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FOUNDED BY IVAN T. SANDERSON

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A DEVELOPMENTAL SCHEMA FOR TELEPATHY

by Libbet Cone and Loren Coleman

IN the effort to understand the mind, its mental processes and its desires and feelings, the exploration of the psyche often takes unusual turns down untrod paths. Even Sigmund Freud frequently had doubts about the route he had chosen. In 1921, Freud wrote: "If I had my life to live over again, I should devote myself to psychical research rather than psychoanalysis." (Jones, 1957, p. 392)

In recent years the examination of psychic phenomena has grown and a fair body of literature presently exists denoting that a serious study of the subject is underway. Of special interest to theorists and therapists alike is the wide-ranging topic of telepathy. Rhine (1947; 1961) and others have given ample demonstration for the acceptance of a recordable phenomenon occurring between individuals. Specifically, telepathy has been defined as "the perception by a person of another person's mental processes, without the aid of (known) sensory channels." (Ehrenwald, 1948, p. 13)

Freud felt in 1933 that telepathy may be "the original archaic method by which individuals understand one another, and which has been pushed into the background in the course of phylogenetic development by the better method of communication by means of signs apprehended by the sense organs." (Fitzherbert, 1960, p. 1560) Since Freud's time, there have been many popular theories, stories, and events which have directly or indirectly alluded to the existence of telepathy. The process for us has been to review the literature and to examine telepathic abilities in terms of early childhood development. We found we were not alone in the evolution of such an approach.

In 1971, Jan Ehrenwald, a Denver psychiatrist, proposed a theory which was at once controversial, and yet, as the research into the subject would lead one to feel, valid. Ehrenwald began by looking at the early symbiotic relationship, initially proposed by Mahler between mother and child, suggesting that "the efficacy of interaction between mother and baby seems to exceed the limited repertoire of whatever conventional signaling code joins them together as one functioning whole." (Ehrenwald, 1971, p. 455) He goes on to say that traditionally theorists have looked to the rationale that sublimal sensory cues, or unconscious expressive movements, or even empathy and intuition, give us the explanation for this phenomenon. Ehrenwald suggests that these answers serve only to cover a gap in our understanding, and he proceeds to introduce a "telepathic hypothesis" into the symbiotic model of the parent-child relationship. This hypothesis suggests that telepathy is in itself a physiological function which is the "modus operandi of the exchange of an infinite variety of primitive or proto-messages, preverbal instructions and injunctions between mother and child." (Ehrenwald, 1971, p. 457)

Ehrenwald, furthermore, suggests this use of telepathy stops as the child begins to use other more sophisticated forms of communication, such as babbling and cooing. This use of speech in itself begins the separation process, which by the nature of the child's struggle to individuate, necessitates a repression of the telepathic ability. As the child's boundaries become more delineated, as it learns the difference between itself and another, as it experiences unmet and met needs, any telepathic event is a regression from this work. Ehrenwald draws a parallel between the repression of telepathy and the repression of primary process thinking. He notes that there is also a cultural repression of both these phenomena which ultimately keeps either from resurfacing too frequently. (Marginally and importantly, he does observe that both recur in psychoanalysis, as have other researchers: Ehrenwald, 1948; Schwarz, 1971, 1974; and Eisenbud, 1970.)

We agree with Ehrenwald that telepathy finds its first expression in the early mother-child relationship. Furthermore, we see it as an ability which, unlike our other senses, does not yet have an understood physical correlate. However, we feel that as we expand our understanding of telepathy, we will discover physical, measurable manifestations for this phenomenon beyond the hints of it now coming forth. For example, in an experiment in ophthalmological-related responses to flashing lights, Duane and Behrendt (1965) discovered telepathic electroencephalographic induction between identical twins. Duane and Behrendt were able to elicit alpha rhythms in one pair of identical twins as a result of evoking the rhythms by means of the light response test in the other twin who was in a separate room six meters away. To date, this apparently is the best electronic indicator that information is exchanged between individuals by other than known means.

But the overwhelming evidence which exists issues from the indicators we find in the interactionalist literature. As we note telepathy emerging early in the mother-child symbiotic relationship, likewise we observe the manifestations of this phenomenon bubbling up in later parent-child communications.

Dorothy Burlingham in 1935 felt the "power of unconscious forces is especially marked in the interplay between parent and child. It is so subtle and uncanny that it seems at times to approach the supernatural." (Devereux, 1953, p. 188) Burlingham, who we find significantly was later to become a researcher on twinning, observed that these examples of telepathic communication between parents and children was "a phenomenon which demands investigation." (Fitzherbert, 1960, p. 1562)

Current investigators most frequently begin their examinations of the phenomenon in their own families. Often the aware individuals involved in such research come up with some amazing results. A New Jersey psychiatrist, Dr. Berthold Eric Schwarz, recorded more than 1500 cases of alleged telepathy between his two children, Lisa and Eric, and he and his wife, Ardis. Schwarz included 500 of

these incidents in his book, *Parent-Child Telepathy*. The opus is filled with examples such as the following: One Sunday morning, Dr. Schwarz was at the kitchen table reading a portion of a tomato juice can label which advertised initialed drinking glasses. Lisa, then two and a half, was sitting in a high chair at some distance from him, and unable to see the can. Suddenly she said, "New glasses, new glasses."

Although the repression of telepathic abilities occurs to a large extent after separation and individuation, episodes of telepathy in later childhood interactions with parents tend to occur and be remembered around emotionally laden and complex psychodynamic events. In interviews with allegedly psychic individuals, frequently the percipients describe "visions" they had when children, of family members who were in danger. Schwarz terms this "crisis telepathy" and comments that it aids in our survival. He observes it surfaces again and again throughout life (Schwarz, 1974). For some children, however, still developmentally learning what to do with the flow of telepathic images coming to them, the sharp and intense emotional input from their parents gains priority as a prototype to crisis telepathy. An excellent illustration of such an occurrence is found in the early writings of Ehrenwald (1948, pp. 45-46):

> It dates back to 1940 when the arrival in this country (Great Britain) of a letter from the U.S.A. was something of a sensation, particularly when containing news from distant friends and relations. My wife had actually received such a letter from Clarence, her half-cousin, with whom she had spent a happy time in America a few years before her marriage. He, too, had married in the meantime and there was a photograph of Clarence's wife, Mathilda, attached to his letter, showing her in the company of two more ladies all unknown to my wife. She was engaged in housework and was just thinking of the photograph, while my little daughter Barbara, aged four, was absorbed in play by her side. At the very moment the child, for no apparent reason, uttered the name *Mathilda*. I may add that this name, in its English version was quite unknown to Barbara at that time. When asked on the next day whether she remembered the name she replied: "Yes, I was having a game with mummy."

Ehrenwald's wife had been thinking of Mathilda's upcoming baby at the time Barbara spoke the name. Ehrenwald felt his wife's identification with Mathilda "provided the emotional stress which was in the last outcome responsible for the telepathic transmission of the name."

The relationship between mother and child, as we have seen, early fosters a channel by which the telepathic impulses are easily exchanged. As the child matures, the ability is repressed, but through the emotionally active agent, usually the parent, a child frequently experiences telepathic events. Part of our understanding of the relationship between twins, like that of mother-child symbiosis, can best be reexamined and pursued if we extend the hypothesis of telepathy into this sphere. Significantly, with twins, we find separation and individuation taking on some important and different twists which have been seen as part of the "twinning reaction."

Joseph and Tabor (1961, p. 277) defined the "twinning reaction" as consisting of "(1) mutual interidentification and (2) part fusion of the self-representation and object representation of the other member of the pair." These authors note this response often occurs in closely aged siblings as well as a wife and husband who have been together for a long time. The literature on what Shopper (1974) termed "pseudotwinning" is scant. Shopper's own addition to the discussion centers on the twinning reaction in non-twin siblings, illustrating telepathy can function, we think, in closely symbiotic individuals. However, it is the interactions of twins which brings forth the most clearcut examples of the twinning reaction, and thus telepathy.

In Tabor and Joseph's simultaneous analysis of a pair of identical twins, frequent incidents of the twinning reaction occurred. Looking at the similarities in the material, the therapists found their patients "shared experiences which are described as though they had happened to both, regardless of who was involved in the experience . . . Both show a relative lack of reality testing, manifested, for example, by a failure to know to whom individual experiences had happened." (Joseph and Tabor, 1961, pp. 291-292)

What we find happening here in this psychiatrically investigated twinship of Joseph and Tabor's is the collapse of ego boundaries and the free exchanging of telepathic material without the ability for the twins to differentiate themselves from each other.

Similar to one of its components, telepathy, "the 'twinning reaction' is opposed in the course of maturational growth by a drive toward separation and individuation. It is the interplay between the 'twinning reaction' and the striving for individuation that forms the matrix for the behavior of twins and for understanding the nature of the twinship." (Joseph and Tabor, 1961, p. 297)

In non-psychiatric situations much documentation exists for the extraordinary rapport between twins, and the psychic framework within which it occurs. For twins, the separation and individuation from their mother is not a time at which their telepathic abilities cease to actively function, as is the case for most children. Twins appear to reinforce telepathy in each other in about a third of the pairs (Gaddis, 1972, p. 98).

Most people who have looked into the subject of twins and telepathy note some of the most dramatic examples appear when the pairs enter the external world in school. One such researcher, a Denver obstetrician, Robert A. Bradley, has gathered many such stories which illustrate "the ability of identical twins to perceive each other's thoughts." For example:

> An aware, thinking, alert grade school teacher noticed that her young identical twin pupils took turns taking home books. On questioning them, she found her suspicions confirmed—they were taking turns studying, yet each passed the tests!
>
> Two handsome, sixteen-year-old twin boys in one

group described how they did the same and bragged the twin who didn't study got the best grades on exams! (Gaddis, 1972, p. 111)

At the University of Chicago, Professor H. H. Newman found, in a separate study he observed, "a pair of girls who seemed able to telepathically communicate answers to one another during school exams. In one instance, they had been so pressed for time while studying for the exam, so each twin reviewed half the course material. Their test answers were so similar that they might have been accused of cheating had they not taken the precaution of sitting far apart in the examination room." (Young, 1977, p. 8)

As in educational endeavors, sporting activities frequently produce vivid examples of the twinships' telepathic abilities. One high school football coach told of how he was always unable to place twin brothers on opposite teams. He found that no matter what play was to be made, the other team's twin would know exactly where the player was going and tackle him immediately (Gaddis, 1972, p. 112). In sports, this telepathic sense of what the other twin is doing is useful if not mildly taken for granted. One twin discovered this was especially true when he and his twin played basketball and hockey. "I never have to look to know where he is," he said, "I just shoot the puck." (Young, 1977, p. 7)

The symbiotic ties of twins appear to reinforce and extend the telepathic phenomenon far past the point where it disappears in most developmental schema. The repression which occurs in normal maturation of this impulse is frequently felt to be, furthermore, lacking in the psychopathology of various disturbed people, and the regressions and fixations at or to certain developmental stages for these individuals may cause a resurfacing of telepathy.

In the symptomatology of schizophrenics, there exist a variety of phenomena which resemble telepathy: auditory hallucinations, thought broadcasting, the belief that others are telling you what to do; delusions; the experiences of many therapists with these people that "they sometimes act as though they can read my thoughts," or the unnerving feeling that indeed, they are doing so.

However, there is, at present, no conclusive evidence that schizophrenics are more susceptible to telepathic ability than others (Ehrenwald, 1960; Ullman and Krippner, 1973, p. 52).

Ehrenwald approaches this controversy from the viewpoint that schizophrenia is, in part, "attributed to the failure of the process of organic repression. It is contingent on the breakdown of ego barriers designed to ward off the intrusion of what I described as heteropsychic material into the patient's consciousness." (Ehrenwald, 1960, p. 52) In other words, telepathic ability is an organic process, it follows developmental lines, and in the course of its development, at the first separation/individuation stage described by Mahler (1952), the telepathic ability is repressed in order to continue with the process of individuation. (Others have called this process infantile amnesia.) However, in schizophrenia, symbiotic psychosis or autism, this repression is incomplete or non-existent, and the patient either experiences telepathy as it infiltrates other thought process, or the patient uses as a primary source of communication, his telepathic ability.

The assumption behind this is that a continuation of telepathic ability after the separation/individuation stage results from a "breakdown" of the repressive system.

Dr. Montague Ullman and Dr. Stanley Krippner (1973) have a somewhat different explanation. They feel that the psychotic, autistic or schizophrenic does not experience telepathy, but rather their symptomatology reflects a "remembrance" of telepathic communications which were experienced as they progressed into the psychotic state. These telepathic communications were "last ditch efforts" as other means of communication were cut off. This is plausible if we consider that the first signs of telepathy show themselves before other forms of communication emerge in the human infant. In either case, telepathy shows itself in a pathological way when its normal development is interrupted.

It is our hypothesis that, in fact, telepathic ability, like any other perceptual/sensory ability, can be developed, refined and used constructively in later childhood and adulthood; that it takes a back seat while other developmental processes occur is perhaps a cultural phenomenon or a necessary one; cultural in that few of us exercise that ability, and thus perhaps it does intrude with the separation process, and can only develop after this process is underway. In any case, it's impossible to say at this point as there needs to be much more observation and study done to determine the developmental stages of telepathy and to discern how telepathy interfaces with other developmental lines of childhood.

Although it is total conjecture at this point, we have developed a possible developmental schema for the telepathetic response. Initially, there is a biological, perhaps genetic transmission of the ability; its first manifestation is at birth, as a part of the mother-child symbiotic relationship. As the infant begins to separate, making sounds, experiencing gratification and frustration at the lack of need gratification, he finds less need for telepathy; in fact, telepathic communication may interfere with his need to experience himself as separate. However, once the child accomplishes this first step, and can experience himself as an individual, he/she experiences the next step in telepathic development: that the child is receiving or sending his/her own thoughts to another. In that the communication occurs early, between parent and child or between siblings-twin and non-twin, when the separation process is still fairly new, the question is raised as to whether the telepathic ability is related to the separation process.

By the age of eight, telepathic ability again takes a back seat, as cognitive development takes the forefront. This may not be coincidental, as our rational, cognitive understanding of our world, especially at this point in our development, does not allow a great deal of room for this phenomenon.

However, at the onset of adolescence, another crucial phase of the separation/individuation process, we find an outburst of psychic phenomena in certain individuals. Nandor Fodor reviews case histories of teen-agers who experience strange events which are "extremely hard"

to explain by normal physical laws. He notes that adolescents are in a "particularly vulnerable or sensitive state, which makes them available for unconscious mediumship." (Fodor, 1959, p. 69)

Our hypothesis introduces the notion that telepathy is a developmental process, interwoven with the other lines of maturation, that perhaps it is closely connected with the process of separation, and one which continues to develop despite its early repression at the earliest stage of individuation.

As Nandor Fodor states (1959, p. 311): "The addition of the psychoanalytic method of approach promises a greater understanding of psychic manifestations than the exclusive utilization of objective methods of research, as used in parapsychology and psychical research."

We feel much insight into the subject of telepathy can be gained in the future through an examination of the phenomenon via the prism of developmental awareness and the separation/individuation process.

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A CONDITIONAL CRITERION FOR IDENTITY, LEADING TO A FOURTH LAW OF LOGIC

by Thomas E. Bearden

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ARISTOTLE'S three laws of logic, on which foundation rests all mathematical, physical, and rational thinking, can ordinarily be stated as

1. $A \equiv A$
2. $A \not\equiv \overline{A}$
3. $A \bigvee \overline{A}$

Table 1. Aristotle's three laws of logical thought

A variety of arguments can easily be produced to show that these laws are incomplete; i.e., they do not specify all reality, for parts of reality can be shown to contradict one or more of Aristotle's laws.

Indeed, *all* "observed" or "observable" reality can be shown to violate all three laws.

E.g., the most direct violation is posed by the problem of change, a problem originally propounded by Heraclitus about 500 B.C., and unsolved to this day. Heraclitus pointed out that, for a thing to change, it must turn into something else, and then asked how a thing could be something other than itself?

E.g., we may think of a thing—say α, some feature "A" of which is said to change. If A changes, it turns into $\overline{A}$, thus violating logic laws one and two. Further, we are considering A as the "changed thing, $\overline{A}$," i.e., something which is somehow both A and $\overline{A}$, so logic law three is violated as well.

Thus, if Aristotle's three laws are taken to be all the fundamental laws of logic, then logically there can be no change whatsoever, because change negates ALL THREE LAWS. I.e., either change does not exist or it is totally illogical.

Since all measurements, detections, thoughts, and perceptions are simply *changes*, then it follows that these operations *logically* cannot exist. Or, if we assume the "operations" to exist, their outputs cannot exist. If the operations do not exist, then again their outputs do not exist.

So if the products or outputs cannot exist, then by this reasoning no perceived, detected, measured, conceived thing exists. If we then insist that such things do indeed exist, then all is paradoxical and illogical. This is essentially the nature of the paradox posed by Heraclitus.

Heraclitus's change paradox has not been satisfactorily resolved to this day, and rigorously all the rational science of the Western world, being based on paradoxical change (detection, perception, observation) is itself totally illogical by its own logical standards.

However, the conditions necessary to resolve the problem of change can be stated simply by inspection of the problem as follows: (1) Aristotle's three laws must specify or apply to only that which is not changing, since change violates or negates all three laws; (2) If change is to logically exist, there must exist at least a fourth law of logic, one which applies to change; (3) This fourth law must contain the negations of each of the first three laws, since change negates them; (4) To be consistent, in any particular logical case, either the three laws explicitly apply or the fourth law explicitly applies (i.e., either change explicitly exists in that particular case or it does not); (5) Since all four laws must apply at all times, then when the three laws apply explicitly, the fourth law must be implicit—and when the fourth law applies explicitly, the first three laws must be implicit.

With the five stated conditions, a fourth axiom of logic can be written simply by writing down the negations of Aristotle's three laws, and synthesizing these negations into a single fourth law. Thus

Aristotle's law	*Negation*	*Explicit statement of negation**
$A \equiv A$	$A \not\equiv A$	$A \equiv \overline{A}$
$A \not\equiv \overline{A}$	$A \equiv \overline{A}$	$A \equiv \overline{A}$
$A \bigvee \overline{A}$	$A \bigwedge \overline{A}$	$A \equiv \overline{A}$ or $[A,\overline{A}]$

* These negations simply state that A and $\overline{A}$ are totally undifferentiated.

Table 2. Negations to Aristotle's laws.

However, even though we can synthesize the negation into a single law—the old "identity of opposites" idea—we still have the problem of understanding such a law. Though at first glance the negations and the synthesized fourth law seem bewildering, we can readily comprehend them if we carefully consider the *temporal* nature of the process that occurs in logical thinking.

Specifically, a finite interval of time is required to perceive, think, detect, or observe an entity—regardless of whether we refer to "physical" or "mental" detection, because both physical and mental processes are temporal. Indeed, we flatly state without further discussion that *ultimately the identifying or mapping of physical and mental operations onto each other is what time is a priori.*

At any rate, we now carefully account for each individual time interval required to think, conceive, detect, perceive, or observe an entity—whether that entity is physical or mental—and we also account for the finite time interval required to perform a logical operation. So we rewrite Aristotle's three laws as shown in Table 3, with subscripted numbers indicating the separate time intervals in each law.

The resolution to the entire mystery so long inherent in these axioms of logic now stands simply revealed: Whether one of Aristotle's laws holds or its negation holds is determined solely by the nature of the logical operation in time

Aristotle's law	*Negation*
1. $A_1 \equiv_3 A_2$	$A_1 \equiv_3 \overline{A}_2$ or $A_1 \not\equiv_3 A_2$
2. $A_1 \not\equiv_3 \overline{A}_2$	$A_1 \equiv_3 \overline{A}_2$
3. $A_1 \vee_3 \overline{A}_2$	$A_1 \wedge_3 \overline{A}_2$ or $[A_1, \overline{A}_2]_3$

Table 3. Temporally accounted laws and negations.

interval three.[1] I.e., the operation in interval three may be regarded as an algorithm comprised of subsidiary (assumed) operations in separate time subintervals that, taken together, comprise the overall operation implied by the logic symbol.

Thus in the first law, if temporal tags (time snapshots) are not accounted (i.e., if they do not apply), then Aristotle's laws hold, for the snapshot 1 of A is not differentiated in algorithm 3 from snapshot 2 of A. This then rigorously holds for *spatial* (L^3) entities, but not for spacetime entities. The snapshots in this case for Aristotle's first law (and the others as well) are spatial snapshots. On the other hand, if snapshots 1 and 2 of A are themselves temporally differentiated in algorithm 3, then the negation of Aristotle's law applies, because the *spacetime* snapshots A_1 and A_2 are different. This is immediately apparent, e.g., in a Minkowski geometry representation, where the second snapshot of A will have a time coordinate different from the time coordinate of snapshot 1. This is represented as shown in figure 1, where "A" is taken as a simple magnitude, in this case 5.

As can be seen from figure 1, 5_1 is not identical to 5_2 *unless we imply the operator* $\partial/\partial T$ *in the time interval three algorithm.*

The negation of the second law may also be simply understood if we use temporal accounting. E.g., suppose we take $A_1 = +1$, $\overline{A}_2 = -1$, and then pose the absolute value operator $||$ for potential use in algorithm 3. If $||$ is not used, then

$$(+1)_1 \not\equiv_3 (-1)_2$$

and Aristotle's second law holds. If $||$ is used, then

$$|(+1)_1|_3 \equiv_3 |(-1)_2|_3$$

and in that case

$$A_1 \equiv_3 \overline{A}_2$$

Note we are taking the view that there is nothing "absolute" or "inherent" about identity or non-identity; instead, each is a conditional result that can only be established by some logical, comparative set of operations. If the suboperations comprising the decision algorithm for the identity/non-identity determination are changed, the finding of the algorithm (the decision) may often change. Specifically, one can have the cases

$$\equiv_1 \not\equiv_3 \equiv_2$$

$$\not\equiv_1 \not\equiv_3 \not\equiv_2$$

Thus we advance a *conditional identity criterion* to be incorporated into formal logic: "Identity" or "non-identity" is defined by a decision made as a result of applying an operational algorithm; changing the internal operator components assumed inherent in the algorithm can change the decision. We are stating a fundamental principle that "identity" and "non-identity" are conditional and only conditional; they are never absolute.

With these points made, we now turn to the third law. From Table 2, on examination it can be seen that the third law actually is a statement for *monocular* perception, detection, observation, thought, or conception. Indeed, this law says that only a single thing at a time can be perceived, detected, observed, thought, or conceived.

As we pointed out in a previous paper,[2] there is a very good reason for this "law." Primitive man lived almost exclusively in a reality detected by light, by the photon interaction. Even in the absence of visible light, all bodies have temperature, and man is immersed in a "sea" of continual electromagnetic photon interactions. The photon interaction is monocular—only one at a time interacts with a particle of mass. Further, photon interaction constitutes the operator $\partial/\partial T$ invoked upon L^3T spacetime. Photon emission carries away time (the photon is made of $(\triangle E \triangle T)$, leaving behind an L^3 *spatial* reality, as we have previously pointed out.[3]

So all our primitive concepts, ideas, and notions about reality have come from over four million years of hominid and human experience in the photon-detected partial reality ("physical", "objective," or "spatial" reality) that remains when the time "dimension" (fundamental variable) is destroyed from L^3T spacetime, leaving only L^3 space behind. Specifically, our observed macroscopic reality consists of large temporal (mental) aggregates of such spatial results, where we cannot distinguish the tiny temporal separations of the pieces. Thus all our observed/perceived entities are *spatial,* and further, each perception/observation snapshot results in a frozen, unchanging spatial entity (resulting—in physical detection—from the so-called "collapse of the wave function." The loss of a wave function is simply the loss of time.) We vaguely sense "time" and "change" as the relation between these snapshots—i.e., by causality, or the ordering of the spatial changes—much as we see "movement" in movie frames rapidly projected onto a screen one-at-a-time.

Thus our primitive observations, from which have painfully been formed our relational concepts and ideas, are monocular, unchanging, and spatial. Aristotle's three laws of logic—which indeed may be taken to be only a simple *synthesis* of our primitive observation and correspondingly relational concepts—then exhibit the same

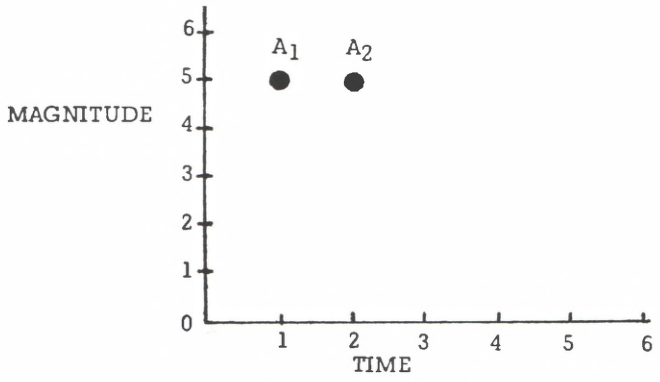


Figure 1. Spacetime snapshots of A.

characteristics; they are monocular, unchanging, 3-dimensional, spatial, non-temporal rational statements. Any statement that is temporal, changing, or 4-dimensional will thus appear as a logical paradox to this logical shorthand.

But from Young's two-slit experiment, we already know that reality and the relationships between its parts are quite different if the photon interaction is not invoked—i.e., if $\partial/\partial T$ is not invoked. Classical reality (as prescribed by Aristotle's laws) is directly violated by an electron in the two-slit experiment, e.g., if and only if photon interaction with the electron is not invoked. Again, this has been simply explained by the present author[4], and Charles Musès as early as 1957 pointed out the absence of any mystery in Young's experiment if the chronotopological aspects were considered.[5]

However, what is normally referred to as the "conscious, thinking mind" is simply a functioning temporal (rigorously, chronotopological) mechanism that is painfully built up in the individual's awareness (his mind in the greater sense of both thought and awareness, whether monocular or multiocular) by training, conditioning, and experience. Its functioning is largely conditioned by one's 90% or so attention to visual stimuli (to the partial reality remaining after photon interaction has been invoked, and to the *memory*-collated ordering of vast numbers of such photon interactions) and by one's cultural conditioning—which itself has been almost exclusively conditioned and shaped by the monocular photon interaction at base root.

Thus, since the beginning of man, his conscious, rational mind has been trained and constructed to function almost exclusively in basic correspondence with the photon interaction, and his experiential reality consists of the partial reality stripped from fundamental reality by photon interaction.

All "perceived differences," e.g., are created by this deep mindset. As has been previously pointed out,[6] the solitary human problem responsible for all man's inhumanity to his fellow man is directly dependent upon man's almost exclusive detection, observation, perception, and conception of "difference" between humans, these "differences" being due exclusively and totally to the fitting of men's conscious minds to the photon interaction's monocular separation of spatial reality from nonspatial reality, i.e. to

$$\partial/\partial\, T\,(L^3T) \Rightarrow L^3$$

Such well-nigh total devotion to, and enslavement by, the photon interaction also is responsible for the scientist's well-nigh total devotion to, and enslavement by, the present imperfect and incomplete three laws of logic, as presented by Aristotle. The depth of that devotion and enslavement is evidenced by the fact that the resolution of such paradoxes as Heraclitus's problem of change have eluded the best minds of humanity for several thousands of years. Indeed, these paradoxes cannot be resolved by the conscious, rational mind in its present state, for it has been most firmly constructed and fitted to function in accordance with the photon interaction.[7] One cannot hope to resolve any logical paradox by using only those same logical methods that found the situation to be paradoxical in the first place!

That we need not be constrained by such universal delusion is already shown by binocular vision. Specifically, in viewing a three-dimensional object, each eye never detects a "third dimension," but detects only an L^2 2-dimensional picture. By taking two slightly different 2-dimensional snapshots and superimposing them, the third dimension is gained. One then essentially sees the resultant superposed pictures as "almost the same but not quite." I.e., the Aristotlean identity algorithm, if satisfied, yields "no difference, hence one object," and if not satisfied, yields "difference, hence multiple (extended) object(s)." So if the two snapshots are almost Aristotlean-identical but not quite, we get an extended two-dimensional (three-dimensional) object. Otherwise we see two separate, two-dimensional snapshots blurred together (the reader is urged to try this and see).

The point is, "dimensionality" and the identity algorithm are directly related, and geometrically one follows from the other.

In very similar manner, we can only gain cognizance or awareness of "time" (as a fourth dimension) by the superposing of two slightly differing (Aristotlean-wise) 3-dimensional snapshots. As is well known, e.g., time is not an "observable" in quantum mechanics; it is a "parameter." Rigorously, the only place such snapshots—each of which is "past" (spatially separated by the annihilation of time in the collapse of the wave function)—can multiply exist is in the "mind" in its most general sense. In a rigorous sense, mind and time can be taken as identical, and the "flow of time" can be taken as the "flow of mind connections or superpositions" of its spatial components. I.e., measured/detected/observed/ "physical phenomena" are a priori 3-dimensional and spatial, while a mind is four-dimensional and hyperspatial.[8] Spacetime exists mentally but not observably. Time is logically implicit, not explicit.

Now we return to the temporal aspects of logic. Each perceptual part of each Aristotlean law is fitted to the photon interaction, hence monocular. The logic operation, inherent in the logic symbol in each statement, involves temporal superposition or comparison of spatial perceptual objects. Hence the logic operation is hyperdimensionally a function of mind, and injects mind/time into the statement. Yet these laws, being fitted to or synthesizing photon interaction, attempt to prescribe the absence of time, even though writing down the logic operation rigorously invokes time. They are thus totally contradictory, since as written they implicitly violate themselves.

Figure 2 summarizes the operations now to be permitted in the time-three algorithm, in developing a new four-law logic:

Rules one and two simply state that, when snapshots 1 and 2 are superimposed (subtracted) in time interval 3, the resultant snapshot 3 may be zero or non-zero. If zero, snapshots 1 and 2 are said to be identical, and if snapshot 1 is to be labeled A, then snapshot 2 is to be labeled A. If snapshot 3 is non-zero, snapshots 1 and 2 are said to be non-identical; if snapshot 1 is labeled A, then snapshot 2 is labeled A.

Rule 3 says that snapshot 3 is a "memory" snapshot,

1. $\lceil S_1, S_2 \rceil_3 = (\text{zero})_3 \Rightarrow (\text{identity})_3$

2. $\lceil S_1, S_2 \rceil_3 = (\text{non-zero})_3 \Rightarrow (\text{non-identity})_3$

3. $\overset{S}{\lceil S \rceil}_3 = \lceil \lceil S \rceil_1, \lceil S \rceil_2 \rceil_3 \Rightarrow$ monocular separation, differentiation internally

4. $\overset{S}{\lceil\ \rceil}_3 = \overset{S}{\lceil\ \rceil}_3 \Rightarrow$ non-separation, no differentiation internally

Figure 2. Conditional identity rules.

and it may be particulately examined to monocularly separate snapshots 1 and 2.

Rule 4 states that snapshot 3 is not a "memory snapshot" and may not be further separated.

Note that in logic we repeatedly apply these rules in combination, serially or compositely. Note further that Rule 1 must serially apply both rules 3 and 4, as must rule 2 also.

If we take $4|3$ to mean "rule 4 applied conditional to rule 3 also being applied," and $4|\overline{3}$ to mean "rule 4 applied conditional to rule 3 not also being applied," we may write:

$4|\overline{3} \wedge 1 =$ identity (S_1, S_2)

$4|\overline{3} \wedge 2 =$ non-identity (S_1, S_2)

$4|\overline{3} =$ oneness without separate-ones; oneness, extraordinary and unperceivable; thing-in-itself

$4|3 =$ "ordinary" one, perceivable separation "thing-as-separated-from-others"

Figure 3. Conditional identity, non-identity, and oneness.

As can be seen, this type of reasoning also sheds a great deal of light on the long-standing problem of the "thing-in-itself," but that is beyond the scope of this paper.

Now we write the fourth law of logic as follows:

$$4. \quad (A_1, \overline{A}_2)_3 \Rightarrow A_1 \equiv_3 \overline{A}_2$$

where all we have said is that, by rule 4, in snapshot 3 no memory process is allowed, and no separation/differentiation whatsoever of A_1 and $\overline{A}_2$ is permitted. Under these operational conditions for identity, what had previously been called A_1 in snapshot 1 and what had been called $\overline{A}_2$ in snapshot 2 are indistinguishable, hence identical.

Thus the age-old philosophical dilemma posed by the illogical identity of opposites has a simple resolution if one considers *temporal* aspects, and introduces temporal conditions for identity or non-identity decisions.

We now write the new four law conditional identity logic as:

1. $A_1 \equiv_3 A_2$

2. $A \not\equiv_3 \overline{A}_2$

3. $A_1 \vee_3 \overline{A}_2$

4. $A_1 \equiv_3 \overline{A}_2$

Figure 4. Four law conditional identity logic.

Further, we point out that all four laws now apply. Laws 1, 2, and 3 are the laws of explicit monocular perception, with implicit binocular perception. Law four is the law of explicit binocular perception, with implicit monocular perception. Both monocular and binocular perceptions must be and are used in each law. So in any situation, either the triad applies explicitly and the fourth law applies implicitly, or the fourth law applies explicitly and the triad applies implicitly.

Indeed, one can even take the view that we have prescribed a five-law logic, the fifth law being taken as

5. $1,2,3 \wedge (4) \vee 4 \wedge (1,2,3)$ where ( ) $\Rightarrow$ implicit

Figure 5. A possible fifth law of logic.

In a previous paper,[9] the author has already presented methods to apply this new logic to resolve present paradoxes. At least hypothetically, every present paradox should be simply a statement of the explicit fourth law, and it should be resolvable by explicit application of that law.

NOTES AND REFERENCES

1. Specifically, by whether or not *exclusivity* applies. I.e., we may read Law 1 as "In snapshot (time interval) 3, what was A in snapshot 1 is exclusively identical to (unseparated from) what was A in snapshot 2." Law 2 may be read as "In snapshot 3, what was A in snapshot 1 is exclusively not identical to (is exclusively separated from) what was not-A in snapshot 2." Law 3 reads, "In snapshot 3, what was A in snapshot 1 and what was not-A in snapshot 2 are exclusively separated." Thus it can be seen that the three laws simply are statements involving whether or not two former perceptions are to be separated in a third perception. These three statements presently prescribe the total separation of the two previous perceptions and prohibit any admixture of the two—the so-called "excluded middle." Thus the three laws prescribe monocular, one-at-a-time perception.

What we call a "wave" exists in time and is considered to contain an admixture of timeless, static spatial states (such as "wavelengths."). The prohibiting of admixtures thus represents the "collapse of the wave function" and the corresponding loss of time. This defines "observation" and explains why all "measurement" and "detection" and "observation"—requiring a collapse of said wave function—are spatial and not spatiotemporal. That is why time is a parameter in quantum mechanics, not an observable.

As we will see, the fitting of our logic to the monocular

AN OPEN LETTER FROM JOHN WHITE TO DR. ARLEN KEITH ANDREWS REGARDING 'WHAT TO BELIEVE—OR, PARING DOWN THE PARADIGM' (*Pursuit*, Summer 1979)

Dear Arlen,

Your call for reality checking by Fortean investigators is entirely appropriate, and I support it. It is indeed foolish to "create entirely new universes and new laws to 'explain' each anomalous event."

However, you illustrated your thesis with two examples that are actually quite damaging to your argument. I refer to Uri Geller and "occasionally transparent living creatures." I consider both to be examples of genuine Fortean phenomena, and I'll give you some data to support this statement.

Uri Geller. I first met Geller in August 1972 at the home of Dr. Andrija Puharich in Ossining, New York. Also present was Dr. Gerald Feinberg of the physics department of Columbia University, the late Dr. Wilbur Franklin, a physicist at Kent State University, and half a dozen other guests who witnessed the following event along with me.

At Geller's request for objects to work with, one of the women present produced a large steel safety pin—the size used for baby diapers—and some other items, including a common metal straight pin. The woman

CONDITIONAL CRITERION REFERENCES *(Continued)*

photon interaction is what has produced this "reality paradigm" that is spatial rather than spatiotemporal, in agreement with what we and all our primitive ancestors have seen with our eyes. For primitive observation via the photon interaction has defined or constrained all our basic concepts, just as it still defines "classical reality."

Relativity, being constrained by such logic, obviously can find nothing "physical" (observed, spatial, timeless thing frozen by the collapse of the wave function as engendered by or fitted to the photon interaction) that is traveling faster than light—i.e., that violates the conditions implied by the "observing/detecting agent."

That reality need not at all be so constrained is clearly shown by Young's two-slit experiment, the heart of all quantum mechanics. In this experiment, "classical" reality is violated iff the photon interaction is not invoked. Classical reality is obeyed iff the photon interaction is invoked.

With appropriate change to logic to fit "reality that has not been interacted with by photons" and therefore is spatiotemporal, a new physics becomes possible.

2. Thomas E. Bearden, "Solution of the Fundamental Problem of Quantum Mechanics," January 3, 1977, Defense Documentation Center.

3. Bearden, "Photon Quenching of the Paranormal (Time) Channel: A Brief Note," 20 April 1977, Defense Documentation Center.

4. Bearden, "Virtual State Engineering and Its Implications," 1979, Defense Documentation Center.

5. With the possible exception of Kozyrev—whose more technical works on time remain undisclosed to open science—no other person known to this author seems to have grasped the implications of a dynamic structure of time as penetratingly as has Charles Musès. The importance of the time interaction in explaining the two-slit experiment (i.e., in explaining wave-particle duality) was noted as early as 1957 by Musès. See, e.g., Musès' introduction to Jerome Rothstein's *Communication, Organization, and Science*, The Falcon's Wing Press, Indian Hills, Colorado, 1958, p. lxii, where Musès pointed out that the celebrated wave-particle paradox remains a paradox only so long as the chronotopological (his word) phases of the phenomena are left unrealized in the analysis. The entire foreword by Musès is a remarkable document which analyzes the structure of time itself. With his hypernumbers Musès can describe the nested structure of time, which is what is actually being carried by the photon. Further, he can theoretically predict mechanisms by means of which these structures can be orthorotated. It would appear that practical devices should be constructable on principles elucidated by Musès, and it is little short of astonishing that fundamental work of such importance and application has been thus far little used by theorists, though it is already recognized in the standard literature; e.g., the profound summary paper "Hypernumbers II" in the January 1978 issue of the journal *Applied Mathematics and Computation*, published by Elzevier.

6. Bearden, "The One Human Problem, Its Solution, and Its Relation to UFO Phenomena," Defense Documentation Center, January 3, 1977.

7. Which is why a Zen master often gives the student a koan to confound and overwhelm this automatic, robotic mindset and functioning that has been constructed as the student's "conscious mind."

8. Specifically, consciousness/life involves a seven dimensional body/being in an infinite-dimensional universe. See Thomas E. Bearden, "A Mind/Brain/Matter Model Consistent with Quantum Physics and UFO Phenomena," prepared for the 1979 MUFON Annual Symposium, available in the *Proceedings*, MUFON, 103 Oldtown Road, Seguin, Texas 78155.

9. Bearden, "The Fourth Law of Logic," *Specula*, Journal of the American Association of Meta-Science, P.O. Box 1182, Huntsville, Alabama 35807, Vol. 2, No. 1, January-March 1979, pp. 30-40; also in publication in Defense Documentation Center.



was a neighbor of Dr. Puharich who claimed to have met Geller for the first time that day, and the items were contained in her purse.

I opened the safety pin and held it at the circular base, observing that it was not deformed in any way and that it was indeed an ordinary metal safety pin. Then, while I held it and the others were watching, Uri lightly stroked the pointed half in the middle between his thumb and forefinger. I could not feel the slightest pressure from his motions, and I estimate that he rubbed the pin for no more than 15 seconds.

Even as Geller was stroking the pin, we could see it begin to bend between his fingers. When that happened, he removed his hand. We could see the pin continuing to bend in my hand. After a minute or so, I placed it on a saucer in the middle of the table around which we had gathered. During the next five minutes, the pin deformed still further, eventually bending in the middle of the pointed half about 30 degrees from its original line until it looked like a square root sign. During that time no one touched the pin.

If you would like to witness Geller performing psychokinesis with an electric balance, and also performing telepathy and clairvoyance, you can obtain a film entitled "Experiments with Uri Geller" that was made during actual test situations conducted at Stanford Research Institute. The film is available from the Institute of Noetic Sciences, 600 Stockton St., San Francisco, CA 94108 (30 minutes, color, $40 rental).

An event such as I witnessed cannot be duplicated by stage magicians. I have repeatedly sought to have it done. But even if they could reproduce the effect through trickery, it would not be proof that Geller is fraudulent. Does a phony dollar bill prove there are no real ones? Of course not. As the saying goes, counterfeit money exists only because there is genuine money. So far as I know, Geller has not actually been caught cheating, though accusations abound. On the other hand, he has given many convincing demonstrations. Give credit where it is due.

Transparent Creatures. "Not all UFOs are spacecraft from another world. Quite simply, many UFOs are living organisms. They are biological aeroforms living in the sky unknown to official science. I know. I have seen them and photographed them."

This statement by a friend of mine, Trevor James Constable, is backed up by a massive amount of evidence, including infrared photographs, black-and-white movie films, Super-8 color film, and videotapes, along with many accounts of sightings by others.

Constable calls these animal UFOs, "critters." You can read about them, and see some of the photographic evidence, in his recent book *Sky Creatures: Living UFOs* (Pocket Books, 1977). Briefly, what he found is this:

Critters are plasma-bodied creatures—organisms consisting essentially of heat-substance at the upper border of physical matter. Neither solid, liquid nor gas, these creatures live invisibly like fish in an ocean of atmosphere. They are normally beyond the range of sight for three reasons. First, their native habitat is the stratosphere at distances beyond unaided sight. Second, their native state of existence is in the infrared portion of the spectrum beyond the range of visible light. Last, they propel themselves at extremely fast speeds, sometimes appearing like meteors before disappearing from view.



This is the sixth photograph in the series that first captured the bioforms, or "critters," in August of 1957. There appear to be two critters here, both plasmatic and both photographed against the local terrain. British author and UFO investigator Harold T. Wilkins, since deceased, told Trevor Constable in 1958 that he felt as though he were "looking through the side of an aquarium" at these strange airborne life-forms. The author maintains that these bioforms are confused with space-ship UFOs and vice versa.

Because critters consist of plasma—matter in its most tenuous form—they have the capacity to change their density and thereby pass from one level of tangibility to another. Thus they sometimes do appear in the visible portion of the spectrum where, if seen by humans, they are quickly labelled UFOs—which they are, of course. But they are not mechanical spacecraft; they are living creatures.

These amoeba-like aerial fauna, Constable thinks, will someday be categorized as macrobacteria in the general field of macrobiology. Furthermore, he says, critters are not the only organisms in the upper atmosphere. It supports a veritable aerial jungle.

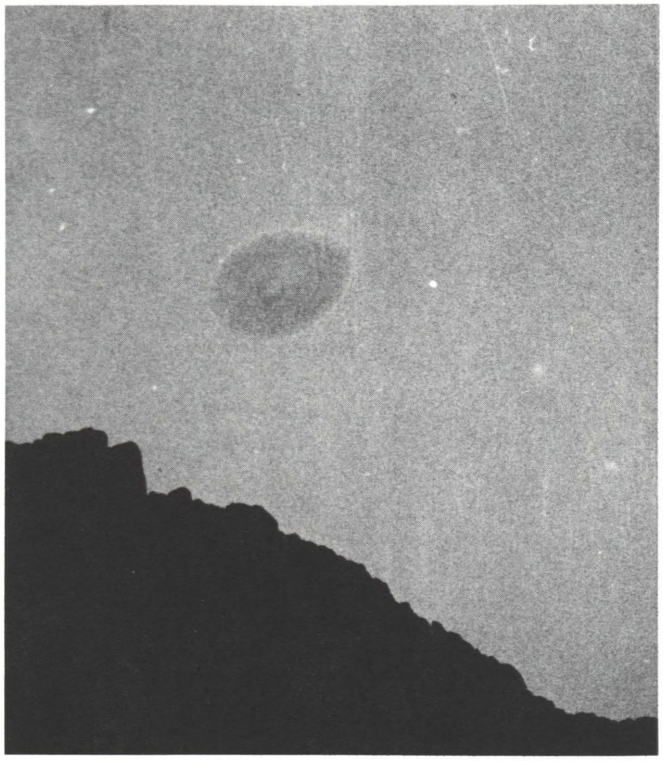
Critters range in size from that of a coin to at least half a mile in diameter. As do most plasmas, they give a solid radar return even though fighter pilots don't see them when vectored by ground control to intercept them. They pulsate like all living organisms and when in visible range often emit a reddish-orange glow, thus

accounting for the mysterious "foo fighters" of World War II. Although they can change both their form and their density, critters generally are discerned as discs or spheroids. Their diaphanous mica-like structure allows a limited view of their interior. Some have been seen close up on the ground in full physical density.

When Ivan Sanderson saw some of Constable's photos, which he began taking in 1958, Sanderson said, "... they don't look like machines at all. They look to a biologist horribly like unicellular life-forms, complete in some cases with nuclei, nucleoli, vacuoles and all the rest."

Constable published the findings from his twenty-year study of critters in a 1977 book entitled *The Cosmic Pulse of Life* (available through Steiner Books, Blauvelt, New York), which deals comprehensively with the UFO experience. *Sky Creatures: Living UFOs* is an abridgement of *Cosmic Pulse,* which has been making its way around the world in ufological circles and inspiring people to attempt replicating Constable's pioneering work. Here in the U.S., half a dozen people have reported privately to Constable that they have also "captured" critters on film. One such photo appears in *Sky Creatures,* along with an appendix by SITU member Larry E. Arnold, who gives an account of many more instances where critters were seen.

And just recently, Constable sent me a copy of a letter from a UFO research group in Genoa, Italy, which corroborated his work entirely. The correspondent, Luciano Boccone, has given me permission to quote relevant sections of his letter.



On May 17, 1958, using a Leica G without filter and high-speed infrared film, Trevor Constable captured this invisible specimen of UFO life above the rocky ridge adjoining Giant Rock, California. F3.5 at 1/50 second, shot in first light of dawn.

"... we were among the very first UFO organizations in Italy to take still pictures of UFOs directly from the invisible state... Generally we do not see anything visible when our instruments behave irregularly and we simultaneously press the shutter of our cameras... This simple procedure has allowed us to objectify, both at low altitudes and close to the ground, invisible events or noumena which prove to be strictly connected ... with the visible phenomena that usually go by the name of UFO manifestations.

"... the photographic, instrumentally-based documentation in our hands positively confirms your photographic findings and conclusions as well as the results obtained by our close friend Florin Gheorghita in Rumania. Let me emphasize that your invisible amoeba-like forms are practically identical in shape, size, density, etc. to the invisible plasmatic organisms that our Rumanian friends and ourselves have photographed in the sky and on the ground, both in Italy and Rumania. There is seemingly no difference between the invisible, unicellular, ameboid structures that can be seen on your infrared still pictures of 'critters,' and the invisible, unicellular, ameboid structures that can be seen on the infrared, panchromatic and color still pictures of 'plasmoids' that we have taken from our research areas on instrumental audible and visual warning.

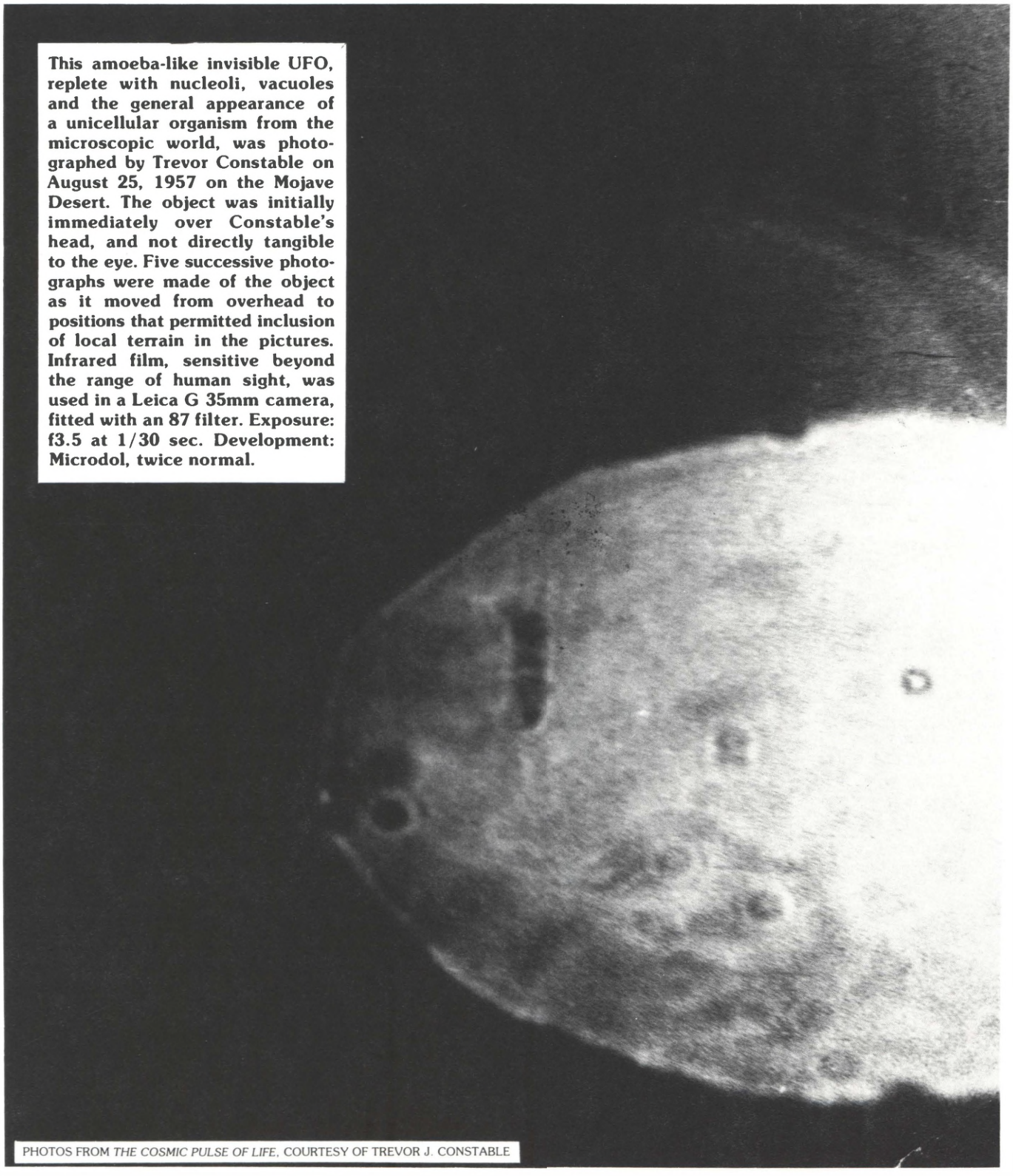
"Like your own files and Gheorghita's, our records are full of photographs showing invisible, glowing, pulsating plasmorganisms, capable of changing shape, size, density, luminosity, arrangement, position, etc. in a split second. Our pictures, for example, show invisible plasmorganisms blinking at low altitude over the Port of Genoa, pacing aircraft... They show invisible plasmatic bodies fleeing or cavorting in the sky at tremendous speed, or hovering or 'dancing' over our research areas ..

"In short, we have got irrefutable documentary evidence of the presence of such 'plasmoids' at low altitude over our mountain and marine research areas, close to us on the ground, and inside our houses, too. I repeat, we have objectified them many times directly from the invisible state on infrared, panchromatic, and color still pictures, most of which have been taken on instrumental detection only...

"This is the reason why, sticking to the facts and failing for the time being any exhaustive, satisfactory explanation other than their 'biological nature,' we agree to your interpretation, according to which most of the UFOs that have mystified men for generations are not extraterrestrial spaceships at all, but are generally-invisible, ultradimensional, ultraterrestrial, biological, etheric organisms that are of our planet, that have been living with us, side by side, unnoticed, since the beginning of time...."

I have written to Boccone for further information, but as of the moment have had no response. Apparently, however, Constable's objectification of what occultists have termed "elementals" is being confirmed.

So, Arlen, I hope I have given you food for thought and that you will reconsider your position with regard to these two subjects. From my perspective, there is



This amoeba-like invisible UFO, replete with nucleoli, vacuoles and the general appearance of a unicellular organism from the microscopic world, was photographed by Trevor Constable on August 25, 1957 on the Mojave Desert. The object was initially immediately over Constable's head, and not directly tangible to the eye. Five successive photographs were made of the object as it moved from overhead to positions that permitted inclusion of local terrain in the pictures. Infrared film, sensitive beyond the range of human sight, was used in a Leica G 35mm camera, fitted with an 87 filter. Exposure: f3.5 at 1/30 sec. Development: Microdol, twice normal.

PHOTOS FROM *THE COSMIC PULSE OF LIFE*, COURTESY OF TREVOR J. CONSTABLE

a strong case for the genuineness of both, and only entrenched prejudice denying them. They appear to be not supernatural but supernormal. No new universes are needed to accommodate them—only a broadened conception of nature and a willingness to walk that narrow line between having an open mind and having a hole in the head. We Forteans must avoid the latter, of course, but we must also avoid premature closure of a topic. Uri Geller and critters, I suggest, deserve another hearing.

—John White
Cheshire, Connecticut

A MODEL SOLUTION TO THE UNIFIED FIELD PROBLEM

by T. B. Pawlicki

THE best-known problem of modern physics is the wave/particle dichotomy. A number of illustrations are presented to show how the same structure can be perceived as a wave at one time and a particle at another. The most common is using a cone to demonstrate that it can appear as a circle from one aspect and a triangle from another. This illustration tells us something about two and three dimensional space, but we are none the wiser about waves and particles. Like mystic gurus, scientists are apt to present irrelevant illustrations as explanations, insulting the intelligence of the layman. When a valid explanation is really quite obvious, misdirections of this kind raise suspicions of red herrings.

If you distribute a bushel of small ball bearings on a billiard table so that there is no grouping whatsoever, you will eventually find that each ball is spaced an equal distance from every other ball. This experiment will prove to you that utter chaos is identical to perfect order.

If you attempt to erase the order of equal spacing by rearranging the balls into random groupings, you will eventually arrive at a distribution corresponding to the statistician's Bell Frequency Curve; regular patterns of density will constitute periodic waves, and sets of waves will combine into large waves until the entire field is defined as a circular wave. Once again, you find that absolute chaos is identical to ideal order. The Creator's intelligence as an architect is overrated; God cannot create a chaos even if He wants to.

You do not have to spend several weeks of tedium to discover these proofs if you happen to be in the vicinity of Seattle, Washington. At the Science Exhibit of Seattle Center, you can see a random distribution of balls forming a Bell Frequency Curve several times every hour.

Anyone familiar with the registration of measuring instruments, such as a camera system, can study this model for a long time to discover several ways of looking at waves and particles. The layman should be satisfied by seeing that any event detected at the limit of resolution will register as a point, and a point is equivalent to a particle. Events finer than the limit of resolution will register as waves if their number and concentration are sufficient to emerge above the threshold of resolution over a span of greater extent than a point. In other words, whether an event is perceived as a wave or a particle has nothing to do with the structure of the entity; the dichotomy is produced by the mechanics of perception. When the focus of perception is concentrated upon the limit of resolution, only point/particles can possibly be perceived. When the focus of perception is extended, points at the limit of resolution can only be perceived as waves. A cosmic scientist whose microscope was incapable of resolving internal detail would be unable to determine whether the ultimate unit of a population were an individual person or a group because the only distinction is edge contrast.

In an earlier article, "Mind Over Matter," (*Pursuit*, Vol. 11, No. 1, Winter 1978, p. 21) I described the Plate Flutter Experiment. Anyone who has observed this model will recognize that the patterns can be perceived as particles when the standing-waves are at the limit of resolution, and as waves when the standing-waves are large enough to function as a field. The distinction is a matter of *scale.* The matter of scale is important, because scale is a true sixth dimension of space and the perception of structure is determined by the focusing of consciousness on a specific scale of the sixth dimension.

In a subsequent article, "The Cosmic Hologram," (*Pursuit*, Vol. 11, No. 1, Winter, 1978, p. 22) I showed that the elemental bits of the universe possess the property of infinity *within the function of perception;* this is the only way a hologram can contain all its information in all of its parts regardless of the scale of the sampling.

In other words, the ultimate element of the universe cannot be detected without an instrument capable of resolving finer detail than its own mechanics implement. Logically, this kind of instrument is impossible by self-contradiction.

So the question as to whether the ultimate element is a wave or a particle cannot be answered in the sense it is asked. But whether the ultimate element is a wave or a particle has never been the paradox. The problem has been to explain how it is possible for the same event to appear as a wave at one time and a particle at another. The model described here demonstrates the mechanics of the phenomenon quite clearly, and we can only wonder about the intelligence of the renowned authorities who make such a big mystery out of a self-evident process.

Most of us are armchair scientists who will go to great pains in criticizing the reports of experiments, but nothing quite so painful as performing the experiments for ourselves to see what is really happening—especially if the results threaten our favorite convictions. There is, however, a natural model everyone can study from time to time as the occasion presents itself, without any laboratory preparation, mathematical measurements, or even much discipline. The next time you are in the vicinity of a sizable body of water, you can study the random pattern of waves on its surface as a set of Bell Frequency Curves and a Plate Flutter Experiment. Each wave is the involute of a spiral vortex, like a tent is the involute of a bubble, and the scale is large enough for you to examine the mechanical dynamics without instruments or a high-speed movie camera.

Eventually, you will discern that while waves travel over the surface of the water, the water does not move in the same manner. Each wave-form defines a field of water rotating around a fixed center; waves constituting

larger waves gyrate around the distance center. All that moves over the surface of the water is the *pattern* of the wave.

Each sizable wave is constituted of numerous wavelets. The wavelets, in turn, are comprised of still smaller dimples, and the scale diminishes on a series of finer aggregations until the molecular scale is reached. Now, if you observe the wavelets at the limits of resolution for 20/20 vision, you will see that they do not flow continuously with the same form and direction. Instead, they dart about like particles in a Brownian Movement. Some of them disappear for a time long enough for their absence to be noticed, and when they reappear, the distance from their previous location is great enough to make it doubtful that it is the same wave. The wavelets are, in fact, discontinuous in both time and space. Now it can be seen that the sizable waves do not have the continuous form and velocity which seemed so self-evident upon earlier inspection; they are constituted of innumerable wavelets, each having no continuous form or velocity, like the image projected on a movie screen appears continuous in form and movement while its successive frames pass through the film gate. The stability of any given wave form is a function of the Bell Frequency Curve, varying directly with the size of the scale. At the smallest scale, you will recognize that the wavelets on the surface of water constitute a very model of Quantum Field Mechanics.

This is a rather important discovery because it means that you do not have to have exorbitantly expensive instruments, a ruinous investment in education, nor a rarified I.Q. to calculate arcane symbols before you can understand how the universe unfolds as it should. Every child can study and understand the analogue directly by his own immediate experience. This discovery has the same political significance as the open Bible in the medieval church. It is no longer illegal for peasants, slaves, foreigners and women to read, but the scientific clerics are no less determined to hold their well-endowed positions as intercessors between Heaven and Earth. Unless the responsible authorities come forward with reasons proving otherwise, this is the probable reason why simple and self-evident models are noticeably absent from current scientific concepts.

An interesting deduction we can derive from our simple model is that nothing of the material world has any continuous, or permanent existence. Everything is constituted of particles manifest from the Quantum Field for the briefest detectable flash, before disappearing forever. All that exists over any practical duration of time is the *pattern* the particles assume. But the substance of the pattern is continually recreated by new particles, like a standing-wave on a flowing river. Even the pattern is evanescent, because it never is completely filled at any given instant, and it is never replicated exactly from one instant to the other. On our scale of experience, however, the differences between one replication and the next are so insignificant that we regard our world as continuous and durable in both time and space. Once you realize that the universe is created anew from instant to instant, it becomes possible to alter the pattern preferred by the Bell Frequency Curve; this is what magic and miracles are all about.

An infinite number of random point/events must eventually arrange themselves into a regular pattern of waves in the form of a spiral vortex, if the scale is large enough. The expansion of the spiral is governed by the PHI ratio, and its radius is a function of the Bell Frequency distribution of random wavelengths. It is difficult to discern the spiral pattern on the surface of water, although the oceanic currents are evidence that it is there. It is also difficult to see the spiral structure of the Plate Flutter Experiment, because the distribution appears practically homogenous to normal inspection; the existence of the standing-waves, however, is the positive evidence that the spirals are there. So I shall ask you to refer to a fourth model demonstrating the very same mechanics. Purchase a set of moire patterns from the Edmund Scientific people, advertising in most technical journals on the newsstands.

The spiral pattern corresponds to a two-dimensional section through the three-dimensional vortex. In order to represent the time dimension, it is necessary to rotate the pattern around the center of the spiral. If you place the transparent pattern over the opaque one, you will see a moire pattern of points created where the lines of the two spirals intersect. If the lines are understood to represent waves, this model shows how the intersection of waves will generate point events that will register as particles.

As the primary spirals rotate, the points constituting its waves move tangentially to the central axis. Note well that the points of the moire pattern move radially. If the moire pattern is large enough in extent, its individual points will form a harmonic spiral on a larger scale. If these points have an intermittent existence, the harmonic spiral will be seen to rotate at right angles to the movement of its points. When two harmonic spirals intersect, a harmonic moire pattern is generated on a higher scale, and the mechanics repeat themselves. Note well that at each stage in the expansion of scale, the size of the primary pattern is magnified in space, and the velocity is retarded in time.

An armchair scientist will be overtaxed to perform this experiment with huge spiral moire patterns. Other patterns in the Edmund Kit, however, will demonstrate the way moire patterns magnify primary dimensions, and once you understand the principle, you can distinguish the same mechanics operating in the generation of waves on the surface of water. Primary waves on the surface of water intersect and pass through each other without affecting each other. The waves generated by their harmonic intersections, however, change in size, shape and velocity in response to every primary intersection; harmonic transformations of the larger waves are difficult to discern because the transformations of innumerable wavelets tend to cancel the differences out to the Bell Frequency average. You will, however, be able to see that the generation of each scale of harmonics results in an abrupt rotation of velocity.

Now, if you have read Tom Bearden's theory of the *photonic reaction,* by which radiant energy is transformed into material particles after a 90° *orthorotation,* you will recognize the same calculations represented in the moire patterns.

By this time, you should be realizing that the mechanics of moire patterns, as observed in wave forms on the surface of water, is a tangible model demonstrating the Unified Field structure which Einstein struggled with all his life without success.

The movement of particles in a field is the means by which the acceleration of the field is measured and the space of the field defined. Because particles have no real existence, but are manifest in the form of a pattern, the pattern of standing-waves in our model corresponds to the structure of physical fields. The lines of force defining all fields are actually standing-waves. At the smallest scale of our model, the spirals are wound most tightly around the center, but they also unwind most rapidly along their radii. The smallest scale of our model, therefore, can be taken to represent the field holding the particles together in the nucleus of the atom. At the radius where the lines of the primary pattern are farther apart than the lines of the secondary harmonic pattern, the force of the harmonic field will supervene the acceleration of the primary field. In this demonstration, we can see why the nuclear force is so much stronger than the electromagnetic, but fades so rapidly. It is merely a matter of calibrating the model to make the measurements identical to experimental data.

Where superimposed spirals are not concentric, you will see transformation from one frequency to another concentrated in limited localities. In the real field our model represents, spiral centers are not conveniently concentric; each Quantum interval is a center for a proper vortex. The shells where frequency transformations concentrate, therefore, correspond to the strong and weak particle reactions.

You will see that whenever harmonic standing-waves undergo any transformation of mass, velocity, or form, there is an interchange of primary standing-waves between them represented by radiant vectors through the proper field. In this way, our model represents particle physics as described by the equations of the Quantum Field Theory.

Where spiral vortices are observed in a fluid, you will see that fields spinning in the same direction repel each other, whereas fields spinning in opposite directions tend to flow together. Examination shows that vortices spinning in the same direction have the highest velocity of impact along the interface of contact, and the velocity increases as their centers move together. Evidently, vortices spinning in the same direction move away from high impact velocities on a gradient toward lower impact velocities; direct impact results in mutual annihilation. On the other hand, vortices spinning in opposite directions have no velocity at the interface of contact, so they can merge without mutual annihilation. This aspect of our model demonstrates the two poles of the electromagnetic force, and shows that spin determines polarity.

If all charged particles are defined by spin, then all charged particles must be dipolar. Experimental data, however, proves protons and electrons to be monopolar. But if you bear in mind that the harmonic field on the next scale must align the polar axes of protons and electrons in the same direction, you will see that protons and electrons are bound to repel their kind unless the harmonic field is eliminated. No researcher has eliminated the harmonic field because science does not recognize its existence. But you can prove the mechanics for yourself by floating a number of minute bar magnets in a fluid dense enough to support them. When their axes are aligned by a superimposed magnetic field, they will all repel each other like very monopoles. If, however, you force a pair of magnets together closely enough for the attraction of their opposite poles to overcome the alignment of the superimposed magnetic field, they will flip relative to each other, and their opposite poles will cleave together like protons in the helium nucleus. This is a demonstration corresponding to what we observe of the nuclear force. All it takes is proper calibration of the scale to make the model identical to the experimental data.

We may infer from this model that the solar electromagnetic field aligns the polar axes of the planets to result in their mutual repulsion. As a matter of fact, the planets hold positions in their respective orbits so that each will maintain the greatest average distance from all the others for the longest time. Mutual gravitational attraction leads us to expect a tendency for the planets to clump together over a long enough time. The fact that the planets have maintained the greatest possible distance from each other since the first Sunday suggests the influence of something corresponding to a mutually repelling force. Unfortunately, this is what Velikovsky postulated, and everyone knows that Velikovsky is in error, and no further explanation is given. Velikovsky may be mistaken for reasons his critics won't give, but you can construct a model to prove it for yourself.

If the standing-wave is established as the datum point, the field is seen to revolve around the particle. This is the probable reason why particles caught in an electrostatic field spiral into the center, and why a current of electrons is attended by a magnetic field generated at right angles to the direction of flow.

All field vortices extend to infinity, but the smaller the scale, the more rapidly the acceleration diminishes to a negligible value. The electromagnetic force is detectable for appreciable distances before it is overwhelmed by the higher harmonic of the gravitational field. The mechanics of the moire pattern magnifies in both time and space. So while the gravitational spiral accelerates with ponderous sloth compared to its generator, it also unwinds exceedingly slowly, so its acceleration holds steady over great distances.

The intersection of one moire pattern by another results in the generation of ellipses, parabolae, and hyperbolae—the trajectories plotted by bodies accelerated within a field. Einstein's theory only tells *what* happens; the moire model shows *how* it happens.

Whatever the radius of a planetary orbit, a body in the gravitational field sweeps the same area of arc over the same span of time. In field equations, area is equivalent to energy. This experimental datum proves that the energy of any given field is constant throughout the space it organizes; all that changes to define one location from another is concentration as manifest through frequency. This constant value is the absolute nominal key to the Unified Field Equations.

If professional mathematicians are not able to calculate

the field constant required to calibrate the holographic model described in this essay, there is a possibility that we are no closer than Einstein to a solution to the Unified Field Equations. In the meantime, however, the operation of this model corresponds so closely to the published reports of physical research that it is no longer credible for any authority to proclaim modern physics utterly beyond human comprehension outside of abstruse mathematical abstractions.

A physical model that does nothing more than account for established data is not welcomed by scientists because it represents a dead end. Even if a model provides a sound representation of what is known, it will be discarded in favor of an uncertain concept that predicts the parameters of new discoveries. Current ideas are rich with prediction, and this may be the reason why the holographic model is noticeably absent from reputable literature; the profession simply doesn't have time for non-profitable theories.

But if you examine the holographic model intensively in its various representations, you will eventually discern that it makes PSI phenomena inevitable. Furthermore, the holographic model indicates the principles of operation by which PSI phenomena may be engineered. This is predictive property of an exceedingly high and valuable kind.

The holographic model shows that the Unified Quantum Field is perceived most comprehensively as a scale of harmonically generated and interpenetrating vortices. You may have to transfer the coordinates of the various illustrative models onto graph paper if your faculty for spacial visualization is insufficient to perceive the wheels spinning within wheels. The axis of each vortex is aligned by its proper field. If the axis is forcibly rotated, and held at an angle of nonalignment with the Bell Frequency Curve defining its field, field pressure will be manifest by a movement of the pattern until the axial alignment harmonizes with the field. We can test this prediction in a crude way by observing what happens when the axis of a toy gyroscope is rotated forcibly, and the holographic model can be refined to show that something like these mechanics is probably what is happening during the process of chemical ion exchange. At the Quantum scale, the rotation of an axis will result in the pattern disappearing below the threshold of detection into the Virtual State; the energy equations are balanced by the appearance of an identical or equivalent vortex elsewhere, instantly. This is the essential mechanism of a Time Transport. A lot of ink has been spread in speculation about Time Travel and the nature of time, but the time has passed for speculation. What I am describing here is not speculation, but history. Michael Faraday proved the principle centuries ago by rotating a beam of polarized light with a magnetic field. Tesla extended the proof and its practical application by his invention of the polyphase motor. The April 1979 issue of *Oui*, from the stable of Hugh Hefner, reported that the Russians have already displaced a few particles in the Quantum Field. (People active in this study are already informed that a number of Americans have replicated these experiments and the equations are established, but the local work is not proclaimed by spokespeople so conservative and prestigious as Hefner.) This achievement is of the same significance as the splitting of a few uranium atoms by Hahn and Strassman in 1936. It is only a matter of time to analyze the field coordinates sufficiently to rotate the axis of patterns larger than particles. Tom Bearden is publishing evidence indicating that the Russians have instituted a research and development program for PSI engineering comparable to the Manhattan Project, and they have already learned to transmit practical amounts of power through hyperspace with explosive force; one sunny morning in August a target population may wake up like the citizens of Hiroshima to be annihilated by a science our authorites proclaim to be impossible nonsense.

The recognition of the Unified Field Model in the hologram brings us to the same contradiction presented to us at the beginning of this analysis. On the one hand, renowned authorities assert that no Unified Field Theory exists and no Unified Field Theory can possibly be represented outside of pure mathematical abstraction. On the other hand we have reports of PSI engineering sufficiently sophisticated to substantiate the validity of the holographic model. The circumstances resemble the development of the aircraft during the first quarter of this century while the authorities are denying the very possibility of aerodynamic engineering—which is not a far cry from what actually happened. The Orientals are notorious for developing extremely sophisticated technology without any notion of mathematical science, but PSI engineering is being implemented by professional scientists. The reports may be exaggerated, but the degree to which the principles can be proven by anyone indicates the reports are not overly optimistic. In view of these facts, amateurs devoted to investigating PSI phenomena may be advised to reconsider their function. Hitherto, the pursuit of unexplained phenomena has been regarded as an exploration of unknown territory by courageous scouts leading the mainstream of knowledge held back by doubters, like Columbus set out to sail beyond the edge of the world to discover new riches. But now that the other shore is in sight, we find the land already settled by well-funded expeditions which make use of every means to keep their activities out of the public attention. This means we are not establishing new knowledge at all; at best, we are merely trying to guess what private research has already done. Thus it would seem that the talents of amateurs would be applied more efficiently by opening lines of communication between radical research and the mainstream of science rather than collecting raw data and speculation at which the establishment scientist refuses to look.



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THE CELTS AND EARLY AMERICA

by L. E. Schroeder

OVER the past several years there has been much discussion concerning pre-Columbian discoveries of America. Lately it has been established that the Vikings did in fact arrive and settle parts of North America well in advance of the Columbus expedtion. Yet the question remains as to whether the Vikings were the first explorers. Several scholars believe that they were following a path previously traveled by the Egyptians, Phoenicians, Atlanteans, and Celts. Two recent publications provide a look at existing stone works in North America and attempt to establish a link between the old and new worlds. The books are *America B.C.: Ancient Settlers in the New World* by Barry Fell (a teacher of linguistics) and *The Search for Lost America: The Mysteries of the Stone Ruins* by Salvatore Michael Trento (an archaeologist).

To date there has not been published a complete book written by a historian. There are several reasons why this has not happened: first, most historians are quite skeptical about the possibility that a primitive people, existing before the Middle Ages, could have successfully traversed the Atlantic Ocean, established settlements, and carried on a trade with Europe.

Second, historians do not like to make conjectures which could be embarrassing. They like to deal in facts and the interpretation of those facts. Written material such as diaries, commentaries, etc., are favored. Though artifacts are often used, the historian tends to favor the former over the latter, leaving the latter to be interpreted by a competent archaeologist. This could be due to a lack of archaeological knowledge.

Finally, historians fear basing their written work on an item or items which could prove to have been faked. Stone artifacts can be planted or created by people seeking to play a practical joke, to embarrass a noted professor, or for whatever reason a warped mind might have.

Therefore, this paper does not attempt to prove anything historically; rather it is an attempt to offer some possibilities, make a few statements, and present its reader with the thought that ancient travel by a barbarian people was not only possible, but probable.

The Celts begin to appear as a people around 2000 B.C. in central Europe. It was at that time that the Urnfield culture, which many scholars believe was comprised of the early Celtic peoples, emerged. The comparison is made because many place-names are an early form of Celtic. The Urnfield people were so called because they cremated their dead and placed the remains in urns which were then buried without a covering mound or marker. The Urnfield people worked with iron and were the fathers of the Hallstatt culture.[1]

The Hallstatt culture was Celtic and existed in central Europe from about 700 to 500 B.C. These people were of the Bronze Age; they lived in small communities and conducted a competent form of arable farming.[2] Around 700 to 500 B.C. the Celts were pushed westward by the Scythians who were a warrior people who had originated in the Caspian basin. The Scythian movement pushed the Celts into France, the Iberian peninsula, England and Ireland. Whenever the two peoples met an exchange of cultures occurred. The most notable Celtic change was the abandonment of cremation of the dead in favor of individual burial. The Scythians adopted the two-part bits, movable side-reins, and snaffles which simplified riding.[3]

As previously stated, the Celts worked with iron and bronze and were a farming people. The Romans called them "Galli" and "Galatai" (these were the Celts residing in Gaul, which is now France) and the Greeks called them "Keltoi." One Greek, Diodorus, described them in the following way:

> They are very tall in stature, with rippling muscles under clear white skin. Their hair is blond, but not naturally so: they bleach it, to this day, artificially, washing it in lime and combing it back from their foreheads. They look like wood-demons, their hair thick and shaggy like a horse's mane. Some of these are clean-shaven, but others—especially those of high rank, shave their cheeks but leave a moustache that covers the whole mouth and, when they eat and drink, acts like a sieve, trapping particles of food . . . The way they dress is astonishing: they wear brightly coloured and embroidered shirts, with trousers called bracae and cloaks fastened at the shoulder with a brooch, heavy in winter, light in summer. These cloaks are striped or checkered in design, with the separate checks close together and in various colours.[4]

The Celtic society resembled the warrior society of Sparta. There existed a strong bond between men. The sexes were separated from childhood. Boys grew into men while studying the arts of riding, hunting, drinking, and swordsmanship. Homosexuality was common, for heterosexual relationships were only encouraged in order to produce male children. There was a strong pride in physical fitness and the male body was adorned with armbands and heavy gold neck rings called "torcs."[5]

The religious beliefs of the Celts were based on the worship of nature which included the sky, sun, earth, rivers, sea, trees, mountains, and the spirits of each. Each part of nature had a living entity called a spirit. The forests held numerous spirits which varied in power. The grove, to the Celts, was the earliest temple, and when temples were constructed they were often built near groves. Religious rituals often ended with a sacrificial victim or victims being hanged on the trees. As regards the tree spirit, the entity could separate itself from the tree and take on elfin traits.[6]

The sun and moon, besides being objects of worship.

had a practical economic value. Stonehenge, in England, is a series of boulders placed in a pattern and which clearly aligned with the movements of the sun and moon. These alignments provided an excellent calendar which aided the Celts in determining the best times for planting. The alignments also helped the priests remain in power, for they were able to determine the exact position of the sun and moon at all times, which to a primitive culture was quite mystifying.[7]

The leaders of the religious beliefs were the Druids. They were the philosophers and teachers, as well as prophets. They assisted in sacrifices and kept the knowledge of the course of the stars. They often talked about the nature of all things and the magnitude of the universe. The Druids were strong believers in immortality and transmigration of souls.[8]

As stated, the Druids were important to the farmer, for they told him when to plant. Corn was a plentiful crop. The field system used has been found to be at least as ancient as 1200 B.C. and it stretched from southern England to Denmark. The Celts used a rotary flour mill called a quern; it was more advanced than anything then used in the "civilized" world. The quern was later adopted by the Roman Empire.[9]

Cattle and sheep were raised and were kept in a corral near the home. In many areas livestock was more important than crop-raising. The domestication of animals and the planting of corn made the individual Celt quite self-sufficient. There was little need for coinage except among members of the Celtic aristocracy who were engaged in trade and began to espouse the economic attitudes of the Romans.[10]

Late in the 3rd century B.C. wine production began in Italy (as opposed to that which was imported from Greece). The Celts of that period began importing wine from the Etruscans in Italy. The original Celtic-Etruscan wine trade moved northward through Switzerland and the Rhineland until it reached southeast England around 100 B.C. The wine trade had a tremendous effect on the Celts, for though wine was expensive, the Celts were ridiculed by other peoples because of their attachment to it. They often drank wine undiluted with water. Ammianus Marcellinus, a Roman citizen, wrote that the Celts were "greedy for wine" and that they devised "numerous drinks similar to wine, and among them some people of the baser sort, with wits dulled by continual drunkenness . . . rush about in aimless revels." Because wine was expensive, it was an aristocratic drink. Although the poorer people sometimes drank it, they were quite content with their native beer brewed from barley or wheat.[11]

Militarily, the Celts were fierce fighters. They wore bronze helmets covered with engraved figures. Some of the helmets were adorned with horns. Several of the Celtic warriors wore breast armor made out of chains, but most men preferred to go naked into battle. When confronting their enemy, at which time both Celts and enemy stood motionless facing each other, one Celt would leave his friends and venture forth to challenge the bravest of the enemy in individual combat. If the challenge was accepted the remaining Celts would break into wild singing, whereby they praised the deeds of their fathers as well as their own powers. This was combined with a series of insults directed at their opponents in an attempt to belittle them and to gain a psychological advantage.

Prior to the ensuing battle, the Celts would begin blowing horns, shouting, and beating their swords rhythmically against their shields until the first warrior broke ranks and charged forward, soon to be followed by the rest of his companions. The forward charge was characterized by squadrons of four wheeled chariots, each supporting two men, moving forward on each flank. The cavalry was characterized by two men mounted on one horse with one of the riders directing the horse and the other carrying a javelin. This combination was similar to that of the charioteers and, like the charioteers, once the javelin had been thrown the thrower would dismount and fight on foot while the other rider would move out of the battle to wait for the enemy to retreat in order to pursue fleeing warriors.[12]

The psychological effect of the Celtic form of warfare can be seen in an account written by Julius Caesar concerning his attempt to conquer Britain. The Britons (who were Celtic) decided to oppose Caesar's landing. Caesar later wrote: "the Britons, either from dry land or advancing a little way into the water, with all their limbs free, and thoroughly acquainted with the ground, boldly hurled their weapons, and spurred on their trained horses. Our men, frightened by all this and wholly inexperienced in this sort of fighting, did not display the same enthusiasm and eagerness as they were accustomed to display in engagements on dry land."[13]

Celtic seamanship varied as to geographic location. Kenneth Macleod in his article, "The Celt and the Sea," claims that the "old Celts regarded the sea as a dark, mysterious power, cruel as an evil woman, but most effective as a protection against their enemies." Macleod bases his remarks on a number of Gaelic poems reprinted in his article. He further states that "the God of the Celt was as the Atlantic, infinite and eternal, terrible in anger, never to be trifled with, mysterious in His actions, harsh to one and gentle to another."[14]

David MacRitchie, in his article "Celtic Civilization," refutes Macleod's statements by pointing to Caesar's description of the ships of the Veneti (a Celtic people who lived on the Atlantic coast of France) around 50 B.C. The description given by MacRitchie, based on Caesar's writings, is as follows:

> . . . broad in the beam, with high forecastle and poop. They were built entirely of oak, and their stout timbers were well riveted together with iron pins 'as thick as a man's thumb.' Their bulk was such that the idea of the small, light Roman galleys attempting to ram them was regarded by the Romans as out of the question; and the ships of the Celts rose so high above the water-line that the projectiles from their forecastles were thrown downward upon the deck-turrets of the Roman galleys.

Caesar further stated that the Celtic ships used leather sails as opposed to linen ones, "whether for lack of cloth . . . or, more probably, because with hoisted cloth sails it was impossible to cope with the strong tides of the ocean or

the hurricane-winds, or to steer such heavy ships properly." Furthermore, iron chains were used to connect the anchors to the ship. Iron chains were far more dependable than the ropes the Romans used.[16] The use of leather for sails was not uncommon in the ancient world. The Athenian navy around 330 B.C. used the skins of hyenas and seals on the sails' edges. This was because of a superstition among sailors that the hides would ward off lightning.[17]

The description of the Celtic ships would seemingly destroy the belief that the Celts were afraid of the sea, but not every Celtic tribe was the same. The term Celt applied to a large number of peoples having a similar cultural background, but who often were commonly referred to by tribal designation, such as the Britons, Veneti, Esuvii, Coriosolites, etc. Therefore, the Celts of Ireland could have feared the Atlantic Ocean while the Celts of the French coast did not.

Regarding trade, the Celts of Britain around 500 B.C. traded tin to the Phoenicians, as did the Celts of the Iberian peninsula. Yet the Phoenician trade with Britain, according to William Preece in his article "Egyptians and Celts," was instrumental in bringing about a cultural exchange between the two peoples. Preece supports his position by pointing to similarities in religious practices and myth. For example: "Egyptian religion is characterized by the worship of animals—particularly 'the bull'—a symbol of courage and strength. In Ireland we have the magical bull of Cooley—the object of Queen Maeve's famous raid."[18]

There also existed trade with the Greek colony at Marseilles, founded around 600 B.C. The principal item sought by the Celts was wine. The pottery vessels used for the transportation of the wine have been discovered as far north as the upper Danube River. Therefore it can be assumed that a very profitable trade existed.[19]

As I have shown, the Celts traded with the Greeks, Phoenicians, Etruscans, Romans, and others of the civilized world. The two most important items which the Celts used in trade were tin, which was used in the making of bronze, and furs. In return, the Celts sought wine—among other items. The knowledge which was passed on to the Celts did not make them the cultural equals of their trading partners, but it is probable that several Celtic tribes gained a satisfactory knowledge of ship construction.

Phoenician merchant vessels had hulls that were large, rounded, and constructed of many beams. Both stem and sternposts were of equal height and rose high above the water-line. The sturdy mast carried a large sail. Anchors were made of lead at a time when other peoples used large stones for the same purpose.[20] It is possible that the Celts copied and improved on the Phoenician model, for both ships had a wide hull with high posts, both stem and stern; and both used a metal anchor. The Celts may have also applied other concepts of Mediterranean shipbuilding to their ships. As stated, the Greeks used leather as part of their sails. Also, around 220 B.C. the Macedonians, among other peoples, employed Celts as mercenaries in their navy.[21]

Though a number of Celtic tribes are considered to be landsmen, there were some Celts, such as the Veneti, who could be classified as seafarers. The Veneti were capable of an Atlantic voyage and Caesar's description of their ships indicates that the ships were strong enough to sustain the rigors of an Atlantic crossing. Also, the ships were large enough to carry goods and supplies long distances. Besides, long trips in the Atlantic and North Sea regions were not unknown. Before 300 B.C., Pytheas, a citizen of Marseilles, traveled around the British Isles and headed north from Britain for six days, at which time he reached Norway (though Pytheas didn't know it was Norway, the description he left strongly indicated it was). Pytheas determined the true position of the polestar, was the first person to make a connection between the moon and tides, and worked extensively with lines of latitude. Because of the location of Marseilles and his explorations around Celtic lands, there exists the strong possibility that Celts such as the Veneti could have learned and profited from his travels. The Phoenicians profited, because Pytheas, returning to Marseilles, reported on the tin trade in Britain which in turn resulted in an increase of that trade from Cornwall across the Channel to Brittany (the home of the Veneti), and from there across France to Marseilles.[22] The presence of Veneti ships in Britain was confirmed by discoveries of the remains of ships, fitting the description given by Caesar, in the mud flats off the Thames River.[23]

As trade increased, the need for more ships, sails for those ships, and new supplies of tin would appear to be a logical result. It is probable that, as in the Pytheas expedition, merchants would have supplied another explorer or explorers with the necessary items to carry on where Pytheas ended, and that instead of exploring Norway these other explorers could have discovered the new world. After all, a trip from Britain to Iceland, Greenland, Canada, or New England would not be inconceivable.

There is archaeological evidence in New England that the Celts or a people similar to them had settlements in the new world. The evidence is in the form of the standing stones, balanced rocks, flat roofed chambers, Mystery Hill, and a linguist's comparison of remains scratched on rocks. The standing stones are monoliths which have appeared throughout much of the northeastern United States. The one in Poughkeepsie, New York, at one time stood nine feet above ground with a similar length buried underground. There are numerous local legends attempting to relate the rock to a fertility rite, but a more practical use would be as a territorial marker or directional indicator. Similar monoliths were used for such purposes in Britain and northern Portugal.[24] Though no marks of significance were found on the Poughkeepsie monolith, other monoliths do bear markings similar to Iberian Celtic script. Barry Fell claims that many of the monoliths might have been used to mark a battle or crowning ceremony—as well as other things. He further claims that these stones are related to the giant monoliths of Brittany (the home of the Veneti).[25]

It is possible that many monoliths are glacial deposits and are therefore confused with the archaeological remains of the unknown visitors (the visitors are considered unknown because the Indians of this area of North America are not considered to have ever worked with stone construction). The glacial theory does present a serious threat to the theory of European visitations, but a number of archaeologists counter by stating that many of the stone structures have a definite mathematical significance. For example, a common unit of length was used in placing

the stones, and the "axes of many balanced boulders and stone circle sites were oriented towards the position on the local horizon where the sun sets on December 21 (the winter solstice)."[26] The defenders of early visitations strongly imply that, like Stonehenge, rock formations here were often used for astronomical functions.

The balanced rocks are similar to the dolmens which often are a form of tomb, and are found throughout the British Isles, Europe and Asia. They consist of one large stone supported by three or more stones. Depending on the tomb's size, one or more bodies were placed in the grave in a contracted position. Unfortunately, no bodies or bone remains have been found at the North American dolmens. Although this could lead us back to the glacial theory, there is, as stated, a definite mathematical significance.[27] The mystery remains as to the actual use of these balanced rocks. Many are large boulders which had to have been painstakingly rolled to a predetermined site. Three or more rocks were then deeply implanted in the ground and covered with dirt. Once the boulder was in place the dirt would be removed, leaving it balanced—only a few feet off the ground—on the lower rocks. The balanced rock often varied in size. It has been theorized that such a construction could have had a directional or religious significance.[28]

The flat roofed chambers are most prevalent east of the Hudson River as opposed to western New York, Pennsylvania, and New Jersey. These chambers are boxlike structures which are "built above ground, usually near the mountain tops." Similarities have been made between the Greek Tholos houses of 4000 B.C. and the Christian churches of 700 A.D. scattered throughout Ireland.[29]

Like the chambers found in Europe, these "nearly always face toward the east, with a prescribed pattern of deviation from true east that can be related to the solar cycle." In addition, the outer surface near the entrance is adorned with an inscription pertaining to one of the Celtic gods. References to Bel are most frequently found.[30] Bel, more commonly known as Beltine, "was celebrated on May 1, a spring-time festival of optimism." The fertility ritual "was important, in part perhaps connecting with the waxing power of the sun, symbolized by the lighting of fires through which livestock were driven, and around which the people danced in a sunwise direction."[31]

There have been a number of theories proposed to explain the chambers' presence and purpose. Several people have claimed they were root cellars constructed by colonial farmers. But colonial farmers built their cellars *below* ground and many of the chambers slant "downards into the banks of hillsides, which increases the chances of water seepage." There is further evidence which destroys the root cellar theory and that is that the chambers were too large. Each chamber contains about 1755 cubic feet with about 10 chambers found in one area along a mile and a half of road. Since six cubic feet of food storage area is needed to keep one urban dweller alive for one year, there would have to have been about 2900 people living in the area of the chambers during colonial times. Since the calculations were based on chambers located in Putnam County, New York, and the population of that area in 1845 was only 1598, it seems improbable that colonial farmers constructed the chambers.[32]

It is possible that the chambers were used for the storage of furs, wine and beer as well as a number of other items. Fermentation of wine in ancient times took place in large bell-mouthed jars. These would require a large space. The wine was carefully watched so that the scum on top could be removed whenever it appeared. Every thirty-six days the wine was inspected and various herbs were added to improve the flavor.[33] Wine storage therefore required some space in order for the local people to properly ferment it. Also, the fermentation of wine and beer requires a cool and constant temperature, which would be provided by the structure's stone walls and roof, throughout the summer and winter months. During the colonial period the settlers made beer from wheat, oats, barley and Indian corn. Though hops were native to America and found growing wild, there was an insufficient supply.[34] The use of barley in the production of beer was an old Celtic custom. The Vikings around 1000 A.D., under the leadership of Bjarni Herjolfsson, discovered an unknown land they named Vineland (Wineland) because grapes and wheat grew wild. Current speculation indicates that Vineland was the present area of New England.[35] What all of the above implies is that the chambers, being large and made of stone, could serve as a storehouse for the fermentation of wine or beer, and that corn, wheat, barley and grapes were so plentiful that the Vikings termed the land Vineland.

Mystery Hill is located in North Salem, New Hampshire, and contains a number of large triangular monoliths. The stones have been chipped away at the edges and markings have been left. A number of the most outstanding stones, when viewed from a particular spot, "line up with key solar events such as the solstice and equinox sunrise/sunsets."[36] This leads to the possibility that Mystery Hill, like Stonehenge, was a crude observatory.

Several scholars claim that the Mystery Hill site was constructed by either colonists or Indians. Logic eliminates the colonists, for few colonists would take the time to drag huge stones atop a hill and arrange them for some future joke. The stones were of no use to the colonial farmer. Besides, the colonists, being Christian, would lack the religious reasons for such an undertaking.

Indians might have built on Mystery Hill, and it seems probable that they did, for radiocarbon tests of charcoal samples taken from between slabs of a drystone walling indicate dates of 1045 B.C. (± 180 years) and 1525 B.C. (± 210 years). These figures would disprove Celtic participation in the placing of stone monoliths on Mystery Hill unless the Celts, as some people believe, built on an old Indian site and used some of the charcoal which had been present. Several stone markings bore a direct relation to Celtic script and therefore support the theory that the Celts did occupy the area.[37]

The Celtic script was primitive, for it was often carved on stone in a vertical line. The alphabet, which contained only nineteen of the letters in our present alphabet, was represented by a series of dots and dashes. For example, four dots represented the letter "E," one dot the letter "A." Four diagonal lines represented the letter "R," two diagonal lines the letter "M." One line to the left of the horizontal line, on which all dots and dashes passed, represented the letter "H," while four lines to the left was the letter "C." Three lines to the right of the horizontal line

represented the letter "S" and two lines to the right was the letter "L," etc. Because of the primitive nature of their script, the Celts were limited in that they could only write simple inscriptions on gravestones and other similar objects. They were subsequently forced to rely on memory.[38]

An inscribed stone found in Weymouth, Massachusetts, according to Fell bore the Celtic inscription "Cease Trespassing. Anyone Treading (Here) is Desecrating a Burial Place."[39] That stone was one of many similar stones found throughout the northeastern United States. The problem with many inscriptions is that they could be faked or could be a product of constant geological and climatic erosion. Considering the primitive nature of the Celtic script and the lack of a complete understanding of the Celtic language, it is not impossible for an over-enthusiastic interpreter to decipher marks as Celtic and to give them a meaning.

Therefore researcher and archaeologist alike are left with a serious puzzle as to whether or not the Celts actually established colonies in North America. Similarities of stone construction and possible linguistic remains (in the latter case there are large numbers of rocks bearing similar inscriptions), coupled with Caesar's description of Veneti ships, which were strong enough to make the Atlantic crossing, all favor Celtic colonies.

Opposition to the above is based on several important considerations. First, no bodily remains definitely determined to be Celtic have been found. Second, people have been known to fake artifacts. Third, radio-carbon testing has often misled people into believing that the Celts could have arrived at North America sometime before 700 B.C., when in fact most studies indicate that the Celts did not enter the European picture until after that date. Finally, there does not appear to be a reason why the Celts would want to cross the Atlantic, considering that they engaged in a profitable trade with the so-called "civilized" world.

The desire to improve their trade might have driven the Veneti to look for furs and minerals, such as copper and tin, in areas other than Britain and continental Europe. European fur resources could have been depleted around 100 B.C. as a result of the heavy demand for furs by the "civilized" world. As noted, much of Celtic clothing consisted of furs, and their ships' sails were made of leather. Around 67 B.C. the Roman Empire began to show signs of expansion with Pompey taking the lead in reviving the Roman navy and carrying on a war against the eastern Mediterranean pirates. Eleven years later Julius Caesar received permission to conquer Gaul, the home of the Veneti and other Celtic tribes.[40] Preparations for war and a desire to replenish existing supplies would logically have driven the Veneti to look for new lands. The explorations of Pytheas around 300 B.C. and his supposed discovery of new lands to the north of Britain could have initiated the oral history that drove them northward. Leonard Sawatzky and Waldemar H. Lehn of the University of Manitoba recently proposed the theory that the Vikings could have reached North America by island hopping while in the process of following a mirage. They state that the reason why a mirage of land could appear "is that Arctic temperature conditions can bend light rays around the curve of the earth, placing a real image on an elevated, seemingly real horizon."[41] Therefore, if it was possible for the Vikings it could also be possible for the Celts. There exists evidence that Irish priests reached Iceland around 790 A.D., though the Vikings didn't arrive until 860 A.D.[42] The ship which the Irish priests used around 900 A.D. tended to resemble the descriptions of the ships used by the Veneti.[43]

Regarding the radiocarbon tests (a form of test which has not yet been universally accepted), it is possible, as I have stated, that the Celts built settlements over abandoned Indian villages. The intentional faking of artifacts could be a viable threat, except that the archaeological remains are so extensive that it would appear a unified conspiracy was in operation in order to sabotage the study of history. The reason why Celtic bodily remains have not been discovered could be due to several possibilities: colonial farmers, in order to improve their farms, could have unknowingly removed grave markers; hostile Indians could have massacred many Celts and scattered their remains; the Celts could have intermarried with friendly Indians and eventually adopted Indian customs and characteristics until they became indistinguishable from the Indians; or finally, many of the Celts could have returned to Europe, abandoning structures which have since lost much of their significance to history.

The trade between North America and Europe might have been profitable, for North America would have offered the Celts a rich supply of furs, timber for ships, and copper for tools. Wine and beer could have been produced in New England and fish caught in abundance off the Massachusetts coast. The Celts could have easily supplied their ships with sufficient provisions to return to Europe. Once the Roman Empire conquered the Veneti and Britain, the Atlantic trade would have ended. The Irishmen, though Celts, were not seafarers and the Romans, once Britain had been conquered, were more concerned with events in Rome and the eastern Mediterranean. Since the Celts left no form of practical written history, their explorations would have become nothing more than legend and eventual speculation.

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UFOs AND MYSTERIOUS DEATHS OF ANIMALS

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by Sebastián Robiou-Lamarche

FREQUENT attempts have been made to correlate the appearance of UFOs with the mysterious deaths or disappearances of animals in certain regions of the world.

A famous case is that of "Snippy," the horse found mutilated at Alamosa in the state of Colorado, USA, in November 1965, and whose mysterious fate has been linked by various investigators with UFO happenings in that part of the country.

The year 1973 saw, both in the USA and in the whole of Latin America, what was possibly the most important UFO wave of recent times. During the following year, 1974, it was the turn of Europe to have abundant UFO sightings.

Following a similar pattern, mysterious deaths of animals began to be reported, from January 1974 onwards, from various American states, notably Kansas, Nebraska, Iowa, South Dakota, Colorado, Oklahoma, and Minnesota. (See APRO Bulletin Vol. 23, No. 4, January-February 1975. Also Jerome Clark's article "The Strange Case of the Cattle Killings," in *Fate* for August 1974).

More recently, on March 4, 1975, the influential newspaper *The New York Times* reported "numerous mutilations of animals in the northern part of Texas and in Oklahoma," and stated that Governor Boren of Oklahoma had launched an enquiry into the question of the mysterious deaths of animals.

In many of the cases the dead animals have been found to lack an organ (an ear, the tongue, the nose, the tail, or the reproductive organs) and the mutilations have been carried out "with the skill of a professional." Such, in fact, was the conclusion of professors of medicine in the University of Minnesota after they had performed numerous autopsies on the carcasses of such animals (see *Replica,* Miami, Florida, March 19, 1975). Furthermore, it was noted that the dead animals all appeared to be "completely without blood" as though the body "had been drained by a needle."

Here in Puerto Rico, between February and July of 1975, numerous cases occurred of deaths of animals in almost identical circumstances *and coincidentally with the occurrence, in the selfsame geographical region* as dozens of UFO cases and of cases of other phenomena held to be related to UFOs.

In the course of our enquiries we have conducted scores of interviews, made many laboratory studies, and spent months of time on analyses and sifting the material. What follows below is, in concentrated form, the gist of our work, which may well throw an entirely new light upon the UFO phenomenon.

THE MYSTERY KILLINGS

The first deaths took place before February 25, 1975.

Then, from that date onwards, innumerable strange killings of animals began to be reported from the area around the town of Moca in the Northwestern corner of the island of Puerto Rico. Then, at the end of March 1975 there came the first report from nearby Aguadilla, and cases began appearing gradually in other areas too.

Already in March the term "The Vampire of Moca" had been coined and was current among the people, this being the alleged cause of the strange animal killings. These reports were headlined in the chief daily papers. One journal, *El Vocero,* which gave extensive publicity to the killings, called upon the Government, in an editorial on March 15, to investigate the enigma, and reverted to the same theme in its editorial of March 21.

As a possible explanation for the deaths that had occurred up to then consideration was at first given to *snakes.* Dr. Juan A. Rivero, the herpetologist at the University of Puerto Rico, investigated the cases and stated on March 22 that the deaths of cows, goats, and birds "definitely were not caused by any snake." On the same date, Saturday, March 22, Senator Miguel A. Deynes Soto, President of the Agricultural Commission of the Puerto Rico Senate, visited the Moca district, together with Attorney-General Victor Calderon, and the Police Commandant for the Western Region, Colonel Samuel Lopez. The theory that snakes might have been the possible cause having been ruled out, the authorities now began to think that the "Vampire of Moca" was some mentally unbalanced human. And so public promises were made that he would speedily be captured and brought to justice. So far as we know however, up to the present time no charges have been brought against anyone. . .

On the following day, March 23, veterinarian Mariano Santiago, of the Federal Department of Agriculture, said of his investigations that he had come to the conclusion that he was unable to explain the causes of the "strange wounds" found on the bodies of the animals. After that there arose a widespread popular belief that the mystery deaths were the work of "vampire bats." So once more Dr. Juan A. Rivero himself, author of various works on the zoology of the Caribbean region, had to make it clear, in statements published on April 7, that that possibility was ruled out too.

Meanwhile, a few days previously, Police Superintendent Astol Calero Toledo had declared "I don't believe in vampires!" But he was quite unable to give the newspapermen an explanation for the dead animals.

On April 9, Sr. Felipe N. Rodríguez, Assistant Secretary of Agriculture, stated that "the situation is preoccupying—and occupying all the time of—my department." And another spokesman, Sr. Isaías Fernández, Federal Meat Inspector, said that he "did not know the reason for the deaths of the animals."

Throughout the month of April further cases were occurring around the Metropolitan Area of San Juan itself, coinciding in time with various UFO sightings in different parts of the island. In July there were more cases of animal mutilation in the area where they had started, Moca. Up till today no official report whatsoever has been made giving any attempt to explain the mystery killings.

THE FEATURES OBSERVED

The undermentioned observations are valid in all the cases that have occurred:

1. The animals are killed during the night, usually in the early morning hours.

2. In almost every case, the owner of the animals, even when he is sleeping quite near to them, perceives no noise or alarm among the animals themselves.

3. In some of the cases the owner is awakened by a "loud screech" or by what sounds like the flapping of the wings of a gigantic bird. In a few of the cases the owner states that he saw "a strange animal" fleeing immediately after the attack on his animals.

4. The animals give the appearance of having died as a result of the wounds received, although in certain other cases these do not look as though they are sufficiently serious to have caused death.

5. The wounds on the animals seem in many of the cases to follow a definite pattern. They look as though they have been produced by a sort of *punch* or sharp pricking instrument which cuts through all organs or bones that it encounters in its path. The wounds seem to vary according to the size of the animal. In the case of birds, the diameter of the wounds is about one quarter of an inch; in cases of goats, the diameter is over an inch. The depth of penetration of the wound also varies in many cases. But what is above all particularly curious to note is that *there is never a drop of blood anywhere around the wound.* Furthermore, the wound remains open: that is to say, it is as though the instrument producing the wound has simultaneously extracted any flesh or organs which it encountered in its passage.

The positions of the wounds vary, but in the majority of the cases they occur near the neck of the animal or in its thorax.

6. In addition to the wounds, some of the animals also have their neck completely broken. And in a number of cases there is also mutilation of organs. The case that has been studied in this respect (Case No. 12) was handled by Dr. Angel de la Sierra, a biophysicist in the University of Puerto Rico. He reported that the cut inflicted on the ear of the piglet in question "is similar to what is done in experimental surgery for the purpose of investigating defects in hearing."

7. In various of the cases, the killings have been "selective." That is to say, in pens where there were other birds or animals, only one species has been killed. None of the other birds or animals show any sign of wound or attack.



One of the goat cases examined by the author.

8. The list of animals killed, and their percentages, is as follows:

Domestic fowl (hens, cocks, guineafowl, etc.)	182	58.14%
Ducks	40	12.78%
Goats	33	10.54%
Rabbits	20	6.39%
Geese	18	5.75%
Cows	8	2.56%
Sheep	5	1.60%
Pigs	3	0.96%
Dogs	3	0.96%
Cats	1	0.32%

As can be seen, the bulk of the victims are domestic fowl. If we consider ducks, rabbits, and geese also as domestic animals kept in pens, then the total amounts to 83.07%, which indicates that the marked preponderance of the mystery killings involve animals kept in pens and hutches.

9. The cases occurred in both rural and suburban areas.

10. In cases 7, 15, 22, 23, and 37, the owners of the animals say they saw "a strange animal, very hairy, running away . . ." Or they say they heard "a screech, as though from a gigantic bird," or "a loud hum," or "a deafening noise," or "a loud flapping noise." Case No. 7 was investigated in very great detail. Don Cecilio Hernández, aged 65, lost a total of 35 chickens over a period of several nights. On the last of these occasions he saw "what looked like a woolly dog, . . . with no legs or head . . . running off towards the hills silently." And he adds: "I have never in my life seen such a sight. It looked just like a mass of wool running along."

11. The following other cases are not directly linked with the deaths of animals, but they do all involve accounts of strange animals:



a. María Acevedo, of the Barrio de María district in Moca, says that one night (12:30 a.m.) early in March she heard "a strange animal on the zinc roof of her house." She could hear it walking about and "pecking." Then it flew off with a "terrible screech."

b. Pellín Marrero, of Rexville, Bayamón, told the press that he had seen a "whitish-coloured gigantic condor or vulture" flying around over the region. (March 25.)

c. On March 26, workman Juan Muñiz Feliciano, of Barrio Pueblo, La Sierra sector, Moca, said that, when returning home at 10:00 p.m., he had been attacked "by a terrible greyish creature with lots of feathers, a long thick neck, bigger than a goose," which he reckoned to weigh about 50 lbs. When he called out to his neighbours and began throwing stones at it, it flew away.

On that same day, March 26, Olga Iris Rivera and Bárbara Pantoja, both of the Nemesio Canales housing complex, said they had seen "a gigantic bird flying around among the clouds."

12. The majority of these cases of mysterious animal deaths were the subject of police investigations, but so far nothing has been published regarding the results of their investigations nor has any attempt been made to explain the cause of the mystery killings.

SOME OF THE MORE ENIGMATIC CASES

1. The most mysterious and puzzling case in the Moca region, and the one that has been the subject of most investigation, both official and private, is the one that occurred at the farm of Sr. Héctor Vega Rosado.

On the morning of March 18, Señor Vega found two of his goats dead, each with a wound from some sharp instrument under the thorax and on the upper part of the haunches. Next day, March 19, he discovered to his great surprise, that there had been a repetition, with ten goats dead, seven wounded, and ten missing. The report of this received great publicity.



Case from Moca, February, 1975.

Sr. Luis R. Urbina, radiation instructor with the local Civil Defence authorities, was quoted as having found evidence of radioactivity. This report caused much alarm. Some few days later, Señorita Mildred Cabán, a radiation technician, stated that she had found a count of 0.005 in the same area. Our own investigations on March 22 showed however that the radiation detected with a Geiger counter was normal for the region in question.

The farm of Sr. Héctor Vega Rosado, where these goats had been killed, is to all intents and purposes quite open, being separated merely by a wire fence from the small adjacent road which links the farm with Barrio Pueblo, a district of Moca. There is no electric lighting in the area. Anyone who studies the area will find it extremely difficult to comprehend how anybody, even with the assistance of others, could catch ten goats there in the open field in the middle of the night and kill them with some sharp stabbing weapon and wound seven more and carry off a further ten. The wounds on the goats all lie around the thorax and are almost an inch deep. In some of the animals the wound goes right through the body, and yet there is no sign of any blood around the wounds.

Although Sr. Vega himself thinks it possible that some unbalanced maniacal person might have caused the deaths, our own view is that, considering all the circumstances, the solution is not so simple as that. The police, for their part, have published no conclusions about the case.

2. Before going to bed, Señor Buenaventura Bello was in the habit of going out to feed the geese which as a pastime, he kept in the back-yard of his home in Los Angéles, Carolina (part of the Metropolitan Area of San Juan, Puerto Rico). And so, as usual, he went out to the geese at 12:30 a.m. on April 5, though he noted at the time that one of his dogs, who always went with him, this time preferred to remain at a distance, "barking insistently at something or other."

Later that morning, at about 8:30, Sr. Bello found his ten geese and three pullets all dead and scattered in a circle. When the bodies of the geese were examined, it was found that each of them had a deep stab wound one-quarter of an inch in diameter, from which the feathers had been removed.

One of the dead geese was found in the back-yard of the neighbouring house, which was unoccupied at the time. This goose, unlike the rest, had had the upper part of its body cut right off "as though with a very sharp instrument."

Sr. Bello immediately informed the police, who in due course conducted an extensive investigation, as also did the Federal Department of Agriculture, who took away several of the dead geese for examination. Thereafter, Sr. Bello's dogs "refused to go out into the yard, however much you tried to push them," and would not do so until several days had elapsed.

A curious point to note is that Sr. Bello's bedroom is right next to the yard where the geese were kept. Despite the fact that these birds are extremely prone to giving the alarm at the least sound, and are in fact used in many places as "watchmen," on the night in question Sr. Bello heard not the least noise, whereas he had always done so on previous occasions when attempts had been made to steal his geese.



One of Señor Buenaventura Bello's mutilated geese, San Juan, April 5, 1975.



An X-ray of one of the mutilated geese, showing penetration.

On March 8, while in the kitchen preparing a meal, Sr. Bello heard, for a brief moment, a strange and "extremely penetrating" noise, which astounded him. Straight away, one of his two dogs started to bark frantically, "as though there was something in the room." The dog continued to bark in this fashion until the strange noise had stopped. The witness was unable to give any explanation for the noise, any more than there is any explanation as to what or who could have killed his geese in so strange a fashion.

In the course of our investigations we managed to have one of the geese X-rayed and to have an autopsy performed on it by a well known pathologist who prefers to remain anonymous. The result of this examination shows that the bird received two stabbing wounds which penetrated to a depth of more than an inch and destroyed the adjacent organs, while at the same time in some fashion cicatrizing the wound so that no blood would flow from it. The wounds are a quarter of an inch in diameter and appear to converge inside the bird's body.

Neither the body of the goose which we had examined nor the site showed any radioactivity in excess of what is normal for the area, nor were any other traces found. It has been impossible to establish the cause of the wounds, though everything indicates that both wounds were inflicted on the bird simultaneously, causing instant death.

UFO SIGHTINGS IN PUERTO RICO

The first of the cases with which we will deal took place in January, 1975. The witness failed to give the precise date. Señora A.A. (she wishes to remain anonymous) was asleep in her home in the Garden Hills sector of San Juan when she was suddenly awakened by a strange sound. It was a powerful intermittent hum, accompanied by another constant hum which appeared to be of lower frequency. The electric fan in the bedroom suddenly stopped. Alarmed at this, Sra. A.A. took the daughter who was sleeping with her, collected her other child, and they all went to another room and shut themselves in.

A few moments later, the loud hum stopped and the electric fan started up again. Sra. A.A. had seen nothing. She had merely heard the hum, which scared her.

A few days later, in the patio of her house, near the swimming pool, her gardener found three strange marks forming a triangle. Around that time she also learned that on the same night when she had heard the weird hum, the family in the house next door had seen an intensely bright light above the palm tree in front of the house. The light itself was not unbearably bright, but it had other lights, green and red, with it and it seemed to have "bright holes" in it. This strange light had remained there for about ten minutes and then moved away and disappeared from view in the west.

This case has been the subject of intensive investigation. The three marks found in the patio were three inches deep and four inches wide, and formed an equilateral triangle with each side measuring 44 inches. Engineer Oscar Hernandez of the Foundation Engineering Laboratories made a profound study on the spot in his laboratory, covering all aspects of the terrain. As a result of his study, he was able to establish that an average weight of around 14,190 lbs. would have been required to produce such holes in that type of soil. So far, no grass has grown again on the areas where the marks were, despite the fact that no signs of burning were detected there. Likewise no signs of abnormal radioactivity were detected in the area.

The next case was on January 12, 1975, when Señor Pedro Vega Avilés stated that he had seen three objects "brighter than the stars" traveling southwards in a zigzag motion near San Sebastián at about 5:30 a.m.

MOCA

On March 12, when the reports of mysterious deaths of animals at Moca had already begun, a farm worker from Moca named Luis Torres Aldaondo, and his son and daughter-in-law plus eight neighbours, all saw, passing overhead at tree-top height at about 9:30 p.m. "something that looked like a police screen of various colours, and spinning like a top." Then it suddenly began to rise as it moved off eastwards. The witnesses said it looked as though made of "shining silver" . . . and that it was "bigger than the house." They said they heard "a faint whistling noise." The sighting lasted but a few seconds before the object was lost to sight among the clouds.

On March 21, just a few days after the mysterious killings of goats which we have already described, and when there had already been a dozen or so of similar cases, a party of witnesses, Señor Carlos Santiago and his wife and one of their daughters, were driving in their car when they observed a UFO which passed at great speed and very low over the El Mamey district of Moca. The object appeared to be "incandescent" and was soon out of sight. On March 24, Dr. Juan Sánchez Acevedo, a well known Moca physician and the local president of one of the political parties, was at work in his study at about 12:00 p.m. when he heard a "shaking, shuddering" noise as though from something in the air. He described the sound as like a long drawn-out *"ruum"* . . . "and stronger than an earthquake." The vibration caused the doors to rattle and his car to shake. Dr. Sánchez Acevedo at once wakened his wife, but by then the noise had moved away and seemed to be fading out. They saw nothing.

Round about the same period in March, three witnesses, Arnaldo Rullán, Carlos Rullán, and Alexis Fernández, reported having found "an area of flattened reeds, circular, as though some heavy flat-shaped object had settled there." And elsewhere in the same town of Moca, at the sports-field, while they were watching a game of soft-ball, three witnesses, Teodoro Quiñones Muñiz, Norberto Méndez, and Jorgo Ramos, saw "a greenish-blue disc descending from the sky." They then saw it perform a sharp turn and move off rapidly towards the east. (The date of these last two happenings has not been established.)

During the days that followed, various witnesses said they had seen a weird bird at various places in the Metropolitan Area of San Juan, and meanwhile reports were still coming in of strange killings in other towns on Puerto Rico.



Goat belonging to Señor Héctor Vega Rosado, Moca, March 19, 1975.

SAN JUAN

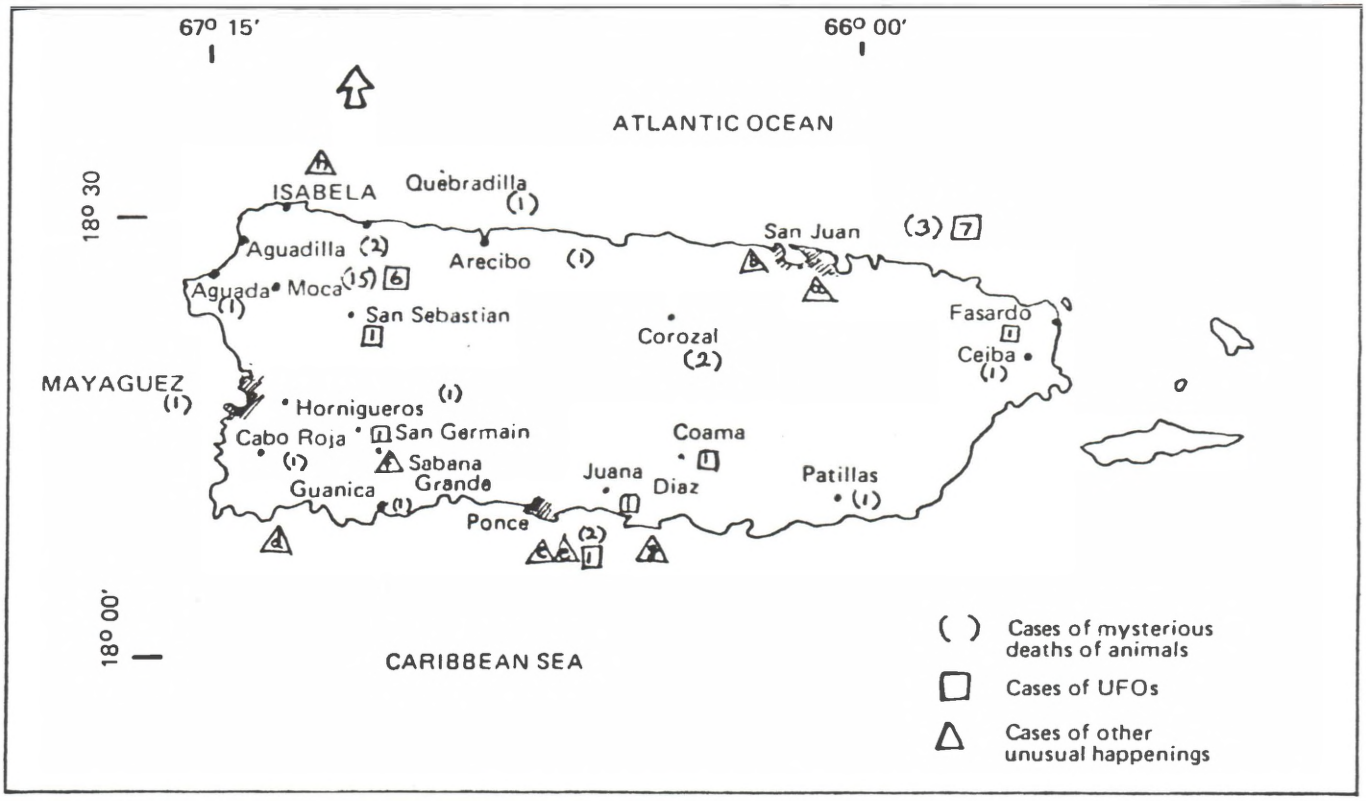
On March 21 came the first sighting (of the current wave) of a UFO over San Juan, the capital. It was at 9:30 in the morning, when a group of people walking along in Santurce saw "a saucer-shaped object moving off towards the North, in the direction of Isla Verde." They said it was traveling at the height of an aeroplane, but at a staggering speed, and that it had a dome "which seemed to be metallic."

Three days later, on March 24, near Puerto de Tierra, in the same area of San Juan, two girl secretaries, Antonia Cintrón and Paquita Martínez, were returning to work from lunch at 1:00 p.m. when they saw "a stationary luminous object . . . which afterwards began to move slowly, emitting brilliant flashes of light." They added "It was something very strange; not an aeroplane; it seems it must have been what they call a 'flying saucer' because it was oval and silvery coloured."

April 6 is a very important date. This was the date of the first strange case of dead animals in the Metropolitan Area of San Juan itself, i.e. the case of Sr. Bello's ten geese, which we have already described above. And, also on this same date came the first close-sighting of a UFO right in the centre of San Juan.

That night, Willie López was working as a disc jockey with Radio Station WBMJ (Radio Rock), located in the Darlington Building at Miramar, when he heard three very loud blows on the outside window behind the controls. (The radio station is on the top floor of the building in question). Going over to the window, the young López saw a luminous figure in rapid movement which seemed to hide behind one of the external columns of the building. Then, remembering that he was all alone in the studio, he telephoned a friend, José Manuel, who lives in the same multi-story building. However, by 10:45 p.m. his friend had still not arrived, so Willie López, unable to contain his curiosity any longer, went over and opened the window suddenly. And he beheld, right in front of the building, and on top of the adjacent cooling tower, "a luminous white object, saucer-shaped, about forty feet in diameter," and only about three or four feet from the building. In the interview which he gave to the press Willie López said he had noticed it was "making a rocking movement." The UFO itself was stationary, the rocking movement was slight, and the UFO's luminosity was constant. Alarmed, Willie López slammed the window shut, and then instantly stopped the music he had been broadcasting, and told the listeners what he had just experienced. (Some days after this incident, the young disc jockey was still suffering from nervous shock and under treatment with sedatives.)

At 1:50 p.m. (precisely the same time) on Tuesday, April 8, when López was in the studio, along with announcer Raymond Rosado and Rosado's wife, and just as they were about to go on the air with a piece of promotion



The island of Puerto Rico

based on the events that had happened two days previously, they heard the whole air conditioning system of the building start to vibrate. As they described it, "it seemed as though the whole place was about to collapse."

Meanwhile, just as this was happening at the studio, out at Guaynabo, where the radio station's actual transmitters are located, things were also happening. Rafael Pérez, Efraín Camacho, José A. Soto, Wito Castro, and Johnny Acevedo all saw a shining object descend and produce a powerful explosion, as a result of which it seems that the whole district, including the WBMJ (Radio Rock) transmitter, was without electricity for twenty minutes. The object that fell made a crater several feet wide and the ground at the spot remained hot for several days. While the possibility of its having been a meteorite naturally cannot be ruled out, does there not seem to be a strange element of coincidence about this whole business?

POWER FAILURE

On April 11 there were sporadic power failures in various parts of San Juan. On the day following, April 12, a group of eyewitnesses saw a UFO "resembling the rotunda on the Capitol" near Paquita's Place, a restaurant in the Piñones district, to the northwest of San Juan. And on April 17, again at Moca, a lady named Wanda Feliciano, and her brother Elly and his companions Félix Cruz and Rosaura Vargas, claim to have seen a UFO. (This date too coincides with the strange deaths of animals in various places.)

WEIRD CREATURE, ANIMAL EFFECT AND ANOTHER MUTILATION

On April 18, Orlando Franceschi, janitor at the San Lucas Hospital at Ponce, claims to have had a personal encounter "with a horrible monster that he would never be able to forget," right in the back-yard of his own home. Coming out of the bathroom, at 8:00 p.m., he was just about to go to the ice-box for some water when, looking out through the window that gives on to his back-yard he saw what at first he took to be a dog pass by. Astonished, since he knew his own dog was tied up not far from there, he seized a shovel which was standing near the door and stepped outside. "Arriving round at the back of the house, I saw nothing, but when I came back . . . I saw it coming towards me . . . it was the same thing that I had seen go past the window; with long ears, a long nose too; the mouth wasn't very visible, but I noticed a slit with no lips, two black blobs which were its eyes, the jawbone of an ape . . . and it was walking the way 'zombies' do, swaying from side to side. It was an amazing sight . . . I felt it was going to attack me, so then I hit it with the shovel. It was about four feet or so from me . . . it was very small, let's say about 4 ft. 8 inches high . . . I hit it on the chest with the shovel and the blow sounded a hard one. On feeling the blow from me, it backed away, but it made no sound. It moved as though it was floating. I said to myself: 'this is no vision' . . . and I hit it a second time with the shovel and again it backed away. When I hit it the third time, I was in a rather uncomfortable position . . . I can't explain

it exactly, but I fell, as though I hadn't hit him, I fell just because of the weight of the shovel. I tried to get up again, but, I don't know exactly how or why, I was paralyzed . . . I don't know if it was through fear . . . I had no strength. I felt there was something that wasn't in me. I looked around and the creature was gone. Then my strength came back. There was a zinc sheet in the neighbour's fence between the two houses, and this had been pushed through on to the other side as though it had escaped through there. I can't of course swear to this, I don't know whether it flew away or whether it just disappeared. While all this was going on, my dog didn't bark even once."

THE AFTERMATH

After this episode (transcribed by us here from his original taped statement) Señor Franceschi, who is aged 26, went back into the house, where were his mother, his wife, and his two daughters. Seeing the distraught state he was in, the family at once called the police, and they launched an investigation the results of which have not been divulged. Franceschi remained under sedation for the next two days. Immediately after the incident, five young men who were returning that same night from the Glenview housing estate said they had seen a "strange dwarf" and pelted it with stones. It is to be noted that a cock was killed that same night and was found near Franceschi's house. It displayed the same characteristic wound as were found on the other dead animals and which we have already described.

A week later, Señor Franceschi started hearing voices which, as he said, "I am absolutely sure were not imaginary." And he went on: "I heard what sounded like somebody speaking to me, and this voice said that on Saturday, May 31, all Christians should meet together to pray. I heard the voice repeat this to me seven times. It said that the churches must remain open, so that there would be nobody who had not prayed . . . and that if this was not fulfilled even worse things would happen than are happening now."

In fact nothing did happen on Saturday, May 31, though lots of people heeded the exhortation which Señor Franceschi had had published in the newspapers.

JUANA DÍAZ AND COSMO

Let us however return now to previous events. On the day following the Franceschi case, that is to say April 19, Señora Alda Isabel Vázuez de Figueroa and her daughter Camille observed a UFO at Las Corozas, a suburb of Juana Díaz, a town near Ponce. Said the eyewitness: "It was around 10:15 p.m. I was just tidying up, and then I went to get a dress to iron it. I opened the door leading to the patio, and I saw a vivid orange light hanging stationary above the garage. It was quite near, and I stood there quietly, watching. I remained there like a statue for I don't know how long—maybe five minutes—and the light remained in the same spot. The thing was bigger than an automobile wheel . . . Then it rose up a bit, quite silently. The body of the thing was very orange and its brightness was enormous. Then it moved away and was concealed behind the mountain, but still leaving the whole area lit up."

On some subsequent date after April 20, which we have not been able to establish precisely, Señora María Socorro Janer and her husband saw an object "shaped like a cupola, with a vivid bright light," when they were travelling by car near the town of Cosmo, not far from where the last case had occurred.

ARSON-LOO?

On April 29, at 3:30 a.m., Señora Juana Vázquez and her children were awakened by something that lit up their house in Peñones, a suburb of San Germán. One of the most astonished members of the family, Ivan, aged 17, said that they got up and, looking out of the window, saw "a bright object stationary over their lavatory." Señor Vázquez and the children Jennie, Luis, Pastora and Ramonita confirm this.

The UFO was shooting out "flashes of blinding light" which made it impossible for them to make out the precise shape of the object. The lavatory caught fire, and the witnesses heard some "faint sounds." Then came other sounds that were "louder and of higher pitch," and the UFO shot upwards and vanished.

The lavatory continued to burn and the fire was put out with the help of the neighbours who came rushing up immediately. One of the neighbours, Rubén Hernández Blas, an agricultural worker, said he had seen the UFO as it was moving away. This case created a great commotion in the whole district and was thoroughly investigated by the police.

Other residents in the district reported that on that same night they had noticed a great deal of disturbance among their domestic animals, especially the dogs, which had barked furiously. Other reports, unconfirmed, indicate that two cows were found dead at the time, in very mysterious circumstances, right inside the suburb of Peñones.

CUPEY

The area of activity seems to have moved, and at 4:30 a.m., on May 4, a Señor R_____, residing at Cupey, to the south of the Metropolitan Area of San Juan, "saw a UFO with a big, intensely yellow pulsating light on one side (the extreme right from his point of view) and another less vivid light at the other side, plus a row of eight rectangular lights," stationary at a distance of about 1,500 ft. from his suburban home. He at once aroused all his family, who all watched the phenomenon for 45 minutes until they grew weary and went back to bed. The following day they went back to the spot where the UFO had presumably landed and they found an area, some 25 ft. in diameter, which "seemed to be burnt." They observed moreover some strange marks, shaped like feet with only three toes. These were 14 inches long and tapering from a width of 4 inches at the back to 19 inches in front. These marks seemed to be in a straight line, and spaced at intervals of 50 inches. Along with these marks, the witnesses also found some "scratch marks" on the ground. This case, which received no publicity, was investigated by electrical engineer Heriberto Ramos.

PROFESSOR'S VIEW

May 17 brought two high-altitude sightings. One of them was seen from Las Crobas, Fajardo, by Gustav Zeissic, a doctor of astronomy and professor of physics at the University of Puerto Rico. Others with him who saw it were Julio Peignand, a professor of psychology, Luis A. Delgado de Léon, a sculptor, and José F. Delgado Ramírez, a banker.

LOW LEVEL UFOs

On the same day, May 17, at 9:30 p.m., came another low-level sighting of a UFO, sighted from two places in the Metropolitan Area of San Juan. At Park Garden in Rio Piedras, Mérida Méndez was in conversation with Georgina and Norma Toro in the back-garden of the two last-named. Norma suddenly saw an object . . . "round and yellow and all with a very powerful light," and shouted to her two friends to look. The UFO was stationary at an angle of about 60° of elevation, above a neighbouring house. They noted that the object consisted of three parts, and that the middle part had some "windows" which emitted a brilliant green light. Suddenly, as they watched, the UFO started "to rise, at an angle, rotating as it did so, and making a 'pu-pu-pu' sound." They also saw that as the UFO rose a red light came on inside it.

After the UFO had climbed higher in the sky it remained there circling around over the area for some minutes. It then disappeared from sight.

On that same night, May 17, approximately one hour later, a UFO, flying slowly and very low, was seen from the Miramar sector, in the same part of the suburbs of San Juan, by a professional man and his wife who prefer to remain anonymous.

On May 24, at 9:50 p.m., not far from the same area, the Ortiz de Rivero family reported that they too had seen a UFO flying low, "with blinking red light." As it moved off towards the southwest the light then became a vivid white. The witnesses stated that on its central part it had what they described as "elliptical skylights showing a yellow glow."

PILOT'S REPORT

After this last sighting, the nature of the reports changes and they now refer generally to UFOs seen at great heights over more distant regions of the island, such as Maricao, San Geraldo, and Cayey-Salinas. On Wednesday, June 18, two commercial air pilots informed the press (anonymously) that they had seen UFOs over Villalba and over the area around San Sebastián. In one case, said one of the pilots, "Some weeks ago, between Barranquitas, Villalba and Ponce, I saw two white lights and one red one stationary in space. The red light was flashing, and the two white ones very brilliant. The time was about 11:00 p.m. The object—or the lights—were towards the northwest, that is to say, nearer to Ponce. Then at one point the UFO started moving up and down, as though simulating impulses, and flashes began coming from the lights." Amazed at what he had seen, this pilot called up the Air Control Centre to ask whether there was any plane or helicopter in the area, but the reply came that there were none.

REMARKS AND CONCLUSIONS

1. Nobody, either privately or officially, has succeeded in establishing the cause of the deaths of the animals. Official police investigations took place. Also investigations by the Department of Agriculture and by federal agencies. The conclusions were . . . silence.

2. It is not possible to establish categorically a link between the mystery deaths of animals and the UFO sightings. However, it must be emphasised that both of these phenomena were occurring simultaneously, and practically in the same chronological order, in certain definite geographical zones.

3. The UFO cases started at the beginning of the year. The strange deaths of the animals began to be reported before the end of February. In the town of Moca both the phenomena—UFOs and animal deaths—were occurring simultaneously, and when sightings of UFOs outside the Moca area began to be reported, so too did the strange deaths of animals in other places also begin to be reported. Around the end of July, 1975 came the last cases of strange deaths of animals in Moca, as though a cycle was closing. *Since that date we have no further cases of either phenomena.*

4. We think we can safely say that 1975 has been the peak year so far as Puerto Rico is concerned for the weird and strange. In addition to the UFO phenomena and the strange deaths of animals and a number of reports of sightings of an enormous bird, which we have quoted above, we have also had the undermentioned happenings of a strange nature:

a. January 14, 1975, at 2:30 p.m. a mysterious explosion was heard throughout almost the entire Metropolitan Area of San Juan. The Puerto Rico National Air Guard (i.e. the Air Force) deny that any machine of theirs broke through the sound barrier over the city and caused this spectacular noise. The cause remains unexplained.

b. On that same day, January 14, at 7:30 p.m. Señora Isabel Dávila of the Santa Juanita residential estate at Bayamón claims to have heard a strange moaning noise and to have seen tears of blood gushing from the eyes of an image of the Sacred Heart. This happening received widespread publicity over a period of several weeks.

c. January 23: Señora Dionisia Arteaga reported that on this day her son Radamés saw blood coming from a picture representing The Almighty which hangs in her residence in the Dr Pilá housing complex in Ponce.

d. February 22. A search was called for after a boat failed to return to the town of La Parguera. Six days later, on February 28, the boat was found drifting in the Canal de la Mona, with everything in complete order, the engine in perfect condition, but both the occupants, two young professional men from the district, missing.

e. March 6. Another strange explosion of unknown origin shook the town of Ponce. It was heard practically all over the town.

f. From the beginning of March reports of fresh "miracles" began to come from the town of Sabana Grande, where there is a sanctuary for religious pilgrims—due to the alleged appearance of the Virgin there on May 25, 1953. These new reports of "miracle cures" continued over the following weeks.

g. April 1. The press reported that a sailing boat had been found without its crew. The boat had put to sea a few days previously from Guayamar, on the south coast of Puerto Rico, and the Coast Guard had mounted an energetic search for it.

h. June 20. Some wax remnants on a porcelain plate are allegedly converted into an image of the Virgin del Carmen. This event is reported to have occurred at Isabela, in the home of Arturo González and his wife. According to the report, Father Ignacio and Father Elías, priests of the local Catholic church in the town, accepted the existence of the image as authentic.

5. What is above all evident from all this is that we are seeing what we might term *a new phase of activity by the UFO phenomenon.* The UFO phenomenon is now manifesting itself more openly; it is ceasing to be rural, and in many cases it is now a town phenomenon; there are more low-altitude sightings; there are three cases with physical marks left on the ground, one of these being the alleged incendiarism in an outhouse. The UFO theme is the subject of frank and open discussion in the organs of the press. And, above all, it is now connected in the mind of the public with the killing of animals.

* * *

In conclusion, I must add that the work of compiling this report has been made possible thanks to the cooperation received by me from: William Santana Font, architect; Noel Rigau, agricultural expert; Oscar Hernández, engineer; Heriberto Ramos, engineer; Salvador Freixedo, S.J.; Alfonso Martínez Taboa, Carlos Alvaredo, Freddy Badillo Javariz, Francisco Marín, José Vargas Lisboa, Osvaldo Laurido Santos, and Rafael Portela.



THE TOMB OF KHUFU: MYSTERIES OF THE GREAT PYRAMID PART II

(Continued from last issue)

by Norman Gholson

UPON scrutinizing Herodotus's description of the Great Pyramid's construction, one is rather startled to find that it reads like any modern work on the subject. Herodotus says that the pyramid was first made in steps, and with the aid of shaduf-like machines, filled in completely. This is the basic theme of the modern theorists. Herodotus is also correct in writing that the Great Pyramid was built during the reign of Cheops, the name by which Khufu was known to the Greeks. Herodotus could have learned much of this from Egyptian priests, including the existence of underground chambers. Furthermore, Herodotus is correct on many details—which indicates there is substance to his stories. Assuming that the Herodotus account was truly historical, why did he refer to supposedly *non-existent* subterranean chambers at three different places in his account? It is quite clear that Herodotus gave credence to this story of underground chambers, and he certainly was no dupe.

Archaeologists have pointed out that no canal such as Herodotus mentioned while telling of the underground chambers has ever been found. Such authorities, however, are not considering what 4500 years of desert weather can do to a canal. The ancient Egyptian equivalent of the Suez Canal, built in the Middle Kingdom (2060-1788 B.C.), didn't even last a millenium. Also, some authorities have emphasized the fact that the Great Pyramid is built on land 36 feet above the level of the Nile, the source of the supposed canal. But that does not rule out the possibility that there never was a canal. Is it not possible that the canal was elevated, and broken down years ago (as with the causeway) and that its mouth on the river clogged up long ago? If the Egyptians could cut 120 feet in bedrock to excavate the subterranean chamber, surely they could have constructed a canal having an elevation of only 36 feet.

Herodotus wrote of something else we cannot see today—an inscription on the side of the Great Pyramid recording that 1600 talents of silver* were spent on radishes, onions, and garlic alone for the workers who built the pyramid. Herodotus claimed that an Egyptian interpreter had read the inscription to him. Some researchers have jumped to the conclusion that since this inscription is not present now, it never existed. They should realize that the inscription was on the casing stones, which were removed from the pyramid as building material for Cairo.

The archaeologists' extreme doubt of Herodotus may stem from the deep rift that understandably separates ancient literature, legends, and myth from scientific archaeology. Such distrust is what caused the archaeological world to scorn Heinrich Schliemann, who after asserting that he could find Troy by reading the works of Homer, did just that. Thus, the existence of subterranean chambers such as Herodotus mentioned has never been proven—and likewise never disproven.

Although no under-pit chambers have ever been found, several subterranean vaults near the Great Pyramid have

* One (1) talent of silver is the equivalent of 56 pounds.

been discovered and excavated. One of these vaults is the tomb of Hetep-Heres, who was Khufu's mother. She was buried in a rock tomb near Dashur, a site of other pyramids.

Although constructed with the usual securities against robbers, Hetep-Heres's tomb was apparently plundered not long after her burial. However, because the tomb had been so lavishly furnished by Khufu, a number of valuable objects were left behind by the hurried vandals, enough to warrant the digging of another tomb. It seems that Khufu presumed the mummy was with the treasures, since the alabaster sarcophagus appeared untouched. But he was wrong. The mummy, along with most of the treasure, had actually been taken by the thieves, for it was a common practice among the ancient Egyptian nobles (and well known to tomb-robbers) to cluster the mummy of a dead queen or king with valuable jewelry. The stupendous job of digging a new tomb-shaft in complete secrecy was eventually completed and the remainder of Hetep-Heres's treasure was again stashed away—this time in relative security.

Hetep-Heres's second tomb was so well concealed that it was never found and looted. In fact, its discovery by modern archaeologists was due only to sheer luck. A photographer, on an archaeological expedition supervised by Egyptologist George Reisner, noticed when setting up his tripod that one of its legs sank into a plastery substance unlike the usual terrain. Upon examination, this substance proved to be a covering for a pitch-dark shaft 100 feet deep. By means of handholds that had been installed on the walls of the shaft, the archaeologists climbed slowly to the bottom. At the bottom they found a small burial chamber. Its floor was littered with scraps of gold, pieces of what had once been chairs, beds, chariots, etc., but which now were only fragments from the ravages of time. This chamber also contained an alabaster sarcophagus of the previous queen.

Hoping to find a mummy, the archaeologists removed the lid of the sarcophagus with extreme care, but were bitterly disappointed. The coffer was empty except for two jeweled bracelets. It was obvious that in the rush to rebury his mother, Khufu or others had not had the coffin checked to see that his mother's mummy was safe inside. However, the expedition did find her Canopic Chest (containing her embalmed organs), thus proving that the mummification process was already known, since use of a Canopic Chest was a major part of the total procedure.

Considering that at least part of Hetep-Heres's treasures survived the ages, may we not assume that Khufu's could remain as well?

THE FUNERARY BOAT OF KHUFU

The tomb of Queen Hetep-Heres was not the only underground chamber found. Another great find was the pit holding the solar boat of King Khufu, who, it must not be forgotten, was the Great Pyramid's builder. In the process of clearing an area just off the south side of the pyramid, workers struck a row of 41 limestone blocks imbedded in rock. When all of the 17-ton blocks had been removed, a 108-foot pit revealed a heap of wood and rope—the remains of a disassembled boat.

Careful study of the wood has since led to a nearly exact reconstruction of the boat's appearance before it was dismantled to fit into the pit. Egyptologists believe the boat was buried beside the Great Pyramid to convey Khufu in his voyage across the sky with the Sun God. Boat models resembling this actual one have been found in other Egyptian tombs. Because funerary (or solar) boats were closely associated with death and Egyptian funeral rites, this find lends additional credence to the belief that the Great Pyramid was intended for use as a tomb.

An intriguing question arises: could the underground chambers thus far found—the tomb of Hetep-Heres, the boat vault, and the pyramid's subterranean chamber be only a part of a network of underground vaults? Is King Khufu buried in one of a series of lost chambers? Only further excavations can tell. To one side of the already opened boat pit lies another, identical vault unopened as of now. Elaborate plans are being made to open this adjacent vault with extreme care. When this pit is finally exposed, will it contain another solar boat, some other treasure, a passage to more hidden chambers, or nothing at all?

We may well assume that King Khufu made the Great Pyramid as secure as possible from the tomb-robbers. His personal experience with his mother's tomb probably made him even more intent on concealing well his own burial chamber.

THE MYSTERIOUS WELL SHAFT

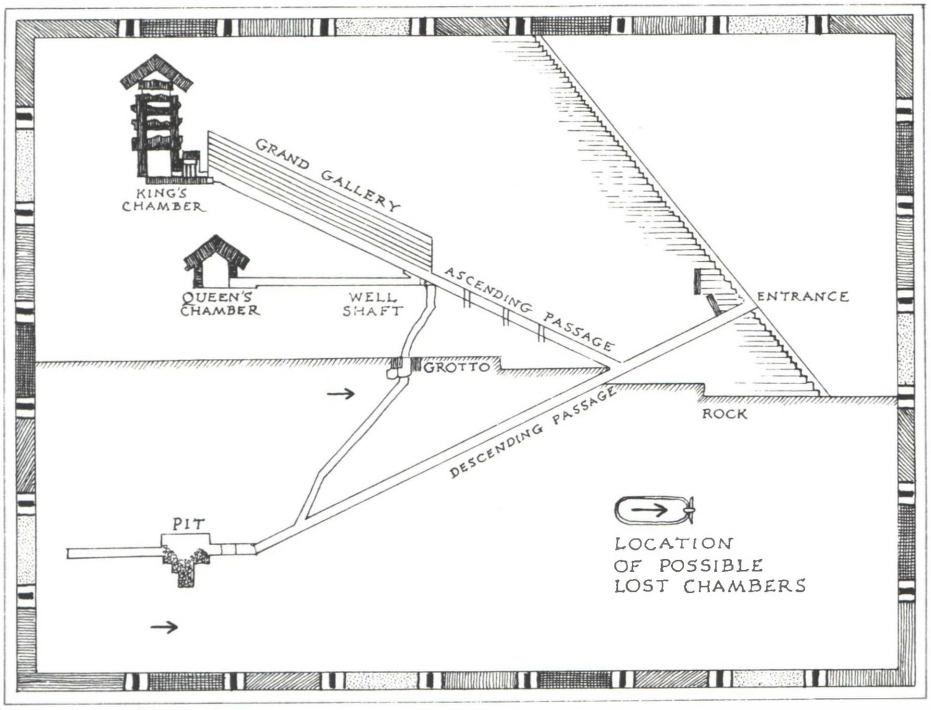
This writer's theory of underground treasure chambers in the Great Pyramid is motivated by the growing belief that Khufu's mummy and treasure were never found or removed and that it still remains somewhere within the vicinity. According to archaeologists, tomb-robbing was so rampant in the Pyramid Age that hardly any of the pyramids contain all the treasures originally included. But could the Great Pyramid be an exception?

As pointed out previously, the most likely time that robbing would have occurred was before the Persian domination of Egypt. By confining our attention to this time-span, we can limit the number of passages that robbers could have used. It is not likely they could have used the Ascending Passage, because three granite plugs blocked this passage until 820 A.D. The only other route to the burial chambers (the King's Chamber and the Queen's Chamber) is the Well Shaft. This shaft is very roughly cut and extends from the Descending Passage to the entrance of the Grand Gallery—thereby providing a link from the Descending Passage to the King and Queen chambers, both of which branch off from the Grand Gallery.

About halfway from the Descending Passage to the Grand Gallery, the Well Shaft opens on one of the most mysterious and unexplainable sections of the Great Pyramid—the Grotto, which branches off to the side of the Well Shaft, and is as irregularly formed as the shaft itself. A large part of the Grotto's floor is characterized by a deep pitfall almost resembling a mine. Why this Grotto was carved from the rock is still an unsolved mystery. Apparently, the Well Shaft was not built into the Great Pyramid by its original architects. It would seem inconsistent to

securely block the Ascending Passage and then construct a direct passage heading straight to the Grand Gallery. Such an original design would have been an easy mark for grave-robbers.

If the Well Shaft was not a part of the original design, then who was responsible for digging it and when did this take place? We know the Arabs reported seeing the upper end of the Well Shaft in 820 A.D. Therefore it had to be dug before their time. Furthermore, there is no record of digging such a shaft in any Persian, Greek, or Roman works, and it is unlikely that the addition of a Well Shaft would have gone unrecorded by ancient historians. Over the time period extending from the Christian Era through the Dark Ages, the general knowledge of the Great Pyramid was meager. Some of the great scholars of the day couldn't even describe the entrance.



For these reasons we may assume that if the Great Pyramid *was* ever molested, the ancient Egyptians alone would have done it, and only through the Well Shaft which did exist during their time. Some problems now arise which make the robbery theories untenable. The sarcophagus as originally installed in the King's Chamber would have had a lid on it, as did all Egyptian sarcophagi of ancient times. Judging from the grooves on the coffer in the King's Chamber, this lid would have been a little over two feet wide, but the Well Shaft passage is only three feet wide and not uniform. It seems unlikely that this coffer lid could have been squeezed through the Well Shaft. If the King's Chamber was once Khufu's tomb, it would have contained even larger items such as the Canopic Chest. It would have been impossible to remove all of the treasure through the Well Shaft, as well as to get those treasures down from the pyramid's surface. In any hassle to grab treasure and run, we could expect a few objects such as stone or painted statues of the buried pharoah and other objects of least worth would be left behind. Yet, not a single such object has ever been found in the Well Shaft, the King's Chamber, the Queen's Chamber, or anywhere else. Furthermore, most Egyptian tombs, and especially those of the pharoahs, were decorated with pictures and hieroglyphs on the walls, and with cartouche of the dead man marked everywhere to preserve his identity. No such decorations have been found in the discovered chambers of the pyramid.

KING KHUFU'S BURIAL

Therefore, this writer does not believe that King Khufu was ever buried in these known sections of the Great Pyramid. Otherwise, either his remains would have been found, or the known conditions and evidences of robbery would be more supportive. However, the purpose of the Well Shaft is still a mystery.

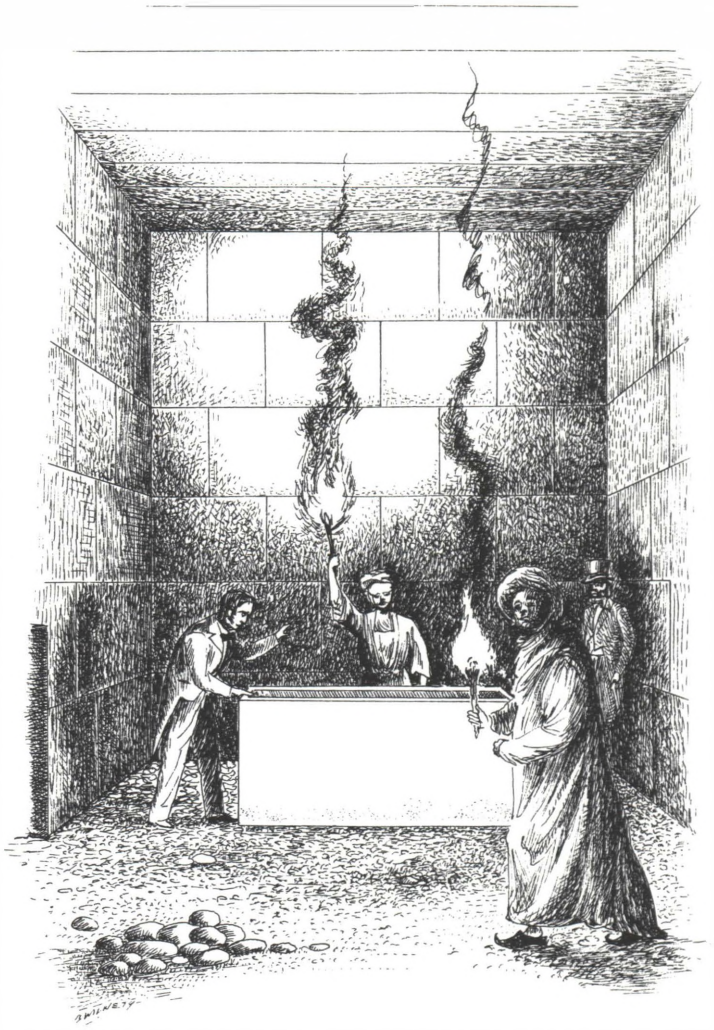
Piecing together what is known of Egyptian burials, we can roughly reconstruct the burial of King Khufu. Although partially guesswork, it may suggest new avenues for research.

Egyptian burials always attracted much attention. En route to the tomb, the roads were lined with mourning spectators showing their sorrow by putting dirt in their hair and beating their chests. Let us presume that some would-be robbers were among these watching the procession. The robbers, along with the others, saw the burial procession enter the Great Pyramid, but there was no way for them to see the actual burial taking place. (They would have believed Khufu was buried somewhere inside the pyramid, but would not have known the exact location.)

As the procession ended, the slaves of Khufu were being directed to carry their dead pharoah down a descending passage into a subterranean chamber where, at a strange opening at the bottom of a pit, they were further directed to lower the coffin and other articles slowly and carefully into a burial chamber below. After all objects had been lowered, the slaves were finally directed to slide some granite plugs into the pit and pour rubble on top of the plugs. Perhaps, as part of a sacred rite, some of the burial party were murdered before the chamber was sealed, as slaves for Khufu in his afterlife. Then, those who were not sacrificed were singled out one by one to have their tongues removed before again mingling with the populace. Thusly, the secret of the Great Pyramid was intended to be sealed forever. Apparently the knowledge of underground chambers was kept alive among the priests; perhaps the priests who carried out the burial rites were spared from death and tongue-mutilation.

But even as the funeral day itself expired, different bands of would-be robbers were eagerly hashing out schemes for plunder. Unmindful of risking death by slow

torture, their eyes could well have bulged with visions of the fabulous treasures they had personally carried inside. Although it was often the duty of priests to guard tombs, it was relatively easy to bribe one of them into helping rob the very tomb he was in charge of protecting. Robbing the Great Pyramid, however, was probably difficult; but eventually some thieves learned how to enter and, relying perhaps on a corrupted priest as their guide, began to dig, but not in the pit. They were digging the Well Shaft. They had been misinformed by their sources, but they didn't yet know this. In their hasty greed, they hurriedly dug on. Only after emerging in the Grand Gallery and exploring the King and Queen Chambers did they realize their attempt had failed.



The King and Queen Chambers were both completely empty as they were intended to be. Possibly the priests, upon discovering the newly dug shaft, had it promptly plastered over at its entrance to the Descending Passage. (This would explain why visitors in Greek and Roman times never saw a shaft.) This plaster could have later fallen off during an earthquake, or may have jarred loose during Al Mamun's time—when he was hacking away to clear a path past the boulder blocking the Ascending Passage.

But there is another theory of the Well Shaft—that it *was* part of the original design. In support of this theory, there is some evidence that the shaft was dug from the Grand Gallery down, and not from the Descending Passage up. If the Well Shaft was dug up later, someone would have to have gotten inside, and moving the entrance plugs would have required much more expertise and labor than likely for a band of thieves.

We might question why the pyramid's designers would include a Well Shaft when they also included plugging the Ascending Passage. Possibly they reasoned that if thieves saw a shaft, they would think someone before them had already robbed the pyramid, and search no more. Even though the upper passages were apparently never used for treasure but only as blinds, the designers may not have known exactly how the interior would eventually be used.

CONCLUSIONS

Whatever the reason for the Well Shaft, the important fact is that this shaft is too small to have been of much use in removing treasure; and because there is no clear-cut evidence that the pyramid was ever robbed, the treasures entombed there 4500 years ago probably remain there today — possibly in still-secret vaults beneath the pit of the subterranean chamber.

Proving or disproving this conclusion should not be extremely difficult. One excavation could solve this mystery forever, or at least lead toward new and better answers regarding one of the greatest mysteries of all time.

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HOW RELATIVITY THEORY CONFLICTS WITH REALITY

by Harry E. Mongold

EINSTEIN expounded his notion that simultaneity is relative to the observer by describing a conceivable experience in which lightning strikes at both ends of a rapidly moving and very long train. Someone stands at the center of the train, so that (as an outside observer might view it) he is moving toward the signal traveling from the lightning stroke at the locomotive end. He is also traveling away from the signal from the other stroke, which must pursue and catch up with him. (This is what the outsider would say.) Because of this he declares that there was a stroke at the locomotive before the stroke at the other end. The signals traveled equal distances, he says, when they went from the ends to the middle, and he saw one before he saw the other. On the track, however, stands an observer at the center of the distance between the two strokes (which leave marks on both track and train). He sees the signals from both ends simultaneously and disagrees with the time order claimed by the observer on the train. If motion is relative, said Einstein, who is to say that one of these observers is right because he was "standing still" and the other wrong?

In "The Concept of Simultaneity" I have argued that the sources of photons must be traveling either with the train or with the earth, or at least that they cannot move two ways at once.[1] If the signal sources travel with the train, the distances the signals themselves travel (which are to be found to be equal and opposite) must be measured on the train; if the signal sources "travel with the track" (i.e., if the photons start from points on the earth) the distances must be found equal along the track. While the theory states that light does not take on the motion of its source, distances in a simultaneity experiment must be measured in a definite way, since even the event of light generation cannot travel all velocities at once. Photons appear when separating from particles. A separation is as much a thing in space as an object is. A separation can be made in motion with a train or "standing still" with a track. If it is objected that photons are created, as opposed to leaving the atoms involved, it must be observed that even so they will have a definite velocity relative to each other object. At this point it must be brought out that the velocity of light cannot be the same relative to all, as is usually said, but may conceivably be *measured* the same by all observers because of a universal, or constant, coincidence.

Thus the proponent of relativity theory says that a man standing still relative to a light flasher would measure the distance the photons travel to him differently than would someone riding by at the time. Also he would find more time was necessary for the flash to reach him. When two observers are moving relative to each other they are believed to use different yardsticks and clocks necessarily. The velocity of light is said to be calculated the same by both.

The assumptions of the theory are so uncertain that even the great Steinmetz could not state it consistently:

> "Suppose we place a lamp on the track, back of the receding train, so that the light shines along the track (for instance, a signal light). The beam of light travels along the track at 186,000 miles per second. The train moves along the track, in the same direction, at 100 feet per second. Therefore, relative to the train, we should expect the beam of light to travel at 186,000 miles less 100 feet per second. It would be thus with a rifle bullet. . . . But the constancy of the laws of nature teaches us that if the beam of light travels along the track at 186,000 miles per second, and the train in the same direction at 100 feet per second, the speed of the beam of light measured in the train (that is, its relative speed to the moving train) cannot be 186,000 miles less 100 feet, as we would expect, but must be 186,000 miles per second, the same as its relative speed to the track. Now, the only way we can explain this contradiction is to say that when we measured the speed of light on the train our measuring rods were shorter, or, using the length of the train as measure, the train was shorter, or the time was slower, or both."[2]

If the observer on the train uses a shorter measuring rod than the observer on the track, he gets a longer distance for the light to travel than the track observer measures. In a given distance a short standard will be entered more times than a long one will. If his clock is slower, he measures less time for the transit, because the hand on his clock does not move as far in a stated time. Thus he has the light going farther in a shorter time, an increase in velocity. He should somehow get the standard velocity. Yet Steinmetz has here correctly stated what the theory claims, namely that a mover and all that moves with him shorten, and their biological and mechanical operations slow down.

The basic self-contradiction of the theory shows up here, since motion is admitted to be relative. The "mover" may be considered either the train or the track beneath it. An observer by the track should be using measuring rods that are longer than those used on the train, for example, but this makes an unwarranted distinction between movers. As it stands, the theory has each mover using measuring sticks shorter than what the other uses. (To say that motion causes shortening of the mover and his measuring rods is to say that they are now shorter than what is considered not moving. Otherwise—if both movers are shortening from what they were before—there is no compensation for leaving the light source, and thus no explanation for calculating the usual light velocity although on a moving train. Besides, one gains nothing by imagining the entire universe shortening every time something moves!) Also, their clocks would be slower than each other. These are

mere words, but they are in the theory as though they had meaning.

What Steinmetz might more reasonably have said is that the observer on the moving train would observe the distance the light traveled as shorter than the observer on the track would measure it. However, he would not see his own clock as slowing just because he was leaving the station by train. Therefore, the "clock" the train observer used should be some event system outside the train, so that he could observe an apparent slowing of events. This suggests a revision of relativity theory so that we could say: An observer moving relative to a light source will measure the speed of that light as being standard because he will use a shorter measurement of the distance (not using shorter measuring rods) and will clock the events seen as occurring more slowly than will an observer at rest relative to the light source. However, maybe he will fail to use the specified method of clocking. Besides, movement away from a light source suggests a notion of longer distance and slower clocks (the events being left behind), while approach to a light source suggests appearance of shorter distance and faster events. Relativity theory does not describe any distinction between movers.

The assertion of some writers that appearance and reality *are the same* is contradicted by their own theory. It is said that a "moving" clock slows in rate, and that when it is brought to a stop it will be found going at the correct rate again but reading behind other clocks. This is exemplified by the famous "twin paradox," in which one twin speeds away from the earth and returns to find the other much older than he. The "moving" twin is the moving clock, because of his metabolic processes, and his metabolism is said to be slower than our normal. The assertion that the twin will return to earth barely older than when he left is the assertion that the slowing down of processes was actual. If there were only an appearance of slowing, as seen by earth observers, there would of course be no difference between the twins at the end of the sojourn.

It follows that there *is a difference* between saying, "The velocity of light is measured the same by all observers because it *is* the same," and saying, "The velocity is only measured the same." The latter seems to be Bolton's impression. He writes that shortening and slowing of moving rods and clocks are only apparent. Thus, in connection with the doctrine of added velocities, Bolton says:

> "Lest the reader should think that we are trying to bewilder him with paradoxes, it may be well to remind him that we are speaking all the time of physical measurements. It is on points such as the present that a person is apt to lose himself by unconsciously importing metaphysical ideas of extension and duration. What the statement which has just been made means, is that if anyone actually measures the velocity of light it will always relatively to himself figure out to the same number."[3]

Similarly, Bergmann says that "the rate of the clock appears slowed down, from the point of view of *S*," meaning that a clock seen by an observer in a different state of motion appears to operate slowly.[4] On the other hand, elsewhere he says, "If it is impossible to define a universal time, and if the length of rigid rods cannot be defined independently of the frame of reference, it is quite conceivable that the speed of light is actually the same with respect to different frames of reference which are moving relatively to each other."[5] He here specifies "is actually the same." Meanwhile, other writers say that changes in length and operation rate are real. Moreover, the experiment of flying atomic clocks about the earth[6] and the observation that mesons experience delayed decay upon approaching the earth at great speed[7] are hailed as proving the theory, and they are cases of actually slowed clocks, not apparently slowed ones.

That some situation could cause observers to always measure the speed of light relative to them as *c* (300,000 km/sec.) is conceivable, but, unfortunately, relativity theory cannot depict such a situation. To say that movers actually slow down in processes and shorten in length leads at once to self-contradiction, but to say that they only appear to do so, to outside observers, offers insufficient explanation for always measuring light at *c* velocity. And it *cannot* be meaningful to say that light *does* travel the same velocity relative to all observers. While the Lorentz equations, as explained by relativists, are based on this impossible postulate, and while there have been striking successes in use, the successes cannot mean what has been supposed. It is important that scientists find out what they do mean.

The definition of 'velocity" given in Chambers' Technical Dictionary is "Rate of change of position or rate of displacement, expressed in feet (or centimeters) per second," as related to a given direction. Whether light is a series of vibrating photons or a wave in ether or something else does not affect the fact that it is something that moves from one position to another. In doing so it must exist stage by stage until it reaches an obstruction. It can never be in two places at once. There is no question as to that, nor as to the fact that, in our three-dimensional space, the relativity postulate would require photons to be in more than one place at a time (so as to have the same velocity relative to all), unless electro-magnetic signals are sent at *all* velocities and are detectable in only one of them. (In that case, if I were standing still relative to a street light I would be seeing a different flow of photons from that which I would see if I ran toward the light.) This seems hardly worth consideration.

Einstein's train-and-lightning example may now be considered in terms of velocities as well as distances. Lovejoy sees that if the lights from the lightning strokes travel at the same velocity for both the train and the track observers "the signals will arrive simultaneously both at *M* and *M′* . . ." (These are the two "midpoints.") That is, if we must assume standard light velocity, we must assume that photons traveled from the ends of the train to the train's midpoint and from the places on the track marked by lightning, meeting at the track midpoint. These would have the standard velocity relative to their own coordinate systems (train or track). The definition of 'velocity' demands this. Lovejoy adds the inevitable conclusion: "But in this case the two observers would not in fact be judging about the same pair of events; the one would be judging about events occurring at *A* and *B*, the other about events occurring at *A′* and *B′*."[8] (The ends of the train are *A′* and *B′*, and its midpoint is *M′*. The other symbols refer

to the track positions.) In other words, the observers would be seeing different photons, one set from where lightning struck in air at stasis with the track and another set from where lightning struck in air at stasis with the train. The photons in Einstein's illustration (where the train observer sees first one signal and then the other) could not all have been traveling at standard velocity, then, relative to both observers.

These arguments concern our three-dimensional world, and relativists do not lean on another dimension in their explanations of simultaneity. The four-dimensional continuum, in any case, is only a mathematical representation that can explain how the same photon is seen as though in different positions at the same time, by different observers. What the representation does is depict the illusions of the various movers. (Only the observer at rest relative to the light source could theoretically measure the true position of a photon relative to that source, at any given instant, although this is wildly impractical.) That this "four-dimensional space" cannot be a reality is admitted by many proponents of relativity theory,[9] although Einstein appeared to take it seriously. In doing so he ignored the great philosophical problems it creates.[10]

The supposed universal velocity of light has been considered supported by experiment. The Michelson-Morley experiments were devised with the "wave" theory of light in mind. That they may not even be compatible with that has been held by Velikovsky[11] and others.[12] If light signals are better conceived as particles, perhaps vibrating ones, for purposes of comparing their velocities, the Michelson-Morley experiments, and the later similar ones, cannot apply.

There is a great deal to be understood about the travel characteristics of light and other electro-magnetic disturbances.[13] Meanwhile, the dead wood of self-contradiction and false views of velocity must be cleared away.

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* * *

Member Steve Hicks requests citations of North American fairy sightings: leprechauns, poukas, banshees, al. He also would welcome references to "little people" in Amerindian folklore. Write: Steve Hicks, 1503 W. 3rd St., Lawrence, Kansas 66044.

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ERRATUM

On the cover of the Fall *Pursuit* (Vol. 12, No. 4), our printer made an error. The issue is actually whole number 48, not "45" as printed. Please take note of the mistake when ordering back issues.

SYMPOSIUM

Comments and Opinions

LETTERS TO THE EDITOR

ADDITIONAL Lake Monster writings that have surfaced since the publication of my Lake Monster List in *Pursuit* (Vol. 12, No. 2, Spring 1979) include the following:

A. The obvious being indexed as #15: *Pursuit*, Vol. 12, No. 2, Spring 1979, pp. 50-55, "Water Monsters of the Midwestern Lakes," by Gary S. Mangiacopra of 7 Arlmont St., Milford, Connecticut 06460), *repeats* for: Devil's Lake, Wisconsin; Lake Mendota, Wisconsin; Lake Monona, Wisconsin; and Lake Michigan and Lake Erie of the Great Lakes, and Michigan and Ohio respectively. With *additions* of: Lake Minnetonka, Minnesota, and the following five, all in Wisconsin: Lake Geneva, Lake LaBelle, Fowler Lake, Oconomowac Lake and Okauchee Lake.

B. Also I have indexed as #16 the *additions* of: Lake George, New York and Spirit Lake, New York (submitted by Joseph W. Zarzynski, P.O. Box 34, Wilton, NY 12886), as reported in the article, "Assorted Ghosts, Ghouls and Goblins of New York State," by Alfred Hulstrunk in "The Susquehanna" Sunday Supplement of *The Binghamton Press* (NY) of August 14, 1977, pp. 8-13, with a *repeat* for Lake Champlain, in Vermont.

C. I have indexed as #17: *Phenomena: A Book of Wonders* by John Michell and Robert J.M. Rickard, 1977, pp. 73, 118-119, that *repeats:* Loch Ness, Scotland on page 118; Lough Fadda, Ireland on page 118; and Loch Arkais, Scotland on page 119. With *additions* of: 1) Bolinas Swamp, on the Fault Line north of San Francisco, California, page 73; and 2) Lough Nahooin, near Clifden, Ireland, page 118.

In addition, I have also included the following:

D. The Black River sighting of 1951, as mentioned by Joe Zarzynski as found in *Things*, by Sanderson, chapter 3, pp. 27-39, in the state of New York.

E. Moosehead Lake, Maine, from *Down East*, Vol. XVII, No. 2, Sept., 1971, p. 41.

Any SITU members who have additional listings can write to me at the Lincoln, New Hampshire address or: P.O. Box 281, 7 No. Main St., Ashland, New Hampshire 03217.

—Joseph S. Haas, Jr.

REGARDING the space-time articles in *Pursuit*—especially those in Vol. 12, No. 2, Spring 1979: It would be very desirable if someone could obtain the mathematician Bernhard Riemann's theories for study and transfer them into an understandable language. Following the claims of some members of the U.S. Labor Party, Einstein distorted Riemann's theories after having stolen them for his own theories of relativity.

I am not myself qualified to judge the matter, but it should be done. Literature can be obtained through: New Solidarity International Press Service, 304 W. 58th St., New York, NY 10019, USA.

—Birgit Thiede, Denmark

I AM pleased to hear that there is an organization in existence with as much scope and open-mindedness as yours. Today and throughout history, it seems, there occur and have occurred many puzzling events that are not readily explainable in terms of our tools of physics and mathematics. Of all events of this nature, however, I believe that only a relatively small percentage are genuinely astounding and anomalistic in behavior. I have come to this conclusion from my general reading and personal weighing of the evidence, and I feel that when one takes into account the factors of misunderstood normal events, genuine pranks, human psychological factors, misinterpretation of data, publicity-seeking, profit-seeking, and irresponsibility, the real core of unexplaineds stands at about 2 or 3 percent of those presented.

I believe that this 2 or 3 percent includes mostly phenomena related to the human mind and also to the idea of alternate universes. It appears that there may be strong evidence forthcoming in both of these areas before too much longer. It seems that there may be a force that is very difficult to detect, a force that links all matter and energy and plays the major role in such things as ESP (human/animal/plant), telekinesis, out-of-body experiences, and more. I believe that eventually it will be proven that an infinite number of alternate universes, each possessing its own characteristic set of physical laws, do indeed exist.

I think that scientific breakthroughs coupled with new angles of investigation will, in the near future, proceed to close in on many of these questions. Technology is increasing at an astonishing rate, and it will tell us amazing things, but we must keep our questions in the forefront. Unfortunately, too many people are content to live in bland day-to-day routines and care little if anything about the "higher order" of questions.

Then there is the more general problem/situation/question of the significance of the animate (living) condition as opposed to the inanimate condition. Just what is the meaning, actually, of living, dead, animate, and inanimate in the sense of the (our) universe as a whole? I believe that there are many varied and intelligent life forms scattered throughout our universe; is it possible that none of this "living" matter—ourselves or distant alien civilizations—is at all significant in our universe? Are we just a coincidence, simply a by-product of the evolution of matter itself?

I also like to ask the question "What will mankind be like in another 500 years? In another 1000? In another 1,000,000?" It seems inevitable that as we continue to evolve and progress in our intelligence we will eventually reach a state of existence strikingly different from that of the present.

I believe that it is possible that our universe (and all others) may be infinitely complex and that we may be forever approaching that point of knowledge as a limit. On the other hand, if we, or any other intelligent civilization, can evolve and progress to the ultimate point of intelligence and knowledge, will total understanding be possible then?

These are some of the questions and topics that I like to discuss. I look forward to SITU as a two-way channel through which these ideas can flow and as an access to the sometimes hard-to-get material that is relevant to these interests. I am 23 years old and have worked in construction and also recently as an engineering technician at a nuclear power plant. I am presently a student studying electronic engineering.

—Wayne Bass
Ridgeway, South Carolina

THE ORION research group is currently investigating the Brown Mountain Lights in particular and ghost lights in general. If SITU members have sightings or information to share, or wish to be kept abreast of our research, we would be most happy to cooperate.

We also have a Brontide occurrence each spring in the Bristol, Tennessee area ("Bristol Booms"). If you have members in East Tennessee, we would very much like to hear from them. Our membership consists of scientists over a ten-state area centered on eastern Tennessee. We work cooperatively with all organizations of mutual interest. We have extensive technical equipment and expertise at hand, should any investigator need lab work.

If interested, please write: David K. Hackett, Director, ORION, P.O. Box 11852, Knoxville, TN 37919.

SITUATIONS

This section of our journal is dedicated to the reporting of curious and unexplained events. Members are encouraged to send in newsclippings and responsible reports they feel should be included here. Remember, local newspapers often offer the best (or only) information concerning some events. Please be sure to include the source of reference (name of newspaper, periodical, etc.), the date the article appeared and your membership number (or name if you prefer to be credited that way).



PHOTO COURTESY OF ROBERT CLOUPE

Robbie Cloupe stands near ice ball fragments.

ICE BALL FALL

Robert Cloupe and his son Robbie were out in their garden in Forked River, Ocean County, New Jersey planting some vegetables on an overcast Memorial Day, 1979, when they were startled by a whistling sound in the sky. The sound, "like a firecracker makes before it explodes," Mr. Cloupe said, occurred around 3:45 p.m. Robbie told his father to look above them and together they observed "something" falling several hundred feet to land in a field next to their neighbor's house a short distance away.

Thinking the object might have been part of a plane because of its irregular shape, the Cloupes ran over to see what had fallen in the high grass.

The object, they discovered, was apparently an ice ball. (See accompanying photo.) Having left a six-inch deep depression in the ground where it landed, the main mass had then broken up into "grapefruit-sized chunks" six to eight inches in diameter which were spread over an area some 25 feet across.

The ice, which Mr. Cloupe described as a combination of semi-hard ice and "mushed-up snow or something like you get when you defrost your refrigerator," was examined *in situ* by the Lacey Township police who thought there might be a piece of metal in the mass. They found

no metal, and the ice mass was still in the process of melting at 6 p.m.

Neither the police nor Roy Roylarue, a spokesman for the National Weather Service, had ever heard of anything like it before. Roylarue said an ice ball that large was "very rare," adding: "That's the first time I have ever heard of anything like that." He speculated that with the Memorial Day clouds reaching an altitude of 35,000 feet, ice could have accumulated into a ball and fallen to the ground without melting. Or, he speculated, the ice ball might have formed from liquid falling from a plane flying at high, cold altitudes.

A man down the street from Cloupe, who also saw the ice ball falling, thought the object was a large bird. Cloupe agreed the object looked unusual as it fell. "It was really weird. It was the strangest thing I've ever seen," he said.

SOURCE: Ocean County (NJ) *Times-Observer*, May 29,1979
CREDIT: Member #432

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PICTURE OF CHRIST 'BLEEDS'

In Roswell, a quiet southeastern New Mexico city, the Willie Seymore family thought it a miracle when a wallet-size portrait of Jesus Christ encased in plastic and tucked inside the corner of a larger framed picture at the Seymore residence began to "bleed."

Friday, May 25, Zack Malott, the husband of Mrs. Seymore's granddaughter, Kathy, glanced at the tiny portrait and noticed what appeared to be a large "tear" of blood just below the right eye in the picture.

Within 1½ hours, Malott said, there was a steady stream of a blood-like substance penetrating through the plastic and congealing at the base of the frame holding the larger picture.

"The blood was running from the picture just as if I had cut my finger," Mrs. Seymore said.

The family at first called a priest, but he refused an offer to drive out to the Seymore residence to inspect the picture, saying that any involvement of the Catholic Church would have to originate from the archbishop.

The family then called the local newspaper, which in turn contacted a medical technician at a local hospital.

By Monday, Malott said, about 160 people had viewed the portrait.

"People were falling to their knees, praying and crying," he said. "We haven't had anyone leave who was a skeptic."

Malott, an electrician, said none of the family members who witnessed the event considers himself deeply religious. The family members are Christians, but are not members of any organized religion and do not attend church regularly, he indicated.

And although the picture did not "bleed" after Saturday, tests conducted by the medical technician confirmed the substance at the base of the frame holding the tiny portrait of Christ was blood. He left a kit with the family to be used to collect any fresh samples of the substance. Additional tests were also planned on the dried substance in an effort to determine if the blood is human and its type.

SOURCE: *Watertown Daily News* (New York), May 29, 1979 and *The Pittsburgh Press* (Pennsylvania), May 29, 1979. CREDIT: Claudia Englert and O. Oltcher.

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ITTSBURGH PRESS PHOTO BY MICHAEL CHIKRIS

Allen Demetrius holds "weeping" statue.

STATUE 'WEPT' FOR HIROSHIMA

Allen Demetrius, who lives in Pittsburgh's Banksville area, told his neighbors about an event that occurred August 6, 1945—the day Hiroshima was bombed.

Demetrius was the owner of a bronze statue of a Japanese girl. In 1969, he gave the 102-year-old statue to his daughter, Annabelle Sollon.

"It happened one night almost 40 years ago," Demetrius said. "I remember that I had read the headlines in the paper that Hiroshima had been bombed.

"That night, I looked at the statue and saw tears in its eyes. The teardrops ran down the cheeks. I was astonished. I can't explain how it happened."

When the tears dried, no trace of Demetrius' "miracle" existed—until 1969, when his daughter discovered that the bronze face had been suddenly marred by green streaks. (See photo above.)

"I was doing housework in my home in Canansburgh," Mrs. Sollon explained. "I noticed for the first time the green stains."

"I don't know how they got there—I never polished the bust—Dad wouldn't let me. I called him and told him about the marks."

Demetrius, amazed by her discovery, rushed to her home.

"I realized what the green streaks were," he said. "The stains were in the exact spot where the tears were. So it had to be the oxidation occurring where the tears had streamed down the statue's cheeks."

Soon Demetrius was beseiged with requests to put the bust on display, and Mrs. Sollon found people "by the carload" coming to her home in Canansburgh and asking to see the statue.

Even the Japanese Embassy became involved, suggesting to Demetrius that he trace the origin of the statue. Demetrius has been working on that for the past two years.

"So far, I've traced it back to France," he said. "I think that the girl is Japanese royalty, part of a family which visited Paris long ago and while there, a French sculptor probably modeled her likeness."

The bust bears an inscription with a foundry name—the Raingo Foundry—on its base. There is also the suggestion that it was cast in 1877. In any case, the statue now stands on a gray stone pedestal in the living room of Demetrius' South Hills townhouse. But he wishes that it could be on display in the United Nations as "a warning against war."

"The whole world is someday going to be destroyed by the atomic bomb," Demetrius said. "We'll end up just like Mars, Jupiter and the lifeless planets in our solar system.

"The statue's crying is a warning that such destruction will lead to desolation."

SOURCE: *The Pittsburgh Press* (Pennsylvania), March 18, 1979. CREDIT: O. Oltcher.

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FOOD FOR THOUGHT

Little Rock, Arkansas—Gus Whisenant, 15, was holding his motorcycle helmet in one hand while he fed Ellen, the elephant at the Zoo of Arkansas, with his other hand. Ellen, tired of the candy she was being fed, grabbed Whisenant by the arm with her trunk. Whisenant panicked and jerked his arm free, but the motorcycle helmet fell into Ellen's cage in the process.

Ellen studied the helmet for a moment, then picked it up and swung it in the air before putting it into her mouth and chomping down, breaking it in half. She then spat out the pieces and stomped them into even tinier pieces.

Whisenant wisely remarked: "It was lucky my head wasn't in the helmet."

SOURCE: *Herald-News* (New Jersey), May 13, 1979. CREDIT: Fred Wilson.

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FALLING FROGS

Tass, the official Soviet news agency, reported a fall of frogs July 5, 1979, when a thunderstorm rained frogs on the Central Asian village of Dargan-Ata on the Amu Daria River.

"Whirlwinds pick up living and inanimate objects off the ground and from small streams and carry them up to the clouds," Tass explained, adding: "When the air flow grows weaker the travelers return to the ground together with the rain."

SITU members may have some difficulty accepting such an easy explanation. . . .

SOURCE: UPI, July 6, 1979
CREDIT: Joseph J. Patchen, Neil Lorber, Jon Douglas Singer, David Weidl, William E. Jones

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'ABOMINABLE SNOWMAN' EATEN

The Chinese journal, *Fossils*, has revealed that soldiers of the Chinese army have reported killing and eating a creature resembling the abominable snowman, or "yeti," in the Himalayan foothills in 1962.

The Chinese scientific journal said the soldiers told of eating "meat from a snowman" which they had killed in a remote section of Yunnan province.

SOURCE: *Evening Journal*, Wilmington, Delaware (via the *London Daily Telegraph*), May 2, 1979
CREDIT: Harry Hollander



BOOK REVIEWS

***SITUATION RED: THE UFO SIEGE* by Leonard H. Stringfield (Doubleday, NYC, 1977, xvi + 224 pp., 5 appendices, illus. $8.95)**

Early in his ufological career, Len Stringfield was designated by the USAF as the southwestern Ohio Ground Observer Corps filter center for UFO reports. GOC observers who saw UFOs told Len and, if he deemed the tale important enough, he passed it on to Wright-Patterson AFB. He told that story in his *Inside Saucer Post 3-0 Blue*. Now he's back . . . and with a rather frightening assessment of current UFO activity.

Situation Red outlines what Stringfield believes is the growing boldness of UFO operators in harassing and injuring humans. We are, he thinks, being set up for more unpleasantness and perhaps even an attempt at invasion and conquest of Earth. It's a scary thesis Stringfield provides as he recounts case after case after case of apparently responsible people claiming that some damnably frightening things have happened to them.

We read of three women down in Kentucky kidnapped by aliens, of a private pilot over Mexico whose plane was controlled by three UFOs, of a family of three that vanished in New Mexico, of Fritz Werner who claims to have been part of a government team inspecting a crashed saucer and its dead 'pilot' in a southwestern U.S. desert 25 years ago, of USAF jets that vanished while chasing UFOs, of rank-smelling Big Hairy Monsters seen near UFO landing sites, and dozens of other weird and unsettling cases. He even tells us of people being killed. Dead. Melted down into gloppy heaps of quivering flesh.

Now that sort of thing may be fine for the sci-fi johnnies whose far futures have often been full of nightmare aliens invading Earth, slaughtering the men and raping the fair maidens, but we are supposed to be dealing with reality here, and for me there is far too much lacking in the way of adequate documentation. I have commented on other occasions that I do *not* accept deathbed 'confessions' of single witnesses who claim to have seen little green men in 'pickle jars' at this, that, or another government or government-connected institution. I cannot accept claims that a crashed saucer, 90 feet in diameter, can be lifted onto a truck in some southwestern American desert and then driven over 1940s-era roads to Ohio . . . undetected. (Go find an undivided, 4-lane highway and measure off 90 feet and see if *you* think it could be done.)

There may be in this book the kernels of some great

truths. It may be that we are indeed being set up for a Wellsian invasion (as opposed to one by the Soviets), but from my judgment seat, the proof of his contentions is not in Stringfield's book . . . nor have they appeared in the years since it was published. Sorry, Len, hearsay just won't do.

—George W. Earley

***SECRETS OF OUR SPACESHIP MOON*, by Don Wilson, Dell Publishing Co., 1 Dag Hammarskjold Plaza, New York, N.Y. 10017. Paperback, $1.95.**

A new (first printing, June 1979) and important scientific study of our satellite is not for the romantics: the Moon will never look the same to anyone who reads this book. A credible job has been done to an incredible subject.

The author correlates NASA's Apollo series of Moon Missions with the scientific theories of two Russian scientists, Michael Vasin and Alexander Shcherbakov. The basic thought is that our Moon is *hollow*, and that it was placed in orbit by outer-space aliens as a base for UFO exploration of the Earth.

Evidence is submitted to justify all that is speculated upon. For instance:

—the specific gravity of the Moon is now known to be 3.33 gr./cc compared to 5.5 gr./cc of the Earth.

—the moon rocks brought back by our astronauts are older than any on Earth.

—the Moon's orbit is unique in two ways: it is a near-perfect orbit—the only one in our solar system, and it keeps one side toward us—again unlike any other satellite.

To the last point the author adds some light humor:

> Oh Moon, lovely Moon with the beautiful face,
> Careening through the boundaries of space,
> Whenever I see you I think in my mind,
> Will I ever, oh ever, behold your behind?

Testimony in favor of the Hollow Moon theory was indeed developed by the Apollo series: When the seismographs recorded the deliberate crash of a small space vehicle 40 miles away on the surface of the Moon, NASA scientists at the Space Center were amazed to "hear" the Moon ringing like a bell for almost an hour. Other recorded impacts bear out the same thing—our Moon is hollow and has an outer crust 20 to 30 miles in thickness.

I think this book is "must" reading for all SITU members. In fact, our own Dr. Ivan Sanderson is significant in Chapter 1 and throughout.

—Edward J. Toner, Jr.

***THE MYSTERIOUS WORLD: AN ATLAS OF THE UNEXPLAINED*, by Francis Hitching; Holt, Rinehart & Winston, 1979 (reprint of British edition, 1978); bibliog., index, illus., maps. $11.95.**

Hitching has produced a scholarly and well-illustrated compendium of Forteana that deserves an honored place on the shelf next to Michell and Rickard's *Phenomena*. The emphasis is heavily ancient history and geological anomalies, but other areas are represented adequately (SHC, UFOs, Bermuda Triangle, unknown energies). One drawback is a geographical imbalance in favor of Europe, which might put off some North American readers, but this is a minor complaint. The author has a very lucid grasp of the nature and implications of all the mysteries he discusses, and he is able to convey this to the reader succinctly and entertainingly.

Nearly everything you've longed to see a map or chart for is mapped and charted here. Some of the most interesting are: a map of cities where Count St. Germain was seen in the 18th century (p. 215); a map of cities where Christian relics (the True Cross, Holy Lances, etc.) are found (p. 179); maps of Stonehenge and Avebury showing underground water patterns (pp. 96-97); maps of the "Alaise leys" in continental Europe (pp. 77-79); a map of places in Asia where Shambhala (Shangri-la) is rumored to be (p. 240); a chart of feral child sightings (p. 208); and a chart comparing conventional ancient chronology, Velikovsky's revised version, and Biblical history (p. 170).

The bibliography is very interdisciplinary. Hitching cites articles from *Scottish Zoo and Wildlife* and *Phrygische Kunst* as well as *Pursuit* and *Fortean Times*.

Neophyte and veteran Forteans alike will enjoy *The Mysterious World* as a well-organized and extremely useful reference guide to the Unknown.

—George Eberhart

***THE PSYCHIC HEALING BOOK*, by Wallace, Amy & Bill Henkin, Dell, 1979 (reprint of Delacorte Press hardback, 1978); 222 pp., bibliog. $2.25.**

This is one of the best "how-to" psychic development books to appear on the market for quite some time. Don't let the title fool you—it wasn't designed to turn you into Oral Roberts or a Philippine psychic surgeon overnight. Instead, the authors provide a series of exercises that will gradually increase awareness and control of one's various *clair*-senses and the psychic force field surrounding everyone's body. Since healing of self and others is one of the most positive of psychic activities, it becomes a logical goal of psychic development. Very slyly, however, the authors introduce the reader to a wide range of phenomena and theories, so that the end result is a general systems theory of psychic science.

Wallace and Henkin emphasize that healing is a process in which the "healer aligns himself totally with the totally harmonious energy of the cosmos . . . and thereby becomes a clear channel through which that energy can flow." This cosmic energy, when imparted to and accepted by the healee, will tend to restore mental and physical well-being.

The whole book is written in a direct, rational style, and manages very successfully to be a textbook in applied parapsychology. The authors' only concession to "mysticism" lies in their use of terms like *karma*, *chakras*, and *aura*, but there are really no equivalent scientific names for these concepts. They point out that anyone can become a psychic healer, whether Christian, Hindu, pagan, or Discordian; the secret lies in tuning in to perfectly natural energies. Where those energies originate is best left for the individual to decide.

One of the most interesting ideas presented in *The Psychic Healing Book* is a caution about "karmic ethics." Just

as people might get upset if you went around putting aspirins in their coffee unbeknownst to them, so also is it morally questionable to zap people with healing vibes without their permission. Beginners tend to be over-enthusiastic, the authors warn.

Some of the exercises for beginners include: reading chakras and auras, self-awareness and visualization, color meditation, and healings *in absentia.* More advanced techniques are precognition encouragement, out-of-body healing, past life reading, and talking with spirit guides. Sound formidable? For me at least, it seems worth a try.

* * *

A few other practice-oriented inner development guides to watch out for are:

***HOW TO MAKE ESP WORK FOR YOU,* by Harold Sherman, Fawcett Crest, 1967 (reprint of DeVorss hardback, 1964); 278 pp.**

The primary focus is telepathy and precognition, with some discussion of hypnotism, OBE, healing, and mediumship. More anecdotal than practical, but has some useful techniques explained.

***OCCULT EXERCISES AND PRACTICES,* by Gareth Knight, Helios, 1969; 67 pp.**

Too brief and general to be of much use. Mystical Christian approach, with some Eastern ideas thrown in.

***HYPERSENTIENCE,* by Marcia Moore, Bantam, 1977 (reprint of Crown hardback, 1976); 301 pp.**

Basically, hypersentience is past life reading through meditation. Contains a number of basic techniques, but the bulk of this tome is case history. Leaves one with the impression that you have to join a hypersentience group to really do it right. It includes some interesting accounts of hypersentient visits to Atlantis, other planets, and "the other side of death."

***DAVID ST. CLAIR'S LESSONS IN INSTANT ESP,* by David St. Clair, Prentice-Hall, 1978; 198 pp., index.**

Possibly useful for rank beginners or high school students, but St. Clair has a way of talking down to his readers that will annoy informed Forteans. He does touch many bases, however, and his techniques are valid.

***TANTRA: THE KEY TO SEXUAL POWER AND PLEASURE,* by Ashley Thirleby, Dell, 1978; 192 pp., bibliog.**

Finally a no-nonsense guide to sex magick stripped of Buddhist mythology and translated into Masters and Johnson terms. A bit ritualistic, but the old adage, "it's not what you do—it's how you do it" seems to apply here. Should be placed on the bookshelf between Aleister Crowley and Lilly's *Dyadic Cyclone.*

—George Eberhart

***SOMEBODY ELSE IS ON THE MOON* by George H. Leonard (David McKay, NYC, 1976, xix + 232 pp., illus. $9.95)**

Project Apollo is over, the astronauts are grounded, and nothing moves on the moon, right? Wrong! says George Leonard, a man who manages to see things in NASA photographs that no one else seems to see (except for his carefully anonymous scientific tipster buddy). And what he sees, says Leonard, convinces him that alien beings are busily tearing up the lunar surface in some sort of gigantic mining operation. For proof, in addition to the data from his tipster, Leonard provides a number of NASA lunar photos on which he has drawn arrows pointing out various 'alien machines.' Sketches amplifying the photos are also provided.

According to Leonard, not only NASA but other arms of government, the aerospace industry, the news media the astronauts themselves . . . in short, everyone involved on a high level with Project Apollo knows that it isn't *our* moon anymore, it's "theirs!" The weakness in Leonard's whole case is that we must believe, as he presumably does, that either no one is going to talk (save for *his* tipster) or that anyone who does talk will be unable to find anyone having the Voice of Authority who can be persuaded of the truth of the situation. Which, presumably, is why George Leonard is telling this tale in a book that probably won't sell for sour apples, rather than your hearing it from Walter C. on the evening TV.

Speaking personally, Leonard hasn't convinced me and in that connection, let me add a personal note. In July 1976, I had the opportunity to interview Apollo 15 astronaut Jim Irwin. Leonard's book wasn't out then but a magazine excerpt had just been published and I showed it to Irwin. His reaction? An emphatic rejection of Leonard's claims. Now you need to know that unlike some astronauts, Irwin was a "maverick" in both his USAF and Apollo days. He is scarcely the type to enter into a conspiracy of silence. Moreover, Jim Irwin found his Apollo voyage an intensely religious experience. After his return, and after his near-death from a massive heart attack, he founded the High Flight Foundation whose ecumenical religious outlook has strong fundamentalist strains in it. Given all this, it seems highly unlikely that Irwin, in rejecting Leonard's claims in our discussion, would, or could, have lied.

If you insist on reading Leonard's book, I urge you to borrow one some foolish library has bought, rather than waste your money purchasing this piece of nonsense.

—George W. Earley

***THE UFO HANDBOOK* by Allan Hendry, Doubleday/Dolphin Aug. 17, 1979, 384 pp. $8.95 ppbd.**

As we begin the fourth decade of the UFO mystery, we find the controversy has changed little. Thousands of UFO books have been published: alleged factual accounts, debunking analyses, and religious and cult texts. Virtually every book in print has had one goal: to convince the reader that its premises hold the valid truths on UFOs. With all that "truth" in print, why do we still have a UFO mystery? The phenomenon is an emotional one, and many people want to believe despite the facts. The years of study have shown that most (85-90%) UFOs are misidentified or misperceived natural or man-made events. It has been very time consuming to sift through these reports. Allan Hendry's new book, *The UFO Handbook,* is designed to help the reader identify these sightings and free the ufologist to devote more time to the 10-15% of

the sightings that may hold the key to the mystery or may perhaps prove to be more complex misperceptions.

The UFO Handbook, then, is not another UFO "reader," full of juicy, incredible stories. It is a textbook, designed to help people explain what they are misperceiving and distinguish UFOs from IFOs. Excellent photographs combined with a text that concisely explains what thirty years of UFO research, and one and a half years of Mr. Hendry's intensive research, has discovered. While neither this book nor any other book is likely to lay the UFO question to rest, at last some rational illumination is shed on a dark corner of our culture.

Do not expect platitudes designed to please the avid UFO reader or to sell the book. This book is not likely to garner praise from UFO hobbyists and supporters of "pet theories," because it is brutally frank in its assessment of the competence of witnesses and investigators alike. However, it is destined to become the premier text on the UFO phenomena.

Mr. Hendry uses to excellent advantage his investigations to point out the proper and thorough way to handle sightings. There are many lessons to be learned from the Identified Flying Objects. His drought of speculation is much appreciated with respect to the monsoon of hypotheses being pushed elsewhere. His one chapter on speculation reveals him to lean toward a Jungian hypothesis, which provides a great working latitude for a skeptically curious investigator. The chapter on tools of the trade is a most valuable layman's guide to these oft-misunderstood tools. As he rhetorically queries, why, after thirty years have I had to amass these resource lists. But it is a sign of the times and the public's changed attitude, that Mr. Hendry is one of the first to be able to devote full time to UFO research. There may be no more to UFOs than misperceptions, hysteria, and a powerful desire to believe, but regardless, our ignorance must be confronted, and this book does it squarely and head on. Perhaps the next thirty years will see the mystery solved. Toward that end, this text cannot help but be of use to the "ufologist" of all bents, and I recommend it highly.

—David K. Hackett

THE NOTES OF CHARLES FORT

Deciphered by Carl J. Pabst

ABBREVIATIONS

These abbreviations pertain to the Fort Notes which follow. Abbreviations used in the Notes which are not found here have been printed in previous issues of *Pursuit*.

Acad	Academy
An Reg	*Annual Register*
A.U.S.	*Archives of Universal Science*
BD	*The Book of the Damned*
B Eagl	*Brooklyn Eagle*
Bib. Brit	*Bibliographie British?*
Calif.	California
chars	characters
Conn.	Connecticut
(Cut)	Illustrated
Disap	Disappearance
E. Haddam	East Haddam
European Mag	*European Magazine*
Inf Conj	Inferior Conjunction
Intro	Introduction
Jour Soc	*Journal of the Society for Psychical Research*
lbs	Pounds
L. An. Sci	*L'Année Scientifique*
(M)	[?]
mag	Magnitude
Mems. Boston Soc Nat Hist	*Memoirs of the Boston Society of Natural History*
n.w.	Northwest
Obj	Object
phe	Phenomenon
Ph.M.	*Philosophical Magazine*
Q. Jour Roy Inst	*Quarterly Journal of the Royal Institute*
Ref.	Reference
Religio-Phil Jour.	*Religio-Philosophical Journal*
S.	South
St. Bart	[?]
vol.	Volume



COURTESY OF AARON SUSSMAN

Charles Fort, c. 1920

1808

May / Footprints and devour / An Reg, 1808-37 / That, in May, 1808, upon the estate of John Gurney, of Eastham, the steward had found a dead lamb — in the neck a perforation, size of a goosequill. He found two living lambs similarly [Reverse side] injured — one died later. A neighbor sent him a large male cat as the criminal. Some kittens had been killed by similar perforations, also were partly devoured. The steward remembered that in snow by the lambs he had seen footprints of a cat. / Own— something killed all — and tom cat may have devoured dead kittens.

May 16 / Skeninge / Sweden / bodies in sky / D-270.

May 21 / Ferentino / Fireball / BA 60.

May 22 / See June 8, 1901.

May 22 / (+) / (F) / The Stanway stones—a gluey substance abundant upon them / Phil Mag 44-222 /
[Reverse side] See Sept 19, 1831. / See Nov 25, 1833.

May 29 / Cape Spartel / Fireball / BA '60.

July 29 / Troston (England?) / Fireball / BA 60.

Aug 1 / San Francisco / great q / [BA] '11.

Aug. 1 Small quake at Leghorn, Italy. BA 1911.
[Kiesewetter // August 1—(The small quake at Leghorn occurred October 26, 1808, not on August 1.)]

Aug 15 / Vienna, etc. / Fireball / BA '60.

Sept 3 / (F) / 3:30 p.m.—Bib. Brit 39/369 / Lissa, Bohemia / Metite / BA, '60 / near Prague.

Sept 29 / [London *Times*], 3-c / Met / London.

Oct 5 / [London *Times*], 3-a / 17-3-c / 20-3-c / 25-2-d / Comet.

Oct 24 / q / Iceland / west of Hecla / Smithsonian Inst. Report 1885-509.

Nov 11 / Fireball / England / BA '60.

Dec 29 / Berne / Fireball / BA '60.

Dec 11 to Jan 31, 1809 / D-fog / At New Granada, sun, at rising, was pale as moon. /
[Reverse side] often bluish or greenish / Unusual coldness, frequent frost near Bogota. A dry haze nights, too.
[Front side] From 1st to 12th Parallel of S. Lat. / An Reg, 1808-445.

1809

/ Kikino, Smolensk, Russia / Metite / (F) ///
[Reverse side] 135 / 172 / 289 / 33 / 34.

/ Perny, Russia / stones with hail / See 1844.

Jan 18 / 2 a.m. / Dunning, Perthshire / Sound and shock. / Bell's Weekly Messenger, Jan. 29—p 35.

Feb 3 / q—met—fires / at dawn / town in Hungary / shock / Houses on a mountain
[Reverse side] were observed to be lighted up by reflection from unknown fires, supposed to be subterranean. / BA '54 / See 1810.

March 10 / Russia / I / [Small quake / BA 1911].

March 27 / Etna / BA 54.

Ap. 5 / Japan / II / [Medium quake / BA 1911].

Ap. 9 / Tours, France / Fireball / BA '60.

April 18 / Op. Mars / (A 1).

May 3 / Island of Corfu, Greece / I / [Small quake / BA 1911].

May 3 / (Reference.) / Bamstaple, Devonshire / q and rumbling sound / Trans Devonshire Assoc 16-651 / (CO).

May 9 / Volc / Goentoes / Java / N.M. / C.R. 70-878.

May 23 / 19 h / Venus / Inf Conj / (A 1).

June 9 / 5 p.m. / Cascade of water and hail poured in a torrent upon London upon
[Reverse side] a space not more than 200 acres. / Symons Met 47-140.

June 17 / St. Bart / Fireball / BA 60.

June 20 / Stone weighing 6 ounces fell on shipboard / Lat 30°, 58′ N / Long. 70°, 25′ W / Phil Mag 4/8/458 /
[Reverse side] Sc Am, NS, I-383 / Bib. Brit 48/162.

June 23 / Poitiers (?) / rain of frgs / L'Institut 2/409.

summer / Toads / France / L'Institut 2/409 / Rec. Sci 3/333.

July 29 / Neumark / Fireball / BA '60.

Aug 7,8 / China / III / [Violent earthquake / BA 1911].

Aug. 14 / Italy / I / [Small earthquake / BA 1911].

Aug 25 / Italy / II / [Greater quake / BA 1911].

Aug 28 / Parma / Fireball / BA '60.

Sept 3 Bell's Weekly Messenger — Ann Moore, faster of Tutbury / p. 283.

Sept 4 / New crater of Vesuvius opened, great flow of lava. Night of 5th, great eruption of ashes. /
[Reverse side] Bell's Weekly Messenger 1809-321.

1809 (?) / Bathurst / Disap and clothes with bullet holes. / See Stuber case, Aug. 16, 1892.

Nov. 25 / Bathurst / See S. Baring-Gould's Historic Oddities.
[Reverse side] 9009.d.3.

Nov / Bathurst.

Nov. 25 / Bathurst / [typescript] / Cornhill Magazine, 55-279.
(See *The Fortean*, #1, p. 14, cols. 2-3; and p. 15, col. 1.)

Nov. 25 / BO ½ Ac to Sabine Baring-Gould, "Historic Oddities," p. 12—On Jan 23, 1810, in a Hamburg newspaper, appeared a paragraph telling
[Reverse side] that Bathurst was well in mind and body, his friends having received a letter from him, dated Dec. 13. This is a secondary mystery. As Baring-Gould asked—Who? Why? Was it imperative to make the authorities abandon the mystery?

1810 Jan. 22 / Bathur[st] Myst / L.T., 1810, Jan. 22/3/a / Nov 16/3/b.

1809 / Disaps. Bathurst / 1910, Dec. 18—Lloyds W. News / Skeleton found buried near Perleberg.

Nov. 29 Parma fireball. BA 1860.
[Kiesewetter // Nov. 29—Munich Fireball (not Parma).]

Dec 4 / Cape Town / 3 shocks—10 minutes later another "accompanied
[Reverse side] by noises like the firing of several pieces of heavy artillery in quick succession—or that not a quake, though so listed—"The sky became clear and numerous meteors were observed." /
[Front side] Rept. 54/85 / It is said that many persons said felt the shock upon the bursting of the meteors.

Dec 5 / Another shock and sound like thunder at Cape Town. / BA 54 / 7 a.m.—also 12:30 p.m. / ab. 5 p.m. / Many very brilliant meteors burst at times of shocks.

1810

Jan 2 or 3/ Geneva / Fireball / BA '60.

Jan. 14 / Hungary / II / [Medium earthquake / BA 1911].

Jan 17 / Phil Mag 44-225 / Red rain in the mountains of Placentia / a liquid "almost as thick and heavy as snow.

Jan. 17 / Dept of Plaisance / Thunder heard and red snow fell. / Bell's Weekly Messenger, May 6, p. 142 /
[Reverse side] in the mountains here.

Jan 22 / Pignerol / Shock and explosion p 86) and here and elsewhere noted that M. Perrey
[Reverse side] had remarked that there was a periodicity upon the 22nd of the month.

Jan 30 / Stonefall / Caswell, N.C. / BA 67-414 / Gazeteer for—Caswell.
[Reverse side] Details / Bib Brit 48/166.

Feb. 3 / After the shocks, houses on a mountain near Csakwar, Hungary,
[Reverse side] were for considerable time illuminated. / C.R., 17-622 / See 1809.

Feb 4 / Japan / II / [Medium earthquake / BA 1911].

Feb 16 / Candia, on island of Candia, ruined by q. / 200 perished. / BA 54.

March 20 or 25 / Canary Islands / III / [violent earthquake / BA 1911].

March 25 / Violent q and great loss of life / Teneriffe / BA, 54.

Ap 8 / 7:20 p.m. / 7:25 / Shocks / Calcutta / Cent's Mag 80-373.

Ap. 14 / Hungary / III / [Violent quake / BA 1911].

Ap 20-2 / night / Metite / New Granada (U.S. Columbia?) / wherever Bogota is /
[Reverse side] L. An. Sci 1860/19.

Ap. 20 / Santa Rosa, New Granada / Met iron / but doubtful whether
[Reverse side] fell or found this day / BA '60.

THE NOTES OF CHARLES FORT will be continued in the Spring issue of *Pursuit*.

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