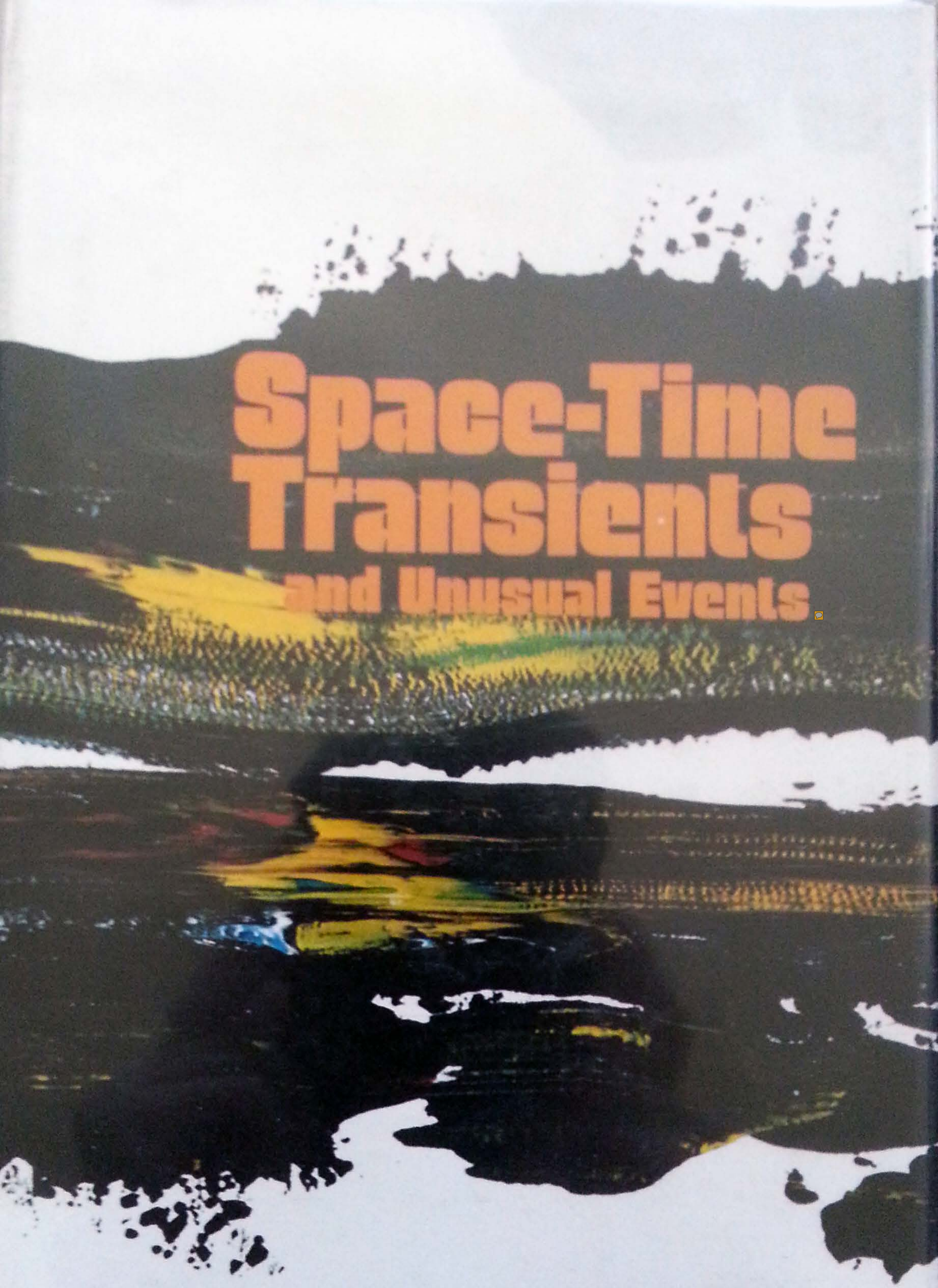

Michael A. Persinger ▪ Gyslaine F. Lafrenière

Space-Time Transients and Unusual Events

Michael A. Persinger Ph.D.
Gyslaine F. Lafrenière

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Dedicated to the
IBM 360-40 without which this book
could not have been written.

Contents

Preface

In every knowledge structure, certain events and ideas do not fit, so they are rejected by means the system uses for its protection. There are many unusual things that people report. Generally these putative events are placed under the rubric of Fortean phenomena. However, unless a phenomenon is recognized officially, its acceptability will always be on a probationary status. This book deals with some of the observations, reports, and ideas that exist in the tenuous zone of the borderline; it deals with those events that have been indicted because of their exception to the commonplace.

Chapter 1 deals with the limits of human concepts for space, time and causality, and how their properties are determined by a number of species-specific qualities. Examples are given of theoretical situations in which time and space are related in different patterns. The role of unusual and infrequent events in context of perceptual limitations and the stereotyped consequences of conceptual ritual are discussed.

Chapters 2 to 15 present the various data according to different topic divisions. Within each chapter, the data patterns are subdivided and analyzed; specific examples are given. Where possible, statements about the data characteristics, temporal patterns and spatial distributions are made. Chapter 2 is concerned

with fall phenomena and includes ostensible instances of rocks, animals, ice, or unusual substances falling from the sky. Chapters 3 and 4 deal with unusual electromagnetic and sonic phenomena such as "ghost lights" or unidentified explosions. Following this introduction to unusual visual phenomena, Chapter 5 is primarily concerned with various classifications of UFO reports, varying from general reports to putative landings and contacts with UFO occupants. Chapter 6 centers on unusual astronomical events such as transient glows on the moon, solar peculiarities and sudden appearances of stars. Unusual meteorological and geophysical events are covered in Chapters 7 and 8. Although very often these events overlap with understood but infrequent phenomena, episodes like unusual cloud formations, unexpected turbulences, sudden blackness, unexpected water movements, "strange areas," and sudden appearances of holes in the earth are listed.

Chapter 9 is concerned with unusual forces focusing on human beings. Subdivisions include cases of objects appearing and disappearing, spontaneous human combustion, formations of etchings and shadows on glass and walls, small explosions and group fainting spells. The problem of unexplained disappearances is briefly covered in Chapter 10. Reports of non-existent animals, sea serpents, or prehistoric creatures as well as unusual animal behaviour complete Chapter 11. Chapter 12 deals with odd archeological findings or unusual fossils, such as giant humanoid skeletons, and Chapter 13 summarizes and compares the results.

The remaining three chapters integrate and expand upon the problems that are evoked by the reports. Various theories normally used to explain Fortean phenomena are specified in Chapter 14 and tested against the data. Conceptual limitations of each hypothesis as well as the practical boundaries of testing are emphasized. Hypotheses discussed include time-invariant/repeated space theories, transglobal patterns, temporal antecedent and lag effects, and spatially independent-temporally contiguous relationships. In Chapter 15, the concept that large scale solar-geophysical electromagnetic phenomena induce transient and localized phenomena is developed. Hypotheses are made and data are shown to indicate the relationship between such large magnitude geophysical events and transient lunar phenomena, UFO reports and other Fortean phenomena.

Finally, extrapolations from our human conceptual limits of space and time are discussed in Chapter 16. Here the idea of energy-mass reversals is compared with possible changes in the space-time fabric as the controlling variable in the genesis of unusual events. The logical extensions of an interaction between millions of human brains and the geoelectromagnetic environment are then discussed in the concept of the geopsyche. It is conceived that under special conditions when many brains share defined characteristics, transient and subtle geophysical disturbances may induce their own phenomena within the population. Chapter 17 contains a final comment.

There are many books dealing with more particular aspects of events similar to those reported here. This book is intended as an introduction to the unusual and to the extraordinary. Its primary purpose is to stimulate and encourage thinking about the limits of our concepts and the boundaries of the ultimate measurer — man. Indeed, in the final analysis we may be reporting about the oddities of the measurer himself.

With respect to division of labour during the construction of this book, the events from the computer outputs and the maps were counted and drawn by G. F. L. The main text was written by M. A. P.; the concepts developed in Chapters 14, 15 and 16 were derived from M. A. P.'s laboratory and theoretical notes on these topics. The final work involved the collaboration of both authors.

We acknowledge the help of Mr. Chris Blomme for his excellent technical assistance and the help of computer experts Dr. Peter Bedall, Aubrey Chernick and Walter Cooke. Our gratitude to Dr. Herman Falter, Department of Chemistry, Dr. Byron Eastman, Department of Economics at Laurentian University and Dr. Klaus-Peter Ossenkopp, Department of Psychology, York University, for their helpful comments.

Michael A. Persinger
Gyslaine F. Lafrenière

chapter 1

Introduction and Perspective to the Phenomena

In the years 1917 and 1970, hundreds of people in southwestern Illinois reported seeing large cat-like and humanoid creatures. Along the banks of the Mississippi River, pictures of similar creatures drawn by Indians still exist. Many fish were seen to fall from the sky over parts of Florida during 1971; fish have fallen many times before in this area. During the summer of 1973, inhabitants from a large sector of the central-southeastern United States and of California reported unusual flying objects; during 1897 such reports originated from the same areas.

In March, 1974, hundreds of fish were reported to have fallen from the sky over northern Australia and in late 1974 the city of Darwin was devastated by a hurricane. During August, 1878, fish were observed to have fallen from the clear sky, along the western coast of California; seven months later the area was stifled by an unprecedented heat wave. On August 20, 1886, a small "comet" was seen for a short time in the constellation of Zeta. During the next eight days ashes and rocks ostensibly fell upon the ground around the Charleston, South Carolina area; on August 31, Charleston was demolished by the largest earthquake on record for that area. Several months before the earthquake of 28 February 1973, people in several states around the epicenter reported unusual "groans" and sounds beneath their houses.

There are unusual and infrequent events; their patterns are plausible but at present improbable. This book is concerned with such events and patterns. It deals with those episodes of the environment that are unusual in their frequency and description in context of the common and the accepted. Such phenomena also have been called *Fortean events*. They include ostensible occurrences of: rocks falling from the sky, rocks "popping" from the ground, artifacts of human culture found in inappropriate places and times, clouds that drop flesh and blood, large prehistoric-like animals seen in this century, and a variety of unexplained luminous and sonic phenomena. They are the borderline episodes of nature, the ones that barely fit into the tails of probability curves. These phenomena are the interface episodes between those events explained by accepted principles of nature and those that are not. Many of these events overlap with characteristics and properties of so-called parapsychological phenomena. However, the latter occurrences will not be considered here.

In this book we have summarized and categorized the different types of Fortean events. With the help of a computer, to date we have been able to sort 6,060 events collected with respect to time, space and category. The spatial distributions in the United States have been mapped for many of the major categories, and are also presented.

The Problem of Transients

Fortean phenomena are difficult data because of their very nature; they exist as *transients*. Not only do they occur infrequently —which makes their systematic study difficult enough—but they are also short-lived phenomena. The time span of an individual event is usually very short, but very intense and localized. By the time the measurement devices are erected, the data dials are arranged and the computer tapes running, a Fortean phenomenon has finished. More importantly, the infrequent interactions of variables required for the phenomenon's creation seem to no longer exist.

Western civilization and its incumbent sciences have had

difficulties with the measurements of transient events. Despite a vast and complex network of human recorders and sophisticated instrumentation, transient events still slip past official detection. When there is no official detection, a phenomenon cannot exist.

Historically, there is a long list of transient phenomena that were beyond the measurement networks of the time or too much for the contemporary concepts to accommodate. At one time, it was assumed that meteors could not fall from the sky and those people who saw a meteor fall were considered poor observers. It was once assumed that ball lightning could not possibly take place, but this was before the time of plasma physics and correlative equations.

The Leftovers

We, as a species, exist in a world in which exists a myriad of data points. Upon these matrices of points, we superimpose a structure and the world makes sense to us. The pattern of the structure originates within our biological and sociological properties.

Our nerves are constructed so that we perceive what has been labeled three-dimensional space. Our brain is organized so that we can experience memory and consequently have a reference point in the midst of incessant bombardment by serial events. As a result, we can experience a sensation of "time."

The patterns we perceive in turn are conditioned by our physical and social environment. They give us structure — a framework of reference points by which experience can be evaluated as "real" or "not real." Through the principles of conditioning, the imposition of structure upon the individual is completed. We are habituated to watching things fall *down;* we are adapted to rocks remaining in stationary positions unless they are moved by observable events. We learn that fish cannot live in the sky; we are told that people do not instantly disappear.

There are various names for large organized patterns that groups of people use to view their universe. Depending upon the nature of the patterns and the methods by which the patterns are maintained, they can be called religion or science. In terms of

social function, there is little difference between the two; both give structure to a structure-requiring species. Presently, most of the human species are influenced by the perspectives that have emerged from the results of a science structure.

However, even this structure is not constant. There have been times in the recent history of man when the patterns of perception have turned like the cylinders of an immense kaleidoscope. At one time the earth was considered the center of the universe. Stars and planets were luminous orbs, moving about the earth along crystal spheres; some men saw these spheres. At one time the earth was seen as flat and even the approaching ship's mast, slowly rising above the distant horizon, was interpreted within that pattern. When men saw earth as a god's recent creation, the fossils buried in strata millions of years old were rationalized into that presumption.

It is hard to evaluate a pattern for seeing the world. When an assumption is made, an array of data points take on an organization commensurate with the assumption. An example of this can be seen in Figure 1. Initially, all we can see are a series of scattered dots (Figure 1A); they are analogous to the data sets that compose our experience. If we assume they are linearly related, the equation for the line can be derived as the "best fit." Those points furthest from the line can be dismissed as unusual or infrequent in occurrence, although they are still a part of the data set.

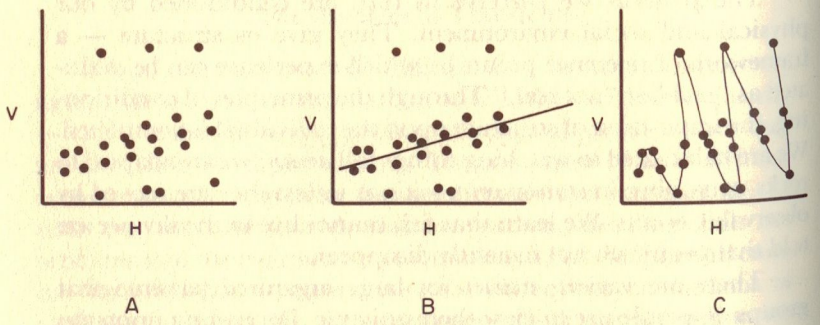

FIGURE 1. Different perspectives by which a given array of data points can be viewed, depending upon the conceptual assumption.

Now, suppose there is a perceptual revolution; a new perspective emerges from the broken heap of concepts and conjectures. It is a non-linear pattern and allows the perceiver to use a more sophisticated means to pattern his environment (Figure 1C). From this perspective the dots are seen organized in a systematic oscillating manner and another interpretation of the world is made. These dots which now do not fit are considered the unusual, the infrequent — perhaps even the unreliable.

The analogy above seems to be a potent indictment against the systematic collection of data, against any organized body of knowledge; it seems contradictive to science. Clearly, the pattern one assumes to view the data array determines the way it is seen. At first inspection there seems to be no advantage to select one pattern over the other; if anything, the pattern in Figure 1B is simpler. But there is a difference between the patterns, a subtle but critical discrimination. With the last pattern (Figure 1C) there are *fewer* points not connected by the equation. There are less data left beyond the pattern. As a result, the prediction of the pattern has become stronger and the viewer has come closer to understanding the entire data set.

In every scientific revolution there are orphan data: reports that do not fit into an accepted world gestalt, patterns that are incompatible with the contemporary structure, measurements that have no meaning. Fortean phenomena may just be those "leftovers" that have been waiting to be reorganized into a new perspective, but their induction may require a reorganization of our concepts.

New and Complex Concepts

The patterns an instrument can detect are a function of its construction — of its resolution and band width. Man, as a species, is not different. Many of the patterns we perceive are imposed by the social environment; still others are a consequence of biological maturation. A young child does not have the conceptual resolution to evaluate the principles of invariance. He incorrectly concludes that water changes volume after it has been poured from a short, fat

bowl into a tall, thin glass. The child is likely to confuse objects that undergo successive stages of gradual alteration; the phases of the moon are perceived as different objects instead of the same object slowly changing.

The adult brain is also bound by conceptual limits for space and time. There has been a problem in science to understand the principle of action at a distance. It is assumed that two objects must be close together or connected in some obvious way before the two can interact. Alternative approaches are cumbersome and apparently insoluble. One can imagine the astronomer's first impression when his data suggested that opposite sides of a quasar, tens of light years apart, were responding in a similar manner. Despite immense distance and with no apparent connection, simultaneous reactions were taking place faster than even the speed of light could accommodate.

There is also a problem of time increment. The human brain can experience time, but the increment of resolution is very small.

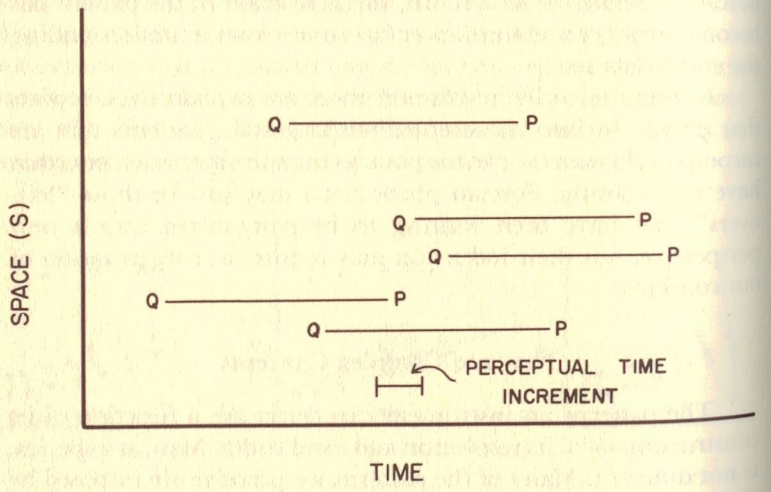

FIGURE 2. A graphic conception of several episodes with two related events (Q and P) whose time separation is much greater than the perceiver's time increment for experience. As a complicating feature several separate episodes of the two related events are juxtaposed in the viewer's space.

Two events which occur less than ten milliseconds apart may be considered a singular episode. Two events that happen weeks apart are considered as unrelated. To be considered as causally related, events must fall into the narrow band of temporal resolution projected by the brain and placed in the context of memory. The range of this band exists in the order of minutes; its effectiveness quickly deteriorates with days. Food eaten during the meal is blamed for the cramps and sickness; the food eaten three days ago, perhaps the real cause, is ignored or forgotten.

The concept is a simple but important one. A pictorial representation of it is shown in Figure 2. The small increment of time is the interval in which successive serial events are experienced as related in some relevant manner. For example, turning the ignition starts the car, placing the gears into "drive" allows the car to move, and pressing the brake pedal stops the movement. These events are seen as related in a causal, serial interval; they are within the increment. Now, suppose we have two related events, Q and P, where the time of separation is beyond the detection of the increment; the two events are seen as unrelated single episodes. If several pairs of Q:P events are juxtaposed in space (moving along the S axis in the diagram), then the observation is confounded; the conclusion that Q and P cannot be related is more likely to be emitted. There are many such patterns in Fortean phenomena. Suppose the Q's were episodes of "rocks falling" and P's were severe earthquakes some time later. Would the relations be detected?

Similarly, there are concepts of space which are difficult to detect. A pictorial example is shown in Figure 3. Suppose there exist non-adjacent localities over the surface of the earth (Figure 3A) where similar phenomena occur at the same time. The points are not spatially connected, only functionally related. A possible reconstruction of space with all such points superimposed at an origin is shown in Figure 3B. When an earthquake occurs in one locus, fish falls, "deluges," sudden floodings or an epidemic of shattered windows occur in the other places. In this context, the phenomena would not have to be Fortean in nature; instead, accepted meteorological or geological disturbances could occur

within these coupled spots of three dimensional space. Although still firmly based in physical principles, such a concept has been difficult to handle.

The *interactions* of space and time would be another test of our present concepts. Suppose the relationship between two Fortean events was a function of the space (s) and time (t) product. This can be easily depicted as s x t = k. Purely as an example and not meant to imply real values, let us assume that s = 8,000 miles and t = 1 day. If these assumptions were correct, then two *related* Fortean events (Q:P) occurring within one day would be 8,000 miles apart. If the two events were 800 miles apart, the time interval between the episodes would have to be ten days. If the separation distance was eight miles, the time epoch between the two events would have to be 1,000 days (2.74 years), and so forth. The product of the time between the two events and the space between the two events would always be constant.

A visual display of this hypothetical relationship can be seen in Figure 4. The two axes along the flat surface of the page (X and Y) represent the space distance between two *related* Fortean events. The third axis represents the period of time between the two events. As one goes further into the page, the time interval between the events increases. The small dot represents the occurrence of two *related* Fortean episodes close together in space; they are far apart in time. The large dot represents two events that are far apart in space; they are close together in time.

Global Analysis

The authors are interested in determining the empirical verification of such concepts. Perhaps their "real-world" counterparts do not exist at all, except as an interesting conceptual exercise. Only the testing of the data will answer the question. If there are non-adjacent areas of the earth that are functionally connected and temporally interwoven, then these areas should emerge as a matrix of plotted points. If there are areas where unusual events have continued to occur year after year, then they should protrude from the data patterns.

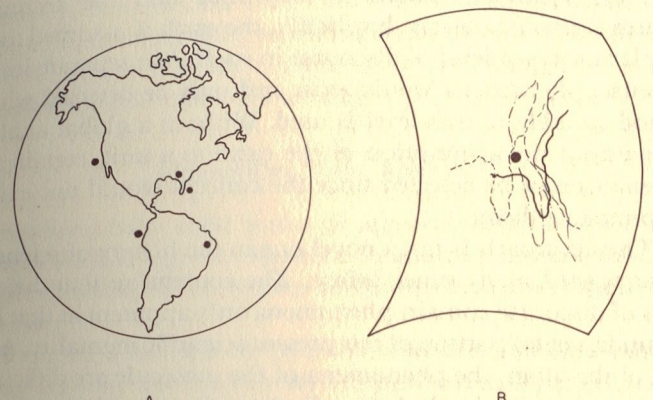

FIGURE 3. (A) Hypothetical distribution over the earth's surface of non-adjacent spatial points that are functionally and topologically related. (B) The earth's surface after all functionally-related points have been placed at the same origin. In such a situation parts of the surface are folded or superimposed and different spatial relationships emerge.

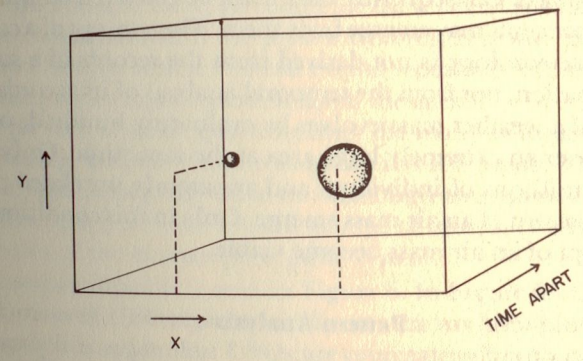

FIGURE 4. The relationship between temporal and spatial intervals for *related* events (e.g., Q and P in Figure 2) existing within a sector section of the space-time manifold (four dimensional space). Those *related* events (large circle) that are far apart in space (X and Y axes) are close together in time (axis into page), while those *related* events close together in space (small circle) are far apart in time.

The questions demand a technique and the technique requires a global analysis. Implicitly, the earth is assumed to be a singular unit — a level of discourse in itself. As a separate level of discourse, phenomena would exist and only be detected when a method suitable to that level is used. Without a global analysis, and without the assumption of the earth as a unit, certain phenomena cannot be detected since the concept would not exist to accommodate them.

This approach is not a novel one in the history of science; it has happened many times before. The contention that different levels of discourse contain phenomena only apparent at that level is a fundamental portion of our present scientific mentality. At the level of the atom, the phenomena of the molecule are difficult to understand; at the level of the cell, the rich and orderly fabric of behaviour is difficult to predict. Each level of approach to nature contains phenomena that typify and justify the approach.

A contention has been made that the earth itself must be considered as a unit — even more than the ecologists in their niche have suggested. Consequently data must be collected on this level and new concepts may emerge from them. The concept of a cold air mass in meteorology is not derived from the records of a solitary weather station, nor from the temporal analysis of its records. The concept of a weather mass evolves by evaluating hundreds of data stations over an extremely large area at the same time. Only then, from the millions of individual and apparently unrelated points does the pattern of an air mass emerge. Only in this condition does the concept of an air mass become viable.

Pattern Analysis

Commensurate with the statements above, the main technique used for this book has been pattern analysis. Individual data points in themselves are not important; nor are they necessarily reliable. What is important are the *patterns* that become apparent once the data are plotted in space or time. Individual points are influenced by a number of factors that are beyond the control of the data collector, perhaps even beyond the control of the

observer. When evaluating the existence of an air mass, one is not primarily concerned with mild deviations in individual stations. The general pattern of many stations is more important. A similar approach has been used in this text.

Limitations of the Approach

Methods have their limits of applicability; there are some phenomena that a given technique or approach cannot validly or reliably evaluate. With the present approach, at least three limitations exist.

First, caution must be applied whenever the data patterns displayed in this text are viewed. The problem with patterns is that observers see what they project into them. An unstructured array of data points evokes a number of psychological responses from a human observer, and he superimposes his own structures upon them. In this manner data patterns are similar to ink-blot tests or any other projection measurement. If the person believes that UFOs are a hostile force, he might see the reports clustering about military installations. If the person believes there are "magnetic" windows within which Fortean events repeatedly occur, then he may just project such a pattern upon the data.

The viewer must guard against the many illusions that the printed page and the visual system can induce. Figure 5 contains a well-known perceptual illusion. Although the squares are equal distances apart, they are seen in groups of four; such illusions are properties of the human perceptual system.

Another illusion is seen in Figure 6. In Figure 6A the spatial distribution of UFO reports within an area has been plotted. If the assumption is made that UFOs are originating from a center, and moving out in concentric circles about the origin, then the dots display a systematic-looking pattern (Figure 6B). Such a perceptual mistake has been committed before in the history of this research.

A second limitation is concerned with the measurer. The nature of a phenomenon very often reflects the properties of the measurement device. Invariably with Fortean events, the measurer

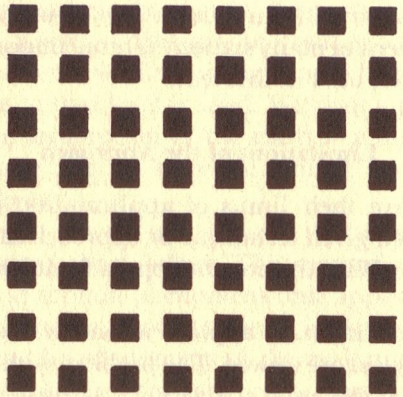

FIGURE 5. The perceptual property of "grouping"(modified from Woodworth and Schlosberg, 1962).

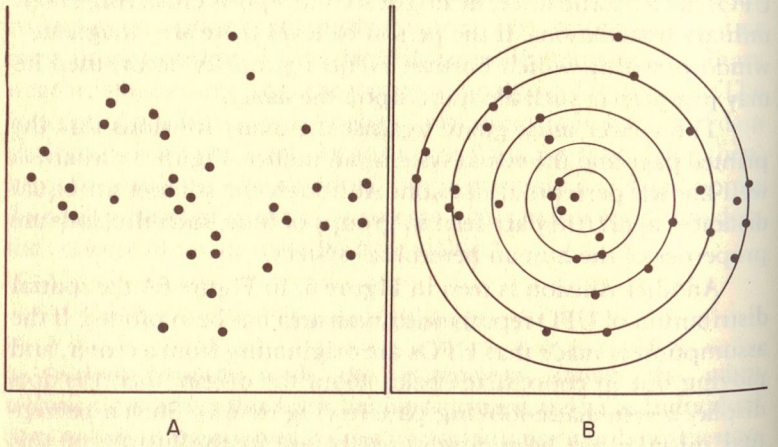

FIGURE 6. (A) The spatial distribution of ostensible UFO reports. (B) The same distribution with a perceptual form superimposed upon the data. Illusions of relationship between the concentric circles and the points can be evoked.

is man. What is reported as unusual or bizarre must be evaluated in context of the people reporting it. Fortean phenomena may only demonstrate man's capacity to interpret environmental events as unusual "things."

Fortean reports may be nothing more than contaminations of natural observations, invalid assumptions projected upon neutral stimuli. If a person implicitly assumes that any unusual phenomenon is hostile, he might describe its occurrence as an "attack." In actuality, the phenomenon may have just traversed nearby as a part of its natural behaviour.

A third difficulty also lies within the measurer. If man is the measurer of unusual events, then a high relationship between population or population density should exist. The higher the concentration of measurement devices, the greater the number of observations. If the phenomena are homogeneously distributed, then the maps on the following pages should reflect only population factors. Deviations from such patterns would indicate the involvement of variables other than population.

Why Study Infrequent Events?

Fortean events are infrequent, transient and, from many points of view, improbable. However, the study of such events is important for a number of reasons.

Psychological Reasons

Like other normal biological systems, the human being habituates to continually applied stimuli. On the other hand, when something new (that is, unexpected) occurs, the human individual becomes activated. A part of the activation is observed as emotional behaviour. Emotional behaviours are a normal component of what the person calls "self." Mild perturbations in the environment produce small and insignificant deviations in that concept.

Unfortunately, transient events are not only unpredictable, but when they occur, they may be manifested in an intense and

crushing manner. In 1882 an entire Texas town was destroyed by a flash flood; during 1891 a city in Massachusetts was wiped off the map by a freak windstorm; in 1929 an entire town in Spain was crushed by ice blocks falling from the sky. Following the view of mysterious inky clouds on the horizon, the city of Charleston, South Carolina, shook into ruins.

Such events have intense emotional impact; they have devastating consequences upon the people that experience the event. Perhaps it is possible to predict the occurrences of the events.

Economic Reasons

When transient, intense environmental phenomena strike, staggering amounts of money and economic potential are wasted. Buildings are destroyed, crops are damaged, cities are leveled. If the systematic study of Fortean events can be used to predict such crises and hence attenuate their effects, the time spent and concepts changed would have had human value.

Presently seismologists and other geophysicists are attempting to isolate early-warning systems for earthquake disasters. Meteorologists and physicists are trying to discover new techniques to avoid excessive crop damage and property losses from unexpected tornadoes or turbulence. The more precise understanding of transient and unusual events could aid in this search.

Scientific Reasons

The scientific reasons for studying transient and unusual events are self-evident. Unusual events are deviations from the normal principles of environmental operation. There is a saying in science that one learns the principle by looking for the exceptions. Transient and infrequent events are often the exceptions. Perhaps we will learn more about the moon when the nature of the transient luminous phenomena on its surface, seen century after century, has been elucidated. Perhaps we will learn more about the evolution of man when the strange fossils and inappropriate

skeletons are explained. Perhaps we will learn more about localized energetics of the environment when rock falls, animal falls and related phenomena are understood. A new and more precise concept of our space and time could emerge.

Historical Significance

Some people believe in a deterministic universe. From this point of view, the United States would have evolved into a great nation, no matter what would have happened in the eighteenth century. A man called Christ would have become the center of a civilization even if he had not died coincidentally with an earthquake.

But there are many variables that contribute to the outcome of a single event. A number of probabilities contribute to the final "destiny" of historical episodes. Some of these probabilities have been transient and infrequent events, a few of them have been classic Fortean episodes.

On May 19, 1780, the day began as usual, but before noon the sky over the New England states had turned pitch black; many people felt that the end of the world was near, others interpreted it as an omen for victory. What did British soldiers on foreign soil think; how did the event influence their behaviour? In April of 1781, General Cornwallis and his troops were making a routine retreat by boat to the ships around Yorktown. A sudden and freak storm arose and he could not leave, so he surrendered to a small, tattered army which was about to disband following one more defeat.

During World War I, hundreds of soldiers saw "phantom armies" in the skies; how did these transients influence their behaviour? In the history of man there have been instances where great leaders have been made or destroyed by transient events. Constantine the Great saw what he interpreted as a cross in the sky; his men followed him to victory. In this century, a general of a rebel army was camped outside the capital of a South American country; victory was certain the next morning. That night a meteorite struck the general's tent and the revolution dissolved in hours.

How many freak and infrequent events have contributed to the products of history? How many freak and infrequent events will add their measure to the future? The human species has had a consistent tendency to associate infrequent and freak events with superstitious and religious origins. Such events are taken as signs from the viewers' god: omens for sure success, warnings of the enemies' defeat. Unpredicted and infrequent lights in the sky, movements of the ground or colors in clouds have been warped and twisted century after century into the contexts and wishes of the perceiver. What impact will such events have upon our present world, with its complex networks of fail-safes, cross-checks, and interlocks? In 1968 a mysterious light appeared for a month above a chapel in Cairo, Egypt. Some thought it was a sign from God. A sign for what?

Required Mentality

Infrequent and unusual events strain the evaluative capacities of the scientist in a person and evoke the emotions of the animal. These events are difficult to understand. Fortean and Fortean-like episodes have been left out of science for two very important reasons.

First, science behaviour is a social behaviour. What is studied as scientific or relevant is defined in terms of the science group. Those people who consider themselves scientists do so by displaying the behaviours that define a scientist. If a scientist studies genes, then such a person studies genetics. If a scientist believes in evolution, then the person who considers himself or herself a scientist avidly defends evolution, even though he or she knows little about it. If a scientist is supposed to be super-skeptical, then the person who has identified himself as a scientist acts super-skeptical — at least when he's in a group. Science behaviour is a group behaviour.

Secondly, many types of Fortean events are insoluble problems — they make no "sense." Insoluble problems are undesirable and anxiety-producing dilemmas for most mammals. When a rat is forced to jump towards two doors, one of which is always open and full of food, it can learn well. But if the problem becomes insoluble, the rat develops a stereotyped response; he jumps always to one door or to the other or uses a "superstitious" sequence. Even when the solution to the problem again becomes easy, the rat maintains the ritual. Human behaviour is similar. When the problem becomes insoluble, people develop stereotyped and ritualistic response patterns. They reject the phenomenon altogether or accept it without question.

Such behaviour must be avoided when borderline and unusual events are studied. All are not real, but all are not unreal either. We don't live in an all-or-none universe. For some problems, perhaps, there are no solutions at all.

Logistics of the Book

Data Sources

The data used for the present analyses were taken from the books of Charles Fort, known scientific journals, newspaper clippings and *Fate* magazine. For more detailed accounts of many of these events the reader should consult the Project Sourcebook series by W. R. Corliss (1974a; 1974b; 1974c; 1975). Since most of the events involve large numbers of observers and reporters, the major emphasis was placed upon verifying the dates and places of the events. There is a significant gap in coverage of unusual events between 1930 and 1945. About 1930 the systematic efforts of Charles Fort as well as routine coverage by orthodox journals begin to dwindle. After 1945, a resurgence of systematic collection took place.

Data Collection Categories

Each of the 6,060 events was punched onto a computer card with reference to: (1) hour, (2) day, (3) month, (4) year, (5) town, city, or localized area of occurrence, (6) state or province of occurrence; and (7) country of report. A four-digit category number was then ascribed. Short descriptions and source of the report were placed in the remaining forty-three spaces on the card.

Depending upon preset criteria (stated in each succeeding chapter), an event was classified with a four-digit category number.

Eleven major categories were used that included: fall phenomena, electromagnetic phenomena, unusual sonic phenomena, UFO reports, unusual human behaviours and properties, unclassified animals, unusual forces, astronomical peculiarities, geophysical oddities, meteorological infrequent events, and archeological phenomena. Other categories of mass human behaviour and related events (mass sickness, crime, etc.) and paranormal cases have been used, but are outside the scope of this text and are not included in the present analysis.

Each category was subdivided into a number of subcategories, each subcategory being defined by specific properties. Two to ten subcategories were partitioned in each category. For this text, some of the subcategories were combined to save space.

A computer was used to sort and list the various events as a function of spatial position, month, year, category type or combinations of the above. A time series of all events in the data population was produced also to detect possible temporal relations between events occurring in different parts of the world during the same period. Since the United States area has many reports and a long history of systematically recorded correlative environmental data, spatial distributions of different categories and subcategories for this area were recorded and mapped individually by the second author.

In order to facilitate mapping and comparisons, the United States was divided into one degree latitutde-longitude partitions; the number of events per partition over time was totaled. An example of the maps used is shown in Figure 7. However, to aid visual inspection, most of the remaining maps will not contain the detailed demarcations, but only be divided according to major longitude-latitude regions.

A Statement on Tenuous Research Areas

There are some ostensible phenomena and research problems that are, at most, tenuous for an outcome; the probability of ever elucidating the nature of such phenomena or controlling their occurrence is very low. But many of these events, though they may

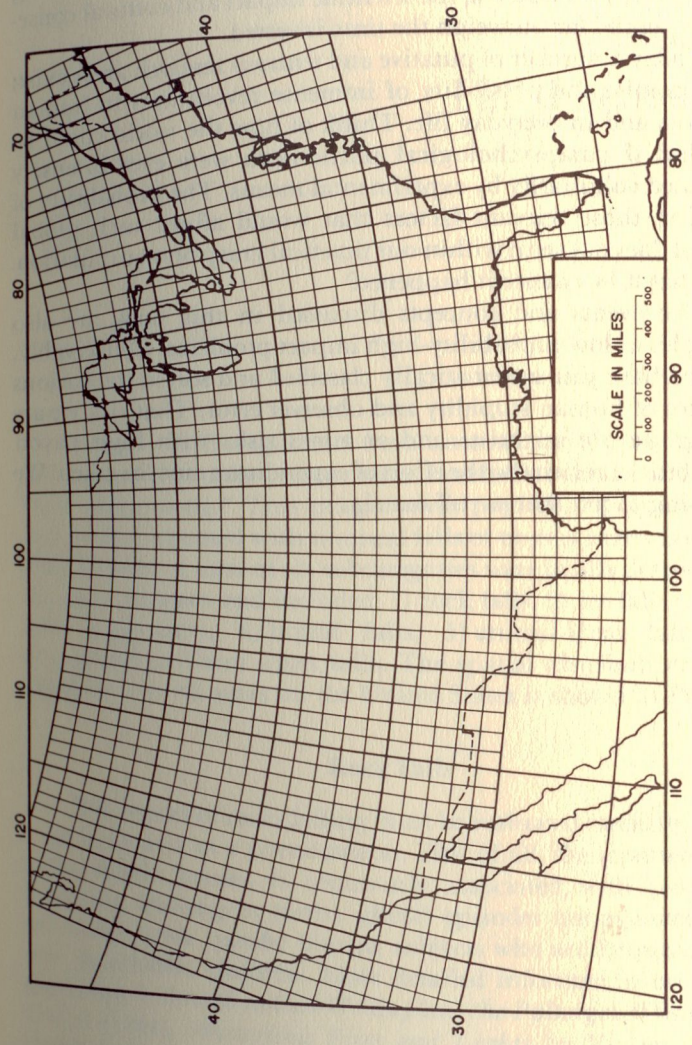

FIGURE 7. Example of 1 degree geographical partitions used to map spatial distributions of Fortean and transient phenomena in the United States of America.

absorb hundreds of man and machine hours, are worth the expenditure because if by some small chance the controlling factors were ever isolated, the scientific impact and cultural consequence would far outweigh the time invested.

Today a number of putative and tenuous research areas exist; they promise the possibility of immense revolutions in human concepts and in everyday life. Think of how the world could be modified if parapsychological phenomena were ever intensely generated voluntarily by experimental means. The probability of isolating those relevant factors that would afford such global control does not seem within our practical grasp or manipulation. But what if by chance it happened?

The events and concepts discussed in this book are also examples of low probability-high impact problems. Conceivably, we may have just systematically classified and sorted the various nuances of human stupidity and observer error. That risk we are taking; we are scientists and at times risks with high payoff probabilities relative to the effort of expenditure must be taken. We are going to test that payoff matrix.

chapter 2

Fall Phenomena

A total of 805 single cases from various countries of the world between 1800 and the present were classified under the category of "fall phenomena." This category was used to classify all events that were concerned with unusual falls of objects in terms of type, size or speed. A total of six subcategories were finally derived from the data patterns and included: 1) rock falls, 2) ice falls, 3) solid falls (non-rock), 4) liquid falls, 5) animal-form falls, and 6) concentrated-area water falls. The spatial distribution of this category over all years for the United States is shown in Figure 8.

Rock Falls

The report of rocks falling must be evaluated carefully both as a category and as a phenomenon. First of all, the reported fall of rocks inside houses is commonly associated with poltergeist activities. Poltergeist (noisy ghost) episodes are assumed to be associated with specific human subjects who are frequently, but not invariably, children. More detailed information on poltergeists can be found in *Can We Explain the Poltergeist?* by George Owen (1964), *Mysterious Fires and Lights* by Vincent Gaddis (1967), and *The Paranormal Part II: Mechanisms and Models* by M. A. Persinger (1974).

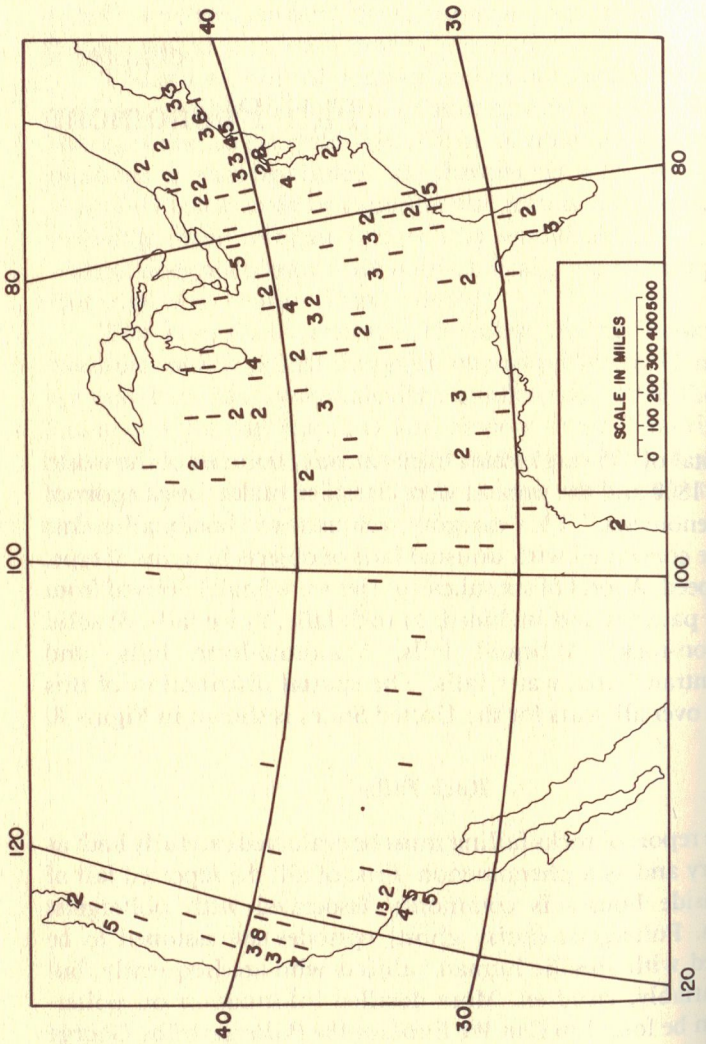

FIGURE 8. Spatial distribution of all reports that involved "unusual" materials falling from the sky.

Conspicuous aspects of poltergeist-correlated rock falls are: (1) their manifestation inside dwellings, and (2) the apparent requirement for the presence of the human focus. Such episodes were not categorized under the rock fall division, but were placed in another category and chapter. Rocks that fell from the sky, outside dwellings, were placed in the present category.

The 104 events classified as rock falls included: (1) the fall of single, large stones or groups of small stones during: a) thunderstorms, b) earthquakes, or c) explosions in the sky, and (2) the fall of pebble-like stones for several hours or days in the same locality. The major feature of the first type of fall is the involvement of observable energy disturbances in the ambient environment of the reporter. In some of the older Fortean reports, the fall of large rocks during thunderstorms or following explosions in the sky were classified as meteorites. However, no remarkable craters nor impact sites were associated significantly with such falls, suggesting that the release distance of the rock from the surface would have been small (assuming physical principles were working normally). Examples of the above category included:

1. 9 June, 1866/Hungary/explosions in the sky, stones fall.
2. —, 1885/Casterton, England/fall of a twelve pound quartz stone during a lightning storm.
3. – March, 1888,/Middleburg, Florida/fall of a block of limestone.
4. 19 November, 1899/coast, France/fall of a meteorite during a thunderstorm.
5. 19 September, 1958/Long Island, New York/fall of meteorites on a lawn.

The second pattern that emerged from the data involved the repeated fall of rocks in a particular area over a sustained duration. These episodes were not associated with apparent storms or earthquakes. Example cases included:

1. – January, 1849/Pantheon (near Paris), France/stones fall on a house for three weeks.
2. – May, 1874/Los Angeles, California/rock shower.
3. 16 June, 1884/Trenton, New Jersey/stones fall in a field.
4. – July, 1921/Chico, California/rock fall begins, lasts for weeks.

5. _ July, 1962/San Bernardino, California/rocks fall, windows break during the unusual "precipitation."
6. _ June, 1968/Valley Stream, New York/fall of rocks, still warm when touched.

Some of the falls were continuous but aperiodic; others were periodic. One episode during 1963 in Melrose Park, Pennsylvania was associated with daily falling of rocks until midday. The distribution of rock falls in the United States is shown in Figure 9.

Ice Falls

Reports of large ice chunks falling from the sky involved 122 cases. Considered as a category, ice falls are not likely to be manifestations of large hail stones. Typically, the calculated weights of the ice chunks, before impact, vary between fifteen and fifty pounds. Their impact velocity is by no means of low magnitude, since injury to livestock or damage to the roofs of houses can be extensive. A frequent report is the sound of a whirring or whistling sound before the ice chunk strikes the ground. Although probably an artifact of observation, there are suspiciously too many instances of the reporter jumping out of the way to avoid being struck by the ice.

With exception of their large size, ice chunks do not display unusual physical properties. They are normally reported as milky white in consistency. Shades of blue or green are mentioned less frequently. Smells associated with the ice chunk are common; typical smells range from fish-like to urine-like in nature. Much to the disappointment of investigators who have chemically analyzed the fragments of ice fall chunks, no unusual or foreign substances have been detected.

Classic cases of ice falls are represented in the following samples:

1. _August, 1882/Salina, Kansas/an eighty pound ice chunk falls.
2. __, 1888/Chicago, Illinois/ice falls, approximately two pounds each.
3. __, 1889/Aitkin, Minnesota/sudden darkness, large ice chunks fall.

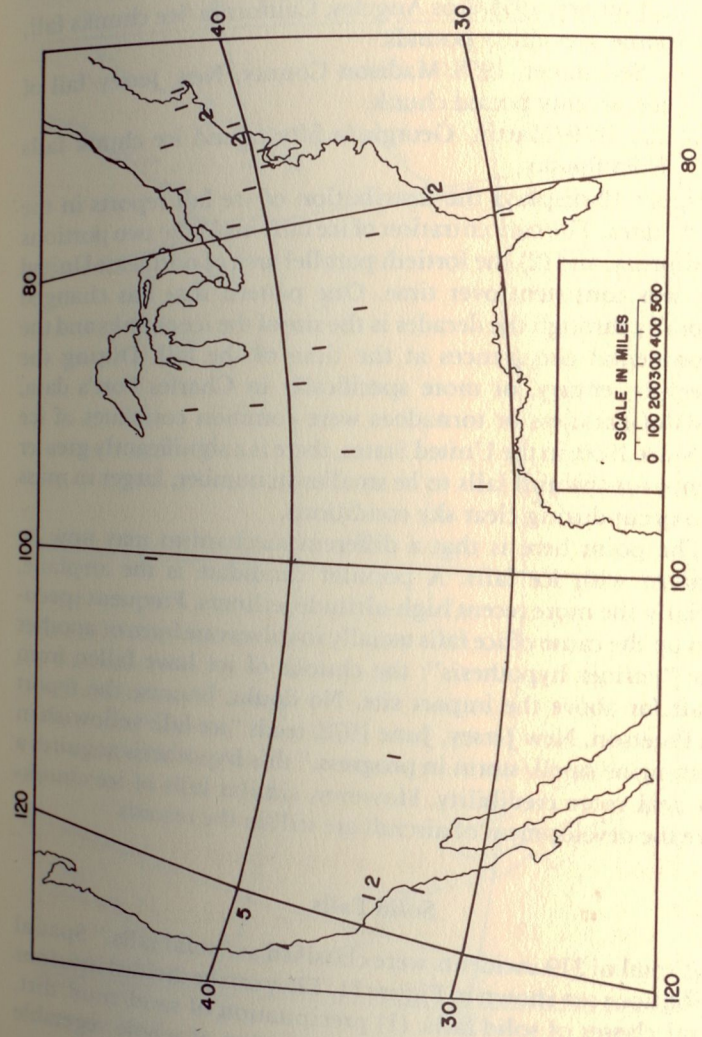

FIGURE 9. Spatial distribution of "rock falls" in the United States.

4. __, 1929/Cazorla, Spain/houses crushed by ice falls.
5. __ 1950/Popham, England/a fourteen pound chunk of ice kills a sheep.
6. _ January, 1955/Los Angeles, California/ice chunks fall, some over thirty pounds.
7. _ September, 1958/Madison County, New Jersey/fall of ice, seventy pound chunk.
8. __, 1959/Martin, Georgia/a fifty pound ice chunk falls from the sky.

Figure 10 displays the distribution of ice fall reports in the United States. The concentration of ice falls in (1) the two portions of California, and (2) the fortieth parallel area of northeast United States was consistent over time. One pattern that has changed temporally through the decades is the size of the ice chunks and the environmental occurrences at the time of the fall. During the nineteenth century, or more specifically in Charles Fort's data, periods of darkness or tornadoes were common correlates of ice falls. Since 1950, in the United States, there is a significantly greater tendency for the unit falls to be smaller in number, larger in mass and to occur during clear sky conditions.

The point here is that a different mechanism may now be associated with ice falls. A popular candidate is the airplane, especially the more recent high-altitude jetliners. Frequent speculation on the cause of ice falls usually involves one form or another of the "jetliner hypothesis": the chunks of ice have fallen from aircraft far above the impact site. No doubt, because the report from Paterson, New Jersey, June 1972, reads "ice fall/yellowish in colour/urine smell/storm in progress," this hypothesis acquires a great deal more credibility. However, similar falls of ice chunks before the development of aircraft are still in the records.

Solid Falls

A total of 319 incidents were classified as "solid falls." Spatial distributions are shown in Figure 11. They can be divided into four general classes of solid falls: (1) precipitation of sand/mud/dirt, (2) fall of organic materials, (3) precipitation of whole vegetable

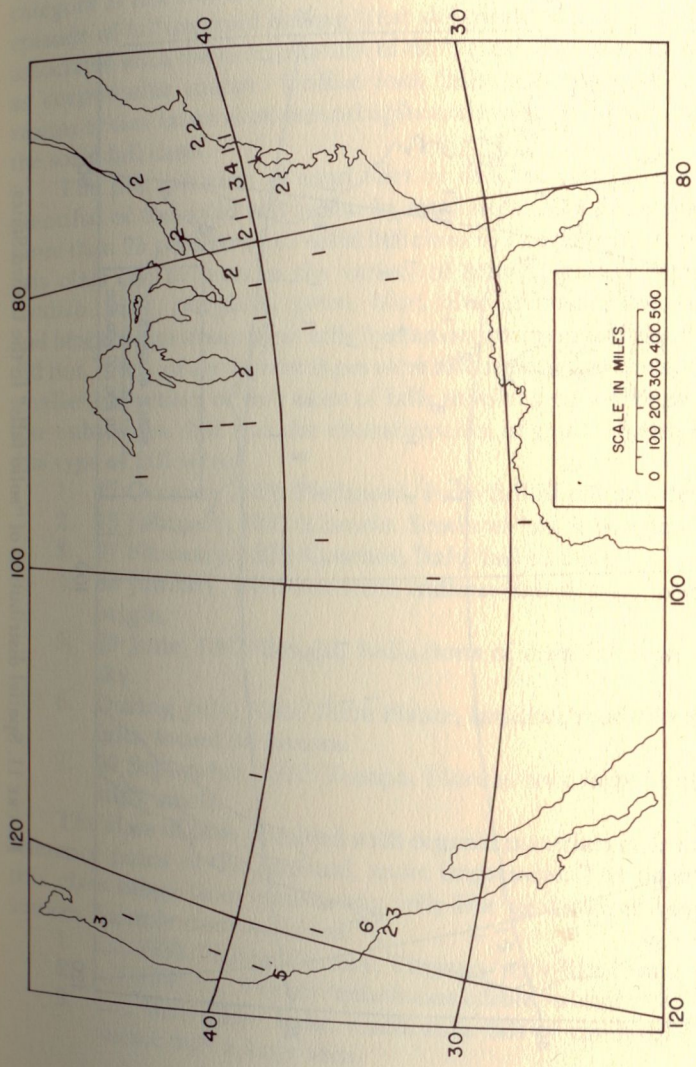

FIGURE 10. Spatial distribution of "ice falls" in the United States.

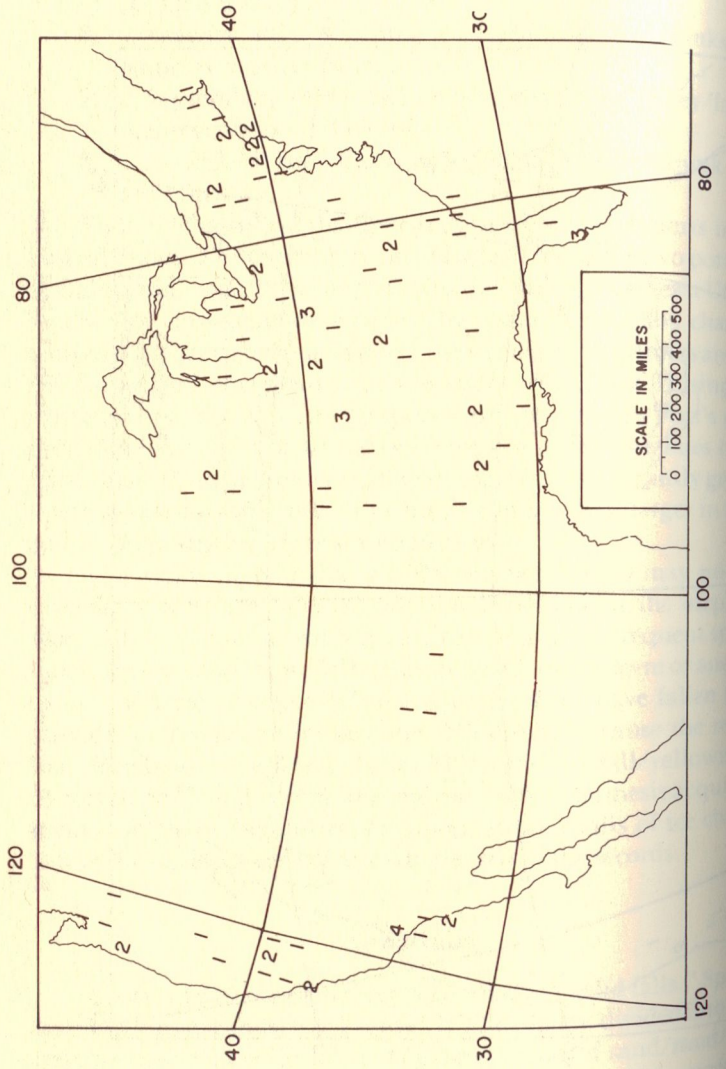

FIGURE 11. Spatial distribution of "solid falls" in the United States.

matter (seeds), and (4) the fall of man-made-like objects. Each category is not exclusive of the others; in some instances a single episode of falling mud during clear sky conditions might also be associated with the precipitation of biological-like materials, such as corpuscular matter. Unlike rock falls, concurrent electrical storms or similar environmental upheavals were not as apparent in the solid fall cases.

The precipitation of sand, dirt or mud was by far the most plentiful of the solid fall types. In total such cases accounted for more than 75 percent of all solid fall classes. The colorful nature of this class can be seen in the variety of hues that were reported: reddish, pink, purplish, green, blue, blue-green, yellow, orange and black. Sometimes these falls had an organic consistency, others did not. A few of the former types were also reported to stink. A still smaller collection of this class of falls involved coke-like or soot-like substances that had the characteristics of mud. Examples of this type of fall were:

1. 27 October, 1814/Piedmont, Italy/fall of red powder.
2. 15 February, 1837/Comrie, Scotland/black powder falls.
3. 27 February, 1872/Cosenza, Italy/fall of dust.
4. 08 January, 1892/northern Indiana/fall of dust, volcanic origin.
5. 29 June, 1897/Bengal, India/tons of mud fall from clear sky.
6. During July, 1963/Terre Haute, Indiana/mud-like slime falls, found on houses.
7. 09 September, 1972/Tampa, Florida/soot falls from sky, stink smell.

The class of falls involved with organic materials is, from the reference point of the unusual, more impressive. The objects in this class range from nauseating jelly-like globs to edible substances. Sample cases included:

1. —, 1833/Nelson County, Virginia/jelly-like lumps fall.
2. —, 1841/—, Turkey/gelatinous edible substance falls.
3. —, 1857/Clear Lake, California/fall of candy-like substance over a large area.

4. 16 November, 1857/Charleston, South Carolina/mass of bristling fibers (angel hair?) slowly falls.
5. 08 June, 1901/Sart, Belgium/fall of substance that smelled like glue.
6. 15 October, 1922/near Chicago, Illinois/fall of web-like substances on lake shore.

Interestingly, the number of organics reported to fall have seemed to decrease since around 1930. However, it should be pointed out that similar substances are now often reported with or following observations of UFOs and consequently would be classified elsewhere.

Falls of familiar and non-familiar seeds have been consistently reported over the centuries. Again, there is no consistent or conspicuous correlation between thunderstorms or windstorms and the occurrence of these falls. Examples of seed falls were:

1. During July, 1822/several places in Germany, Poland/fall of unknown seeds.
2. 13 August, 1913/Kirkmanshaws, Persia/fall of unfamiliar seeds.
3. _ February, 1958/Savannah, Georgia/shower of seeds.
4. _ August, 1962/Blackstone, Virginia/fall of beans and peas during storm.
5. 22 January, 1964/San Fernando, California/thousands of white beans appear after rainfall.

Less frequently reported are the falls of other kinds of vegetable matter that included:

1. 10 April, 1869/Indre, Austria/fall of oak leaves, no wind.
2. 27 July, 1875/Monkotown, Ireland/fall of masses of hay.
3. 11 April, 1894/Pontcarre, France/fall of dry leaves for over half an hour.
4. 12 July, 1961/Shreveport, Louisiana/fall of peaches from a cloudy sky.
5. __, 1971/Springwater, New York/fall of chunks of hay.

Under the class of "man-made-like objects" a whole series of unusual and parausual objects are reported. When the computer selectively printed this class of events, we were impressed with the range of things that can be *reported* to fall from the sky. Pieces of red hot metal crashing to the ground are no longer implausible for members of the space age community. But such cases of man-made metals precipitating during thunderstorms were also reported in Charles Fort's data — before the age of satellites. Since 1950, the variety of objects in this class has displayed a greater range. Sample cases of man-made-like object falls included:

1. __, 1858/Marblehead, Massachusetts/copper-metal object, fused together, falls.
2. 17 August, 1887/Brixton, England/fall of a lump of iron during a thunderstorm.
3. 11 May, 1894/Vicksburg, Mississippi/fall of a piece of alabaster in a hailstorm.
4. 24 November, 1906/Essex, England/fall of steel chunks.
5. 26 May, 1907/Remiremount, France/fall of large hailstones with images of the Virgin on them.
6. 21 July, 1920/Portland, Oregon/thunderstorm, fall of china-like fragments.
7. 16 August, 1951/Tacoma, Washington/five pound ball of steel falls from the sky.
8. 27 August, 1956/Elmira, New York/fall of cardboard-like substance.
9. _ August, 1956/Jackson, California/fall of silver foil-like substance.
10. 25 November, 1961/Elizabethon, Tennessee/about one ton of polyethylene film falls.
11. 25 July, 1963/Cleveland, Ohio/fall of corrugated aluminum.

Liquid Falls

Unusual liquid falls dealt basically with different color rains. Only seventy-one of the total cases under the fall category were classified in this division. Black and red color rains were by far the most frequent types of events recorded; blue, lavender, green or yellow rains were relatively uncommon. The psychological features associated with the reports of red-colored rain must be emphasized; invariably the reports of red rain incidents were

phrased as the "fall of blood-like rain" or "the fall of rain the color of blood." Rarely have there been any reports of unpleasant sensations, aside from nauseating olfactory effects. In the last twenty years, however, the report of blisters or burning sensations, caused by "acid rains," has become more frequent. Sample cases of liquid falls were:

1. _ May, 1849/Wales, England/fall of red rain.
2. 28 December, 1860/Siena, Italy/reddish rain falls.
3. 01 May, 1862/Slains, Scotland/black rain falls.
4. 19 December, 1903/Oudon, France/fall of lavender rain.
5. 17 November, 1920/__, China/fall of blood-like substance.
6. _ April, 1954/Detroit, Michigan/blue rain stains clothes.
7. 26 March, 1948/Dayton, Ohio/green rain.

Animal Falls

Velikovsky took the myths about the gods seriously and derived his now famous theory of worlds in collision. Whereas the academic leaders of the western world had considered stories about wars of planet gods as merely myths, Velikovsky has forced us at least to reconsider the possibility that the planets actually underwent cataclysmic perturbations in the past. Another favorite myth of western culture is the putative fall of animals from the sky. Despite their suspicious similarity to medieval concepts of abiogenesis, these ideas still live on appropriately modified in some of the popular sayings of this century. Phrases such as "raining cats and dogs" and "raining horny toads and lizards" are just two of the various permutations of this concept.

A total of 159 cases were classified under animal falls. The distribution of the cases in the United States is shown in Figure 12. A type profile for the variety of animals that supposedly falls from the skies is shown in Table 1. It is clear that the most frequent animals reported for such episodes are fish and frogs/toads. From the descriptions given of the animals, the maximum animal unit weight was definitely *less* than one pound, with the exception of the birds. Another interesting observation was the greater the

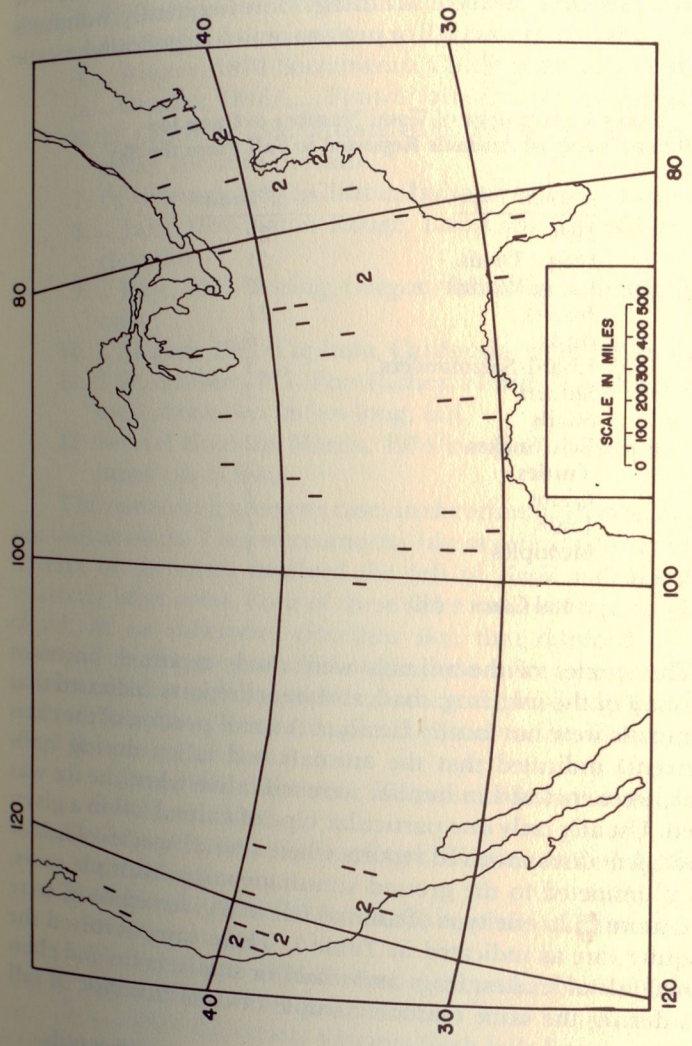

FIGURE 12. Spatial distribution of "animal falls" in the United States.

number of unit animals that fell during a given observation, the smaller the unit size of the animals. For example, there are few reports of hundreds of large fish falling. More frequently, hundreds to thousands of minnows fall or just one or two large flounder-type fish fall.

Table 1 Percentage of Total Number of Cases for Different Types of Animals Reported to Fall From the Sky

Animal Type	% of Total
Fish	*29*
Frogs/Toads	*25*
Larva/Worms	*12*
Insects	*11*
Birds	*6*
Lizard/Salamanders	*3*
Spiders	*2*
Snails	*2*
Eels/Snakes	*2*
Turtles	*1*
Clams	*1*
Crabs	*1*
Multiples	*5*

Total Cases = 140

The species of the animals were rarely reported, however, about half of the fish, frog/toad, and insect reports indicated that the animals were not locally familiar. A small portion of the cases (3 percent) indicated that the animals had fallen during hail-storms, were enclosed in ice, but were still alive when the ice was broken. Usually only *one* particular type of animal fell in a given episode; *few* cases involved reports where several species of fish or frogs plummeted to the ground simultaneously. Multiple cases, where more than one type of animal fell in a given episode, were also quite rare as indicated in Table 1. These cases involved the reported fall of snakes, frogs and toads, or snails, crabs and clam shells during the same episode. Sample cases of this type of fall were:

1. 08 July, 1841/Derby, England/fish, frogs and ice falls.

2. 28 December, 1857/Montreal, Quebec, Canada/lizards fall.
3. 11 June, 1864/Pontiac, Ontario, Canada/ice falls with tiny green frogs inside.
4. _ August, 1870/Sacramento, California/lizards fall.
5. _ October, 1846/__, France/fall of hundreds of dead birds.
6. 12 October, 1888/Brownsville, Texas/fall of snails and oyster shells in the rain.
7. 04 February, 1892/Clifton, Indiana/fall of brown worms.
8. _ July, 1896/Baton Rouge, Louisiana/fall of birds on a clear day.
9. _ June, 1911/Boring, Oregon/fall of salamanders during rain.
10. _ August, 1961/Capitola, California/birds fall from sky.
11. 7 September, 1971/Port Richey, Florida/hundreds of fish, each about two inches long, fall.
12. Several times in March, 1974/northern Australia/fall of hundreds of fish.

The remaining nineteen cases in the animal fall category were not unit animals. They were amoeba-like or cellular-like in nature. Twelve of the cases involved the fall of *flesh* and *blood* over relatively large areas. Four of these cases involved reports of a red cloud, in an otherwise cloudless sky, that dumped the flesh material on the ground. Although these cases comprise only 8 percent of the total fall population, their extraordinary properties and implications allow them special consideration. Consequently all of these cases are listed:

1. _ July, 1841/Lebanon, Tennessee/fleshy material falls from a red cloud.
2. 17 August, 1841/Spring Creek, Tennessee/flesh falls from a red cloud.
3. 16 March, 1846/Shanghai, China/falls of hairs and flesh of some animal.
4. 15 February, 1850/Simpson County, North Carolina /flesh falls from a red cloud.
5. —, 1850/Cloverlea, Virginia/flesh falls from a red cloud, several hundred pounds.

6. 24 July, 1851/Benicia, California/flesh falls; no cloud seen.
7. _ June, 1869/Santa Clara County, California/flesh and blood fall.
8. 03 August, 1869/Los Nietos, California/flesh and fine hair fall.
9. __, 1870/Sulfur Springs, Texas/fall of a blood-like substance.
10. 03 March, 1876/Bath County, Kentucky/flesh falls in thin strips.
11. __, 1876/Columbus, Georgia/fall of flesh.
12. 17 November, 1920/__, China/fall of a substance like blood.

Exploding Falls

Fifteen cases were included in this type of fall. Essentially these cases involved reports of hailstones falling very slowly and exploding upon impact.

Small Area Falls

Fifteen cases were included under this heading. The general pattern involved the repeated fall of water droplets, mist or rain within a small circumference, over many days, and in clear sky conditions. All of these reports were recorded before the turn of the century. Sample cases included.

1. 05 November, 1886/Charleston, South Carolina/fall of water in a ten foot square area during cloudless sky.
2. _ October, 1892/Akron, Ohio/fall of water on a small area for days.
3. 21 October, 1886/Charlotte, North Carolina/fall of water on a small area for two weeks.
4. _ November, 1892/Brownsville, Pennsylvania/fall of water on a peach tree within a fourteen foot square area.

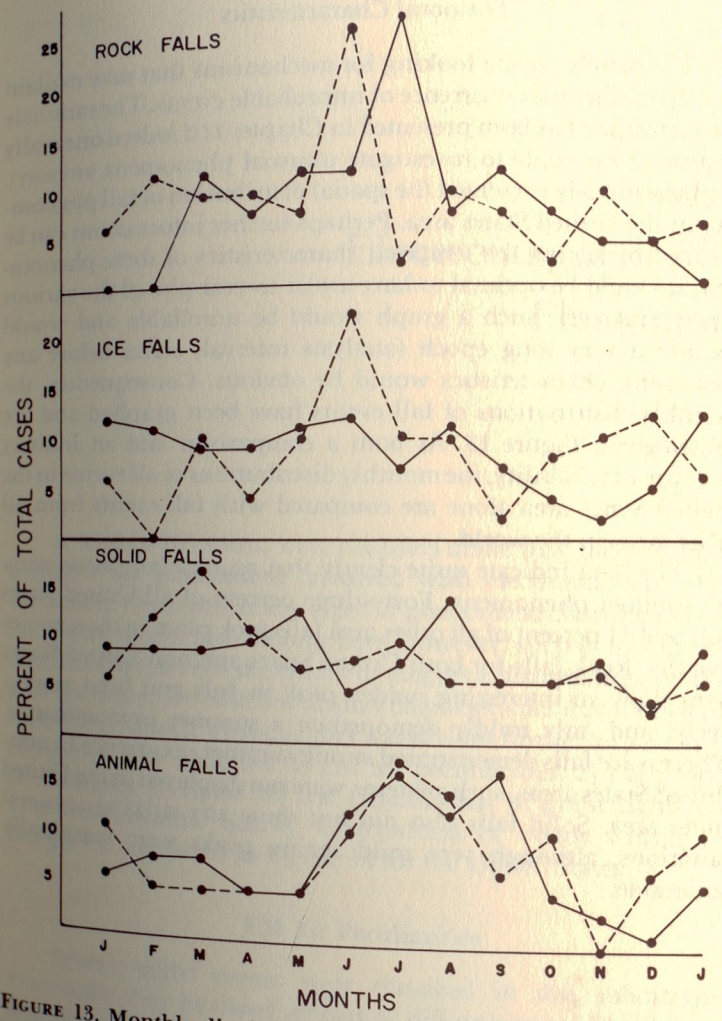

FIGURE 13. Monthly distribution of "fall" phenomena recorded for all years involving: rock fall, ice fall, solid fall, and animal fall subcategories. Temporal distributions in the United States of America (solid line) are compared with distributions in all other parts of the world (broken line).

Temporal Characteristics

Ultimately we are looking for mechanisms that may explain or help predict the occurrence of improbable events. The rationale for such study has been presented in Chapter 1 (if indeed one really requires a rationale to investigate unusual phenomena anyway). We have already presented the spatial distribution of fall phenomena in the United States area. Perhaps further information can be gleaned by noting the temporal characteristics of these phenomena. It would be optimal to have a year-to-year plot of the various types. However, such a graph would be unreliable and would require a very long epoch (analysis interval) series before any sustaining characteristics would be obvious. Consequently, the monthly distributions of fall events have been graphed and are presented in Figure 13. As both a comparison and an indirect measure of reliability, the monthly distributions of all events in the United States area alone are compared with fall events from all other areas in the world.

The data indicate quite clearly that animal fall phenomena are summer phenomena. Forty-three percent of all United States falls and 44 percent of all other area falls took place in the summer months. Rock falls for both United States and non-United States areas show an interesting sudden peak in July and June, respectively, and only mildly demonstrate a summer predominance. Whereas ice falls demonstrated strong summer occurrence in non-United States areas, such patterns were not displayed in the United States area. Solid falls also did not show any striking seasonal variations, although very mild spring peaks were marginally noticeable.

chapter 3
Unusual Electromagnetic-like Phenomena

A total of 185 events were classified under this category which included all phenomena involved with electromagnetic (EM) variations. No doubt, many types of phenomena classified in other categories might also belong here, however, such events did not explicitly involve electrical and/or magnetic disturbances, or more appropriately, they did not display characteristics that *seemed* like such disturbances. This category was divided further into four subcategories that included: 1) EM air peculiarities, 2) EM ground peculiarities, 3) lights on the ground, that is, ghost lights, and 4) communication quirks. Distribution of events within this category is displayed in Figure 14 for the United States.

EM Air Peculiarities

Seventy-eight events were classified in this subcategory. Essentially they involved reports of diffuse auroral-like lights in non-magnetic storm conditions or in situations possibly involving high electrical gradients in the air. Such events lasted in the order of hours to days and were not shorter transients, like classic UFO phenomena.

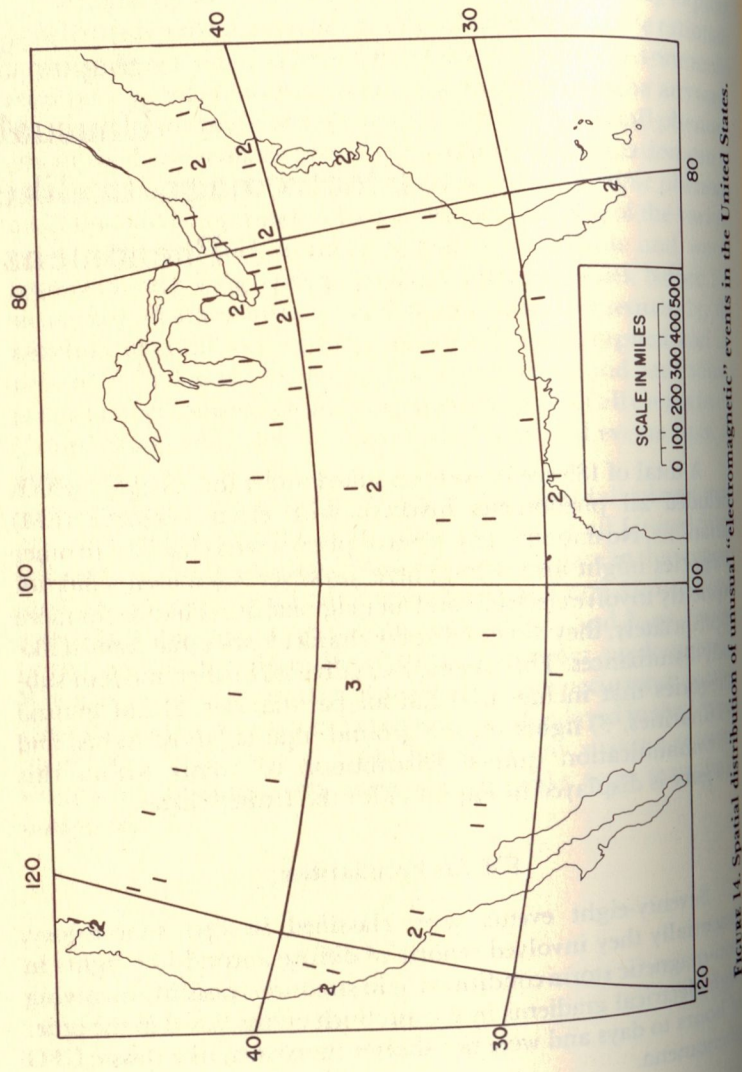

FIGURE 14. Spatial distribution of unusual "electromagnetic" events in the United States.

Example cases of this type of EM event were:

1. 19 March, 1847/London, England/aurora-like lights seen at night.
2. 13 April, 1883/—, Indiana,/afterglows reported.
3. 23 April, 1883/—, California/afterglows reported.
4. 10 August, 1883/various places in world/afterglows reported.
5. 16 July, 1892/Mt. Etna area, Italy/light beams seen during eruption.
6. 17 September, 1901/Comrie, Scotland/ribbon-like flashes in the sky before earthquake shock.
7. 27 November, 1919/Indiana, Michigan, Illinois/blinding glares in the sky, shock felt.
8. —, 1952/Detroit, Michigan/fifteen minute blue-green flashes seen.
9. _ February, 1956/Almeda, California/flame-like glow in sky.

EM Ground Peculiarities

Forty-two events were classified as ground EM peculiarities. No obvious pattern was apparent in this subcategory. Many of the events were borderline cases with putative "haunt," UFO, and communication quirk types, but lacked the typical correlative phenomena. Basically, these events involved the occurrence of light displays on the ground without apparent source. Sample cases included:

1. —, 1916/—, Utah/lights glow near spring.
2. 25 November, 1930/Tango, Japan/rainbow-like colors seen near ground before an earthquake.
3. —, 1951/Pasco, Washington/streetlight burns without apparent power.
4. _ March, 1952/Long Island, New York/floating luminous material seen.
5. —, 1956/Guadalajara, Mexico/flames seen at the foot of trees but the trees don't burn.
6. 26 October, 1962/South Pacific Islands/sudden power

surge in VLF wave band following nuclear explosions sets off burglar alarms.

7. _ December, 1965/Buckeye, Arizona/Glowing spots on the soil following rain.

Ghost Lights

Although this subcategory contains only thirty-five cases, it is interesting for a number of reasons. First, as a group, the phenomena are remarkably consistent over long periods of time. Within a given week interval they may not be predictable, but over several months or years, strong probability statements can be made about their occurrence. Some of the cases presumably have their counterparts in local Indian legends, which refer to these phenomena as spirits of dead leaders. Implicitly such assumptions have not changed among the observers from this century, as indicated in the common term "ghost lights." Another interesting characteristic of these phenomena is the consistency of shape; usually ghost lights are luminous phenomena, not larger than a basketball. Their kinetics are also fascinating from a mechanism point of view. Several reporters have noted that these balls of light seem to move away when approached, keeping the observer's distance constant. Still other observers insist that the lights disappear when approached, only to reappear at some greater distance. Crackling or hissing sounds are often heard when the lights are approached. There are classic cases of ghost lights; perhaps the most familiar ones are the Brown Mountain Lights in North Carolina and the Hornet Spook Light in the southern midwest region of the United States. Sample cases included.

1. Chinati Mountains, Texas/ghost lights seen since Indian days.
2. Joplin, Missouri/ghost lights seen since 1901.
3. Warrenburg, New York/bouncing ghost lights first sighted in 1946.
4. Suffolk County, Virginia/ghost lights first appear in 1951.
5. Gonzales, Louisiana/first appearance of ghost lights in 1951.

6. Loudonville, Ohio/periodic ghost light over thirteen years reported in 1956.
7. Vernon, Alabama/spook light noted over fifty-year period.
8. Silver Cliff, Colorado/spook light first noted in 1956.

Unlike classical "haunt" situations, ghost lights do not display human-like forms nor do they appear in houses, per se. Like "haunt" situations, these luminous phenomena are spatially located and do not appreciably deviate from a central area (see Figure 15). Although they share many characteristics with some types of UFO phenomena, they differ from UFOs with respect to their long term existence in an area. It is probably not spurious that ghost light localities are situated frequently in swampy areas with high tree densities.

Communication Quirks

In the world of extremely low probability events, communication quirks are probably the most easily recognized and rationalized. The infrequent interactions of a multitude of unspecified but scientifically acceptable variables often require little discussion. The explanation seems implicitly absolved by the principle of electromagnetic communication; quirks within individual network geometries are comfortably packed into the tail of normal distributions. In the present study, thirty such cases were classified as communication quirks. The earliest case, in our data banks, occurred in 1940; the most recent was reported in 1967. No doubt there are hundreds of such events occurring yearly, but since they have taken on (superficially at least) the property of the probable to many observers, our reports do not reflect a normal sample. Cases of communication quirks included:

1. —/Dallas, Texas/short-wave radio band picked up by a heater.
2. —, 1940/Wayne, New Jersey/music from local station picked up by a drain pipe in kitchen.
3. —, 1954/parts of England/KLEE-TV from Houston, Texas, received.

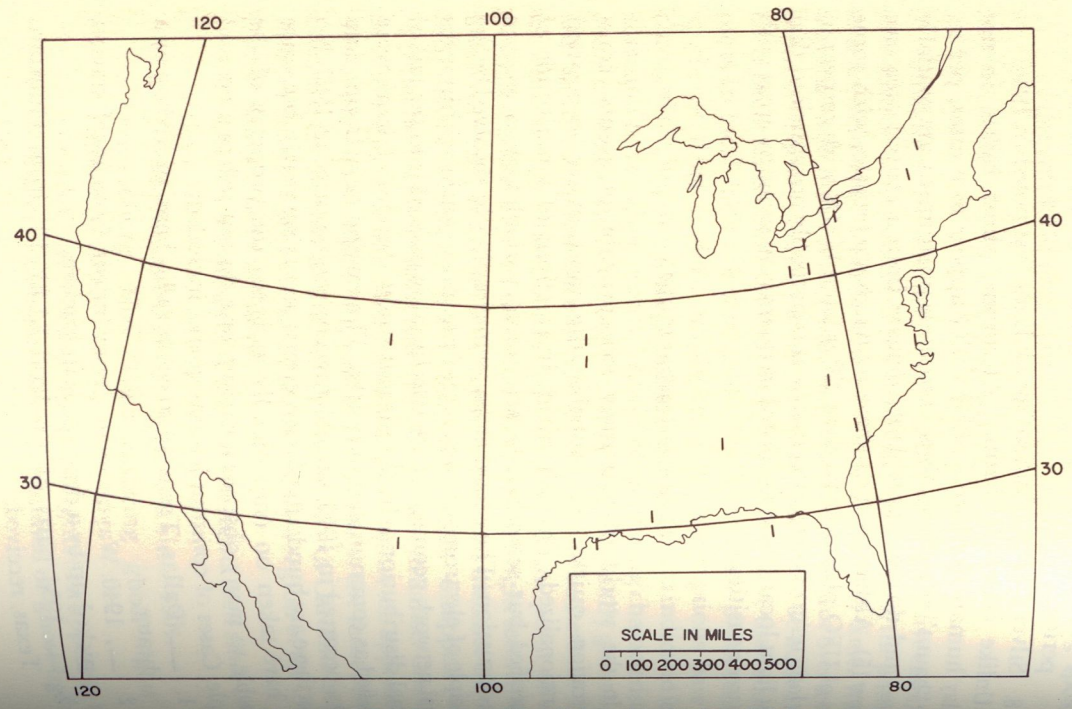

FIGURE 15. Spatial distribution of localities where "ghost" lights have been reported for several years.

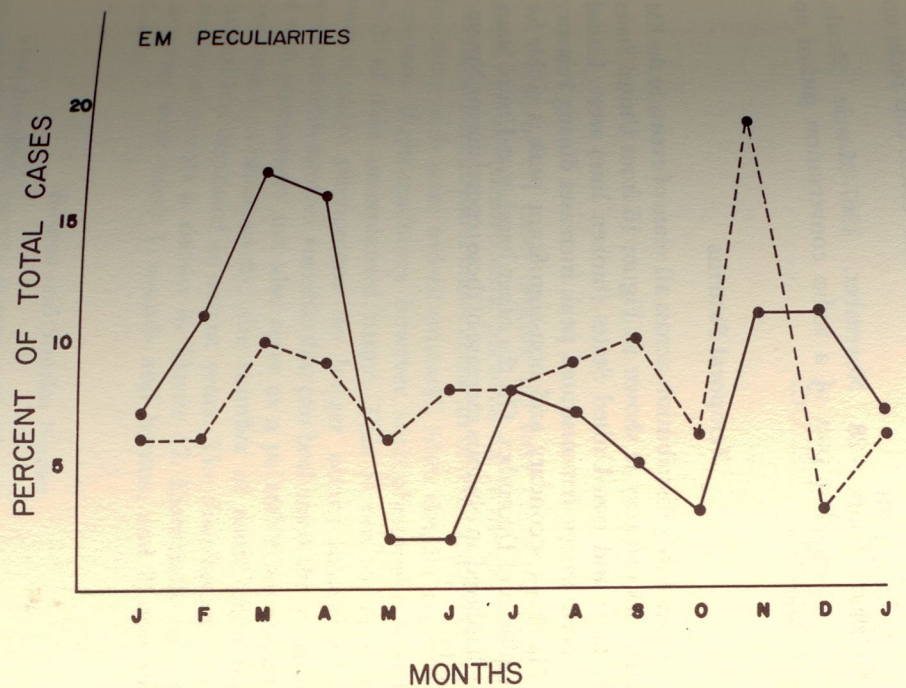

FIGURE 16. Monthly distribution of "peculiar electromagnetic" events for all years and all subcategories in the United States (solid line) and other parts of the world (broken line).

4. __, 1959/Boston, Massachusetts/call of "mayday" interrupts long-distance telephone call.
5. _March, 1962/Huntington, West Virginia/operator picks up Merry Christmas call from *previous* December.
6. 26 November, 1963/San Francisco/coffee cup picks up radio station.
7. 1800 hours, 28 November, 1967/Muscle Shoals, Alabama/last part of a radio conversation picked up twice.

Temporal Patterns

The monthly distribution across all years of events in the EM peculiarities category is shown in Figure 16 from United States (solid line) and non-United States (broken line) areas. United States occurrences demonstrated peak increases during February and March; a secondary and non-significant peak is visible for November and December. On the other hand, non-United States areas displayed an obvious increase of these reports during November only.

chapter 4

Unexplained Sonic Phenomena

A total of 141 cases (Figure 17) were classified under the category of unexplained sonic phenomena. In the days of Charles Fort and before, unusual blasts in the air or resonating booms over the countryside were indeed unusual. After the development of supersonic flight machines, however, such phenomena have lost much of their unexplained luster. This is not to imply that unusual sonic phenomena no longer occur; instead we are presented with another variable that can both mask the occurrence of such phenomena and also serve as a palatable but erroneous explanation. Consequently, the number of sonic phenomena reported has decreased in recent years. The distribution of this category of events is shown in Figure 17. Essentially two subcategories were used: 1) sounds and booms, and 2) non-boom sounds.

Booms and Similar Noises

One hundred twenty events were classified under this subcategory. Essentially, they involved low frequency, high intensity noises that are similar to the sonic booms from jet crafts of the last two decades. The first report occurred in 1822, according to Charles

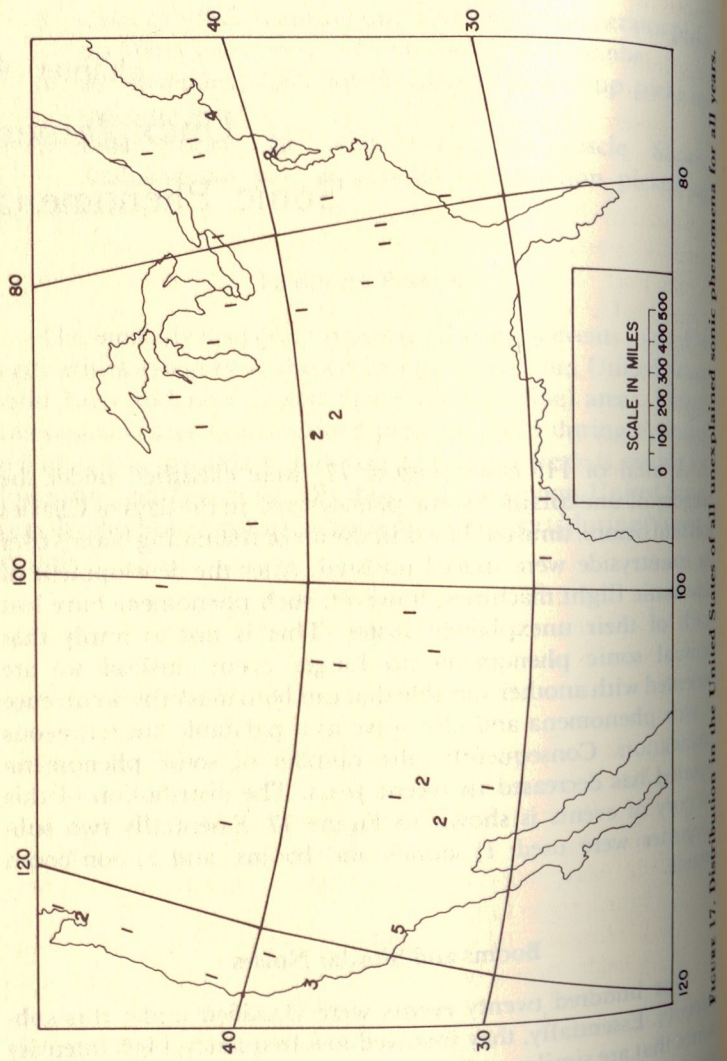

Figure 17. Distribution in the United States of all unexplained sonic phenomena for all years.

Fort's data. Almost always, observers of these events reported that the origin of the booms was somewhere *above* them; a small but significant number of instances involved an apparent source beneath the observer.

Booms only were reported in 73 percent of the total cases in this category. Many of the Fort reports indicate that the booms occurred in groups of three or four and took place over a time interval of several days to weeks. More recent reports that have originated in the United States area are concerned with rumbling sounds — especially before small magnitude earthquakes. Even in the old Fort data, 11 percent of the cases of sonic-like booms occurred before or concurrent with earthquake shocks.

Luminous sky phenomena associated with booms are not new observations, however, the number of events is less frequent than quake-related booms and accounts for only 7 percent of the total cases in the subcategory. Perhaps these phenomena should also be classified under unusual meteorite categories since another 7 percent of the total data episodes involved sky booms and the fall of rocks. Still another 7 percent of all cases was involved with rocks or objects (roofs of houses) being sucked *upwards* during the sonic concussion. Sample cases of this type of event are:

1. _ December, 1813/Easthaddan, Connecticut/explosive sounds heard in the air.
2. _ October, 1839/Comrie, Scotland/"sky explosions" for a month.
3. _ October, 1857/St. Louis, Missouri/sounds like thunder heard over several days.
4. —, 1874/Barisal, Bengal, India/famous Barisal guns episode.
5. 22 May, 1884 Bismarck, North Dakota/sharp sounds heard, rocks fall.
6. 27 August, 1886/Charleston, South Carolina/explosive sounds heard near future epicenter (large magnitude earthquake on 31 August, 1886).
7. 02 January, 1887/Chico, California/detonations heard in sky.

8. 19 July, 1912/Holbrook, Arizona/loud detonations associated with earthquake.
9. 11 February, 1959/Panhandle, Texas/boom rocks 60,000 square mile area.
10. 27 March, 1964/Houston, Texas/sonic booms at time of famous Alaska quake.
11. _February, 1973/Northern Delaware/booms heard before 28 February quake.

Non-Boom Noises

A heterogeneous batch of twenty-one cases make up the last type of unusual sonic phenomena. They involved the rationalizeable to the borderline paranormal. Essentially, however, they can be divided into hums and cracklings associated with an area and areas where shrieks, shrills and voices are heard with no obvious source. Examples of these types of events are:

1. _, 1960/East Kent, England/hundreds over large area hear hum sound.
2. _____/Kazakhstain/mountain makes noises except during wet weather.
3. __, 1840/Comrie, Scotland/crackling noise heard in air before quake.
4. _May, 1874/Los Angeles, California/human voices heard in open area; rock shower.
5. 20 April, 1905/Humboldt Co., California/screams of people heard in air.
6. __, 1931/Melrose, New Mexico/sound of flapping wings of a large bird heard; nothing seen.
7. __, 1953/Morgantown, North Carolina/chimneys sound as if they were talking.

chapter 5
UFLO: Unidentified Flying and Landed Objects

With the exception of a few "flap" years (1836, 1877, 1883, 1897, and 1908-1910), reports of unidentified flying or landed objects were relatively infrequent before 1947. Then suddenly, with an almost inundating manner, the number of UFO reports began to increase. A total of 1,242 UFO reports were included in our analysis. Compared to the tens of thousands of reports recorded by the professional UFO agencies (such as the Aerial Phenomena Research Organization), even this number is minute. Nonetheless, a number of interesting patterns were observed in this data. Nine subcategories were finally established and included: 1) general UFO reports (luminous objects moving in the sky), 2) landings of craft or "saucer nests," 3) humanoids seen with the crafts, 4) small glowing spheres and exploding UFOs, 5) contacts with UFOnauts, the inhabitants of the landed UFO, 6) death or injury associated with close UFO contact, 7) blackouts and electromagnetic disturbances associated with UFOs, 8) fall of materials from UFOs, and 9) unidentified hollow spheres. The spatial distribution of this category in the United States is shown in Figure 18.

General UFO Reports

This subcategory contains 1,018 reports of luminous objects or putative "crafts" reported by at least two observers. The unit

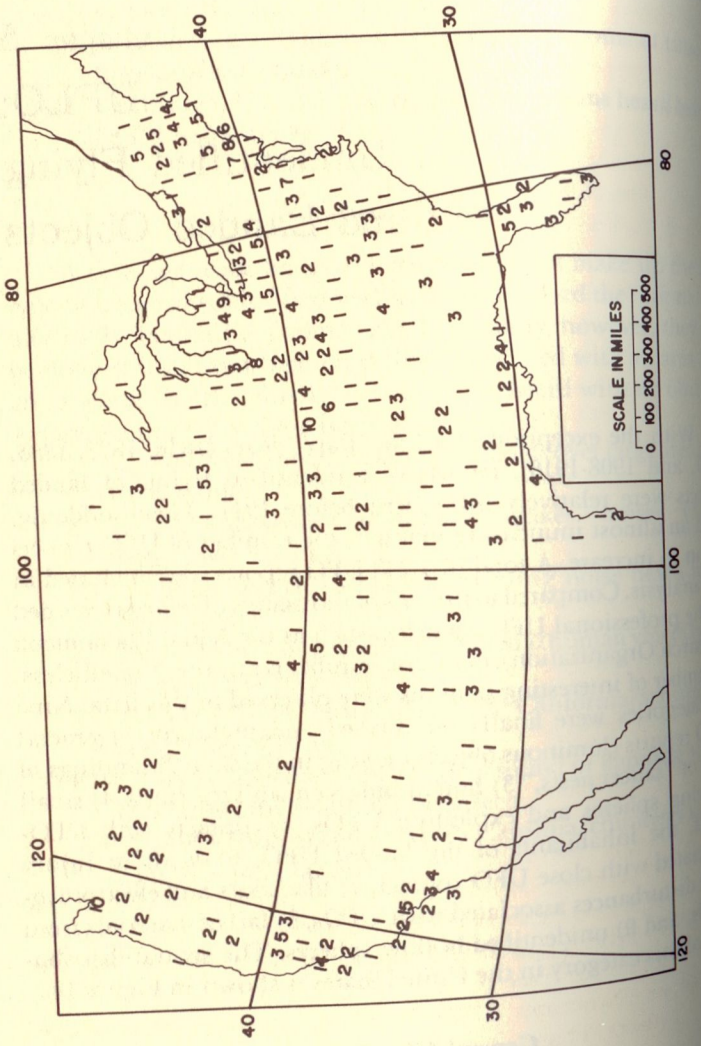

FIGURE 18. U. S. distribution of all UFO report categories for all years.

time span of these cases was relatively small, ranging from a few seconds to a few minutes at most. These reports were distinguished from other categories because they were not repeated in the same area, over many observations, within a year period. This distinction is not to be confused with "flap" episodes, when many people report UFOs from different places within a small spatial area, for example, about 1,000 to 10,000 square miles. Sample cases included:

1. 05 April, 1800/Baton Rouge, Louisiana/airship seen; luminous object seen.
2. _ September, 1831/Geneva, Switzerland/unknown luminous object seen in the sky for two months.
3. 0400 hours/11 September, 1852/Fair Oaks, England/luminous moving object appears.
4. __, 1866/Durham, England/famous Durham lights episode.
5. _ May, 1880/Persian Gulf, Persia/bright wheels appear with sixteen spokes evident.
6. 29 August to 28 November, 1883/many parts of the world/something like a comet reported; size of the full moon.
7. 31 August, 1895/Oxford, England/luminous object larger than Venus seen moving east.
8. _ April, 1897/several central states/cigar-shaped object seen; luminous searchlight shapes seen.
9. __, 1922/Wellstown, Ohio/funnel-shaped light descends for about thirty minutes.
10. 17 August, 1947/Crow River, Ontario, Canada/saucers circle lake and are photographed by observers.
11. 14 July, 1952/Norfolk, Virginia/two pilots report eight bright discs in the sky.
12. 30 August, 1964/Bennett, Iowa/cigar-shaped object seen with two lights in middle section.
13. 28 February, 1970/Culberston, Nebraska/saucer-craft seen and radar tracked.
14. 18 November, 1973/Rosebud, Texas/triangle-shaped object "chases" women.

Craft Landings and Putative Landing Areas

Forty-two episodes were involved with observers noting landed crafts or places where UFO crafts supposedly had been located. The latter areas have been called "saucer nests." Before 1947, the only cases of this type were involved with the 1897 episode in the mid-southern and central states and in a single episode during 1929 in Saskatchewan, Canada. Fort does not mention any cases where landed crafts were encountered. No doubt he was exposed to the information concerned with the 1897 episode, but perhaps he did not consider it relevant within the context of his usual format. Sample cases from this division include:

1. 03 September, 1947/Lake Tahoe, California/saucer seen; nest observed.
2. —, 1953/Spitzbergen, Norway/saucer metallic disc found on snow.
3. —, 1955/Picket Line, Quebec, Canada/bright orange object lands.
4. 06 November, 1957/Knoxville, Tennessee/boys see UFO in field.
5. 24 April, 1964/Socorro, New Mexico/UFO seen landed.
6. 04 September, 1964/Glassboro, New Jersey/red ball "lands."
7. 18 July, 1965/Rio Plata, Uruguay/four-legged object lands.
8. 24 August, 1972/Norton Sound, Alabama/football-like object lands.

Humanoids Seen with Craft

Surprisingly, 3.3 percent (forty-one) of all UFO reports involved episodes where humanoids were seen with the UFO craft. When the total number of different events classified as UFOs is considered, this number is still quite large. However, it is not likely that the percentage reflects the UFO report population as a whole; instead, disproportionately more humanoid reports are recorded because of their unusual nature. As with the last class of UFO

phenomena, very few reports of this nature are noted before 1947, with the exception of the 1897 episode. During this period English-speaking, normally dressed (for that period) men were reported to leave a strange dirigible-like craft and talk to the local inhabitants. Authors who have scrutinized this episode note that the "men from the craft" gave their names. The only other pre-1947 reports involve humanoids "flying in the air" during 1843 in Warwick, England (from Fort) and during the night of 28 July, 1880, in Louisville, Kentucky (also Fort). Apparently, on the 18th of May, 1909, in Cardiff, Wales, a tube-like object landed and men speaking foreign languages were observed. During the dawn hours, August, 1914, along Lake Ontario, Canada, a "glob of light" with a small humanoid nearby was supposedly reported.

Of the thirty reports since 1947 involved with humanoids (associated with UFO craft), 43 percent (thirteen) of the cases involve "little-men" descriptions. In comparison, Coral and Jim Lorenzen (1967) noted that 47 percent of their ninety-eight humanoid observation cases involved "little men." Sample cases from this classification included:

1. 30 November, 1953/Modena, Italy/humanoids seen with human masks on.
2. —, 1954/Garson, Ontario, Canada/three creatures thirteen inches high seen emerging from craft.
3. 05 November, 1958/Pioneer, Ohio/orange craft seen landed; midgets seen in area.
4. 31 July, 1967/Caracas, Venezuela/"flap" of little men reported after earthquake.
5. 03 November, 1971/Austin, Texas/humanoids seen with craft.

Small Glowing Spheres/Exploding UFOs

Thirty-seven events were classified in this division. Essentially, the characteristics of these phenomena were similar to ghost lights, except they were transient and did not last for more than one day. Ghost lights, on the other hand, have been reported in the same area for years to centuries. Zig-zag motions and pulsating

movements were general properties of this type of UFO phenomenon. Exploding UFOs were included in this division since most of the exploding spheres displayed physical dimensions and properties of the "small glowing spheres" class. Sample cases included:

1. 01 February, 1952/Hammersley Fork, Pennsylvania/fireball seen around dusk; hits garage and explodes.
2. 24 February, 1952/Imperial Beach, California/white orb two feet in diameter seen pulsating.
3. 14 May, 1959/Orlando, Florida/pulsating ball of light reported.
4. 05 May, 1965/Warminster, England/explosion of 200-foot diameter, orange, mushroom-like object.
5. 19 December, 1966/San Diego, California/three small orange spheres sighted; later they explode.
6. _ July, 1972/Louisiana, Missouri/glow seen, then explodes.

Contacts with UFOnauts

From a phenomenal and psychological point of view, the reports of actual contacts with inhabitants of UFO craft promise important information. In our present data banks, thirty-five episodes (Figure 19) were classified in this division. This means that only 2.8 percent of all UFO reports involved: 1) seeing a landed craft, 2) seeing humanoids associated with craft, and 3) actually communicating with the humanoids in a given single episode.

Unfortunately, the sample size is too small for content analysis of what the UFOnauts said to the reporter of the episode. From the cases at hand, however, two general patterns of UFOnaut behavior are apparent. The first pattern involves situations where the UFOnauts routinely talk to the reporters of the episode. Topics of conversation range from how to operate a tractor (of the reporter's) to intergalactic space travel (via magnetic fields, of course). The second pattern seems more similar to a type of "sample collection," if we can be anthropomorphic momentarily.

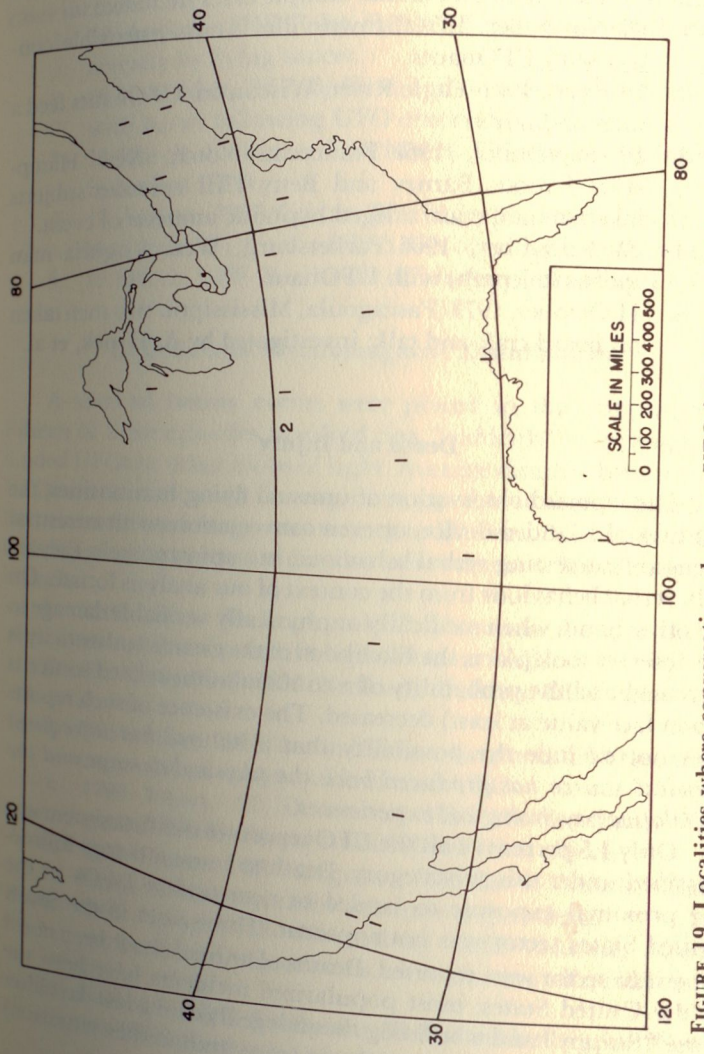

FIGURE 19. Localities where conversations between UFO inhabitants and local observers supposedly took place.

In such cases, the UFOnauts, according to the reporters, are interested in collecting samples of human blood and sperm, in addition to local flora and fauna. Sample cases included:

1. 06 November, 1954/Brownsville, Texas/ostensible contact with UFOnauts.
2. 18 April, 1961/Eagle River, Wisconsin/UFOnauts feed a man and talk.
3. 19 September, 1961/Franconia Notch, New Hampshire/famous Barney and Betty Hill episode; subjects taken aboard craft; alleged hypnotic amnesia of event.
4. 02 November, 1966/Parkersburg, West Virginia/man speaks (telepath) with UFOnaut.
5. 11 October, 1973/Pascagoula, Mississippi/two men taken on board craft and talk; investigated by A. Hynek, et al.

Death and Injury

The reported observation of unusual flying luminosities, the sighting of a landed device, or even conversations with terrestrial aliens are interesting verbal behaviour, but unfortunately, they are only verbal behaviour from the context of our analysis format. On the other hand, when medically or physically verifiable damage to the observer took place, the likelihood of the event's authenticity is increased and the probability of a confabulation-related source is (upon face value at least) decreased. The existence of such reports does not exclude the possibility that a *natural but infrequent physical source has produced both the physical damage and the correlative psychological experiences.*

Only 1.5 percent of all the UFO reports in our data system was classified under this subcategory. Death to human beings following proximal exposure to landed or near-surface UFOs in the United States sector was not apparent. Three cases in the South American sector were reported. Deaths of animals have been noted in the United States; most popularized incidents have been the horse "Snippy" and a bull dog that allegedly died a few days after UFO exposure. Burns, paraesthesia (pins and needles sensation) and partial blindness have been reported by human observers following close proximity or contact with landed UFOs. Sample cases included:

1. 18 August, 1952/Palm Beach, California/man burned severely by flying saucer.
2. 09 November, 1957/Bedford, Indiana/man's head covered with burns following UFO observation.
3. 13 March, 1965/near Fort Myers, Florida/hunter burned by landed UFO.
4. 13 August, 1967/Crixas, Brazil, South America/man hit by a green ray from a UFO; dies of radiation poisoning.
5. 19 March, 1968/Beallsville, Ohio/boy burned by a UFO.

UFO Related Electromagnetic Disturbances

A total of twenty events were placed in this subcategory. Fifteen of these episodes involved cars "suddenly" stopping near landed UFOs or other blobs of light. Average distance between the UFO and the car (when the engine stopped) was about a hundred feet; the estimated range was twenty to 200 feet. Blackouts in the car's lighting system and radio also were common. Sample reports included:

1. 2100 hours, 16 August, 1947/Timmins, Ontario, Canada/globe of purplish light seen; car stalls.
2. 09 November, 1957/Bedford, Indiana/UFO seen; car stalls.
3. 09 February, 1962/Aston Clinton, England/UFO seen; car engine stops twenty yards from a UFO.
4. 1700 hours, 21 December, 1964/Harrisonburg, Virginia/UFO lands; car stalls 200 feet from object.
5. 1100 hours, 03 August, 1965/Santa Anna, California/UFO seen; radio transmitter goes dead.
6. 0500 hours, 28 November, 1966/Valdosta, Georgia/luminous object lands on road; car stalls; radio goes dead.
7. –summer, 1967/Sandpoint, Idaho/truck stops; attributed to a UFO nearby.

Remaining Categories

The remaining subcategories mentioned in the introduction of this chapter contained fifteen cases per unit. Consequently they will not be treated separately. Sample cases from each of these subcategories, however, included:

1. 10 August, 1938/St. Helens, England/blue object sighted; soot falls from it.
2. _ October, 1954/Catania, Italy/fibers dropped from a UFO.
3. 26 October, 1955/Whitsett, North Carolina/fall of angel hair; UFO craft reported.
4. 27 August, 1956/Sagetown, New York/silver icicles fall from two UFOs.
5. 07 September, 1956/Twin Falls, Idaho/UFO steals steer with net.
6. 07 February, 1967/Monterrey, Mexico/twenty-four-inch metal ball found.
7. _ November, 1967/Conway, Arkansas/twenty-three-inch metal ball found.

Temporal Patterns

Monthly distributions of UFO events for the United States and non-United States areas were computed separately for control and comparison purposes. The results are presented in Figure 20. It can be seen that the monthly distribution of UFOs (general reports) is remarkably similar for both data pools; the number of cases represented here for the United States and non-United States sectors is 620 and 351, respectively. A sharp peak in UFO reports is noted for April with a more rounded peak increase during the summer months of July, August and September. UFO reports were still quite high, apparently, even during October and November. The similarity of the two data pools indicates an interesting reliability of pattern (*not* reliability of the phenomena). Furthermore, since the UFO data in the United States predominantly represent cases since 1947 and the non-United States cases represent

events between 1820 and 1930 (Fort's interim of collection), it seems that UFO *report patterns* have been consistent over several decades.

The other subcategories of UFO-type phenomena were not plotted because of the small sample size. In general however, they displayed similar patterns and were comparable to the trend in Figure 20. There was a preponderance for UFO landing sighting to occur in November; all other deviations from baseline variations were not remarkable.

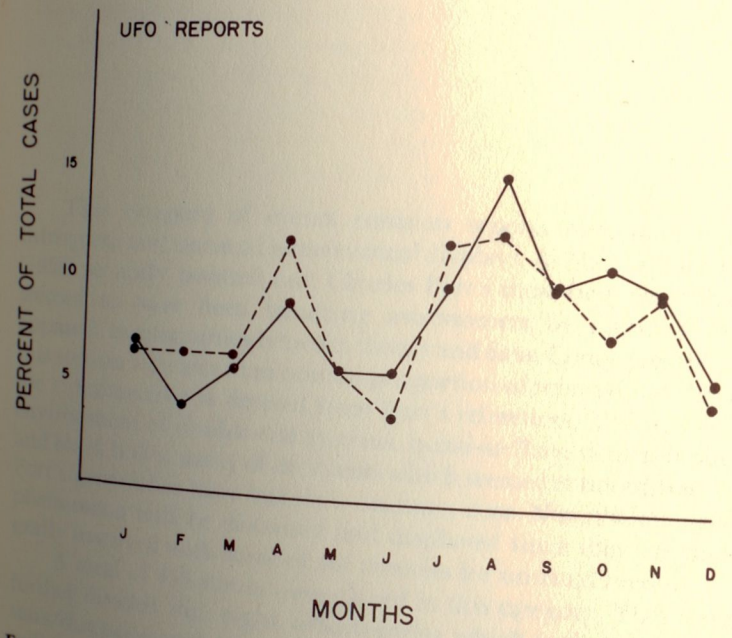

FIGURE 20. Monthly distribution over all years for general UFO category reports in the United States (solid line) and in other areas (broken line) of the world.

chapter 6

Unusual and Infrequent Astronomical Events

This category of events contains reports concerned with infrequent and unusual astronomical displays. As Martin Gardner (1952) so aptly pointed out, Charles Fort's most frequent hobby seemed to have been insulting astronomers by pointing out apparent incongruities between theory and data. Consequently, in this section a greater than normal proportion of reports for some of the subcategories is derived from Fort's references. Today, in an environment of double-star systems, quasi-stellars, neutrino stars and black holes, many of the events which seemed extraordinary to Fort's generation have lost their uncanny aura. Nonetheless, such phenomena will be discussed and displayed since they are integrally involved with some of the theories for unusual events.

A total of 416 events were placed in this category. They were further divided into eight subcategories which included: 1) new stars/disappearance of stars (or sudden increases or decreases in radio output from radio stars), 2) solar peculiarities, 3) uncharted objects, "planets," or irregularities of satellite movements, 4) lunar transient phenomena, 5) space signals, 6) unusual meteors/meteorites, 7) fireballs, and 8) established meteorite impact sites.

Appearance/Disappearance of Stars

Forty-six reports were classified in this subcategory. Before the development of radio astronomy, the reports refer to sudden appearances or disappearances of stars from sky maps constructed with light telescope data. In more recent years, reports involved with spectacular fluctuations in radio output have been classified here. Sample cases included:

1. _ May, 1866/new star seen suddenly in constellation of Corona Borealis.
2. 04 October, 1878/Hyinus N suddenly no longer visible.
3. _ August, 1885/new star seen in Andromeda/bright.
4. _ February, 1901/new star seen in Perseus/possible nova.
5. _ November, 1913/star in Sagittarius suddenly increases about ten magnitudes.
6. _ August, 1920/nova found in Cygnus III.
7. __, 1964/new star found, unusual characteristics.
8. _ September, 1972/Cygnus X displays unprecedented radio power increase.

Solar Peculiarities

Seventy events were classified as solar peculiarities. Generally these reports involved the observation of dark shadows or objects moving across the solar disc. Vulcan reports, the planet that has been postulated several times to exist between Mercury and the sun, were classified in the "uncharted planet" section. Sample cases included:

1. 13 August, 1833/southern United States/blue sun seen.
2. _ July, 1837/two unknown objects seen crossing solar disc.
3. _ May, 1845/stream of black objects crossing the sun reported from several places in Europe.
4. _ February and March, 1849/two dark bodies seen crossing solar disc.
5. 29 July, 1878/two objects crossing sun reported seen from several places in the United States.

6. 15 and 25 April, 1883/Marseilles, France/many irregular bodies seen crossing sun.
7. 12 and 13 August, 1883/about 200 irregular bodies seen crossing solar disc.
8. _ January, 1921/irregular black objects cross solar disc.
9. _ September, 1970/sun observed as pale blue in Europe and United States.

Uncharted Planets/Satellite Irregularities

Sixty-one events met the criteria of this label. Generally, these phenomena involved unusual lights, marks or objects near the planets, and unpredicted appearances or non-appearances of satellites. Vulcan observations (sightings of proposed planet between Mercury and the sun) were also classified here. This concept, "officially" introduced by two University of Wisconsin astronomers around the turn of the century, was re-entertained as recently as 1971. Like other phenomena in this category, this planet — if it exists at all — seems to have a very transient existence (observation period) in the order of a day or days before it "disappears" for years. Sample cases of this classification include:

1. __, 1860/report of a planet (Vulcan) between Mercury and sun.
2. 24 October, 1864/red lights seen on Mars' surface.
3. 15 March and 6 April, 1868/shaft of light seen beside Venus.
4. 27 May, 1868/red spot visible on Venus.
5. 08 May and 17 June, 1873/white marks and objects seen on Mars' surface and beside planet.
6. 15 October, 1883/Jupiter's satellite late by 46 minutes.
7. 15 August, 1884/brilliant spot seen on Venus from Brussels.
8. 10, 11, 13 June, 1892/from parts of England/white shaft of light off Mars.
9. 07 December, 1900/series of light flashes seen from Mars by many.

10. _November, 1911/brilliant spots noted on Martian disc.
11. 03 June, 1956/blue lines seen across Mars.

There is a conspicuous decrease in events of this type after 1920; this may in some degree reflect the specialization of reporting and journal publication that began in science. Also about this time, a significant increase in measurement sophistication began which allowed marginally visible and borderline phenomena to be properly evaluated. Compounding this development, later developments in radio astronomy were not only in themselves at times tenuous but beyond the grasp of the average observer.

Lunar Phenomena

Short-lived areas of unusual color or intensity on the surface of the moon have puzzled men for centuries. These men include, not only the borderline experts, but the orthodox authorities of astronomy such as Halley, Herschel, and Barnard. Today these phenomena are called transient lunar phenomena, or TLP. The explanations for the TLP are still not clear and vary from idiosyncratic behaviours of electronic shells in "diatomic carbon" to some nth order interaction with solar wind. Although the geometries are not clear, the principles are still within the explainable.

Our data files contain 120 reports of TLP; these reports are most probably among the most spectacular of such episodes. The more specialized report compiled by Middlehurst, Burley, Moore, and Welther (1967) contains a total of 579 TLP reported between 1540 and 1967. Although the episodes have originated from many different lunar areas, the most frequent crater area to display transient luminosities has been Aristarchus; Plato, Linne and Schroeter's Valley have been reported several times, but not as frequently as Aristarchus. The Middlehurst, Burley, Moore and Welther data show that 39 percent of all reports were in the Aristarchus area. Sample cases from this topic included:

1. 22 October, 1790/lights on moon seen during eclipse.
2. __, 1820/line-like and street-like prominences seen in Schroeter's Valley.
3. __, 1825/red lights seen on Aristarchus.

4. _ March, 1847/luminous spots and flashing lights on moon.
5. _January, 1867/triangles seen in Linne.
6. 21 February, 1885/reddish smoke seen in Cassini.
7. 11 June, 1897/moon looks greenish (from Assam).
8. 31 January, 1915/"gamma" shaped letter noted in Littrow.
9. __, 1923/lights seen in Plato.
10. 25 March, 1959/intense blue-violet glare seen on Aristarchus.
11. 27 November, 1963/red-colored eruptions seen on moon.

Signals

Only fifteen instances of signals were recorded in the present analysis. Signal events involved episodes where the observer concluded that some type of extra-terrestrial communication was in progress. By the term signal, most reporters mean the stimulus source is not random but is either periodic or systematic. It is a common presumption that intelligence is characterized by predictable signal patterns. The report of putative contact signals does not end with Fort's data, but continues even today from some astronomers and star-gazing groups. Sample cases of this type included:

1. 04 October, 1844/quick repeated bright flashes seen originating from Jupiter.
2. 07 December, 1900/vibrations from Mars reported (by N. Tesla).
3. 19 May, 1919/unidentified message "KUG-VKAJ" picked up.
4. 22 August, 1924/dot-dashlike codes picked up from Mars direction.
5. __, 1925/faces decoded from wireless chatter.
6. 23 July, 1954/periodic bright flashes of light seen originating from Mars by observers in Pennsylvania.
7. 17 October, 1961/English group pick up famous "signals" from space.

Unusual Meteors/Meteorites

More appropriately, this category could be called extraordinary over large meteor/meteorite displays. Essentially, these cases involved identifiable meteorite episodes; a total of fifty-nine events were recorded and included:

1. 13 and 14 November, 1866/large meteor and meteorite shower in United States.
2. 05 September, 1868/large meteor shower seen coming from direction of Jupiter; noted all over Europe.
3. 17 March, 1877/Gunnersbury, England/the "great meteor" fall of 1877.
4. __, 1886/Cabin Creek, Arkansas/107-pound meteorite fragments found.
5. 29 May, 1889/over Europe/meteor explodes; meteorite fragments found.
6. 24 January, 1892/Cape Colony, South Africa/great meteor explodes; fragments found.
7. _ July, 1957/Issaquah, Washington/fall of magnetic particles with meteorite.
8. 08 February, 1969/Chihuahua, Mexico/fall of fireball; famous Allende meteorite; concurrent shocks and Fortean-like events.
9. _ January, 1970/Lost City, Oklahoma/meteorite found after meteor display, ten-pound fragment.

Fireballs

Forty-five instances of "fireball" events were noted in the data files. Unlike UFO reports, these events displayed meteor-like properties of entry angle and velocity. Unlike the last section, however, they did not produce recoverable fragments. Sample cases were:

1. 19 February, 1913/New York, New York/estimated 300 fireballs cross sky.
2. _ January, 1949/__, New Mexico/green fireball entering atmosphere; seen by pilot.

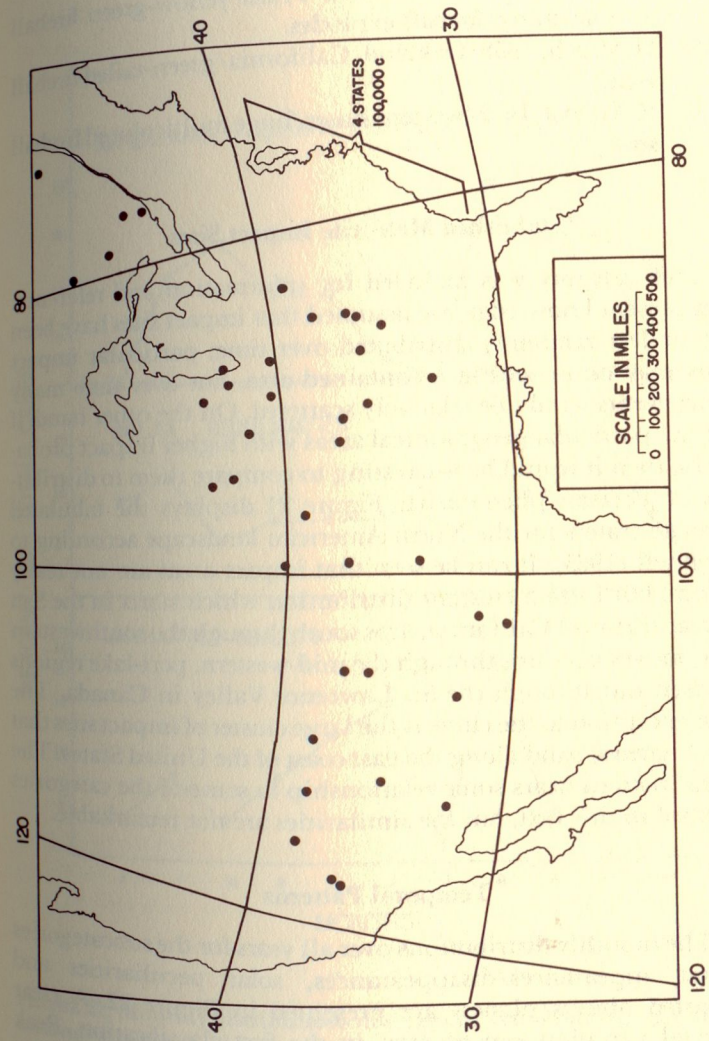

FIGURE 21. Established major meteorite impact sites in the United States (after O'Connell, 1965).

3. _ January, 1951/United States and Canada along St. Lawrence Valley/large fireball seen.
4. 02 February, 1952/Trenton, Texas/yellow-green fireball seen by many; fireball explodes.
5. 11 March, 1958/Oakland, California/green-tailed fireball seen.
6. 10 August, 1972/western states/huge multicolored fireball seen.

Established Meteorite Impact Sites

This category was included for information and reference. From present knowledge, we assumed that impact sites have been more or less randomly distributed over time; particular impact events may occur within a contained area, but over time many impact events would be relatively scattered. On the other hand, if there are particular geographical areas with higher impact probabilities, then it would be interesting to compare them to distributions of Fortean phenomena. Figure 21 displays the tabulated meteorite craters for the North American landscape according to O'Connell (1965). It can be seen that impact areas are not really random, but form a crescent distribution which starts in the San Andreas region of California, dips south through the southwestern states, moves upwards through the mid-western, peri-lake regions and then out through the St. Lawrence Valley in Canada. The major exception to the curve is the large cluster of impact sites that form a narrow band along the east coast of the United States. The general pattern bears some relationship to some of the categories described in this text, but the similarities are not remarkable.

Temporal Patterns

The monthly distributions over all years for the subcategories of star appearances/disappearances, solar peculiarities and uncharted objects/planets are presented in Figure 22. A clear biannual variation can be seen in the first classification. Peak

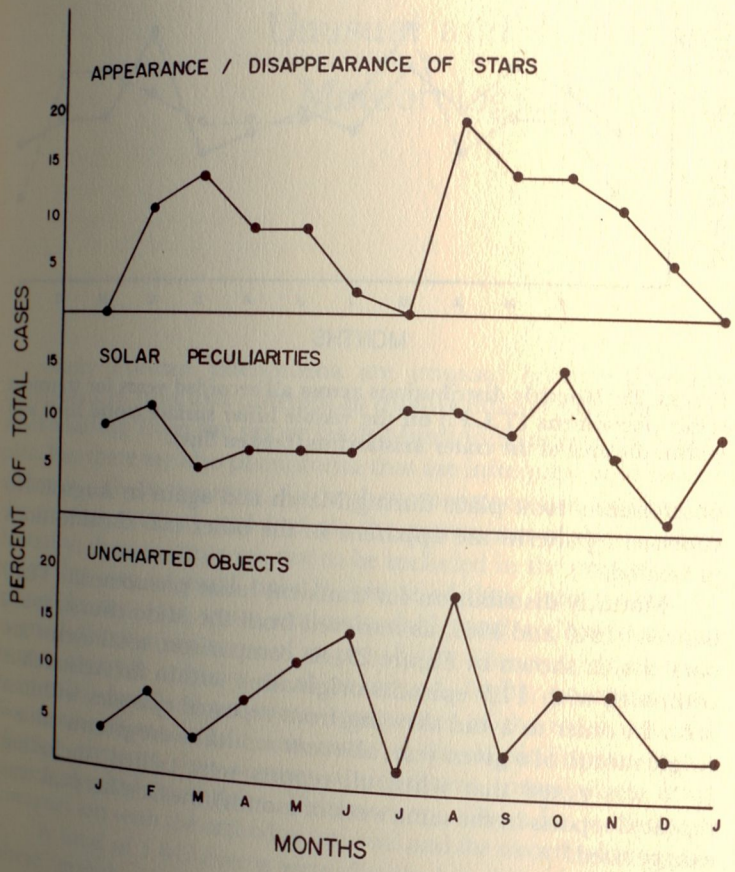

FIGURE 22. Monthly distributions of three different subcategories from the unusual astronomical event division for all years.

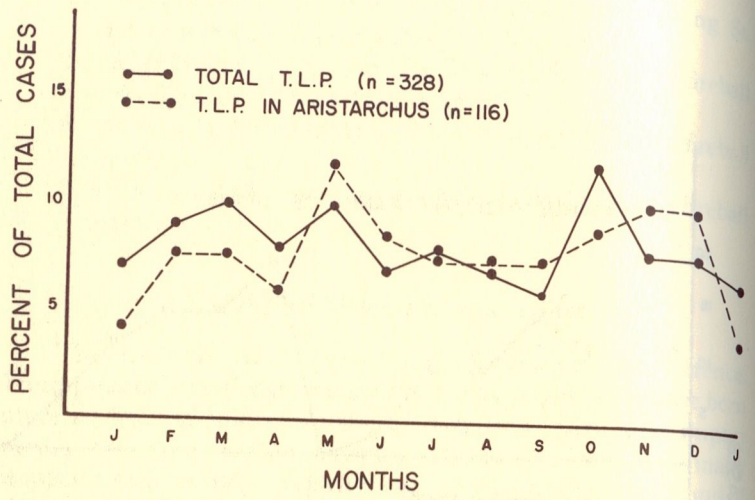

FIGURE 23. Monthly distributions across all recorded years for transient lunar phenomena (T.L.P.) on the visible lunar surface (solid line) and within the area of the crater Aristarchus (broken line).

observations took place during March and again in August. No consistent patterns are apparent in the other two classifications presented.

Monthly distribution for transient lunar phenomena (TLP) between 1540 and 1967, as retrieved from the Middlehurst, et al., data list, is shown in Figure 23. As comparison, total events are compared with TLP episodes originating within the Aristarchus area. In order to avoid skewing from repeated episodes within a single month of a given year, all *event months* were given a value = 1. It was noted that when all reports were tallied (including repeated reports in the same week or month), the October peak was exaggerated.

chapter 7

Unusual and Infrequent Meteorological Events

Many Fortean phenomena are unusual because they are infrequent in time *and* different in quality relative to the normal. Rocks falling from the sky or landed luminous objects are examples. But there are also phenomena that are infrequent in time but different only in *quantity*. Such phenomena account for some of the present category and include the extremities of the weather. Initially, these events were not to be included in the present book since they are unusual only by virtue of their infrequency. In principle they are quite understandable and well within the normal distribution curve of respectability. However, many such events are still episodes of short-termed, highly energetic and (generally) localized processes—properties of the more unusual Fortean accounts. In addition, many of the classic Fortean events display patterns that suggest a significant contribution from meteorological operations. This category allows for such direct comparison with the orthodox unusual and the unorthodox usual.

A total of 1,047 events were classified in this category. From these events, twelve subcategories were selected: 1) excessive precipitation (snow or rain), 2) drought, 3) excessive hail storms, 4) excessive thunderstorms and electric displays, 5) sudden or unexpected winds and turbulence, 6) tornadoes and waterspouts

(established) of unusual nature, 7) excessive short-term fluctuations in temperature or pressure, 8) temperature and pressure extremes, 9) strange and unusual clouds, 10) obnoxious fumes of uncertain origin, 11) sudden periods of blackness, 12) verified ball lightning and 13) sudden flooding.

No doubt there are thousands of such events recorded in the hundreds of meteorological logs throughout the world. Our data files contain only the spectacular international events reported in newspapers, in the meteorological journal *Weatherwise*, and in Fort's collections. Criteria for selection included: 1) unusual nature of the event, 2) record event, *or* 3) large death toll associated with the disturbance. It should be pointed out that only very few reports were selected on the basis of large man-kills. Although record mortalities are interesting from a psychological perspective, they do not systematically reflect the energetic or unusual condition of the meteorological system. This is especially true of small locus storms where probabilistic overlap with human population densities is the major factor.

Since many of the normal weather events were not localized easily to 1 degree latitude-longitude partitions, per se, a total event map was not feasible.

Excessive Precipitation

This subcategory contained 518 events and was concerned with excessive rain falls, cloudbursts, and snow falls. Criteria for inclusion within this category were: 1) a record event, 2) unusual concomitant phenomena, *or* 3) occurrence in an extraordinarily large area. Sample cases were:

1. 13 July, 1816/part of United States/snow falls reported.
2. 14 October, 1879/Marcia Province, Spain/sudden deluge of water; 1,500 people die.
3. 29 May, 1889/Hong Kong, China/record rain fall.
4. __, 1889/China, Australia, Uruguay, Brazil/water spouts break; inundations, hundreds drown.
5. 08 August, 1882/central Lake Michigan/cloudburst of snow and slush; over six inches on decks of ships.

6. 11 and 12 June, 1897/India, Mexico/deluge of water suddenly.
7. _ August, 1906/Valparaiso, Chile/darkness associated with fires in sky; sudden devastating deluge.
8. 24 August, 1906/Guinea, Virginia/ten inches of rain in 40 minutes from cloudburst.
9. _ March, 1913/United States, South America, Africa, Spain, Tasmania/terrible floods, snow falls, rain.
10. _February 1969/all over United States/worst rains, snow falls in decades, records broken.
11. 10 June, 1972/Rapid City, South Dakota/heavy downpour; flooding; 300 missing.

Excessive Hailstorms

Excessive hailstorm episodes were placed under a separate category because of their energetic nature and because of the high probability that mechanisms other than those responsible for rainfalls are involved. In general, the thirty-two hailstorms of this division were confined to small areas. Sample cases included:

1. 08 May, 1784/Winnsboro, South Carolina/hailstones up to nine inches in circumference fall; several slaves killed; hundreds of livestock killed.
2. 17 July, 1788/Canterbury, Connecticut/hailstorm; banks of up to two feet ten inches of stones found.
3. _ March, 1913/Valencia, Spain/fall of hailstones; three feet deep.
4. 29 May, 1951/Wallace to Kearny Counties, Kansas/"The Great Hailstorm"; $6 million damage.

Droughts

A total of 108 events involving long-term shortages of precipitation were included here. A significant number of the areas associated with droughts were also the loci for massive inundations of precipitation some time later. Sample cases included:

1. _ August, 1854/New York state/peak of the "Great Drought" era.

2. —, 1889/Australia, Germany, West Indies, Western Africa/drought followed by excessive precipitation.
3. 10 September, 1905/—, Turkey/earthquake during drought condition followed by deluge of water.
4. —, 1931/Saskatchewan, Canada/drought era begins.
5. —, 1952/southwest United States/severest drought since 1930's.
6. —, 1971/southwest United States/severest drought since 1952.

Excessive Thunderstorms and Electrical Displays

A total of sixty-five cases involving extraordinarily violent thunderstorm periods and/or electrical displays was included here. Although the changing mechanisms for clouds and upper tropospheric regions are not completely clear, violent electrical displays imply unusual energetic concentrations in localized areas; we are interested in such phenomena for reasons discussed earlier. Sample cases included:

1. 22 July, 1858/Cambridge, Massachusetts/"most terrific thunderstorm within memory."
2. 22 March, 1913/parts of Australia/terrific thunderstorms; unprecedented.
3. 07 March, 1952/parts of California/violent lightning displays.
4. 12 July, 1957/Chicago, Illinois/worst thunderstorms in history.

Sudden or Unexpected Turbulence

All episodes that involved sudden or unexpected turbulence (non-thunderstorm, per se) or violent winds (non-hurricane) on a less local level, were classified in this division and included twenty-five cases. Sample cases included:

1. 26 July, 1875/Erie, Pennsylvania/sudden windstorm struck, 134 killed.

2. 03 April, 1891/Buena Vista, Massachusetts/only known United States city destroyed by windstorm.
3. 27 June, 1925/Helena, Montana/sudden windstorm in area of epicenter before earthquake.
4. 06 March, 1957/Springdale, Connecticut/tornado-like winds occur during clear sky conditions.

Tornadoes and Waterspouts

The fifty-one events placed in this subcategory involved verified tornadoes and waterspouts that displayed unusual properties, but were otherwise normal, as well as the general criteria of record intensities, unusual geometries or large man-kills. Sample cases of this category included.

1. 18 July, 1881/Americus, Georgia/sulfurous, sickening smell associated with tornado.
2. 03 June, 1889/Colburg, Ontario/large water spout seen passing overhead (downwind later, a large deluge occurs, local dams break).
3. 05 January, 1892/—, Georgia/tornado seen filled with "fire."
4. 18 March, 1925/Missouri, Illinois and Indiana/"Great Tri-State Tornado"; 695 killed, record.
5. 11 April, 1965/Lambertville, Michigan/luminous glows and lightning strokes noted from tornadoes (reported by B. Vonnegut and J. R. Weyer).

Excessive Short-Term Fluctuations

Phenomena in this subcategory included episodes that involved large fluctuations in temperature or barometric pressure within a short time, that is, in the order of an hour. Popular terms such as "temperature flashes" or "pressure flashes" have been applied to some of the phenomena included in this area. It is possible that events in this category may have reflected primary phenomena such as the Chinook, the Foehn, or other warm-dry

winds. However, events were selected for this division if they were not *apparently* related to such phenomena. Sample cases (in degrees Fahrenheit) included:

1. 20 December, 1836/central Illinois/cold front at noon; drop from forty to zero degrees; "chickens froze in tracks."
2. 17 June, 1859/Santa Barbara, California/very hot wind around 1400 hours; fine dust in air; fruit roasted on windward side.
3. 10 January, 1911/Rapid City, South Dakota/temperature dropped forty-seven degrees in *15* minutes.
4. 22 January, 1943/Spearfish, South Dakota/temperature rose forty-nine degrees in *2* minutes; later fell fifty-four degrees in 27 minutes.
5. 20 July, 1960/Gretna, Manitoba/two temperature flashes of approximately 15-minute duration; twenty degree increase.

Temperature and Pressure Extremes

Meteorological events in this category were essentially records for high and low temperatures and pressures over state-wide, province-wide or equivalent political demarcation sectors. Sample cases involved:

1. 17 August, 1885/Amos-area, California/record high temperatures.
2. 13 February, 1901/Naples, Italy/extreme cold; people freeze to death.
3. 02 September, 1935/Florida Keys/record low pressure storm; unpredicted; fifteen-foot tide; 400 drown.
4. 10 January, 1962/Helena, Montana/highest barometric pressure ever recorded in United States.
5. _ June, 1973/Mexico, United States, Canada/records broken with heat wave; worst in thirty to fifty years.

Strange and Unusual Cloud Formations

Phenomena included in this category are more Fortean-like in nature. All sixty-six events of unusual cloud formations or concomitant events were placed in this division. Sources for this category involve both Fort and the records of the United States Weather Bureau. Sample cases include:

1. 28 July, 1874/Mill Run, Pennsylvania/clouds "collide"; unusual discharges produced.
2. 11 March, 1875/Guadalajara, Mexico/black cloud seen; earthquake follows.
3. Last of August, first part of September, 1886/South Carolina, United States; Mediterranean area/strange, inky clouds seen offshore.
4. 31 July, 1904/offshore, Delaware/"magnetized" cloud moves out to sea; phosphorescence noted.
5. 28 August, 1915/Constantinople, Turkey/loaf-like clouds seen; sharp edges, "rolling within themselves."
6. _ November, 1963/Redstone Arsenal, Alabama/strange cloud seen; said to be "rolling in on itself."
7. 03 February, 1969/Jacksonville, Florida/"rattling" sounds originating from single cloud.

The combined distribution of unusual turbulence and "mysterious" clouds is shown in Figure 24.

Obnoxious Fumes of Undetermined Origin

Unusual moisture collection within a small locus could produce mists or unusual clouds, since the resultant opacities would make the phenomenon observable to the human being nearby. However, there might also be conditions where highly localized "inversions" take place with *no* concurrently observable cues. Sudden temperature changes would not necessarily be associated with these events; the only remaining distal cues of their occurrence would involve olfactory sensations. Consequently this category contains all events where sudden (usually obnoxious) smells were reported for which no known source could be located. A total of thirty cases were filed. Sample cases included:

1. —, 1886/Charleston, S.C./sulfurous emission noted.
2. –July, 1897/Khurdah, India/air smells like sandalwood.

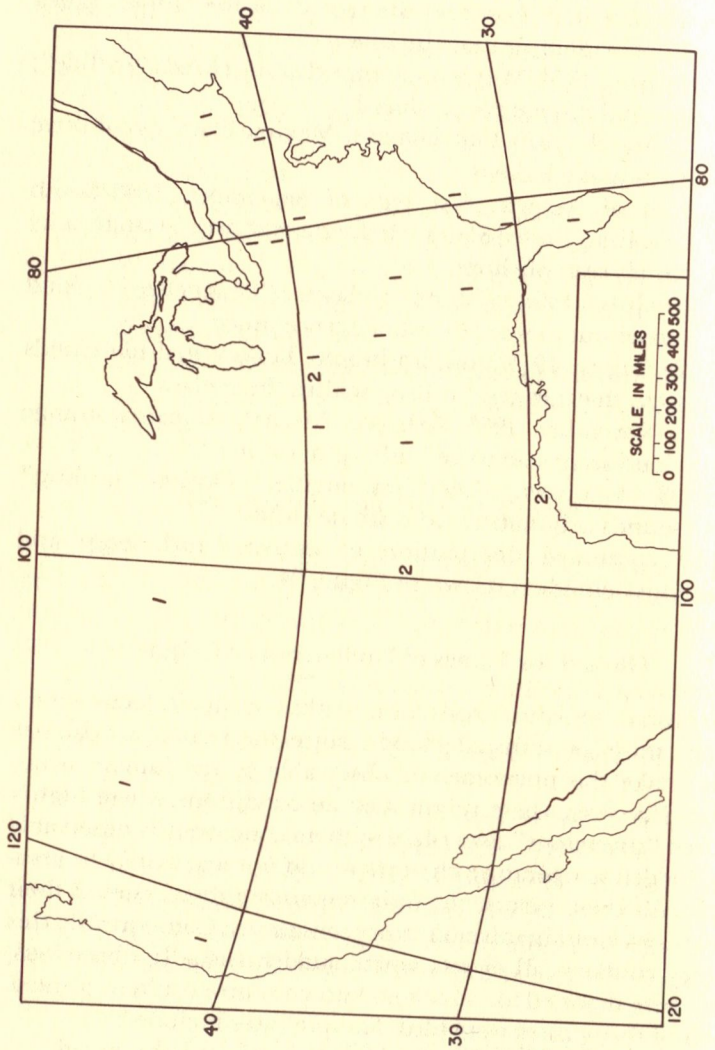

FIGURE 24. Spatial distribution of "mysterious clouds" and "mysterious turbulence."

3. 27 September, 1905/Calabria, Italy/blast of hot asphyxiating wind; people "choke" to death.
4. 09 March, 1931/Nassau area, New York City, New York/sickening smell; people run into streets.
5. First two weeks of September, 1944/Mattoon, Illinois/famous "gas attacks," sweet smell, sickening.
6. _ December, 1961/Houston, Texas/church disrupted by sweet, sickening smell; nauseating.
7. —, 1969/Conway, Arkansas/mysterious vapours; sickening and irritating effects.
8. _ July, 1972/Louisiana, Missouri/obnoxious smells (noted during sighting of "hairy giant").

Sudden Periods of Blackness

From time to time throughout the history of the western world, there have been reports of episodes of "sudden blackness," where the sun is almost totally obscured for several minutes to hours by some substance or object. These episodes do not correspond with known or predicted solar eclipses, nor do they display characteristics of such events. In some instances the involvement of massive forest fires is implicated strongly; in other cases this source is less likely. The most famous of these cases for the United States (from a political-historical point of view) is the Dark Day of 19 May, 1780 in the New England states. Sample cases involved:

1. 1 November 1716/New England states/Dark Day, reported by Reverend Mather.
2. 19 May, 1780/New England area/Dark Day; pitch blackness by noon; greenish lights seen; sulfur smell noted; end-of-world panic.
3. 9 November, 1819/Massachusetts area/Dark Day; rain fell with particles.
4. 08 June, 1839/Brussels, Belgium/sudden darkness (ice falls noted).
5. 11 April, 1860/Pernambuco, Brazil, South America/dark period; object passing over?

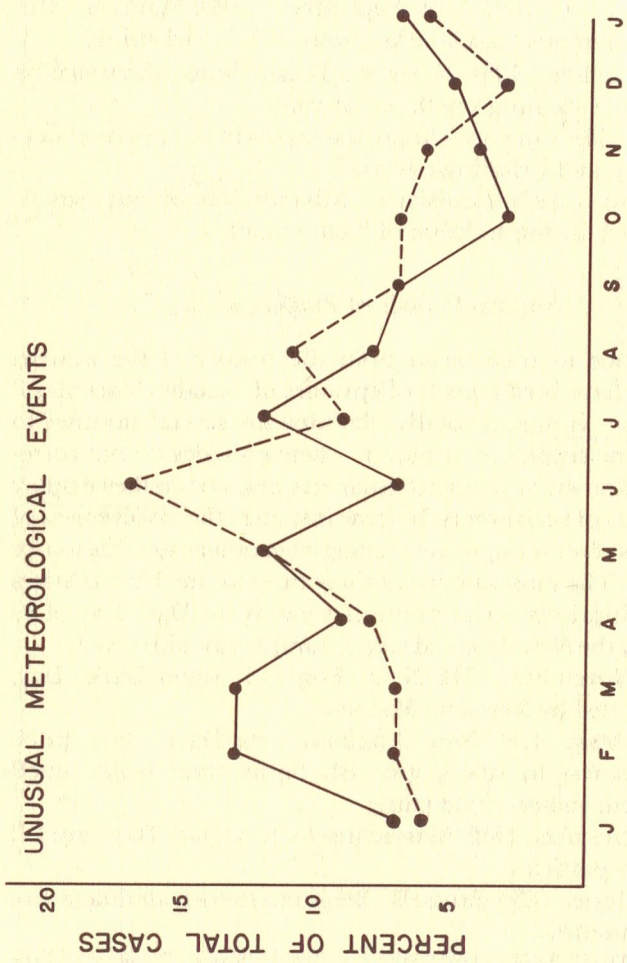

FIGURE 25. Monthly distribution of unusual meteorological events in the United States (*solid line*) and non-United States (broken line) areas.

6. 22 June, 1884/Fletching, Sussex, England/sudden blackness.
7. 19 March, 1886/Oshkosh, Wisconsin/sudden blackness for 10 minutes; (also noted in other places in path-like pattern).
8. 02 December, 1904/Memphis, Tennessee/sudden blackness for 15 minutes.

Temporal Patterns

The temporal distribution over months for all subcategories of unusual meteorological events is shown in Figure 25 for the United States and non-United States areas. The United States displays a clear trend for a yearly cycle, with the crest occurring between February and July and the trough occurring between August and January. The non-United States areas (predominantly Europe and northern latitude regions) show a pronounced peak during May and June.

A Comment on Turbulence

Areas of turbulence are typified by short-termed high intensity and often localized manifestations of energy exchange. One of the more well known forms of excessive turbulence is the tornado. The distribution of tornadoes by two-degree squares during a forty-five year period (1916-1961) is shown in Figure 26. Whereas more generalized mechanisms are involved with the high density tornado areas north of Texas and west of the Mississippi River, it is interesting to notice the heterogeneous spatial distributions of tornadoes *east* of the Mississippi River. The possible relationships between these patterns and Fortean events warrant discussion.

Correlations were completed between total Fortean events, fall events and tornado frequencies for eighty-seven two-degree sectors east of the ninety degree latitude division. This area was selected since population has been more constant here over the years of data collection than areas west, which were populated more recently. The correlation coefficients (r) between total Fortean events and

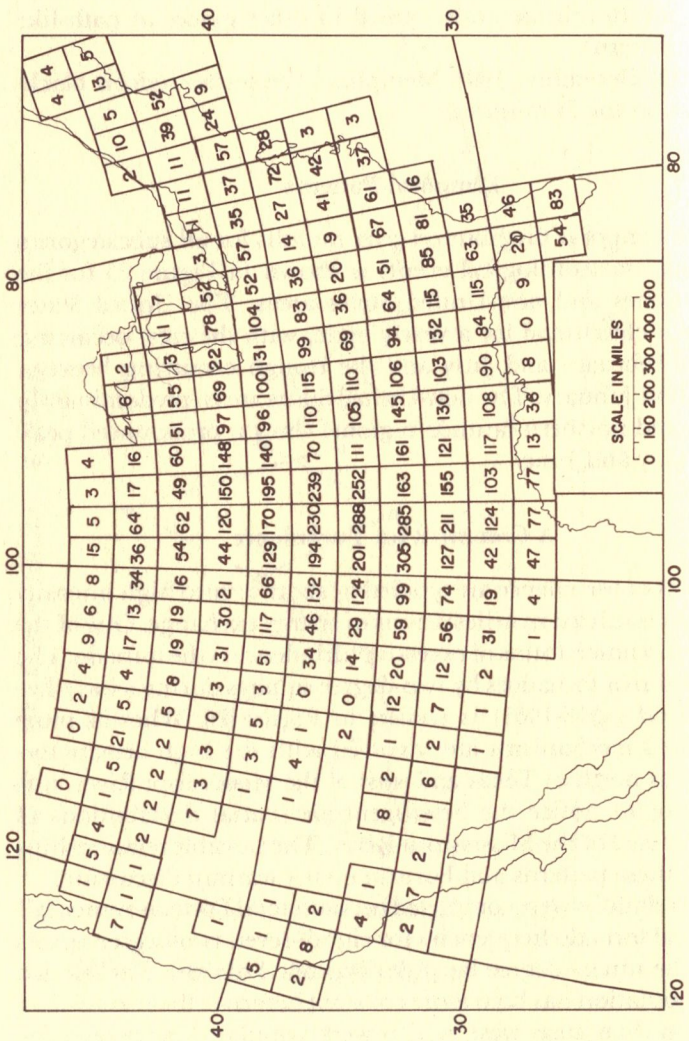

FIGURE 26. Total number of tornadoes reported between 1916 and 1961 for two degree sectors of the United States (after Miller and Thompson, 1970).

tornadoes and fall events and tornadoes were +0.20 and +0.14, respectively. These values are not impressive. However, visual examination of the data array indicated that the relationship was not linear, but curvilinear. Consequently correlations were made between Fortean phenomena in areas that showed tornado frequencies of eighty or less during the period described in Figure 26. The resulting correlation between total Fortean events and tornadoes for the fifty-seven criterion sectors was r = +0.44, a highly significant relationship. The probability that this relationship was due to chance alone is only three in 10,000 (p = .0003). The correlation between fall events and tornado frequencies was r = +0.35, also statistically significant (p = .003).

The conclusion can be made that areas with zero to mid-range tornado distributions demonstrate a positive, linear increase in Fortean events. Of course this does not mean necessarily that the unusual events are being caused by tornadoes; rather the two are related. Alternatively, it could be stated that areas which are prone to tornado turbulence are also prone to Fortean events.

chapter 8

Unusual and Infrequent Geophysical Events

Man and the enclosing biosphere exist within a thin ring whose width is only one-thousandth of the earth's diameter. In short, we are suspended upon a thin-layer surface beneath which mammoth and gigantic processes are taking place. These processes induce phenomena on the earth's surface. One such phenomenon is the geomagnetic field with its various ramifications. Perturbations in subsurface equilibria are assumed to produce more violent topographic episodes such as volcanic eruptions and earthquakes. These latter changes are not randomly dispersed over the surface, but display high probabilistic concentrations. The famous "Ring of Fire" that exists along the Pacific land boundaries is an area where volcanism and seismicity are at one of their greatest maxima.

Whereas earthquakes and correlated phenomena grossly reflect internal terrestrial processes, smaller anisotropic events may induce only short-termed and highly localized phenomena. Such events would not involve necessarily crude expressions of force like rock fractures or high pressure release of magma. Instead phenomena of a different quality and kind might be produced that involve interactions between various subfracturing quantal units of force and local geophysical properties. Unusual piezoelectric episodes would be a more obvious example.

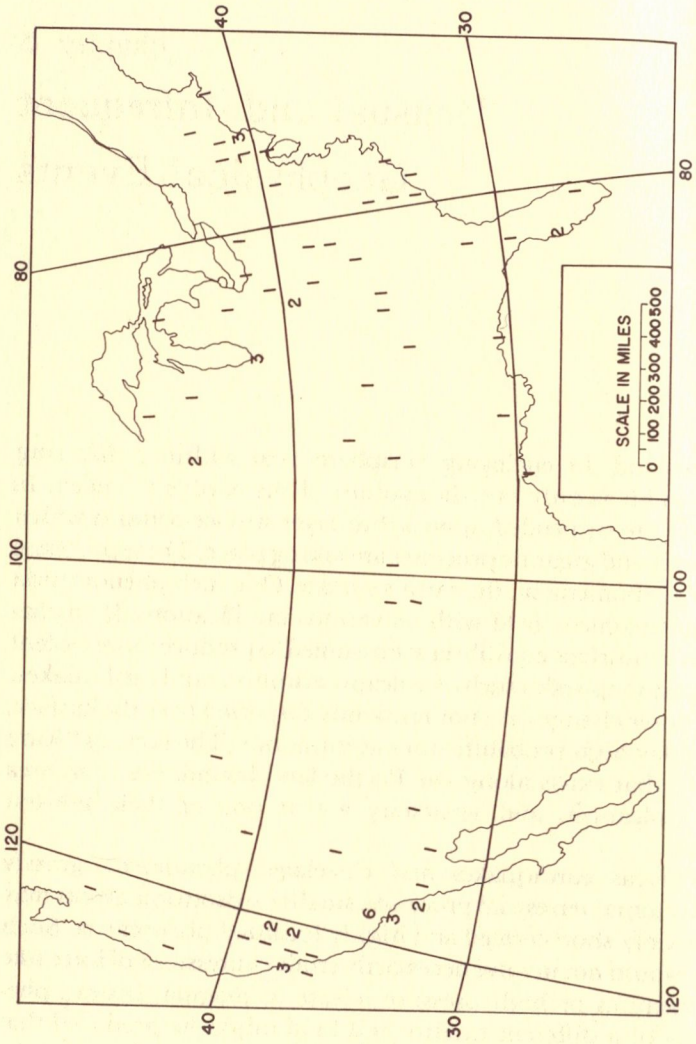

FIGURE 27. Distribution of unusual geophysical area and events in the United States (all subcategories).

A total of 450 events were recorded in the present category. Nine subdivisions were further included: 1) volcano eruptions, 2) earthquakes (extraordinary or peculiar nature), 3) land movements (sudden), 4) sudden water movements, for example, seiches, 5) "strange" areas, 6) unclassified events, 7) local explosions of undetermined origin, 8) rocks "popping out of the ground," and 9) unexplained appearances of large holes in the ground. Their spatial distribution in the United States sector is shown in Figure 27.

Volcanoes

This subcategory contained episodes of exceptional or unusual volcanic activity. Most of the events in this category are derived from Fort's data; content analysis indicates that his data were inflated with instances of global occurrence. A total of fifty major events were placed in this subcategory; sample cases included:

1. __, 1815/Timboro; Pacific/gigantic volcanic explosion; global red sunsets; "no summer" following year.
2. 11 June, 1877/sixty miles northwest Yuma, Arizona/volcanic-like eruption seen.
3. 27 August, 1883/Krakatoa, Java/greatest non-nuclear explosion; Krakatoa disintegrates.
4. 08 May, 1902/Mt. Pelee; St. Martinique, West Indies/Mt. Pelee "explodes," 30,000 die.
5. October and November, 1902/Peru, Java, France, Mexico, Pacific, Atlantic, Hawaii/massive volcanic outbreak.
6. 18 April, 1906/Japan, Canary Islands, Italy/volcano outbreak; dormant volcanoes become active.
7. _ February, 1969/Washington, U.S.A.; Nicaragua, Sicily/volcanoes erupt in last two areas; warm spots develop on Mt. Ranier.

Unusual Earthquakes

This subcategory contains instances of unique, large magnitude or large mortality seismic episodes. As noted in the meteoro-

logical chapter, the latter criterion was not frequently used. Two hundred five events were categorized. Sample cases included:

1. 23 October, 1839/Comrie, Scotland/most violent quake of the era.
2. 08 October, 1857/Missouri, Illinois, Kentucky/earthquake; lumimous orbs seen in area; fish fall reported.
3. 22 November, 1873/California/major earthquake.
4. 31 August, 1886/Charleston, South Carolina/most major earthquake in area; 1,600 mile diameter area.
5. 17 December, 1896/England/severest shock of nineteenth century.
6. 18 April, 1906/San Francisco, California/famous 1906 earthquake; business section destroyed.
7. _ April, 1928/Europe, Asia, Central America, South America/severe earthquake year; windstorms and deluges before quakes.
8. 27 March, 1964/Alaska/the devastating "Alaska Quake."
9. 31 May, 1970/Peru, South America/severe quake; 20,000 killed.

Land Movements

This subcategory contained twenty-six events that dealt with instances of land movements; many but not all of these occurrences were coincident with major seismic activity in the area. Sample cases included:

1. 16 December, 1811/New Madrid region of Mississippi/large portion of land sinks.
2. 31 December, 1879/Santiago, Central America/island rises out of Ilopanga Lake.
3. 23 March, 1913/Adirondack Mountain, Pennsylvania/mountain suddenly "moves" and covers two streets.
4. __, 1924/off west coast Africa/ocean floor found elevated by 2.5 miles since last measurement twenty-five years before.
5. __, 1935/___, Maine/sandy patch forms; grows to 500 acres.

6. __, 1954/New Castle, Pennsylvania/450-yard section of road sinks 50 feet.
7. __, 1968/Bahama Islands, West Indies/possible rise of land/ocean floor seen in some areas for first time.

Water Movements

Sudden, unpredicted and unexplained movements of water in either lakes or oceans were included in this subcategory: a total of twenty-four instances were used. More than half of these instances involved seiches, sudden unexplained increases or decreases in water level observed in lakes and other land-locked bodies of water. Following the dramatic, quick change in water level, oscillations in the water line can be noted. Sample cases included:

1. 09 April, 1761/Loch Ness, Scotland/sudden upheaval of water over lake; boats flounder.
2. 23 June, 1882/Cleveland, Ohio/large seiche occurs; water rises in an eight-foot surge.
3. 18 January, 1892/Lake Michigan/tidal wave noted.
4. 22 July, 1899/Ashland, Wisconsin/water suddenly rises three feet.
5. 09 September, 1905/Kashmir, India/river suddenly rises seventeen feet.
6. 29 May, 1920/Lincolnshire, England/brook "jumps" twenty feet; fifty people killed.
7. __, 1936/Gulf of Alaska/single mysterious huge wave hits; floods area (also happened in 1854).
8. __, 1962/Chicago, Illinois/seiche; harbor suddenly drops nine feet.
9. 15 February, 1969/Sarasota, Florida/unexplained 4.5-foot wave hits Lido Beach.

"Strange Areas"

Many western and non-western cultures have myths and stories about special small areas in the locality that display unusual properties. Frequently, these areas are in some way

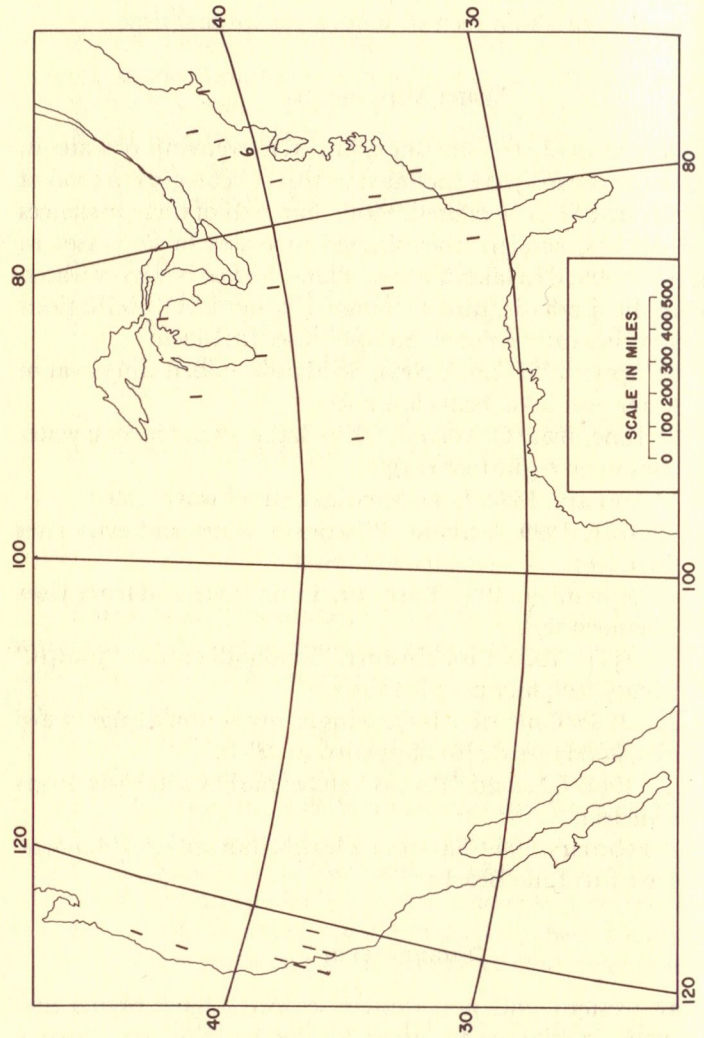

FIGURE 28. Distribution of "strange areas" in the United States.

incorporated within the particular religious or superstitious framework. The localities (Figure 28) contained in our data file, from our present perspective of science, are nothing more (at most) than unusual manifestations of sonic, electromagnetic or gravitational fields. In such "strange areas," *apparent* anisotropies of these field conditions are reported. Infrequently, human death has been associated with the occurrence of the unusual phenomena. Few of the cases reported in this subcategory are transients; instead, reports of the peculiarities of these areas span several years to centuries. Sixty reports have been placed in this subcategory. Where relevant, dates have been included. Sample cases included:

1. ___/Bridgeport, Devonshire, England/area where drivers feel compulsion to leave road.
2. ___/Moncton, New Brunswick, Canada/so-called magnetic hill.
3. ___/Lebanon, Missouri/ostensible healing stream.
4. ___/Santa Cruz, California/150 foot area; magnetic-like and gravity-like perturbations.
5. ___/Chatham County, North Carolina/forty foot diameter spot; nothing grows there.
6. ___/Salinas, California/100-foot diameter gravity anomaly.
7. ___/Odd Acres, Missouri/ostensible magnetic and gravity anomaly.
8. ___, 1950/St. Martinique, West Indies/animals seem to be growing to very large sizes.
9. ___, 1954/Barrie, Ontario, Canada/reported mysterious force pulls cars off road.
10. ___, 1969/Scotty's Castle, California/rocks move in small area within Death Valley.
11. ___/N-NE of Philadelphia, Pennsylvania/thirteen areas where rocks "ring"; psychological effects reported.

Unclassified Events

Twenty events were significantly different from the normal but did not meet the criteria of other categories within this chapter. Sample cases included:

1. ___/Venezuela, South America/network of unusual caves found.
2. ___/Mobile-Biloxi, Alabama/so-called "singing river" noted.
3. ____, 1953/Newman, California/ground bursts into flame when touched.
4. ____, 1958/Trenton, New Jersey/rumbling noises and blue flames from sink.
5. _ September, 1963/Chattanooga, Tennessee/foundation of house found red-hot (no fire source).

Local Explosions

Forty-eight events involving unexplained local explosions were placed in this subcategory. The spatial distribution of these localities in the United States is shown in Figure 29, combined with the next two subcategories. Only those cases in which dynamite, routine explosives or possible meteor impacts were not likely, have been included. In such cases there was no apparent evidence of nitrate residues or impact fragments. Many of the events took place in empty fields and were accompanied by brilliant flashes and extremely powerful sonic shocks. Upon inspection by human observers, large holes were found in the putative area of the blast. The craters were, as a group, by no means minuscule. Sample cases included:

1. __, 1908/Tunguska, Siberia, Russia/explosion burns large area; (famous "Siberian meteorite").
2. 15 June, 1951/Mare Island, California/explosion cracks road.
3. 04 January, 1952/Oakland, Berkeley, California/explosions, holes found, very loud.
4. January and February, 1952/many parts of Nevada and California/large explosions heard, holes found.
5. 31 July, 1953/Dillon, South Carolina/violent explosions; sixty-foot wide, twelve-foot deep crater found.
6. _ November, 1955/near Tampa, Florida/holes explode in ground; fires started.
7. 2 April, 1959/Leland, Illinois/brilliant flash of light

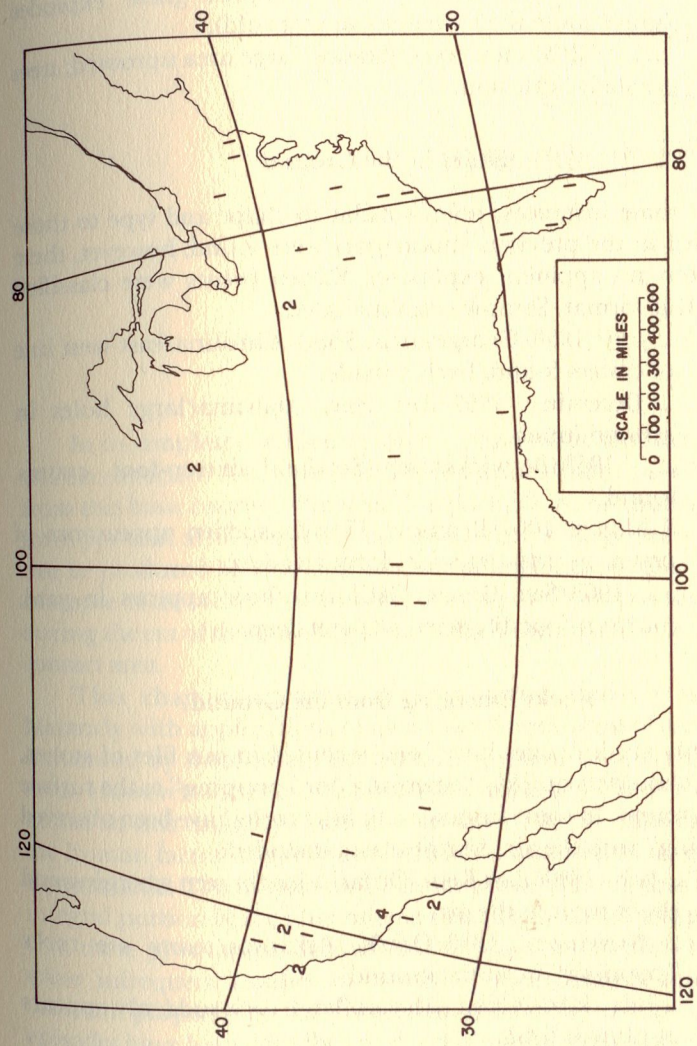

FIGURE 29. Distribution of events reported in the subcategories local explosions, unexplained holes, and "popping" rocks for the United States.

during storm/hole twelve feet wide, more than one foot deep.
8. —, 1969/Charleston, West Virginia/grave explodes (grave more than twenty-five years old).
9. —, 1972/Montauroux, France/large area uprooted; trees rotated; explosion.

Holes in the Ground

In some instances, holes similar in shape and type to those included in the previous subcategory were found; however, there had been no apparent explosion. Eleven events were classified under this format. Sample cases included:

1. _ July, 1953/Georgetown, South Carolina/east-west line of craters found; freshly made.
2. _ December, 1957/Red Bay, Alabama/large holes in ground found.
3. —, 1963/Berwickshire, Scotland/sixteen-foot craters found.
4. 4 March, 1964/Bronson, Florida/sudden appearance of crater; twenty feet wide, forty feet deep.
5. —, 1968/San Diego, California/hole appears in yard; fourteen-foot diameter, fifty feet deep.

Rocks Emerging from the Ground

Only six instances have been recorded in our files of stones, rocks or boulders quickly "emerging" or "popping" to the surface of the ground. In some instances, smaller rocks have been observed "shooting" into the air. Sample cases included:

1. _ July, 1880/East Kent, Ontario/stones seen emerging and shooting into the air.
2. _ November, 1880/Ozark, Arkansas/many see rocks "popping" from the ground.
3. _ July, 1960/Alden, Illinois/large rock suddenly appears in plowed field.
4. 17 February, 1973/Elk City, Oklahoma/several tons of rocks "pop" to the surface.

chapter 9

Unusual and Infrequent Forces

In its simplest expression, force is equal to the product of mass and acceleration. A variety of different applications can be derived from this basic concept. Pressure, for example, is the application of force per unit area. Despite small initial forces, large net pressures can be produced by reducing the area of application. One famous example of this relationship is the denting of tile and cement floors during the era of the spike high heel, which had a smaller than usual contact area.

This chapter is concerned with events that are involved blatantly with applications of unknown forces. Most of the objects influenced by these forces are contained within a house or living area. However the most characteristic aspect of the events contained in this category is the human factor. In previous chapters, the human factor was relevant only in its function as an observation variable. The human factor in the present cases seems to be an integral portion of the phenomena themselves. From one perspective, these phenomena behave as if they are interactions between some infrequent quality of a major human factor and some unusual property of the correlated space-time. Many of these episodes have been described under the rubrics of parapsychology. Unlike the usual subject matter of that area, events contained in this chapter have been associated with physical observables.

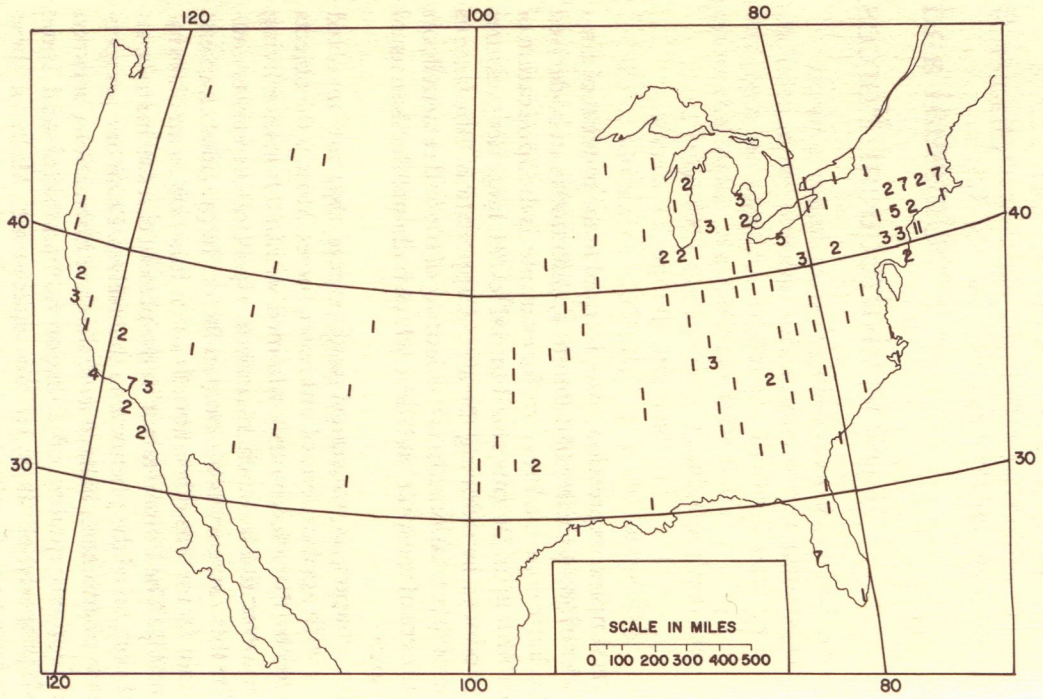

FIGURE 30. Spatial distribution of reports involving human-oriented episodes of "unusual forces."

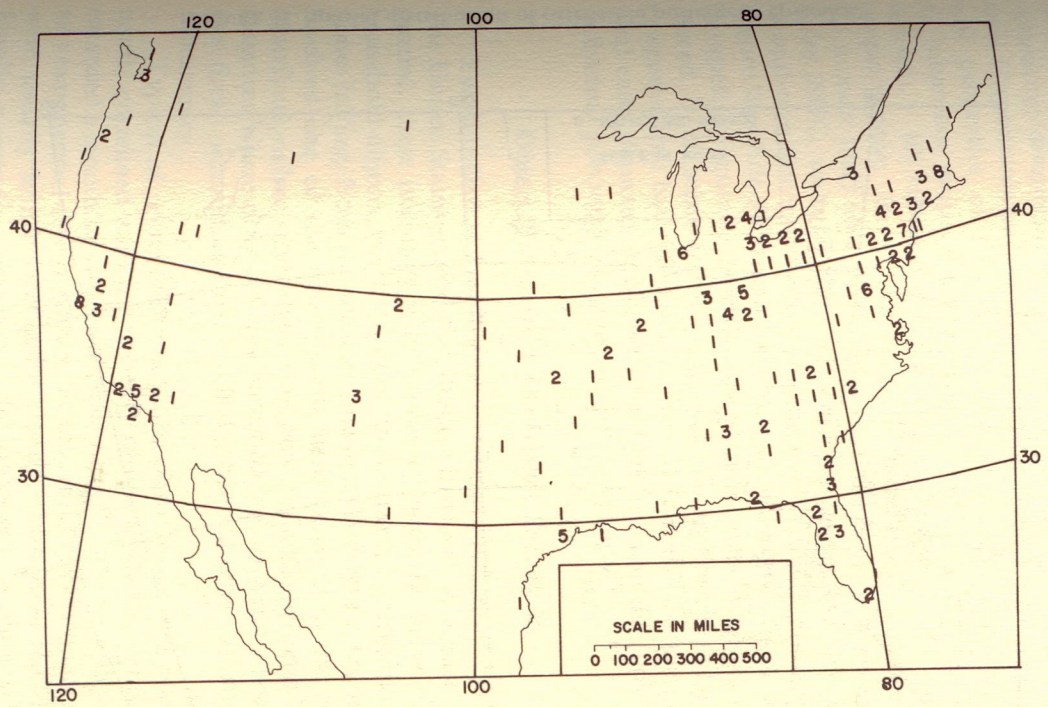

FIGURE 31. Spatial distribution of reports involving object-oriented episodes of "unusual forces."

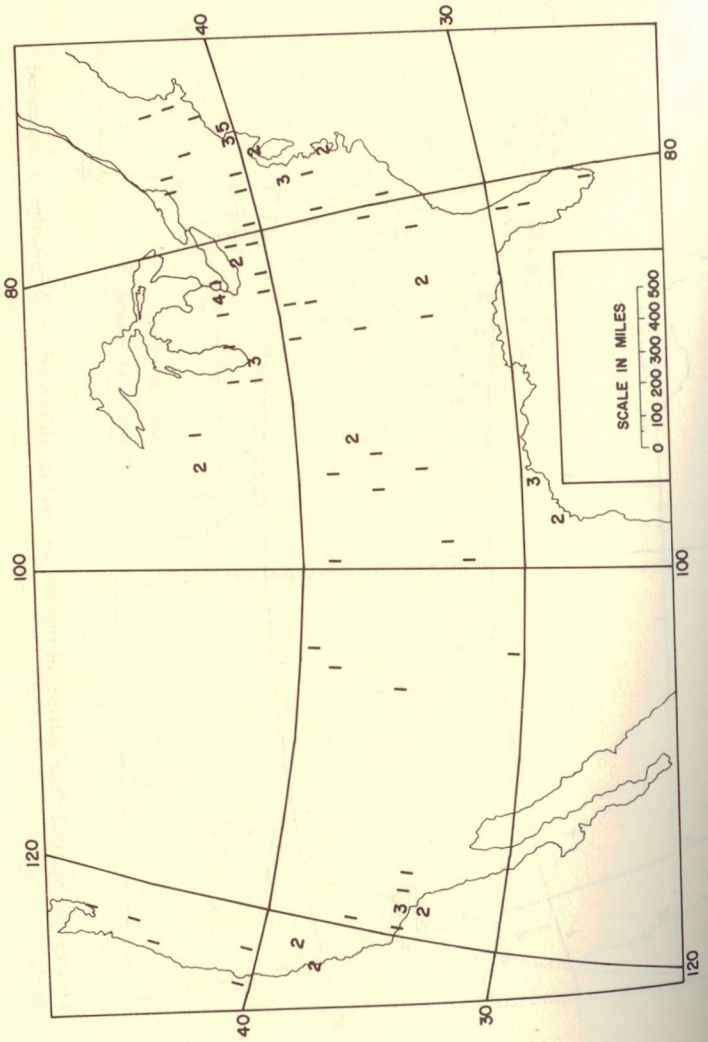

FIGURE 32. Spatial distribution of ostensible poltergeist episodes.

A total of 744 events were classified in this category. Thirteen subcategories were formed: 1) object movements, 2) objects appearing/disappearing, 3) liquid appearances, 4) spontaneous fires, 5) spontaneous human combustion (SHC), 6) unusual physical properties of human subjects, 7) etchings and shadows, 8) "phantom sniper" phenomena, 9) small explosions (inside houses), 10) subdermal afflictions (human), 11) tactual-proprioceptive forces, 12) unusual mechanical kinetics and 13) human blackouts. For comparison, the human-oriented episodes (SHC, unusual physical properties, subdermal afflictions, tactual-proprioceptive forces and human blackouts) are shown in Figure 30, while the remaining object-oriented episodes have been grouped in Figure 31. Initially the human-oriented episodes were placed in a separate division and included additional subcategories that have been deleted from this text; consequently the total cases depicted in Figure 30 are greater than the sum of the individual subcategories presented in this chapter.

Object Movements: The Classic Poltergeist

Two hundred and seven events were classified under this topic. The United States spatial distribution is shown in Figure 32. In general, these instances were concerned with the movement of household objects, occurrences of noises (raps, bumps, thumps), stones falling (from the ceiling), and fires. Different cases usually involved one of the above phenomena more than the others; contributions from the others were, however, still apparent. Those instances where only one phenomenon (for example, spontaneous fires) occured, were classified under another appropriate subcategory.

Typical of poltergeist events, the phenomena were predominantly correlated with the presence of young children and rarely exceeded a month's duration of peak intensity. The growth pattern was exponential-like in nature. At first, mild knockings or noises were usually heard; later more kinetic events were manifested. Finally, a cascading sequence of disturbances took place (coinciding with public attention) before the episode ended. Frequently the

child was physically ill, emotionally unstable (according to the evaluations of the reporter) or dying at the time of the event. Sample cases included:

1. __, 1790/Wizzard's Clip, West Virginia/object movements, animals drop dead, apports.
2. __, 1820/__, Tennessee/peak of the "Bell Witch" period; object movements, voices, death associated with unusual forces.
3. _ October, 1873/Menomonie, Wisconsin/objects move; dresses ripped to thin shreds.
4. _ June, 1880/Essex, England/beds move; furniture moves, shadows seen.
5. _ August, 1883/Cedarville, Georgia/objects move, pebbles move in presence of fifteen-year-old girl; dishes smashed; raps heard.
6. _ September, 1889/Clarendon, Quebec, Canada/rocks move, fires, hair pulled, objects move.
7. _ March, 1892/Chicago, Illinois/objects moved, jewels smashed, curtains ripped; nine-year-old girl sick.
8. _ February, 1905/parts of England/outbreak of several poltergeist activities.
9. _ December, 1921/Budapest, Hungary/fires break out; furniture moved in presence of thirteen-year-old boy.
10. _ February, 1952/Johannesburg, South Africa/bed sheets shredded; objects moved in house, household attacked by "force."
11. _ February, 1958/Seaford, Long Island, New York/objects move; bottles pop off caps, etc.
12. _ January, 1963/Edmonton, Alberta, Canada/objects move; blankets move; pounding sound.
13. __, 1972/Detroit, Michigan/drawers moved; holes in wall; knocking sounds.

Objects Appearing/Disappearing

The idea of "apports" was developed considerably by Charles Fort. Apports refer to events where objects seem to disappear only

to reappear in a different space coordinate. A significant number of apport cases are involved with stones, buckshot or other objects appearing at about ceiling level and falling. Thirty-eight events were placed in this subcategory. Events were only placed in this category if they predominantly involved the appearance or disappearance of objects. If other classic poltergeist symptoms were evident, the event was classified in the previous subcategory. The geographic distribution of these cases in conjunction with spontaneous fire and opening door/window episodes is shown in Figure 33. Sample cases involved were:

1. 09 December, 1873/Bristol, England/couple report floor opening; almost engulfed into dark void from which came voices.
2. _ January, 1888/Caldwell County, North Carolina/large stones fall inside closed room.
3. _ March, 1929/Newton, New Jersey/buckshot falls from ceiling of garage for days.
4. __, 1952/San Bernardino, California/bracelet of unknown metal appears/disappears.
5. _ December, 1962/Toledo, Ohio/objects appear/disappear.
6. _ May, 1970/Oakland, California/rings disappear from fingers, clocks disappear.

Liquid Appearances

Seventy-five events were classified under this subcategory. This category was divided into three separate pattern types; they were combined because of the central feature: appearance or disappearance of moisture or liquid. The least frequent of these patterns involved the sudden appearance of large amounts of water inside a room. The second pattern: classic stigmata, where human beings show select bleeding in areas similar to the wounds of Christ, was also infrequent. More than 70 percent of the cases in this file were involved with "crying statues" or "crying icons." The copious "tears" from these objects were not always clear water, but contained oily reddish materials in many instances. Substances

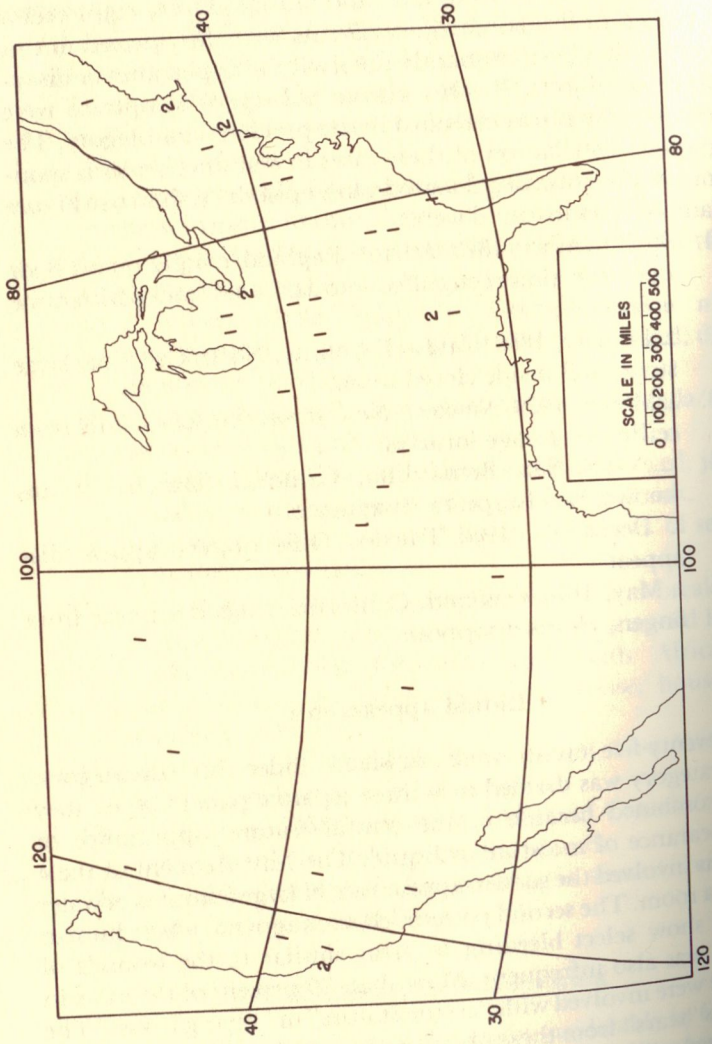

FIGURE 33. Spatial distribution of unusual kinetics in houses.

identified as blood have been noted to appear on pictures or statues; the occurrences of blood-like material on graves, headmarkers or similar death-associated symbols are relatively infrequent as a data population. Liquid manifestations of dried or clotted blood of saints are included within this category. Sample cases of liquid appearances/disappearances within rooms included:

1. 30 August, 1919/Norfolk, England/over fifty gallons of oily substance spurts from walls and ceilings of house.
2. _ October, 1953/Orlando, Florida/water keeps appearing in house.
3. _ September, 1955/Windsor, Vermont/water collects on furniture; thirteen pails per day.
4. _ October, 1963/Lawrence, Massachusetts/water found spraying from walls.

Sample cases of dried *blood* suddenly liquifying or blood suddenly appearing included:

1. __, yearly/Naples, Italy/blood of saint liquifies yearly.
2. __, 1927/Maifouk, Lebanon/blood and perspiration appear on twenty-nine-year-old corpse.
3. _ June, 1961/Houston, Texas/blood spots keep appearing in house.

Sample cases of "crying icons" included:

1. __, 1918/Poitiers, France/statues weep.
2. __, 1940/Syracuse, New York/statue of Ste. Anne weeps.
3. _ March, 1960/Hempstead, New York/portrait of Virgin cries.
4. _ October, 1963/Ciudad Mier, Mexico/wooden statue cries.
5. _ July, 1972/New Orleans, Louisiana/a Virgin statue weeps.

The last type of phenomenon is interesting from a social psychological perspective since frequently the occurrence of water on the icon is considered a miracle. Consequently hundreds to thousands of people pass through a *small spatial area* within a very *short period of time*. It is not uncommon for the phenomenon to increase its intensity during this period. Another interesting trend

for this event-type is its manifestation during anticipation of social disturbances.

Spontaneous Fires

Incidents concerned with spontaneous or sudden fires involved sixty-three cases. Only those cases that involved no obvious or reasonably obvious source were considered. The frequent association of the phenomenon with a teenage human subject was also apparent in these events. Sample cases involved:

1. _ August, 1856/Bedford, England/forty unexplained fires in short period.
2. _ May, 1878/Bridgewater, England/fires repeatedly start near twelve-year-old female, sounds.
3. _ August, 1887/Woodstock, New Brunswick, Canada/forty fires in house in short period; child found in flames.
4. __, 1905/parts of England/spontaneous fire episodes; noises, explosions, in surrounding area.
5. _ August, 1929/Antigua, West Indies/girls' clothes flame; no burns found on body.
6. __, 1939/Borley Rectory, England/famous "Borley Rectory" burns down following episode of spontaneous fires.
7. 28 March, 1953/Silver Springs, Maryland/accordion catches on fire while eleven-year-old female playing.
8. _August, 1957/Stephenville, Newfoundland, Canada/many fires erupt in closets, drawers.
9. _August, 1958/Talladega, Alabama/fires near ceiling of house, reddish-blue in color.
10. _, 1966/Columbia, South Carolina/bed found on fire; no reason or source.

Spontaneous Human Combustion: SHC

The alleged occurrence of spontaneous human combustion (SHC) was the primary reason this entire category was originated.

This phenomenon not only challenges our assumptions concerning the combustion characteristics of human material, but evokes interesting problems concerning heat and matter. In classic cases of SHC, the victim generally is seen to "burst into flames" and then quickly burn to ashes. It is claimed, in such episodes, that even the fires of the crematorium could not do the job as efficiently within the particular time interval involved. Correlative phenomena of SHC are also interesting and puzzling. While the body of the SHC victim can be severely charred or reduced to carbon, the bed sheets or clothes may be untouched or only mildly singed.

Some cases designated as SHC instances were witnessed by groups of people while others are inferred following discovery of charred remains of the victim. Of the seventy-four cases of SHC included in this subcategory, the majority of victims were late middle-aged or older. In thirty of the reports which contained the specific age information of the subject, 90 percent were greater than fifty years of age. Sixty-five of the cases specified the sex of the victim, who was female 74 percent of the time. Severe burning episodes in which other factors could possibly be established or involved, were not included as SHCs. Less than 5 percent of the cases involved poltergeist-like correlative events. The spatial distribution of SHC reports in the United States is shown in Figure 34. Sample cases involved:

1. 02 March, 1773/Coventry, England/fifty-year-old female; SHC.
2. 01 August, 1869/Paris, France/SHC; floor burned around body; victim's bed clothes not burned.
3. 12 May, 1890/Ayer, Massachusetts/female SHC; clothes not scorched.
4. 16 December, 1904/London, England/widow; SHC; sitting in bedroom; clothes not burned.
5. January and February, 1905/parts of England/three SHCs within month.
6. 30 July, 1938/Norfolk Broads, England/SHC; woman on cruiser at time of incident; clothes burnt.
7. 18 September, 1952/(Algiers) New Orleans, Louisiana/SHC; man.

8. 18 May, 1957/Philadelphia, Pennsylvania/SHC, sixty-eight-year-old female.
9. _ October, 1964/Dallas, Texas/woman, seventy-five years old; burns, car not touched.
10. _ January, 1968/Ballinger, Texas/SHC; house with possible history of SHC.

Unusual Human Physical Properties

Human beings are very weak sources of electricity, magnetism and heat. Electrical fields are generated in the order of a few millivolts, magnetic fields are induced in the microgauss range, and heat is produced in kilocalories. They are still very weak sources. But there are instances, apparently, when significant increases in the intensities of these forces occur. When they do occur, invariably they are transient and disappear in time. This subclass of phenomena includes twenty cases of "magnetic people," "high voltage people" or individuals who can detect color with their fingers (dermatooptics). Sample cases included:

1. __, 1877/London, Ontario/seventeen-year-old girl shows high voltage discharge following illness.
2. _ December, 1882/Pawpaw, Michigan/twenty-four-year-old male starts fires by breathing on substances.
3. __, 1889/Joplin, Missouri/high voltage human reported.
4. __, 1890/Maryland/sixteen-year-old boy becomes magnetic; objects (iron) stick to him.
5. _ March, 1928/Washington, D.C./man gives paralyzing electric shock when touched.
6. __, 1963/Southampton, Pennsylvania/rings of light seen on person's body.
7. __, 1967/Rotterdam, New York/boy sees colors with finger tips.

Etchings and Shadows

One of the most important developments for western civilization has been the production of glass and related silicon products.

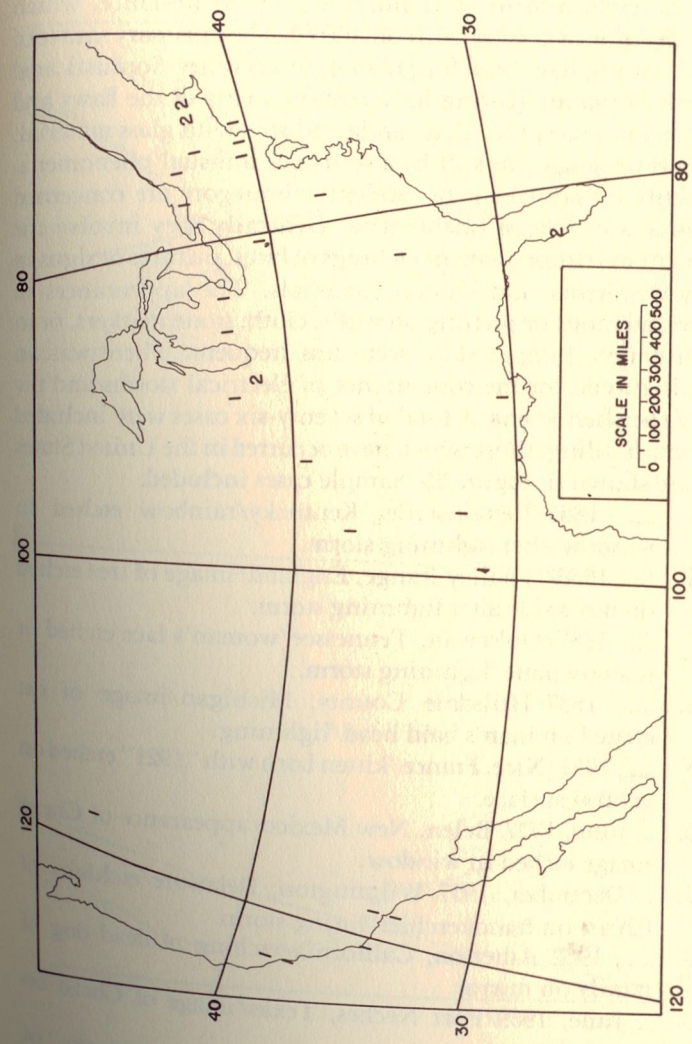

FIGURE 34. Spatial distribution of SHC (spontaneous human combustion) reports.

The interesting crystal lattice of this material allows the passage of light and consequently increases the amount of visual information about the environment. The nuances of this substance, which during the time of Galileo was considered to be a primary source of visual illusions, have been forgotten in this century. Sophisticated standards of manufacturing have reduced many of the flaws and distortions in perception that can be induced with glass material.

However glass can still be a source of unusual phenomena. The events contained in the present subcategory are concerned with these and related phenomena. Generally they involve the permanent to semipermanent etchings of faces, pictures or signs in windows, mirrors and similar materials. The appearances of shadows, etchings or pictures on walls, cloth, stone markers, or in some instances human skin, were less frequent. There was an interesting trend for the concurrence of electrical storms and the onset of the phenomena. A total of seventy-six cases were included under this heading; those which have occurred in the United States sector are shown in Figure 35. Sample cases included:

1. __, 1865/Demonsville, Kentucky/rainbow etched in window after lightning storm.
2. __, 1866/Whalley Range, England/image of tree etched on boy's side after lightning storm.
3. __, 1887/Ooltewah, Tennessee/woman's face etched *in* windowpane/lightning storm.
4. __, 1887/Hillsdale County, Michigan/image of cat etched on man's bald head/lightning.
5. __, 1921/Nice, France/kitten born with "1921" etched on ventral surface.
6. _ June, 1927/Belen, New Mexico/appearance of Christ image etched in window.
7. _ December, 1957/Wilmington, Delaware/etchings of Christ on handkerchief during storm.
8. __, 1962/Atherton, California/etching of dead dog of family on mirror.
9. _ June, 1969/Port Neches, Texas/image of Christ on screen door.
10. _ September, 1971/four cities in Florida/"epidemic" of shining crosses etched in windows.

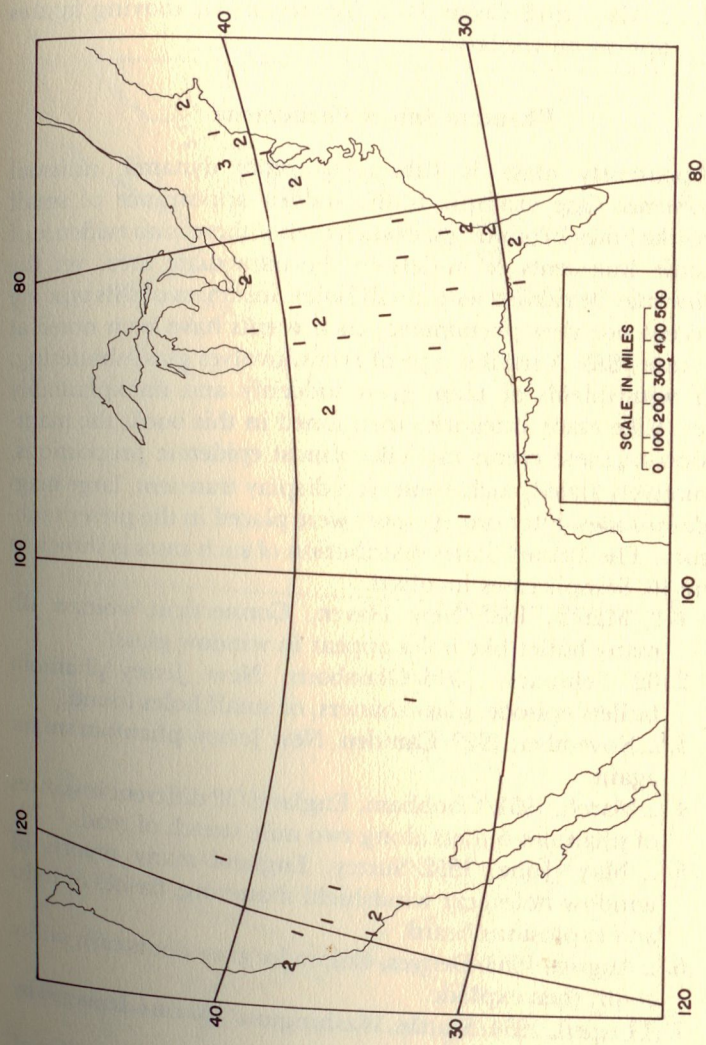

FIGURE 35. Spatial distribution of unexplained "etchings and shadows."

11. _ October, 1971/several cities in Georgia/churches report crosses in windows.
12. _ May, 1972/Cedar Hill, Texas/various moving figures appear on windows.

Phantom Sniper Phenomena

Apparently glass is subject to more dynamic unusual phenomena. One example is the sudden appearance of small bullet-like holes in windows. In such events, there is no evidence of projectile fragments or bullets in the immediate area, yet the window may be riddled with small holes. Instances of this type are not recent nor new phenomena; such events have been noted at least since 1883. A similar type of event involves glass-shattering, where windshields or plate glass suddenly and unexplainably shatter. Like many categories mentioned in this book, the manifestation of these events can take almost epidemic proportions. Alternatively stated, such events can display transient, large magnitude episodes. Fifty-one episodes were placed in the present subcategory. The United States distribution of such cases is shown in Figure 36. Sample cases involved.:

1. _ March, 1883/New Haven, Connecticut/woman ill; many bullet-like holes appear in window glass.
2. 02 February, 1916/Glassboro, New Jersey/phantom bullets episode; glass shatters, or small holes found.
3. _ November, 1927/Camden, New Jersey/phantom sniper again.
4. _ March, 1951/Chobham, England/32 different instances of phantom bullets along two mile stretch of road.
5. _ May, June, 1952/Surrey, England/many reports of window holes, car windshield shattering; flashes of light and explosions heard.
6. _ August, 1953/Denver, Colorado/glass doors turn milky color; then explode.
7. 14 April, 1954/Seattle, Washington/100 cars damaged by mysterious sniper.
8. 05 March, 1961/Springfield, Massachusetts/rash of broken windows (happened again 20 July of that year).

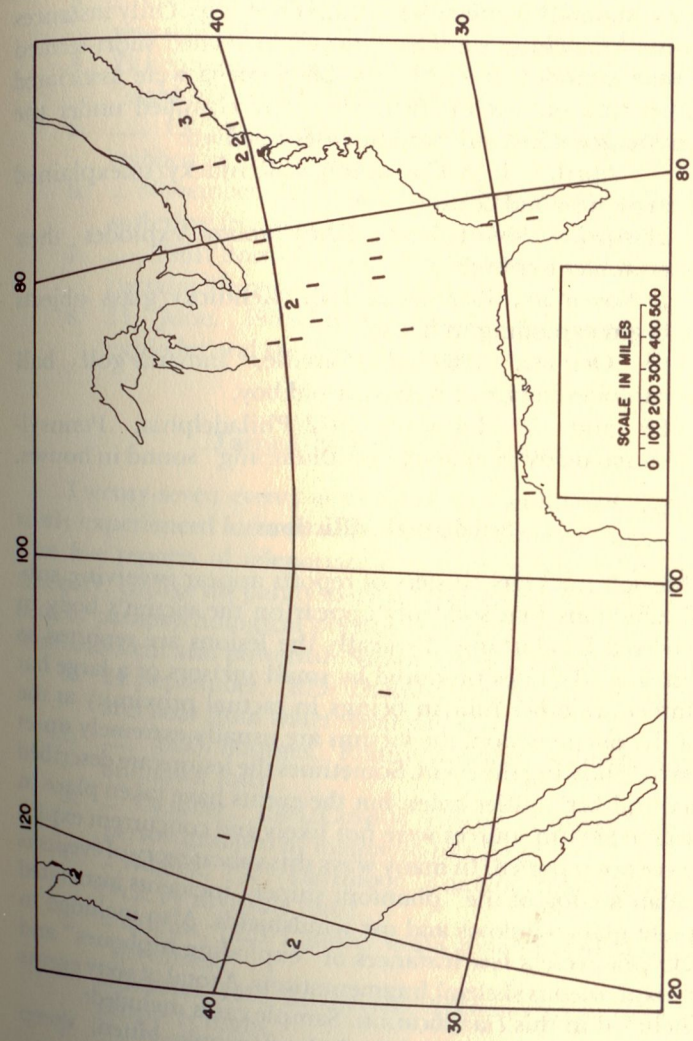

FIGURE 36. Spatial distribution of the "phantom sniper" phenomenon.

Small Explosions Inside Houses

The twenty-three events contained in this division were involved with small "explosions" inside dwellings. Only instances of unusual "knocking sounds," "pops" or related short-termed noises were included. If such sonic phenomena were associated with other unusual events, then they were classified under the classic poltergeist division. Sample cases involved:

1. _ April, 1953/Covington, Kentucky/unexplained explosion and death.
2. _ April, 1954/Toledo, Ohio/broom explodes then crumbles to pieces.
3. _ November, 1968/Olive Hill, Kentucky/glass objects begin exploding in house.
4. 05 October, 1969/Jeffersonville, Indiana/golf ball explodes in face of nine-year-old boy.
5. 28 and 29 January, 1972/Philadelphia, Pennsylvania/many people report "thumping" sound in houses.

Subdermal Afflictions

Through the years clusters of reports appear involving subdermal afflictions that suddenly appear on the victim's body in areas covered by clothing. Typically the lesions are reported as small in size, like bites produced by small incisors or a large hat pin. Rarely are other human beings in tactual proximity at the time of the phenomenon; the victims are usually extremely upset and scared following the event. Sometimes the lesions are described as "small caliber" bullet holes, but the events have taken place in areas where firearm sources were not likely and concurrent explosions were not reported. In many ways this subcategory of events is the human analog of the "phantom sniper" incidents associated with plate glass windows and car windshields. Also included in this data pile were a few instances of "exploding hipbones" and related spontaneous skeletal fragmentations. A total of sixty events were included in this classification. Sample cases included:

1. _ April, 1874/Limerick, Ireland/people bitten; sheep killed.

2. _ June to August, 1899/over United States/bites reported by hundreds.
3. _ November, 1901/Kiel, Germany/thirty men and women wounded by bites while walking along streets.
4. 21 February, 1909/Berlin, Germany/seventy-three women "stabbed" by man who disappears.
5. __, 1925/Bridgeport, Connecticut/twenty-three people stabbed by phantom.
6. _ November, 1931/Bogota, Colombia/forty-five persons suffering from stab wounds; no assailant visible.
7. __, 1961/Port Elizabeth, South Africa/women scratched; curtains ripped.
8. 11 June, 1968/Miami, Florida/hipbone of woman explodes and shatters.

Tactual-Proprioceptive Forces

Twenty-seven events were concerned with reports of subjectively experienced force or with forces that moved human beings. The five reports of teleportation were included under this subcategory. Unlike the paralysis-type experiences that are reported in certain parapsychological phenomena, the forces in this category were transient and powerful. Sample cases included:

1. 24 September, 1875/Thames, England/force pulls men and boat from water; boat sinks.
2. __, 1893/Bourges, France/nineteen soldiers hit with unknown force.
3. _ October, 1904/Corpus Christi College, England/person grabbed by magnetic-like force.
4. _ August, 1921/Dartmoor, England/man thrown from cycle by invisible force.
5. _ August, 1923/Lahore, India/many people grabbed by "invisibles."
6. _ October, 1958/Blytheville, Arkansas/some force attacks people at night.
7. __, 1969/Coos Bay, Oregon/man suddenly becomes weightless (UFO nearby?).

Unusual Mechanical Kinetics

This subcategory of unusual forces involves ostensible cases of runaway cars, suddenly stopped cars, and unusual kinetics displayed by mechanical objects. Twenty cases were classified here; they were not apparently involved with the simultaneous report of UFOs. Such instances were reported elsewhere. Sample cases involved:

1. __, 1923/over Germany/"force" pushes French planes onto ground.
2. 25 October, 1930/Saxony, Germany/forty autos mysteriously stalled at same time.
3. 06 May, 1953/Edmonton, Alberta, Canada/car moves without driver; flames seen, horn makes noise.
4. 06 March, 1954/Madison, Wisconsin/driverless car chased by police.
5. 13 May, 1958/Endicott, New York/runaway car case; car suddenly sped away.
6. _ November, 1959/parts of United States/rash of trains "starting on their own."
7. 26 August, 1964/Chillicothe, Ohio/driverless car episode.
8. __, 1965/Warminster, England/car stalls; driver feels "force" in car; noises.

Human Blackouts

We have presented report data that electrical circuits, automobiles, and other mechanisms involving electromagnetic field patterns can unexplainably fail for a short time. As noted in the chapter concerned with UFO phenomena, not only do automobiles terminate operation in the proximity of UFOs, but human observers may terminate normal functioning as well. During this period, paralysis or unconsciousness is reported.

However there are also other instances where UFO correlates are not apparently involved. These cases would be the human analogies of the last subcategory. In fact, there are a few established reports of people suddenly fainting in large numbers. Such

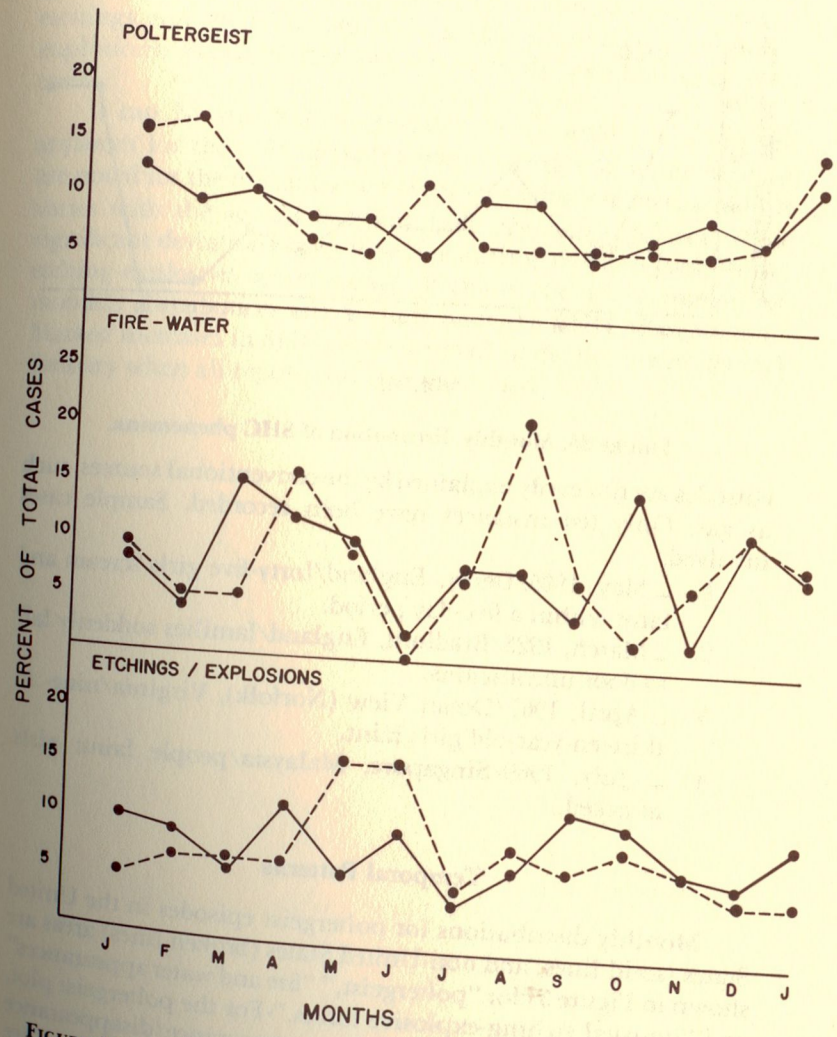

FIGURE 37. Monthly distributions of "poltergeist," "fire and water," and "unusual etching-explosive forces" for the United States (solid line) and non-United States areas (broken line).

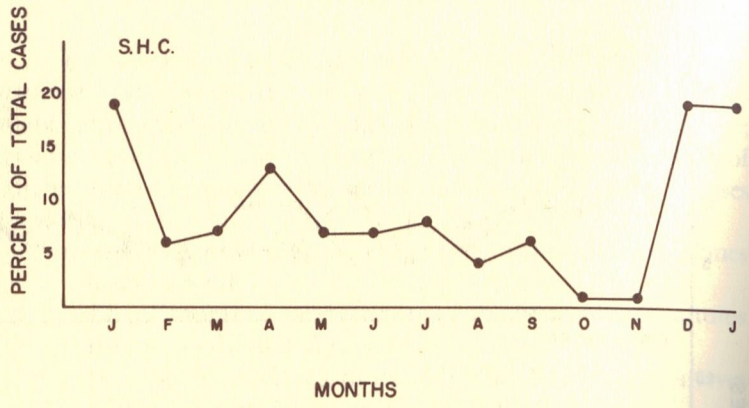

FIGURE 38. Monthly distribution of SHC phenomena.

episodes are not easily explained by the conventional sources, such as gas. Only ten instances have been recorded. Sample cases involved:

1. _ May, 1905/Derby, England/forty-five girls scream and faint within a five-day period.
2. _ March, 1923/Bradford, England/families suddenly fall to floor unconscious.
3. _ April, 1967/Ocean View (Norfolk), Virginia/nine- to thirteen-year-old girls faint.
4. _ July, 1969/Singapore, Malaysia/people faint; girls attacked.

Temporal Patterns

Monthly distributions for poltergeist episodes in the United States (solid lines) and non-United States (broken lines) areas are shown in Figure 37 for "poltergeist," "fire and water appearances" and "unusual etching-explosive forces." For the poltergeist plot, data from: object movements, object appearance/disappearance and doors open/close subcategories, have been pooled. The "fire and water" curve represents the pooled data from "spontaneous fire" and "liquid appearances." The last data pattern represents

the data pool of the subcategories: proprioceptive-tactual forces, etchings and shadows, phantom sniper phenomena and house explosions. Figure 38 displays the monthly distribution of SHC cases.

It can be seen that no spectacular monthly deviations are apparent for the poltergeist episodes. Spring and summer peaks are noted for the fire and water event types, but the precise month varies with the spatial location. Only the non-U.S. areas show significant deviations from base line during May and June for the etching-explosive force events. Perhaps the most interesting monthly distribution can be seen with the SHC phenomenon. Marked increases in SHC events are evident during December and January when all report years are combined.

chapter 10

Unusual or Unexplained Disappearances

In the last chapter, putative displays of unusual forces were discussed and described. By reasons of criterion selection, these objects were small and limited to areas of the household. However, reports of unusual disappearances do not terminate with small objects, but include people, boats, airplanes and other large mechanical objects. This chapter is concerned with three general kinds of appearances/disappearances: 1) unusual or sudden mass appearances/disappearances of human beings, 2) unusual or sudden appearances/disappearances of ships, 3) unusual or sudden appearances/disappearances of airplanes. A total of 172 cases were included in this category.

Unusual Appearances/Disappearances of People

This subcategory contains 120 cases involved with disappearances or appearances of people under circumstances that have been considered unusual. The former type of phenomenon is by far the most frequent; appearances in this division are rare. Most of the cases in this subcategory involve *groups* of people, for example, armies, pubescent children, ships' crews. Their common feature is

the relatively short time period in which the large number of disappearances took place. In some instances involving "disappearing" crews, boarding parties discovered hot food still in the galley or warm coffee still in the cups, suggesting the crew had left quite recently. Sample cases included:

1. __,1850/Easton Beach, Rhode Island/the *Seabird* found; crew missing.
2. __, 1858/Saigon, Vietnam/650 French troops disappear.
3. _ August, 1869/Cork, Ireland/thirteen children about same age disappear.
4. _ January, 1874/Paris, France (area)/repeated disappearances of young men.
5. 23 September, 1880/Gallatin, Tennessee/controversial and possibly fraudulent case of David Lang; walks into field and "disappears" in front of witnesses.
6. _ July, 1883/Montreal, Quebec, Canada/unaccountable disappearances of many men.
7. 23 November, 1886/Edina, Missouri/three boys and father hit by lightning; one of them reportedly "disappears."
8. _ January, 1888/__ area, Connecticut/sudden appearance of several "wild men" in area.
9. 24 December, 1890/South Bend, Indiana/another case of man disappearing into "thin air" in view of witnesses.
10. _ January, 1905/different parts of England/sudden appearance of ten "wild men"; speak gibberish.
11. 28 August, 1915/Constantinople, Turkey/entire regiment seen to disappear into strange clouds that descended to earth.
12. _ October, 1955/Fiji Islands/disappearance of crew from the *Joyita*.
13. 30 July, 1960/Picton, Ontario/thirteen-year-old boy disappears in spot; found in same spot five days later; amnesia of days missing.
14. __/Los Angeles Forest, California/supposed area of increased children disappearances.

Disappearances of Ships

A small man-made vehicle placed in an area that is many orders of magnitude larger in area is subject to the vectorial sum of a myriad variables. Complexing the situation is the human factor that adds its unknowns to the final equation. Consequently, when a ship disappears — per se, the event is not unusual at all. Indeed, the loss is another expression of chance. Throughout the history of sailing, from the times of the first crude rafts to the era of steel liners, there have been ships lost at sea. Some disappear, never to be found again; still others are found years later floating abandoned in some uncharted cove. However even these cases can be unusual. For example, the *Marlborough* mysteriously disappeared in 1890. It was found again in 1913 severely rotted, without crew, but still afloat. In this subdivision only those celebrated or well-known instances of disappearing ships or ships found with dead crews will be considered. A total of thirty-five cases have been classified. Sample events included:

1. _ June, 1872/near Vicksburg, Mississippi River/*Iron Mountain* disappears, no trace of crew or passengers.
2. __, 1880/Bermuda, West Indies/the *Atlanta* with 250 cadets on board disappears, no trace.
3. _ February, 1893/in North Atlantic/the *Naronic* disappears.
4. _ July, 1909/Atlantic/the *Waratah* disappears.
5. _ March, 1918/between Barbados and Virginia/the *Cyclops* disappears in "the Bermuda triangle."
6. 14 December, 1928/Montevideo, Uruguay/*Kobenhaven* vanishes.
7. _ February, 1948/near Sumatra/*S.S. Ourang Medan* crew die suddenly; bizarre circumstances.

In more recent years, following the increased coverage of UFO phenomena, there has been a trend to associate such disappearances with periods of high UFO activity in the area of disappearance. Whether this relationship is spurious and reflects biasing in data retrieval by the authors concerned, or is a replicable correlation, must still be established.

A complicating feature of mysteriously appearing unknown ships is the possibility of haunt phenomena. By haunt phenomena, we are by no means implicitly assuming that haunts exist nor are we referring to an actual event. Haunt phenomena refer to the *reported experiences* of people who supposedly see ships at sea. The ships are usually transient in existence, that is, they appear only to disappear a few seconds later, or they appear for some time but are "transparent," "glowing" and "strange." Such events were classified in another category. Only those instances where men *boarded* the mysteriously appearing ship were included in the previous subcategory.

Disappearances of Airplanes

Seventeen cases of unusual disappearances of airplanes have been placed on file. The cases are proportionally less in light of the short history of air travel. After 1945 and more markedly after 1953, the number of unusual military aircraft disappearances has decreased. Again, whether this change in data pattern reflects less accessibility to relevant cases or actual data characteristics cannot be ascertained presently. Sample cases included:

1. 13 October, 1913/Long Island, New York/airplane vanishes; no trace.
2. 05 December, 1945/off coast of Florida/several airplanes vanish; no oilslicks; no crash evidence; unusual pilot reports before loss of radio contact.
3. 30 January, 1948/near Bermuda/*Star Tiger* airliner disappears.
4. 12 February, 1969/between North Carolina and Georgia /airplane disappears.

Temporal Patterns

The monthly distributions of total human, ship and airplane disappearances in the northern hemisphere are shown in Figure 39.

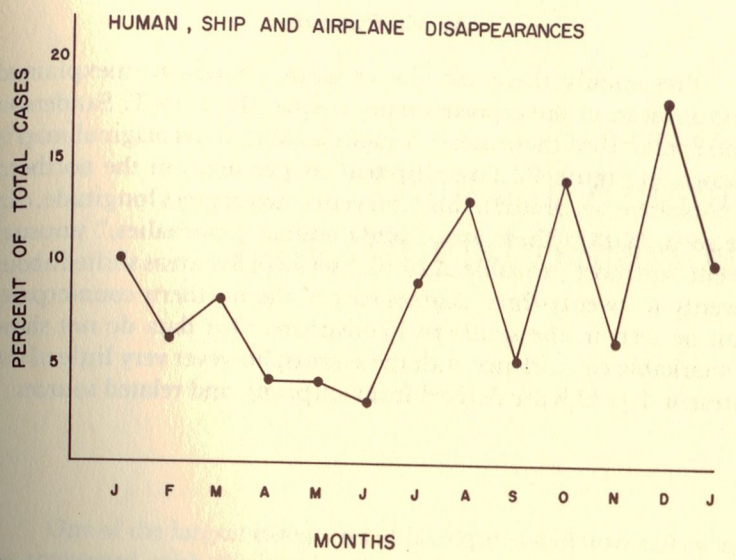

FIGURE 39. Monthly distribution of totaled human, ship, and airplane disappearances over the years in the northern hemisphere only.

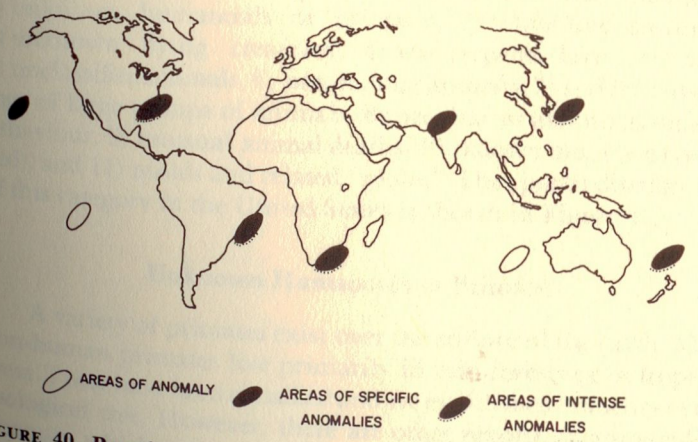

FIGURE 40. Putative positions of unusual event areas over the world according to the data of I. T. Sanderson (1971).