

Some Physical and Psychological Aspects of a Series of Poltergeist Phenomena

W. G. ROLL¹

INTRODUCTION

In popular accounts of psychical occurrences, the terms "poltergeist" and "haunting" are used for repetitive, spontaneous cases of ostensible psi phenomena.

"Poltergeist" is generally used for disturbances characterized by unexplained physical happenings such as the sudden movement and breakage of plates, knickknacks, furniture, and other movable household effects. The phenomena often disrupt the lives of the people involved though they are usually of fairly short duration, rarely lasting more than a couple of months, often less. As a rule, there is some person around whom the phenomena occur and on whose presence they seem to depend. When this individual is absent, the incidents abate. The phrase "recurrent spontaneous psychokinesis" or "RSPK" has been introduced (5) for unexplained physical phenomena of the poltergeist or haunting variety which appear to be due to the agency of some person. The typical poltergeist case has no references to hallucinatory experiences such as seeing "ghosts" and hearing "footsteps." Reports of such experiences, however, are common in accounts of hauntings.

Haunting occurrences also sometimes involve physical disturbances, but these are generally less frequent than in poltergeist cases though tending to last longer. As a rule, there seems to be no (living) person around whom they revolve.²

¹ My thanks to Dr. J. G. Pratt, of the School of Medicine at the University of Virginia, who was co-investigator of the initial study of the case, for his encouragement in presenting this material and for his helpful suggestions. Also thanks to Dr. John L. Artley, of the Department of Electrical Engineering at Duke University, and to Dr. Irving H. Paul and Dr. Gertrude R. Schmeidler, both of the Department of Psychology at the City College of the City University of New York, for their contributions. Most of the statistical guidance and calculations are due to Dr. Donald S. Burdick, of the Department of Mathematics at Duke, whose assistance is gratefully acknowledged. Suggestions by Mr. Robert L. Morris, graduate student in the Department of Psychology at Duke, are also appreciated.

² The popular conceptions of both forms imply survival or incorporeal agency. "Poltergeist" is German for noisy or rattling spirit and "haunting" is derived from the same root as home or -ham (as in Birmingham), the implication being that a spirit has homed to or remained at his earthly habitat. The term RSPK avoids a prior commitment to the survival hypothesis. Hopefully, systematic research will reveal whether or not any of the phenomena are due to the agency of deceased but surviving personalities.

THE CASE

The actual investigation of this case was undertaken some years ago in collaboration with Dr. J. G. Pratt. We have already brought the aspects of the investigation that are concerned with the possibility of fraud and other normal causes to the attention of our colleagues. I shall summarize that part of the study.

The disturbances took place in the suburban home of a family that consisted of two adults, Mr. and Mrs. Lessing, and their two children, Michael, age twelve, and Nancy, age thirteen. (Pseudonyms are used.) We visited the home and stayed for several days, investigating the occurrences that took place while we were there and interviewing the family and other witnesses. It soon became apparent that this was a typical poltergeist case and that the central figure was Michael.

Once it is determined that ostensible RSPK occurrences depend on the presence of a special individual, the range of possible normal explanations is narrowed. The effects could not be attributed to impersonal physical forces such as vibrations due to settling of the house or underground water unless it is supposed that these were timed to Michael's presence in the house. The attempts to discover such causes were unsuccessful. The only serious candidate as a normal explanation for the incidents is the theory that one or both of the children committed them fraudulently, either alone or in collusion with their parents.

Sixteen incidents took place involving the movement of household objects and furniture while the children were under the supervision of one or more grown-ups. As a rule, the adults were Mr. and Mrs. Lessing, but in three instances they included visitors to the house (a relative of the Lessings, a police officer, and Dr. Pratt and myself). In four of the sixteen cases, the adults claimed they actually saw the first stages of movement of the objects while at the same time observing the child or children. In the remaining twelve cases where adults were with the children, the incidents took place in empty rooms elsewhere in the house. It seemed highly unlikely that either child alone or both in collusion could have normally caused these incidents without being detected.

In addition to the instances where it appeared to be impossible on the basis of the statements by adult witnesses that the children perpetrated the events, there were a number of cases where fraud was possible but difficult without detection. Finally, there were several incidents, for instance when Michael was alone in his room, which the children could easily have committed without being discovered.

It is easier to suppose that Michael normally caused some of the

occurrences if his parents were parties to the deception. This theory, however, has its own difficulties. The family had itself called in the police and welcomed other investigators, including Dr. Pratt and me. Several incidents occurred while observers were in the house. On some occasions the visitors asserted that they had the family under observation and that it seemed impossible that any of them could have caused the incidents normally. The parents seemed genuinely upset about the disturbances. Valuable possessions were damaged or destroyed and family life was disrupted. On some occasions the incidents reportedly were so frightening that the family left home to stay with relatives and friends.

It was planned to augment the study by polygraph ("lie detection") interviews with the family, especially with Michael, but the Lessings rejected this proposal. It was hoped that the polygraph interviews would indicate whether any of the phenomena Michael could have caused by trickery in fact were done that way.

The expectation from the lie detection method as a means of establishing paranormality was probably inflated. My reservation about its usefulness is due to an experience with it in another RSPK study (11) where it failed to indicate that the person was lying, though some of the incidents were known to have been caused normally by him. Psychiatric interviews indicated that the agent was unaware of his involvement and since the polygraph is only likely to reveal lying about conscious acts, its failure was anticipated by the psychiatrist. The lesson from this was that the polygraph, by itself, cannot be trusted to separate spurious from genuine RSPK phenomena.

Though I am aware of no reliable way to detect unconscious trickery, some of the psychological tests administered to the children might be expected to reveal conscious deceit. There is no indication from this material that the children were consciously perpetrating the incidents. (See Appendix A for a discussion of this problem.)

Though there is no evidence to suggest that any of the events were caused normally by the children or by anyone else, whether consciously or unawares, it is impossible to discount the possibility that some were. The following analyses are presented with the assumption that if any of the incidents are fraudulent or due to other known causes, they are in the minority and will not seriously affect the overall picture.

ANALYSES FOR AGENCY

In the previous pages I suggested that Michael was the agent of the Lessing disturbances. This conclusion was reached on the basis

of the distribution of the events in time and space in relation to the members of the household.

Temporal Distribution of the Occurrences

The occurrences consisted of unexplained movements and disturbances of objects in the house, and also three incidents which consisted of loud thumping sounds for which no cause could be found. They began on a Monday, and ended on a Monday six weeks and a day later. The number of occurrences for each of the six weeks was twenty, ten, twelve, sixteen, eight, and one. The distribution of the incidents in time is shown in Table 1. It is clear that they did not occur randomly. The groupings of occurrences over the days of the week and the hours of the day are both significant ($P < .00001$ for both days and hours).

Table 1

TEMPORAL DISTRIBUTION OF OCCURRENCES*

Time	Days of the Week							Totals
	Su.	M.	Tu.	W.	Th.	F.	Sa.	
12:00 - 1:59 A.M.			1					1
2:00 - 3:59 A.M.								0
4:00 - 5:59 A.M.								0
6:00 - 7:59 A.M.		1	1		3			5
8:00 - 9:59 A.M.								0
10:00 - 11:59 A.M.	9							9
12:00 - 1:59 P.M.								0
2:00 - 3:59 P.M.	1	6				1		8
4:00 - 5:59 P.M.	2	1			1		1	12
6:00 - 7:59 P.M.	2		2		4			9
8:00 - 9:59 P.M.	8	5		1	3			17
10:00 - 11:59 P.M.	4			1	1			6
Totals:	26	13	11	2	12	1	2	67

Distribution of Occurrences over Days: $\chi^2 = 49.91$ (6 d.f.); $P < .00001$

Distribution of Occurrences over Hours: $\chi^2 = 62.13$ (11 d.f.); $P < .00001$

* The median is entered if the event is stated to have occurred sometime during a two-hour span, for instance, between 3:30 and 5:30 P.M. In this case, it is 4:30 P.M.

If we relate the figures to the activities of the family, we notice that on Sundays, the most active days, the family generally spent more time at home than on weekdays. The same was true as a rule for Saturdays, with the exception of one weekend when the family left home early Friday morning and did not return until Sunday at noon. On another Saturday and extending back to Wednesday of that week, family life was severely upset by reporters and photographers; it is possible that it was because of this

that no incidents took place during these four days. However, these absences and interruptions do not fully account for the infrequent occurrences on Wednesdays, Fridays, and Saturdays. For some unknown reason the effects died down at these times.

The hourly distribution of the events was recorded for two-hour periods. If we consider the activities of the members of the family in relation to these, the phenomena were most numerous when the children were at home and awake, usually commencing when they returned from school and continuing until they were asleep. Once they had been in bed long enough to suggest they were deep asleep, the disturbances ceased until the following morning when the family awoke. On the days when disturbances took place later than 10:00 P.M., the children had been kept awake by preceding events. On school days, they awoke about 7:00 A.M. and left for school about 7:45, several disturbances occurring during this interval. Nothing happened while they were at school. A later schedule was followed on Saturdays and Sundays. There were no incidents Saturday mornings. On Sundays there was a noticeable shift in the hourly distribution of the morning occurrences which may reflect the fact that on Sundays the children awoke later than on the other days.

Mr. Lessing returned from work in the late afternoon when the children were already at home and usually after the disturbances had begun. Mrs. Lessing spent most of the day at home, but nothing happened unless the children were also there.

The fact that the times of the disturbances appeared to be correlated with the times the children were at home and awake suggests that one or perhaps both might have been the agents.

Spatial Distribution of Occurrences

As a further aid in determining agency, the proximity of the members of the family to the incidents was studied.

First, the number was added of the cases when the various members of the family were in the house, though their exact distances from the origins of the disturbances were not necessarily known. In sixty-four instances, Michael was known to be at home. Nancy and Mrs. Lessing were in the house during sixty events while Mr. Lessing was home during thirty-two. Secondly, the instances were counted when it was reported or could be inferred that persons were absent. There were no occurrences when it was certain that Michael was away. In only three cases is it possible that he might not have been home. Nancy and Mrs. Lessing were away during five occurrences each and Mr. Lessing during thirty-one.

Next, the average distance was determined between the place

in the house where an unexplained movement originated and the location at that time of the members of the household. The averages were obtained by dividing the total number of occurrences whose distances from the person in question was known into the sum of the distances for these incidents. In the case of Michael there were forty-eight happenings and the sum of their distances from him was 434 feet. The average distance per event consequently is $(434/48 =) 9.0$ feet. In the cases of Nancy, Mrs. Lessing, and Mr. Lessing, their average distances from the events were $(547/40 =) 13.7$ feet, $(584/37 =) 15.8$ feet, and $(320/25 =) 12.8$ feet, respectively.

Finally, the proximity factor was studied for the twenty-eight incidents when all members of the family were at home. In some cases two or more persons were reported to have been equally close to an occurrence. Michael was closest to the disturbance in nineteen cases, or was among the persons closest to it. For Nancy and Mr. and Mrs. Lessing, the figures were six, three, and eleven. This distribution is significant ($P < .002$).

In all cases, the spatial distribution of the events in relation to the members of the family points to Michael as the center of the disturbances.

In the following pages a search will be made for clues regarding the nature of the incidents on the basis of the hypothesis that Michael was the source of the energy.

PHYSICAL ASPECTS

Attenuation Effect

The analyses in the previous section suggested that Michael was the source of the disturbances because they tended to happen when he was at home and awake and because they occurred in closer proximity to him than to anyone else. The assumption underlying these analyses is basically a physical one. It is assumed that RSPK agency will be revealed by spatio-temporal correlations between a person and the disturbances. If the phenomena do in fact follow physical rules, then these might be expressed in other ways as well. One of the main characteristics of known forms of energy is that there is a gradual attenuation with distance in space.

The distances from Michael at which the phenomena in the Lessing home could occur were limited by the size of the house. No events could occur inside the house at greater distances from Michael than approximately forty-two feet, the diagonal from one corner of the house to another. Since Michael did not generally occupy one of the corners of the house, the possible distances at

most times were shorter. For instance, if he was in bed in his room, the greatest lengths were to the corners of the living room and recreation room, distances of about twenty-seven feet. The greatest distance at which a disturbance was recorded was twenty-six feet from Michael.

There were forty-eight occurrences where Michael's distance was known. These have been reduced to six groups representing occurrences at 1-5, 6-10, 11-15, 16-20, 21-25, and 26-30 feet. The number of occurrences for the six groupings was nineteen, nine, twelve, five, two, and one. A linear regression analysis shows the decrease to be statistically significant ($t = -6.58$; $r = .96$ (5 d.f.); $P = .001$). This suggests that the energy responsible for the occurrences was attenuated with distance.

Since evidence for attenuation with distance could have important implications for the understanding of RSPK, and perhaps of other psi phenomena, we should examine any reasonable counter-hypothesis before accepting it. There are several ways in which the attenuation effect could arise as an artifact from factors extraneous to the energetic process itself. We may refer to these as "motivational artifacts," "observation and target-grouping artifacts," and "fraud artifacts."

Motivational Artifacts: Objects in the visual field of a person are more likely to be a focus of attention than concealed objects. If a person has feelings of aggression (which, as I shall later show, Michael seemed to have) against persons or things in his environment, he may be more likely to vent his anger on those near at hand than on more distant ones, whereas "out of sight is out of mind." There were three disturbances which originated a few feet in front of Michael as he was seated at the dining room table which might have been at least within his peripheral vision. It is not recorded whether he actually was looking at these objects, except for one which he said he did not see because he was looking at his dinner plate. There were two movements of bottles on a bathroom table next to the sink where Michael was standing brushing his teeth. He was watched by his father, who saw the bottles start to slide across the table. However, Michael said he only noticed the bottles when they fell (to the floor and into the sink). On another occasion a figurine flew off a table next to him while he was facing away, talking to his sister and a visiting relative, and in another an ink bottle moved while his back was turned. The remaining incidents in the 1-5 feet category took place when Michael was in bed and consisted in disturbances on or of his bedside table, of wall pictures, and of objects at the foot of his bed. At these times the lights in the room were out and Michael either was reported to have fallen asleep or was presumably trying

to do so. It seems unlikely that he was consciously paying attention to the objects that were disturbed.

It does not seem that there was any tendency for objects to be disturbed which Michael was looking at or which he was otherwise concerned about. He seemed to be as little involved with objects close in space as with the more distant ones, at least on a conscious level.

Observation and Target-Grouping Artifacts: It is possible that the attenuation effect is due, not to the energetic process itself, but to a lack of suitable RSPK targets or to less efficient observation of disturbed objects at increased distances from Michael. It may be that Michael's habitual paths in the house brought him close to sensitive objects or that his parents and the other observers were especially attentive to occurrences in his immediate vicinity, overlooking those further afield. In either case, there would be attenuation with increased distance from Michael. These possibilities are especially likely to be realized for the longer distance categories since these could be expected to extend beyond the house when Michael's movements brought him close to its outer walls more often than the shorter ones inside the house. The internal walls as well as the floor and ceiling between the upstairs and the basement were permeable to the energy and it would be surprising if the outer walls were not. However, no phenomena were observed outside and it is possible this was due to a deficiency of suitable RSPK targets there or to poor conditions of observation.

With regard to the situation inside the house, Michael was undoubtedly under closer watch than anyone else by his parents and the various investigators. However, this did not mean that they became less attentive to disturbances at a distance from him. On the contrary, there was a special concern about the distant incidents because they were often more difficult to explain normally than many of those that happened right next to Michael, say when he was alone in his room. But it is possible that the further removed the members of the family and others were from an incident, the more likely they were to fail to notice it. In that case, we should expect an attenuation effect in relation not only to Michael's position but also in relation to the proximity to the events of the other persons present.

The forty cases where Nancy's distance from the occurrences was known were distributed as follows: one, seventeen, eight, four, nine, and one. Thirty-seven incidents took place when Mrs. Lessing's distance was known; they fall into groups of three, eight, six, seven, eleven, and two (one incident which occurred thirty-two feet from Mrs. Lessing was included in the 26-30 feet category). In the case of Mr. Lessing there were twenty-five occurrences of

this kind divided into groups of five, four, seven, six, three, and zero. With regard to the twenty-one cases where visitors were present and their distances known, the figures are zero, five, six, four, five, and one (the visitors consisted of relatives, friends, neighbors, police officers, a physicist, Dr. Pratt, and myself). For purposes of comparison, these figures and those representing the occurrences in relation to Michael's distances have been converted to percentages of the totals for each person and entered in Figure 1. For instance, the nineteen incidents in Michael's 1-5 feet group become nearly forty per cent of the forty-eight events where his distances were known. Figure 1 shows at a glance that only in the case of Michael did the number of incidents decrease gradually with distance.

In all cases there was a conspicuous lack of events in the 26-30 feet category and beyond. This is undoubtedly an observational artifact caused by the limited size of the house since, at these distances from the events, it was unlikely or impossible for the persons to be within the walls of the house. This general decrease throws doubt on Michael's 26-30 feet category and the more distant ones. It is possible that the lack of incidents is at least partially due to observational factors and that more phenomena would have been observed at greater distance if the area of effective observation had been larger. Since there is no attenuation for the other persons in the 1-25 feet groupings, the attenuation observed in the case of Michael in this range probably is not due to observational artifacts.

One other aspect of the distributions calls for comment, namely, the high proportion of disturbances when Nancy was 6-10 feet away. This concentration, representing more than forty per cent of her total, is due to the fact that for many of the incidents that happened in Michael's room when he was in bed, Nancy was also in bed about eight feet away in the adjacent room.

As far as can be determined, Michael was not in closer proximity to the objects or kinds of objects that became RSPK missiles than the other members of his family, except for those in his own room. He was probably less often close to the things in his parents' room that were disturbed (see Table 7) than Mr. and Mrs. Lessing were, and Mrs. Lessing was undoubtedly more involved with the bottles of laundry liquids (see Table 6) that were so often targets for the disturbances than was Michael or anyone else in the family. Consequently, it is to be expected that if the attenuation effect is an artifact resulting from the location in the house of RSPK targets in certain limited areas, the gradual decrease of incidents with increased distance from Michael should be observed also in relation to the other members of his family. As we have already seen, this was not the case.

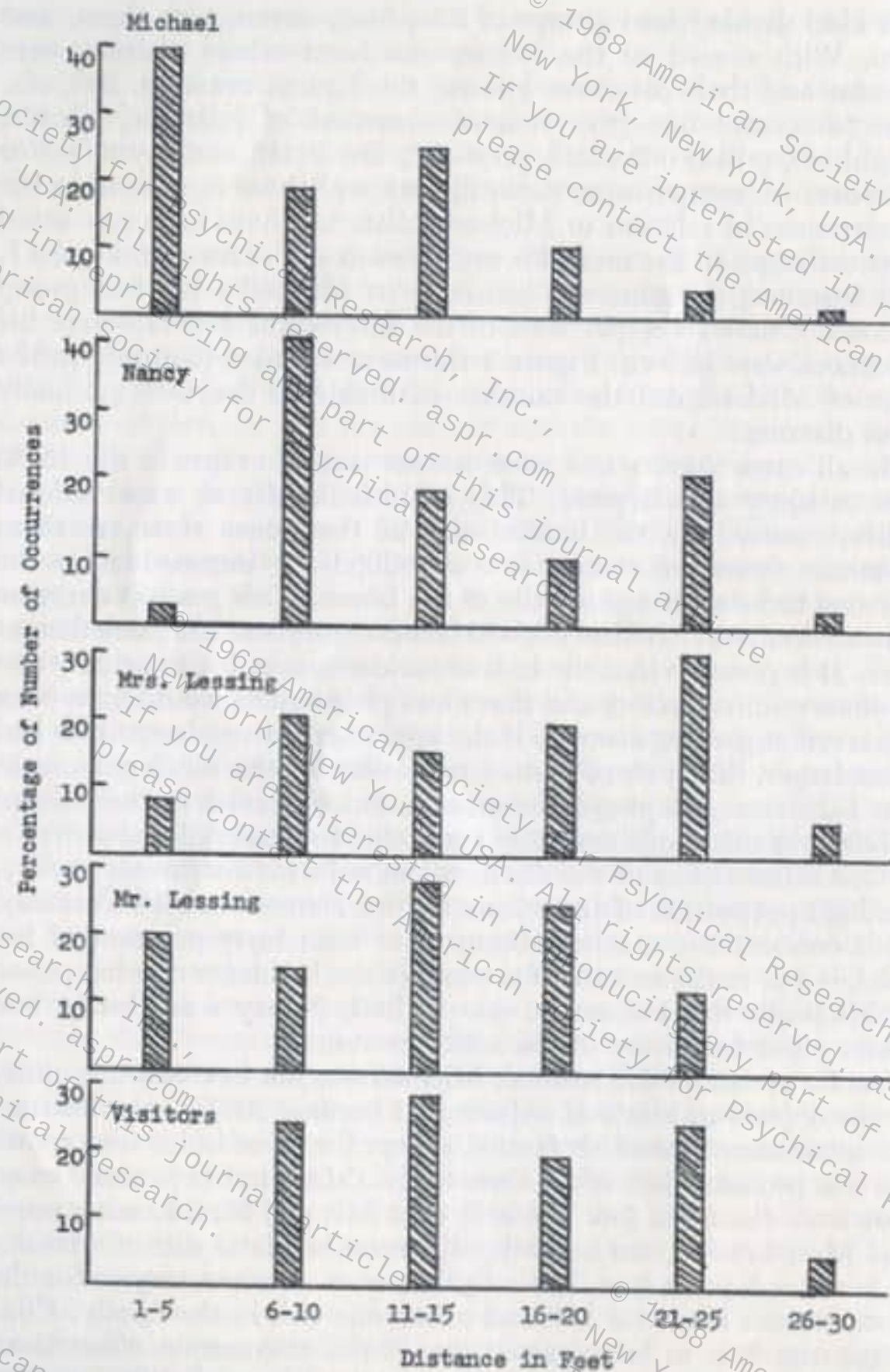


Fig. 1. Percentage of number of occurrences in relation to the distance from occurrences of persons in the house. When several visitors were at the same distance from an occurrence, one entry was made in that distance category. When several visitors were at different distances, the average distance was used. One of the two occurrences placed in Mrs. Lessing's 26-30 feet category actually took place 32 feet from her.

Fraud Artifacts: If Michael caused some of the incidents normally, whether or not he was aware of this, we might expect the largest number of incidents to occur in his close proximity. As a rule the conditions of observation were poorest for the incidents that happened closest to Michael. It was usually easier to determine that Michael did not surreptitiously throw an object or use some other kind of trick in a distant room than in the one he occupied at the time. The sixteen occurrences where Michael was under observation by adults are much more evenly distributed in the six distance groupings than the total of forty-eight: four, four, four, three, one, and zero. The distribution is not entirely flat, the linear regression analysis giving $t = -2.35$ with a correlation coefficient of $r = .80$. This is comparable to the figure representing the forty-eight disturbances ($r = .96$), but the probability here is only $P = .10$. Most of the incidents in the 1-5 group took place when Michael was in bed at night and not under observation by adults, and several of these he could easily have perpetrated normally. There is one exception: Mr. Lessing, having been alerted by a previous occurrence in Michael's room, saw a night table turn ninety degrees and then fall while Michael was lying quietly in bed. Though this event does not allow us to conclude anything about those that took place when Michael was alone and not observed, at least it shows that not all incidents that occurred when he was in bed at night were done by him normally either consciously or unconsciously.

In summary, the attenuation effect cannot be easily explained away either in terms of motivational preferences or other extraneous conditions. Even the selected sixteen cases show an attenuation tendency though they present a sample biased in favor of the greater distance categories.

Psi Field and Exponential Decay

I have suggested that psi phenomena can be understood in terms of "psi fields," interactions between psi fields, and interactions between these and known physical fields (8).³ Psi fields are similar to known fields insofar as they often exist in regions surrounding physical objects. A PK occurrence can be understood in terms of an event in the agent's organism influencing his psi field, which in turn influences the psi fields of objects in his environment and thereby the objects themselves. As with other fields, "The shorter

³ At the time this investigation was conducted and the data pertaining to distance, etc., were collected, this theory had not been formulated. An earlier version was primarily concerned with ESP and "psychometry." In the course of writing the present paper I discovered that some of the observations were consistent with the psi field theory.

the distance between two psi fields, the greater the probability of interaction between them" (8, p. 51). The present observations appear to support this hypothesis.

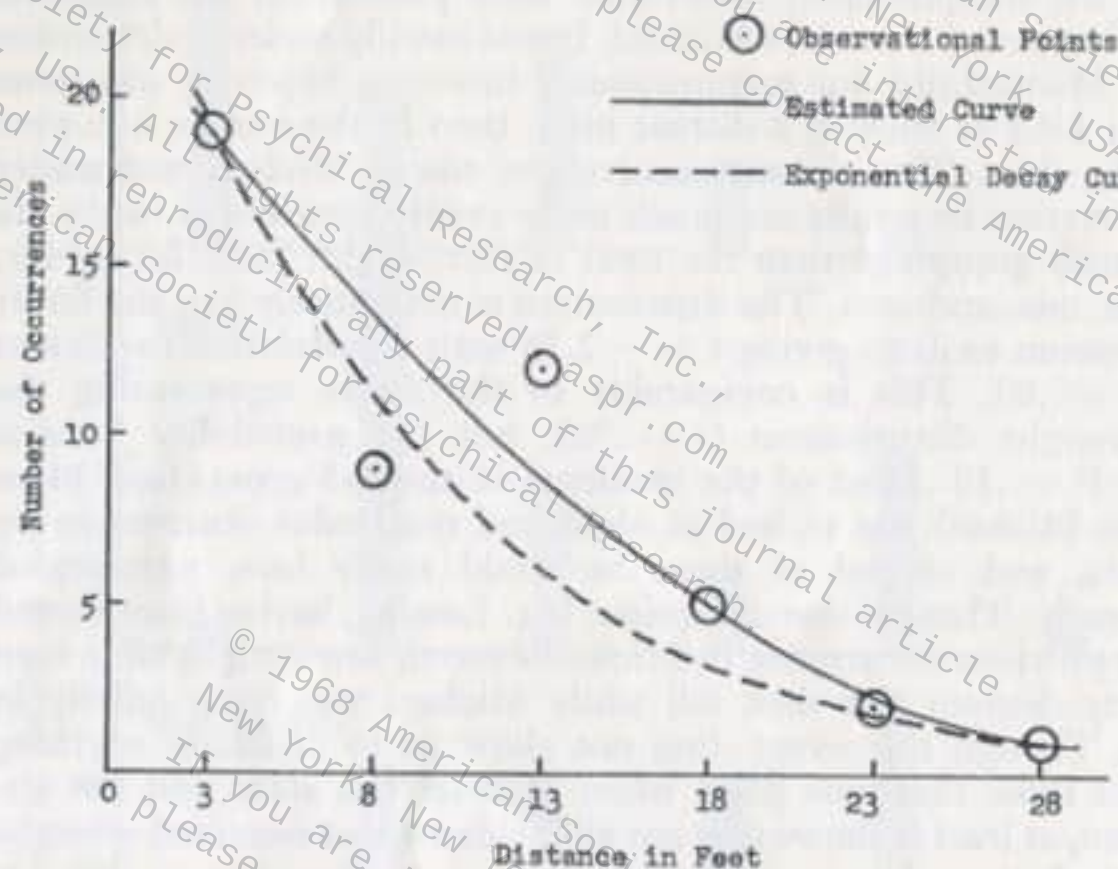


Fig. 2. Number of occurrences in relation to Michael's distance from the occurrences.

In studies of ordinary physical occurrences, the rate of attenuation may tell us something about the nature of the physical field. In the hope that the present data might yield new information about the RSPK process, an analysis of the attenuation was made by Dr. John L. Artley. Figure 2 shows the six groupings of occurrences entered at the midpoints (that is, the incidents 1-5 feet from Michael are shown as if they were observed at three feet, the others at eight, thirteen, eighteen, twenty-three, and twenty-eight feet). The curve drawn with a solid line is Dr. Artley's estimate of the monotonically, or smoothly, decreasing curve which best fits the six observational points. If it were drawn to fit all, it would have a hump at the third representing the increase of phenomena in the 11-15 feet category. It is assumed that this increase is produced by some extraneous condition and is not a function of the process itself. As I shall later show, this extraneous condition appears to be a "focusing effect" consisting of repeated incidents with certain objects. When these repetitions are not counted, the hump disappears.

In order to determine whether the data fit curves representing familiar functional forms, for instance, as expressed in the inverse square law (which applies to the field intensity surrounding a point source) or the inverse law (which concerns line sources), several such curves were studied. The exponential decay curve was found to fit the data best (see Appendix B for Dr. Artley's full analysis). This is drawn with a broken line in Figure 2. A familiar application of this curve is the measurement of attenuation of sunlight as it penetrates a "lossy" medium, such as the ocean, where the decay is exponential with the depth of water. Actually energy is not lost; it is converted to another form. In the case of sunlight hitting water, light energy is converted to heat energy. Since RSPK phenomena generally involved the movement of objects, in the present case there appears to have been a conversion of psi energy to kinetic energy and, in some instances, to sound energy (or "phonons"). It makes good sense that it is the exponential decay curve that best fits the data rather than, say, the inverse square curve, since the exponential decay curve entails conversion of one form of energy into another, which the other curve does not. The finding is consistent with the principle of conservation of energy which is incorporated in the psi field theory in the form of the hypothesis that "When psi fields interact with each other and with physical fields, energy is exchanged in such a manner that the total energy is conserved" (8, p. 50).

Other Attenuation Effects

If psi energy is analogous to known energy forms, the loss of energy with increased distance from the source may be revealed not only in the reduction of incidents with distance, but also in the reduction of energy the farther removed from the source the incidents are. One way in which the strength of energy might be expressed is in terms of the length of movement of the objects. The energy required to propel a given object depends on its weight. A distinction should therefore be made between pieces of furniture and lighter household items. However, none of the seven pieces of furniture that were involved moved any measurable distances, but merely turned over (or, in one case, upside down). A number of incidents consisted in the unexplained opening of screw-cap bottles and the spilling of their contents. With the exception of one, they did not move. Since there is no way of determining how much energy was used for the removal of the caps, this case has not been included. Twenty-four cases remain where household items moved various distances. In eleven where the movement originated between 1-5 feet from Michael, the average length of movement was 5.8 feet, for three that originated 6-10 feet from him, the length

was 7.6 feet, for the eight incidents in the 11-15 feet category, it was 8.75 feet, while the single disturbances in the 16-20 and 20-25 groups were four and two feet, respectively. The number of entries, particularly in the 6-10, 16-20, and 21-25 groupings, are too few to rely on; however, there is no trend for a reduction of length of movement with distance from Michael. In this respect the occurrences do not seem to follow familiar energetic processes. On the other hand, the fact that the furniture generally only fell over and did not otherwise move while many of the lighter objects did, seems consistent with such processes and the psi field theory: "The more a physical object or event is determined by other physical causes, the greater the psi energy needed to affect it" (8, p. 51).

Psi Field Vectors

In Figure 3, the origins, directions, and lengths of movements are shown when these were known and when Michael's position in relation to them was reported or could be inferred. We can regard these as vectors in his psi field; that is, as forces with direction where the distance an object travels indicates the strength of the force. Michael's location and the way he faced are indicated by the circle and enclosed arrow at the center. The heavy curved line at the left demarcates movements when it was not known which way Michael faced. Three objects which are not represented, since only one aspect of their motion was known, consist of an object that moved toward Michael and two that moved clockwise in relation to him. These aspects of their movement are incorporated in the following discussion.

As a rule the movements originated in front of Michael. There were fourteen instances of this type and only three where the occurrences were initiated at his back.⁴ This difference is significant ($4P < .05$). There was no significant favoring of sides, nine incidents originating at his right and seven at his left.

When we look at the directions of movements, there was an insignificant tendency for the objects to move away from Michael, nineteen of them following that trend with thirteen moving toward him (two objects that started off toward Michael and then passed him were counted with the objects moving toward him). If a distinction is made between objects made in whole or part of metal, which are probably electrical conductors, and those made of glass, porcelain, wood, and plastic, which are probably dielectrics, there

⁴ In those cases where Michael was lying down, it was assumed he was facing the foot of the bed. Incidents which happened next to the bed, toward the foot, and those which happened beyond the foot of the bed were grouped with the occurrences in front of Michael.

is an insignificant tendency for the dielectrics to move away from Michael, sixteen following this trend while eight moved toward him. On the other hand, five conductors moved toward Michael and three away.

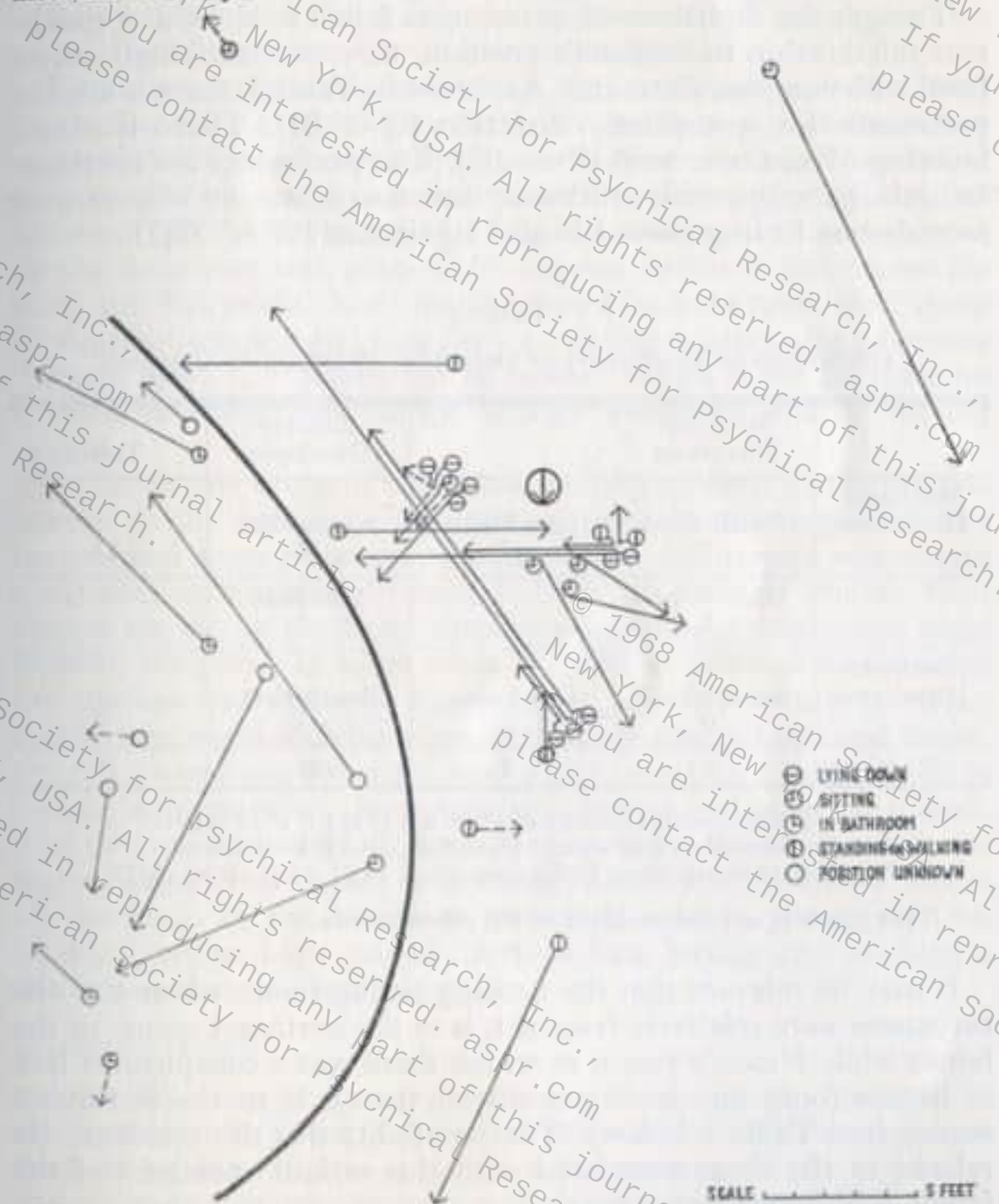


Fig. 3. Origin, length, and direction of movement of objects in relation to Michael's position. The position and the way he faced is indicated by the large circle and arrow at the center. The small circles indicate whether he was lying down, sitting, etc., at the time of the disturbance. (Since the large circle indicates the position of his head, about four feet should be added to obtain an estimate of the position of his body when he was lying down.) For the movements shown within the curved line at the left, it is not known which way Michael faced. One object that moved toward him and two that moved clockwise in relation to him are not shown since their distances from him were not known. The broken arrows show objects which only turned over.

Eighteen of the objects moved clockwise and fourteen counterclockwise, also an insignificant difference. The tendency for movement to be initiated in front of Michael suggests that there was a concentration of energy in that part of the field.

Though the directions of movements failed to show any consistent relationship to Michael's position, they were strikingly correlated with compass directions. As shown in Table 2, there is marked preference for a northerly direction ($P < .01$). There is also a favoring of east over west ($P = .02$). The preference for northeast as against the opposite southwest direction where no objects were recorded as having moved is also significant ($6P < .002$).

Table 2
DIRECTIONS OF MOVEMENTS OF OBJECTS IN RELATION TO COMPASS

	Westerly Directions	Easterly Directions	Totals
Northerly Directions	North-West 7	Due North 3	North-East 14
	Due West 2		Due East 4
Southerly Directions	South-West 0	Due South 5	South-East 4
Totals:	9	8	22

North-South Difference: $\chi^2 = 6.8$ (1 d.f.); $P < .01$

East-West Difference: $\chi^2 = 5.4$ (1 d.f.); $P = .02$

North-East South-West Difference: $\chi^2 = 14$ (1 d.f.); $6P < .002^*$

* This figure is not independent of the previous two.

It may be relevant that the Lessing sitting room, where the disturbances were relatively frequent, is in the northeast corner of the house while Nancy's room, in which there was a conspicuous lack of events (only one having occurred there), is in the southwest corner (see Table 7 below). The possibility that the incidents are related to the areas associated with the various members of the family will be discussed later.

Other Aspects of Movement

One of the most curious aspects of this case was the removal of screw caps from bottles. There were twenty-one instances in which glass bottles and two in which metal containers lost their screw caps, accompanied usually by explosive sounds, and fell over spilling their contents (in one case also moving nine feet).

Dr. Pratt and I experimented with bottles, trying to cause the caps to come off by creating a pressure inside. The only way the caps could be made to come off without breaking them or the containers was by unscrewing them. Since screw caps are removed with a counterclockwise motion, it appears that the energy which caused these incidents moved counterclockwise.

There is a suggestion from some of the other objects that they were affected by a rotating force. As a rule the nature of the movement of the objects is not known since they were rarely observed in motion. Only four objects were actually viewed during the full course of their movements. Mr. Lessing saw one of the two bottles on the bathroom sink turn 45-90 degrees before it slid across the table and fell to the floor; he also saw a bedside table turn about 90 degrees before it fell over; and a visiting relative saw a figurine "wiggle like . . . a worm cut in pieces" before it left its place on a table, a description which is also consistent with a circular motion.

As far as one can tell, there was nothing unusual about the trajectory of the objects. For instance, there is no suggestion that they turned around corners; the place an object landed was always consistent with a straight motion from its place of origin. Most objects landed on the floor, thereby suggesting a downward flight pattern. However, in some cases it could be inferred that part of the motion was upward. For instance, on two occasions clorox bottles in an eight-inch high box on the floor jumped out and broke. On three occasions two figurines, which stood on a table nineteen inches high, traveled about ten feet, hitting and scarring a desk. The two main clusters of marks, representing the times when the figures completely broke, were twenty-seven and thirty-one inches off the floor. In the basement recreation room a phonograph on a table two feet high moved fourteen feet, hitting and marking a shelf on a staircase five feet up.

Nature of Objects

If RSPK energy is comparable to known energy forms, it is also to be expected that the physical properties of objects may cause them to be more or less sensitive to this energy. In the hope that any patterns that emerge here will also be found in other RSPK studies, I shall describe the electrical and chemical properties of the disturbed objects, insofar as these can be determined.

Electrical Properties: Table 3 gives a list of all the objects and their electrical properties as far as they are known. There were seven incidents involving metal objects which were probably all good conductors. Eight disturbances affected objects which were partially made of metal and therefore classed as probable con-

ductors. On twenty-three occasions objects made of china, glass, and other poor conductors or dielectrics were affected. The twenty-six glass bottles were counted as probable dielectrics even though in some instances their contents might be conductors.

Table 3

ELECTRICAL PROPERTIES OF OBJECTS

Object Disturbed	Number of Occurrences	Probable Conductors	Probable Dielectrics
Bleach Bottles	5		✓
Holy Water Bottles	4		✓
Toilet Water & Perfume Bottles	3		✓
Shampoo Bottle	2		✓
Starch Bottle	2		✓
Kaopectate Bottle	2		✓
Ink Bottle	1		✓
Wine Bottle	1		✓
Ammonia Bottle	1		✓
Bottles with Unknown Contents	5		✓
Can with Paint Thinner	2	✓	
China Figurines	8		✓
Plastic Figurine	1		✓
Metal Figurine	1		✓
Wood Furniture	6		✓
Metal Furniture	1		✓
Phonograph	1		✓
Brass Lamp	2		✓
Table Lamp	3		✓
Globe of World	4		✓
Glass Bowl	3		✓
Wall Pictures	2		✓
Ashtray	1		✓
Plate	1		✓
Sugar Bowl	1		✓
Flashbulb	1	✓	
Totals:	64	7	23

There were more than three times as many incidents with dielectric objects than with conductors and also more than three times as many probable dielectrics than probable conductors. Since we do not know the distribution in the house of the two kinds of objects, it is not possible to say whether there was a preference for dielectric objects. All we can say is that they were not avoided.

Chemical Elements: The principal materials of which the sixty-four objects were made and their chemical elements are shown in

Table 4. There were thirty-seven bottles or other objects made of glass. Seventeen of the bottles contained water, usually in combination with other substances, namely hydrocarbons (perfume, wine, and paint thinner), chlorine, soap, and ammonia, which accounted for six, five, two, and one of the incidents, in that order.

Table 4

CHEMICAL COMPOSITION OF OBJECTS

Principal Materials	Glass	Water	Carbohydrate	Clay	Iron	Brass	Unknown Metal	Hydrocarbon	Chlorine	Soap	Polymer	Ammonia	Abundant in Organisms	Not Found in Organisms	Number Occurrences with Each Element
Number Occurrences with Each Material	37	17	14	13	5	2	8	6	5	2	1	1			
Main Elements															
Hydrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	91
Oxygen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	85
Carbon	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	60
Silicon	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	50
Calcium	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	37
Sodium	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	37
Aluminum	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	13
Iron	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	5
Copper	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2
Zinc	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2
Unknown Metals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	8
Chlorine	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	5
Nitrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1

The fourteen objects consisting in part or wholly of starches and cellulose, such as the wooden furniture, gave that figure for carbohydrates; and objects of porcelain or china, thirteen for clay. There were fifteen objects with metals of which five could be identified as iron and two as brass. Finally, a plastic figurine provided the single entry under the polymer heading.

The main chemical elements of these materials are indicated by checkmarks in the column for each material at the names of its elements. For instance, glass, assuming it to be ordinary soda glass, is made of silica (silicon oxide, SiO_2), sodium carbonate

($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$), and lime (calcium oxide, CaO). Consequently, it consists of hydrogen, oxygen, carbon, silicon, calcium, and sodium.

A study of Table 4 shows that many of the elements are common to the human organism. This is relevant to the theory by W. P. Bentley (1) that ESP targets made of materials indigenous to the organism work better than nonorganic substances. Similarly, according to one of the psi field hypotheses, "The greater the isomorphism between two psi fields, the greater the probability of interaction between them" (8, p. 51). Since "Physical and mental events produce isomorphic representations of themselves in the psi fields of the animate or inanimate objects in which the events occur" (8, p. 50), two objects that are physically alike should work better as source and receiver than others. Experiments with Pavel Stepanek (10), in which he failed to show evidence of ESP using aluminum cards while scoring significantly with cardboard cards, lend some support to these speculations.

The checkmarks in the two columns at the right of Table 4 indicate whether or not the chemical substances composing the disturbed objects are abundant in living organisms. Substances that are found in organisms but not in great quantities are indicated by checkmarks in parentheses. The entries in the adjacent column refer to elements that are foreign to living systems. In order to obtain an indication of the relative distribution of the chemicals among the objects, the number of times an object contained the chemical in question is added up at the right of the table. For instance, since glass and clay usually contain silicon, it is assumed that this chemical was involved in the thirty-seven incidents with glass objects and in the thirteen cases where china or porcelain objects were disturbed, making a total of fifty incidents where silicon was one of the main materials. Figures were obtained for the other chemicals in a similar manner. These values must be taken with reservation since they disregard the total amount of the element in question in any one object. The figures suggest that hydrogen, oxygen, carbon, and silicon were abundant, that calcium, sodium, and metals (iron, copper, zinc, aluminum, and unknown) were less abundant, with chlorine and nitrogen at the bottom of the list.

The two most abundant elements in protein are carbon and hydrogen, followed by nitrogen and oxygen. Hydrogen, oxygen, and carbon are at the top of the list of elements involved in the disturbances while nitrogen is at the bottom. Calcium, which was also high on the list, is common in bones and teeth. Sodium, chlorine, iron, copper, and zinc are also found in the human organism, though they are not as abundant as the other elements. The only element that is foreign to organisms and is high on the list

in Table 4 is silicon, which is found in both the glass and clay objects. However, this, as well as aluminum, which is also not part of the organism, were always combined with elements which are. There appears to have been no disturbance of an object which did not contain, as one or more of its main components, one or several elements common to the human organism. However, the absence among the disturbed objects of any wholly made of non-organic elements, for instance, of aluminum, might be because there were few such in the house.

Though the predominance of elements abundant in organisms is in line with Bentley's thinking and the psi field theory, we must await further research to determine whether this was a chance effect. Even if there were a favoring of such materials, it could have resulted from other factors. For instance, if dielectric objects are more sensitive than conductors, there would be a deficiency of the latter and consequently a deficiency of organic substances since metals are absent from or scarce in living systems. Conversely, any predominance of dielectrics might be due, not to their electrical properties, but to the presence in organisms of the materials composing these objects.

FOCUSING EFFECTS

In ESP experiments, the tendency for a subject repeatedly to respond in the same way to a target whether or not any "hits" are achieved has been called the "focusing effect" (6). At various times in the course of the Lessing disturbances, certain types of objects, certain individual objects, and certain areas in the house repeatedly became the target for the unknown energy.

I do not suggest that all focusing phenomena are necessarily due to similar causes. The term is only used descriptively for the tendency of certain objects to be selected as targets.

Before we speak of RSPK focusing, we need to consider whether this effect may be an artifact. It has been observed that there was an increase of disturbances with proximity to Michael. If objects close to him were more likely to be disturbed than those at greater distances, it is possible that the "focusing" on certain objects and places was due only to Michael's proximity to them. To take a hypothetical example, if throughout the thirty-six days, Michael had been locked up in a room where all objects except one were nailed down and if this object moved sixty-four times, this would obviously not be evidence of focusing. A distinction can be made between focusing on special objects and on special areas in the house. "Object focusing" may consist in a preference for individual objects or for types of objects.

Object Focusing

Individual Objects: In Table 5 I have shown repetitions of disturbances of single objects in relation to their distances from Michael. For each object, the first checkmark represents the first occurrence with that object, the second checkmark, the second occurrence, and so on. The largest number of occurrences with any object was four; of these, two involved a female figurine and one a globe of the world. There were four objects which were each disturbed three times: a holy water bottle, a bottle of bleach, a glass bowl, and a table lamp. Eight objects were involved in two disturbances: four of these were bottle incidents with loss of screw caps and spilling, and three were disturbances of other objects, namely a brass lamp, a dresser, and a wall picture.

In all, sixteen objects were involved, accounting for forty incidents, of which twenty-four were repetitions. This is three-eighths of the total of sixty-four disturbances of objects. If the repetitions are examined in relation to distance from Michael, we find that three of the globe incidents and both occurrences with the brass lamp and the wall picture took place in his immediate (1-5 feet) vicinity. These disturbances, consequently, may possibly be attributed to proximity rather than to focusing on the object itself.

In several instances the repetitions did not occur in the boy's immediate vicinity. These consisted of the three recurrences with the female figurine, the two repetitions with the bottle of bleach, the glass bowl, and the table lamp, and the single repetition with the starch bottle, the male figurine, and the dresser. The third incident with the globe is one of the few where it was not known whether Michael was in the house at the time. The globe was found on his bed after he and Mr. Lessing had returned from shopping. Immediately before they left, Mrs. Lessing had straightened up the house and had discovered nothing unusual. Apparently, the occurrence either took place when Michael was leaving or entering the house or while he was gone, but probably not while he was in his room and within the 1-5 feet range. Consequently, there may also have been focusing on that object.

In some cases the object's career as a PK missile might possibly have continued had it not been destroyed during its last flight. Both figurines belonged in this group, as did in fact all the figurines.

I have not been able to assign a statistical value to the repetition or focusing phenomenon. However, in view of the many objects in the home that never performed even once, there seems to have been a principle of selection other than chance. If, as seems to be the case, the focusing effect is due to factors unrelated to proximity, then these may have interfered with the distance distribution.

Table 5

FOCUSING ON INDIVIDUAL OBJECTS

Object	Occurrence Number	Distance of Occurrence from Michael							Number Repetitions
		1-5	6-10	11-15	16-20	21-25	26-30	?	
Female Figurine	23 31 32 40 28 45 55 63	✓				✓			3
Globe of World	28 45 55 63	✓						✓	3
Holy Water Bottle	12 23 24 33 60 67 39 53 61				✓	✓			2
Bottle of Bleach	33 60 67 39 53 61		✓	✓	✓				2
Glass Bowl	41 51 54 3 7 4 8 5 16							✓	2
Table Lamp	3 7 4 8 5 16							✓	1
Bottle	3 7 4 8 5 16							✓	1
Bottle of Starch	14 18 15 19							✓	1
Bottle of Shampoo	14 18 15 19							✓	1
Bottle of Kaopectate	15 19							✓	1
Can of Paint Thinner	17 22							✓	1
Brass Table Lamp	29 57*							✓	1
Male Figurine	34 37*							✓	1
Dresser	42 43 48 56		✓					✓	1
Wall Picture	42 43 48 56		✓					✓	1
Totals: 16	40	12	5	9	1	2	1	10	24

* Object broken

In Table 6, where repetitions have been excluded and only the first occurrences with each of the forty objects are entered, the distribution of events in relation to distance follows the exponential decay curve more closely than when the occurrences are also counted, the distribution being fifteen, six, four, four, one, and zero.

In addition to the fact that a number of objects were repeatedly affected, the spacing of the repetitions is interesting. In three cases, an incident with an object followed immediately on a previous one, namely, events 31-32, 23-24, and 42-43. In two cases, there were two intervening events, namely, 51-54, and 34-37; in another four cases there were three, 3-7, 4-8, 14-18, and 15-19; and in one there were four, 17-22 (Table 5).

Table 6
FOCUSING ON TYPES OF OBJECTS

Object	Distance of Occurrence from Michael						Totals
	1-5	6-10	11-15	16-20	21-25	26-30 ?	
Containers:							
Bleach, Starch, Ammonia	2						3
Shampoo, Perfume,	1						1
Toilet Water	1						1
Holy Water				1			1
Kaopectate, Wine	1						1
Paint Thinner, Ink	1						1
Unknown				1			1
Totals:	3	4		2	1	8	18
Miscellaneous Objects							
Figurines	2	1	2				5
Table Lamps	1						1
Plates, Bowls, Ashtrays	3			1			4
Globe, Wall Picture,	2		1				3
Photograph		1					1
Flashbulb							
Totals:	8	2	3	1		2	16
Furniture:							
Bookcases	1						1
Night Tables	2						2
Dresser, Coffee Table	1		1				2
Totals:	4		1				5
Grand Total:	15	6	4	4	1	10	40

It is not clear what the focusing effect may be due to. The favored objects did not seem different in physical composition from objects that never moved. For instance, there were several china plates on the dining room display cabinets that were not disturbed. Perhaps when an object is influenced by a PK source, it thereby becomes more sensitive to that source; or the focusing effect might be due to motivational factors, or to a combination of causes. I shall consider the possible motivational aspects later.

Types of Objects: In an effort to discover if there was any favoring of types of objects, these have been outlined in Table 6. In the case of the objects repeatedly disturbed which were described before, only the first incident is entered to avoid duplication of the previous analysis. The distances from Michael are again shown to help distinguish between focusing and the proximity factor.

Of the ten containers whose distances were known, seven were disturbed beyond the 1-5 feet range, indicating a focusing effect independent of proximity. There was no indication of focusing on miscellaneous objects or furniture with the possible exception of the figurines since three of the five whose distances were known were affected beyond Michael's immediate vicinity.

The total number of bottles and figurines versus other objects in the house is not known; a statistical evaluation of the apparent focusing on these therefore is not possible. The proportion of containers to other objects in the house probably was considerably less than one half or so, the figure suggested by the fact that eighteen of the forty objects were containers. I also suspect that the proportion of figurines was less than one seventh (forty divided by six). There seemed to be no physical qualities in these objects that would make them more sensitive to PK than other objects in the house. I shall later consider the possibility that they might have been favored for psychological reasons.

Area Focusing

Table 7 shows the distribution of occurrences over the rooms of the house (one incident, a sound, could not be localized). If we disregard events close to Michael, repeated incidents with individual objects, and bottle incidents, we end up with a figure of only four for the living room and two each for the master bedroom and the recreation room. These figures are too low to provide anything but a slight suggestion of area focusing in favor of the living room.

It may be objected that the object focusing was due to a focusing effect on the areas where the objects were located rather than to any favoring of the objects themselves. However, repetitions with individual objects were observed in seven rooms and the bottle

Table 7
FOCUSING ON AREAS IN THE HOUSE*

Areas	Michael's Distance from Occurrence								Totals	Less 1-5 Feet	Less Repetitions	Less Bottles
	1-5	6-10	11-15	16-20	21-25	26-30	?					
Michael's Room	1		1			4		16	5			
Master Bedroom	1	1	1	2	1	1	4	11	10	6	2	
Living Room	1	1	5	1				9	8	4	4	
Bathroom	2		2	1			4	9	7	5		
Utility Room		5		1			2	8	8	5		
Dining Room	4		2					6	2			
Kitchen		1					2	3	3	2		
Recreation Room		1	1					2	2	2	2	
Nancy's Room							1	1	1	1		
Closet							1	1	1	1		
Totals:	19	9	12	5	2	1	18	66	47	26	8	

* One of three thumping sounds could not be localized.

incidents were spread over eight of the ten areas. Apparently, object focusing took precedence over area focusing.

Though the analysis failed to reveal focusing on any particular area of the house, nevertheless there was a conspicuous area focusing effect, namely on the Lessing home as such. The RSPK incidents were apparently restricted to the house; they were not reported to have followed Michael to school nor to the homes of the persons where the Lessings at various times sought refuge. Evidently, there was something at home which stimulated Michael's PK abilities and which was absent elsewhere.

PSYCHOLOGICAL ASPECTS

It was suggested in the previous section that the RSPK incidents can be understood in terms of a conversion of psi energy to kinetic or sound energy. We have not yet discussed the origin of the psi energy itself. To do so we must turn from the receiver end of the process to the source, namely to Michael.

Gardner Murphy suggests that "the ultimate elements in personality structure are the needs or tensions" (3, p. 641). A tension is a concentration of energy in a particular tissue or group of tissues. These tensions are connected and spread from one region to another. "The result is a *tension system* whose lawful structure is expressed in terms of the relative strengths of tensions and the relative rigidity of barriers to their diffusion" (3, p. 641). In Murphy's view, these tensions may extend beyond the physical organism since human personality is not restricted to the body but is "a node or region of relative concentration in a field of vast and complex interpenetrating forces, in which none of us is completely individualized any more than he is completely washed out in a cosmic sink of impersonality" (4, p. 14). When tensions spread outside a person's body, they are no longer organic but presumably have been converted to psychical forces. I picture this conversion as producing a copy in the organism's psi field of its physical fields (for simplicity's sake we may assume that thoughts and emotions are aspects of the physical organism and do not affect the psi field directly). And again, when there is a further conversion of psi energies to physical energies, we expect these in some way to reflect the physical forces that started the process.

Personality Studies

Personality studies of both children were made by Dr. I. H. Paul, assisted by Dr. L. Goldberg and Dr. George Klein. The Wechsler-Bellevue Intelligence Scale, Form I; the Rorschach test; the Thematic Apperception Test (TAT); a word-association test; and figure drawings were administered. The psychologists were aware of the ostensible RSPK disturbances and knew that the reason the examinations were requested was to throw light on the incidents. However, they stated that in preparing the assessment "every conscious effort was made to keep it uncontaminated by knowledge of the surrounding context of the testing."

Since Nancy did not seem to play an important role in the incidents, her psychological report will not be discussed.

Dr. Paul found Michael to be "a very intelligent, quick-witted youngster with a highly perceptive and sensitive grasp of events and situations. His thinking is detailed, logical, somewhat legalistic, and also picky and critical." "Particularly impressive is his fluency and articulateness, his quick and vivid imagination, and his accuracy and quickness in grasping, analyzing, and integrating situations." His verbal I.Q. (127) is higher than his performance I.Q. (109). He is very knowledgeable in science and biology and is especially interested in such oral aspects as the way different animals stalk and consume their prey. In general, violent themes

predominate, but "He would probably deny feelings of hostility against anyone even though admitting an interest in such destructive things as 'rockets,' 'bombers,' 'badly mauled and dying squids,' 'a vampire bat ready to perch on its prey,' 'fighting wolves,' and the like." Such ideas are not experienced as "ego-syntonic" but are seen in other persons or in objective events.

In a boy close to puberty, such as Michael, the search for an adult identity often comes into conflict with the dependency needs of childhood. These may be in the form of oral needs which, if frustrated, may result in "passive-demandingness." Though Michael may feel that he is impaired or incompetent, at the same time he may see himself as "rather prematurely adult and deprived of the many passive-dependent childish longings which he must suppress." Also as a child grows up it may experience conflict or competition with its parents. For girls this is often with the mother and for boys with the father. One of Michael's stories concerns a boy who is "living with a guardian whom he hates and he wants to go out and become a doctor to be some good . . . to make a name for himself in the world"; in another a father accused his son of being "a liar or a cheater"; the son fights him, and is killed. These and the other images and ideas can be tolerated "because the affect is divorced and diverted from them." Michael "seems to feel emotionally distant and cut off from situations and people," using "intellectual activity for contact and control." He seems to enjoy myths of doom and destruction and Dr. Paul draws attention to his "sensitive and imaginative" image of "Atlantis, the lost continent . . . sinking into the ocean . . . crashing through all the coral." There is also "an almost magical faith in omnipotence and omniscience." One might add that if Michael was the agent for the disturbances, this faith was not without foundation!

The "isolation of affect," where "the appropriate affect is divorced and split off from its evoking situation and is suppressed or diverted," is one of the main features in the psychological picture. This mechanism may also play a crucial role in the parapsychological expression of Michael's "tension system," because it may provide the barrier which diverts organic tensions beyond the body and into the psi field. If this thinking is in the right direction, we should expect the RSPK incidents to copy or correspond to elements in Michael's personality structure.

Focusing Effects

In the discussion of focusing on individual objects, there were repeated occurrences with a bottle of bleach and a bottle of starch. Also in the study of focusing on types of objects, bottles predomi-

nated. There seemed to be no strong preference for any particular kind of bottle or contents; except insofar as they contained elements found in the human organism, there seemed to be no obvious physical resemblance between them. However, several possessed two common denominators which might be of psychological significance; most of the bottles were connected with cleaning of one kind or another. Bleach, starch, and ammonia are used for laundry (and paint thinner can be used for spot removal). Shampoo, perfume, and toilet water are connected with personal cleanliness and holy water with spiritual cleanliness. Most of the bottles were also related to the activities of Mrs. Lessing. As the housekeeper she was responsible for the laundry materials and she was the one who had placed the holy water bottles in the master bedroom. The only bottles not specifically connected with her were the medicine, ink, and wine bottles and the toilet water in Nancy's room. Since we do not know what the proportion was of cleaning bottles in relation to others, nor how many of the bottles in the home were associated with Mrs. Lessing, we cannot be certain that the predominance of cleaning liquids connected with Mrs. Lessing was not a chance effect. Assuming these connections are not accidental, we may ask whether the bottle disturbances and the incidents to be considered later expressed needs or tensions in Michael's personality. Another way of putting this question is to ask whether the incidents were *symbolic* of his needs. In this context, a symbol can be regarded as "a stimulus which stands for another stimulus," to use Murphy's definition (3, p. 998). We may react to a symbol, such as a word, picture, or other representation of a desired or disliked object, in a similar way as we would to the object itself.

If the incidents are regarded in this light, we may speculate that to Michael the bottles associated with his mother symbolically represented the nursery bottles of infancy and that the incidents where they opened and spilled expressed his oral needs. The fact that many of them were connected with cleaning is perhaps to be understood in terms of a dependency need to be cleaned and cared for as an infant.

The violence of many of the bottle incidents (two clorox bottles jumped out of their box and broke on the floor; an ink bottle discharged its cap with an explosive sound and flew some nine feet, spilling ink on the floor and wall; and most of the other bottles lost their tops with loud sounds) was reminiscent of Michael's images of bombers, rockets, and a shell which he saw in four of the ten Rorschach cards. It is also tempting to speculate that there may be a symbolic connection here with being "bottled up" and of "blowing one's top."

The study of focusing on individual objects showed that two figurines were repeatedly involved. These figures, one representing a female and the other a male, were located in the living room. Since this was largely reserved for the adult members of the family, the children generally being restricted to their rooms or to the recreation room, it is possible that the figurines symbolically represented Mr. and Mrs. Lessing to the boy and that the disturbances expressed unfulfilled needs or conflicts related to the parents.

The study of focusing on kinds of objects also indicated some favoring of figurines. A ceramic doll and a plastic angel broke in Michael's room and a large ceramic figure of the Virgin Mary flew from Mr. Lessing's dresser and hit the mirror over Mrs. Lessing's dresser on the other side of the room. In the basement a small metal horse moved several feet and broke on the floor.

The TAT and Rorschach stories are rich in scenes where people or animals come to a violent end or are hurt. In Michael's stories to six of the eleven TAT cards, people were injured or died, usually violently, and in five of the Rorschach cards he saw animals which had been maimed, were fighting, or killing each other.

Dr. Paul notes that some of Michael's stories may have been influenced by TV shows. An example, which is nevertheless interesting, may be his account of "Dracula's daughter . . . sinking her fingers into the neck of a victim" and leaving "four blue marks . . . the guy comes in and the cure is to put a cross there because that's the work of the Devil." The cross is also placed on Dracula's daughter, who dies as a result. The idea that religious objects can suppress violent and evil forces conceivably is expressed in the incidents with the holy water and the religious figurines.

With regard to objects other than bottles and figurines, there was focusing on a table lamp belonging on Mrs. Lessing's dresser. The two repetitions with this object reinforce the impression that Michael's relation to his mother played an important role in the occurrences. Concerning the recurrences with the glass bowl, it may be relevant that this was used as a centerpiece on the dining room table and was perhaps therefore, in Michael's mind, associated with eating and oral activities. Michael's feeling of omnipotence and omniscience may have been expressed in the incident where the globe of the world moved from its place on a bookcase in Michael's room to his bed. There was one repetition with a dresser in Michael's room. The psychological studies seem to provide no explanation why this should have been involved.

The examination for area focusing showed a slight favoring for the living room. This impression was strengthened by the study of direction of movement.

Direction of Movement

In a previous section it was shown that there was a striking tendency for the objects to move in a northeasterly direction and that the living room was in that part of the house. As noted before, this room was mainly used by the parents, the children's play and recreational activities being confined to other areas. These intrusions into the parents' living space may have expressed similar emotions as the incidents with two figurines belonging in that room.

An attempt was made to see, in those instances where direction of movement could be discerned, if anybody could be identified as the apparent target for the movements, indicating that individual as the focus of Michael's feelings. There were four cases where the arrow of direction pointed to people. On one occasion, Michael and Mrs. Lessing were walking toward the laundry area in the basement when a bleach bottle came from its box about six feet away and broke on the floor in front of them. On another occasion a sugar bowl left its place on the dining room table in front of Michael and broke at the foot of a police detective who was standing about five feet away. Another time a small metal horse on a shelf in the basement moved about six feet, breaking close to the feet of the detective; and a third time, the globe came bouncing out of Michael's room toward a reporter who was sitting in the living room. If direction of movement is indicative of target for attention or aggression, it is surprising that in three of the four cases where someone was known to be at the receiving end, this should have been a visiting observer rather than a member of the family. In this connection it should also be mentioned that one of the disturbed objects, a flashbulb, did not belong to anyone in the family, but to another reporter. Evidently, people and objects that probably were only of passing concern to Michael could become part of the parapsychological situation.

Agent's Activities

A person's behavior often reveals his thoughts and emotions. If the RSPK incidents reflected elements of Michael's personality or tension system, his activities at the times of the occurrences might give a clue to this system. Table 8 shows Michael's activities in relation to the incidents. During fourteen of the forty-three events when his activity was recorded, he was in bed either preparing to go to sleep or else in the early stages of sleep; in thirteen cases he was seated; in seven he was in the bathroom; and in nine he was standing or walking. Since proximity appears to be a favoring condition, a truer picture of the relationship of his activity to the occurrences may be obtained if those in the immediate

Table 8

MICHAEL'S ACTIVITY IN RELATION TO OCCURRENCES

Activity	Objects Disturbed				Totals	Total Minus 1-5 Feet Occurrences*
	Containers	Miscellaneous Objects	Furniture	Noises		
Lying in Bed		8	3	3	14	
Seated, Eating	6	2			8	
Seated, Doing Homework		2			2	
Seated, Talking to Relative		1			1	
Seated, Activity Unknown		1			1	
In Bathroom	3	4			7	7
Walking with Mrs. Lessing	1				1	1
Walking to his Room with Books	1				1	
Walking to Bathroom			1		1	1
Standing, Brushing Teeth	2				2	
Standing with Detective**	1				1	1
Standing, Folding Clothes			1		1	
Standing with Nancy and Mrs. Lessing**		1			1	1
Standing, Activity Unknown		1			1	1
Totals:	13	21	6	3	43	21

* Noises also not included since distances are not known.

** Attending to occurrences.

vicinity range are excluded. If this is done, all events where Michael was lying down disappear while the other figures are left comparatively intact. There were seven cases, mostly consisting of bottle disturbances, when Michael was sitting down eating; there were two when he was seated doing homework; seven while he was in the bathroom; and six while he was walking or standing. Since it is not known how much time each day the boy spent in any activity, a statistical assessment of these figures is not possible.

However, there were probably more incidents than chance would account for when Michael was eating or was in the bathroom. These activities are supposed to be often associated with strong emotions and it might be speculated that they provided special triggering effects for the RSPK incidents. Of particular interest in this connection is the fact that most of the occurrences that took place when Michael was eating were bottle incidents. As has been noted before, these occurrences may bear a close relation to Michael's oral needs.

Unconsciousness of Phenomena

Table 8 suggests that emotions connected with eating and eliminating food may have expressed themselves in the form of the RSPK phenomena. However, there was no indication that Michael was in any way consciously concerned with the incidents at those times or was thinking about the objects that were disturbed. On the contrary, on a conscious level he was probably only occupied with the activity at hand. Table 8 suggests that when something happened Michael was generally engaged in a purposeful activity that was, at least superficially, unrelated to the occurrences.

There were two exceptions to this: once a figurine of a horse fell when Michael and a police detective were in the basement in connection with a previous (unrelated) occurrence; and another time, he, Mrs. Lessing, and Nancy had taken refuge from the incidents in the hallway when a figurine in the living room crashed against the secretary, apparently from its place on a coffee table nine feet away. Perhaps on those two occasions he was consciously concerned with the incidents, though it seems unlikely he was thinking about the figurines.

Michael's responses to the psychological material support the impression that he was not consciously aware of causing the incidents. The word-association test contained several words referring to objects connected with the disturbances. Michael's responses to these were generally stereotyped and without delays or other reactions suggestive of conscious involvement. His reactions to the words are discussed in detail in Appendix A. This appendix also has an interpretation by Dr. Gertrude R. Schmeidler of Michael's Rorschach responses which supports the impression that Michael was not consciously involved. The general impression from the record is "It's happening" rather than "I'm doing it" (13). It is possible that the incidents which took place in the evening when he was in bed, and which were all within his immediate

* Michael was somewhat overweight, perhaps another indication of the oral aspects of the case.

vicinity, involved objects he was then thinking about. However, in several of these cases he was said to be asleep, again indicating that conscious concern with the objects was no advantage.

Several investigators are of the opinion that in telepathy, material in the unconscious of the agent provides a more potent ESP stimulus than conscious thoughts and also that emotional material is better than neutral items. Some of this work is reviewed in (9). As far as I know, no PK tests have been done to determine whether material in the subject's unconscious works better than conscious thoughts. H. Forwald (2), J. B. Rhine (7, p. 124), and R. H. Thouless (14), are of the opinion that strong conscious effort or concentration has no effect. Forwald says that he is most likely to do well when he has "a mind picture of the . . . dice as resting or moving within the target area" (2, p. 280). R. Rose similarly says about a PK subject "that when she produced good results, visualization of the target face was largely responsible" (12, p. 125). Perhaps mental images, which are not however at the focus of consciousness at the time, are likely to provide the best condition for PK transmissions. Michael's psychological responses indicated he had a rich imagination and that the themes of his images were reflected by the incidents in his home.

CONCLUSION

None of the incidents in this series of apparent RSPK phenomena were observed under as good conditions as can be achieved in the laboratory. However, four were seen by adults and twelve took place in areas of the house which were known to be empty. It is difficult to suppose that the boy could have caused these by trickery without being discovered. The psychological studies supported the view that Michael was not consciously perpetrating the phenomena.

The distribution of the events in time and space point to Michael as the agent. In an attempt to get an impression of the energy responsible for the incidents, the disturbances were plotted in relation to their proximity to him. It was found that the number fell off with distance as we should expect if the energy were similar to known types. Since there is no known source of energy in the human organism which can propel objects without contact, it seems appropriate to describe the occurrences in terms of psi energies and psi fields and to suppose that there was a conversion of psi to physical energies, in this case mostly kinetic ones. The discovery that the data fit the exponential decay curve seems to support this interpretation.

It may strike one as paradoxical that RSPK should be so quickly

attenuated while ESP information may be transmitted over thousands of miles. However, there is nothing inconsistent about this even assuming that we are dealing with the same kind of energy in ESP and PK. The situation may be analogous to the difference between sunlight traveling through water and through empty space. In the former case there is likely to be a conversion to other energy forms relatively soon after the light hits the water, while a photon may travel forever if it meets no obstacle (there is also attenuation of light in empty space but this is due to the dispersal of the photons with distance and not to conversion to other energy forms). In this example ESP messages might correspond to light rays in empty space and PK influences to light penetrating water. The picture that emerges of the RSPK process from the Lessing case suggests a transmission of psi energy from a source, namely Michael, to several receivers, namely the objects that were disturbed. The energy at the source appeared to consist of organic tensions which were diverted or suppressed by other tensions and converted to psi energy. This resulted in an increase of energy in the organism's psi field which was transmitted to the psi fields of the physical objects in its vicinity. Finally, there was a conversion of psi to kinetic energy, causing the movements of the objects.

Though the psi process may involve energy changes, at the same time it is an isomorphic or copying process. The correspondence, for instance, between ESP guesses and a pack of cards or between a PK attempt and the fall of the dice is a main characteristic of parapsychological phenomena. The comparison between the incidents and Michael's personality seemed to show marked correspondences. The objects that were disturbed, the nature of the incidents, and the direction of movements seemed to reflect elements of the boy's personality structure.

It should not be forgotten that we were searching for similarities; consequently, some may have been read into the material that were not there. It should also not be forgotten that we are dealing here with only one RSPK case: all the findings need to be tested by additional RSPK investigations or by experimental work. The evidence for "decay" of PK energy within a few dozen feet of the agent could be explored relatively easily in a laboratory.

It was not part of the original plan to examine for attenuation or other physical variables. At that time I was interested only in the psychological side of the phenomena. I had previously expressed the opinion that psi phenomena fall off with distance, but it did not occur to me to test this hypothesis against the present case. The conservation principle was added to the theory (8) after the present investigation (but independent of it). It is pleasing to obtain support for one's theories, especially when one is not looking for

it; nevertheless it was startling to learn that poltergeist disturbances might obey such mundane laws.

REFERENCES

1. BENTLEY, W. P. "Research in 'Psychometry' in the U.S. and England." *International Journal of Parapsychology*, Vol. 3, Autumn, 1961, 75-98.
2. FORWALD, H. "A Continuation of the Experiments in Placement PK." *Journal of Parapsychology*, Vol. 16, December, 1952, 273-283.
3. MURPHY, G. *Personality: A Biosocial Approach to Origins and Structure*. New York: Harper & Brothers, 1947.
4. ———. "Psychical Research and Personality." *Proc. S.P.R.*, Vol. 49, 1949, 1-15.
5. PRATT, J. G., AND ROLL, W. G. "The Seaford Disturbances." *Journal of Parapsychology*, Vol. 22, June, 1958, 79-124.
6. ———. "Confirmation of the Focusing Effect in Further ESP Research with Pavel Stepanek in Charlottesville." *Journal A.S.P.R.*, Vol. 62, July, 1968, 226-245.
7. RHINE, J. B. *The Reach of the Mind*. New York: William Sloane, 1947.
8. ROLL, W. G. "The Psi Field." *Proceedings of the Parapsychological Association*, No. 1, 1957-1964, 32-65.
9. ———. "ESP and Memory." *International Journal of Neuropsychiatry*, Vol. 2, October, 1966, 505-521.
10. ROLL, W. G., AND PRATT, J. G. "An ESP Test with Aluminum Targets." *Journal A.S.P.R.*, Vol. 62, October, 1968. (In press.)
11. ROLL, W. G., WREGE, C. D., FEATHER, B. J., AND ALTROCCHI, J. "Panel Discussion of the Newark Disturbances." (Abstract.) *Journal of Parapsychology*, Vol. 26, December, 1962, 273-275.
12. ROSE, R. "Some Notes on a Preliminary PK Experiment with Six Dice." *Journal of Parapsychology*, Vol. 14, June, 1950, 116-126.
13. SCHMEIDLER, G. R. Personal communication, January 8, 1968.
14. THOULESS, R. H. "A Report on an Experiment in Psychokinesis with Dice, and a Discussion on Psychological Factors Favoring Success." *Journal of Parapsychology*, Vol. 15, June, 1951, 89-102.

Psychical Research Foundation, Inc.
Box 6116, College Station
Durham, North Carolina 27708

APPENDIX A

The Psychological Tests and the Conscious Fraud Hypothesis

In the hope that the psychological tests might provide indirect evidence for fraud, had any of the incidents been so caused, they were examined from this point of view. I have already discussed the difficulties facing the fraud hypothesis with regard to the occurrences which happened in the presence of adult witnesses or in rooms known to be empty. If Michael had staged these events, presumably he would have needed sophisticated magical devices. Michael's modest performance IQ (of 109) does not suggest the very high level of ability which would permit the successful installation, use, and concealment of such devices in such a way as to escape detection by the people who were watching him.

The psychological tests that are likely to be most sensitive to the question of fraud are the Thematic Apperception Test (TAT), the word-association test, and the Rorschach.

The Thematic Apperception Test

In Michael's responses to the TAT pictures there are several cases where an identification figure—that is, a person who is likely to represent Michael himself—is guilty of a criminal act and fearful of punishment. This may suggest that Michael had perpetrated the incidents, or some of them, normally.

Nancy's responses are also of interest in this context. Three of her TAT stories contain accounts where a boy, never a girl, misbehaved in some way. In one of these, Card 14, a boy did something bad in school and is frightened that his parents might catch him; in Card 5, a mother resting in her bedroom hears a noise caused by her little son who is looking for cookies and drops the jar; the mother will tell the father and the boy will probably get a spanking. In Card 12 Nancy saw a boy accidentally shoot his friend with a rifle. These responses suggest that Nancy suspected a boy, perhaps her brother, of being guilty of something wrong.

In several of Michael's TAT stories the central figure commits a crime and is fearful of the consequences. Card 14 "looks like a teenage burglar breaking into a place." He does not get caught but is worried that he may. There was a battle with a rival gang and "he feels good, great and proud, because maybe he's killed or injured someone. But later his conscience starts bothering him, so he's about to give himself up when the cops start rounding them up." Card 5 evoked a scene where a rich old man has been murdered for his money and "the problem is who done it." "The boy's friend who the niece hired is indicted and goes to jail—and the niece also gets indicted, and Perry Mason gets paid—ever watch

it on TV?" Card 7 BM is particularly interesting: "This could be a man that called the younger man a liar or a cheater and the older man is his father and he looks at him to see what he's going to do about it, and the younger guy has a very stern and angry face and he goes on and fights him and he (i.e., the older man) kills him and he gets arrested for murder and he gets a lawyer and gets off with self defense." Card 6 GF showed a man who "could be a detective and she could have committed robbery and she's pointing out the facts, and she pulls back and he comes nearer and starts shouting, emphasizing the point, and finally accuses her, and she finally breaks down and confesses that she did it. She goes to jail." In Card 12 M there are two boys in a room of a school or academy "and this guy is an enemy of the one sleeping because the one sleeping got him in trouble, so he's going to get back at him by . . . stealing maybe one of his books . . . Just as he's about to do it the dean or professor comes in and sees him taking it and he gets expelled."

Card 18 GF "could be a good story for shock theatre. She could be Dracula's daughter and she's sinking her fingers into the neck of a victim and the victim dies and . . . they come to her to put the cross on her . . . and she dies." In Card 16 there is a robbery of a jewelry store, the jeweler is shot by the gangster, there is "a big five-state search, finally he's caught."

Dr. Paul observes in connection with these accounts that "one mustn't minimize the influence of TV on these stories—they do follow the usual TV half-hour program pattern." Nevertheless, they may reflect some action by Michael which he was aware of, considered wrong, and whose consequences he feared. Nancy's responses to the TAT cards suggest that she, too, considered that her brother had committed some wrongful acts. The word-association test may indicate whether these acts were connected with the unexplained disturbances in the Lessing home.

The Word-Association Test

The word-association test included several references to the disturbances. Dr. Paul noted that both children reacted smoothly to all words and their associations seem stereotyped and usual. None of the words evoked any special reaction. One of the special words was "lamp" since five of the disturbances involved such objects. The response of both children was "light," a common reply. Another word was "horse." A small metal horse had played an important role in one of the disturbances. When a police detective and Michael were alone in one of the rooms, a small metal horse fell to the floor close to the feet of the detective. The latter immediately accused Michael, saying that he had seen him throw

the horse, which he had not, and subjected him to a long and severe grilling, the boy all the time denying that he had anything to do with this or any of the other incidents. If Michael was guilty of this act, he must have had a very narrow and frightening escape. Though the psychological examination was carried out nearly three months after this incident, if Michael had been guilty it would in all likelihood have left an impression which might be expected to color his response to the word. However, he merely replied "ride." Nancy's response was "saddle," also an innocuous response. Another conspicuous object was the globe of the world which was involved in four disturbances. On all but one of these occasions, Michael was in his room at the time and could have thrown the globe with little risk of being detected. Both children said "world" in response to "globe" and there were no other indications of an unusual reaction.

The word "holy" was chosen because of the holy water bottles that were involved in four incidents. Michael's response was "special"; when asked what he meant by this, he replied "If it's holy, it's special important . . ." Nancy replied "Ech—priest."

One of the distinctive disturbances was the movement and breakage of the children's own phonograph. Both children, however, gave the stereotyped response "record" to the stimulus word "phonograph." One of the more damaging incidents involved the movement of a bottle of ink and the spillage of its contents on the wall and carpet. Michael's response to "ink" was "pen" and to "rug" his response was "carpet." Nancy said "pen" and "floor."

Six porcelain figurines were involved at various times. However, the word "figurine" only elicited the response "doll" in the case of Michael and "statue" in the case of Nancy. A number of incidents involved dressers in the rooms of Michael and his parents. Twice a dresser in his room fell over. The first incident in the case, which involved the breakage of a ceramic doll, also happened on his dresser. In his parents' room there were four occasions when objects were upset on Mr. Lessing's dresser and six on Mrs. Lessing's. Michael's response to "dresser" was "drawers" and Nancy's was "night table."

Among the objects involved only once was a ceramic ashtray. Michael and Nancy both responded with "cigarette" when "ash-tray" was the stimulus word. The final word on the list, "desk," referred to the secretary in the living room which was the target for flying figures on three occasions; it was heavily scarred as a result. Michael's response to "desk" was "paper" and Nancy's was "pen."

Twenty-eight of the disturbances involved bottles. The word "bottle" elicited the reply "container" from Michael. This was one of the few replies that was given after a three-second pause, nearly

all the others being produced after a one- or two-second pause. There were two words that referred to the possible effects of the disturbances, namely "fuss" and "cleaning." The first elicited "mess." The examiner asked about the meaning of this. Michael replied, "Fixing up a mess, cleaning up, fussing over things..." Nancy's response to "bottle" was "wine," to "fuss," "grand-mother," and to "cleaning," "cleaning-dirty."

There were four words referring to areas in the house where things had happened, namely, "bathroom," "basement," "bed-room," and "kitchen." Michael's replies were, respectively, "sink," "cellar," "sleep," and "sink." All were stereotyped and were made quickly, showing no emotional reaction. Nancy's replies were "tub," "cellar," "bed," and "stove."

There were two words which might refer to the way Michael caused the phenomena. These were "throw" and "pull." To the first, he replied "fall"; he evidently did not hear the second word, and when it was repeated, replied "drag." Nancy answered "ball," and the second one she also did not hear correctly, and replied, "excuse" and then "force."

Finally, to the word "guilty," Michael replied "innocent." Nancy gave the unusual reply, "axe—no wait—head"; perhaps an association with the beheading of a guilty person.

In summary, words that were meant to refer to the unexplained events in the Lessing home did not seem to elicit the emotional reaction we should expect if Michael had perpetrated them. Though his TAT stories suggest he was preoccupied with real or imagined wrongdoings, these apparently were divorced from the disturbances. This interpretation is supported by Nancy's responses to the TAT and word-association material. If any of the incidents were normally caused by Michael, it appears that neither he nor his sister were aware of this.

The Rorschach Test

A study of the Rorschach test protocol by Dr. Gertrude R. Schmeidler throws additional light on Michael's connection with the events and on the question whether he caused them fraudulently:

Michael was so intimately associated with the strange events at his home that we must conclude he caused them. But this conclusion poses a dilemma. Did he cause them by normal means? This seems unlikely because it would have required consistent success in deceiving the adults who were watching him, and in addition either deception of his sister or else her unwavering cooperation. Did he then cause them through paranormal means? This seems inherently unlikely on the basis of our present knowledge of the world.

Let us pursue both alternatives to see where they lead. If Michael used normal means, he was showing deliberate aggression and hostility directed primarily toward the destruction of objects and secondarily toward embarrassing and making fools out of the adults around him. This implies a megalomaniac self-aggrandizement. It means also that he was a clever manipulator, wearing a bland mask and plotting elaborately and successfully; a wolf in sheep's clothing. Such a high level of antisocial accomplishment over a long period while under close scrutiny demands a distinctive, effective personality structure, so precocious that it should be readily recognizable in a child's projective tests.

If the phenomena were of the poltergeist type, they imply a different handling of aggression. The best working hypothesis seems to be that poltergeist phenomena come when there is strong unconscious hostility with a brittle pattern of outward good behavior. Violent resentment is ordinarily held down under, but sometimes involuntarily explodes. The personality associated with this should then show unstable repression, a shifting balance between hateful forces struggling for expression and virtuous, hampering control. The violence should seem spontaneous and depersonalized, as if the person were innocent of it.

When I looked at Michael's Rorschach protocol to see which of these patterns it showed, it seemed to me that the second possibility fit far better than the first. For what it is worth, I can add that I put these alternatives to a colloquium of clinical psychologists who were not markedly sympathetic to the PK hypothesis, and the group consensus was unequivocally that the Rorschach was more consistent with the eruption of spontaneous, unconscious, depersonalized violence than with the clever, conscious manipulation of hostile actions.

Four categories of responses seem to me to merit particular attention. I will describe them separately, although there is considerable overlap among them.

1. *Masks, costumes, and disguises:* These are rather common Rorschach responses, so that a few "masks" in a record would not be diagnostic. However, if there had been many responses of this type, it would have implied an unusual interest in concealment and deception. In fact, Michael did not give even one such response.

2. *Movement of inanimate objects, of plants, and of natural forces like the wind:* This type of movement is often taken to represent unconscious and depersonalized "not-me" impulses, as opposed to the movement of such possible identification figures as humans or animals. Out of the total of thirty responses, seven were of this type—an unusually large proportion. There were three rockets with flaming exhausts, blasting through the clouds; there was a shell that blasted a hole in a wall with the flaming remains of an atomic warhead; and there were bombers over a volcano. Two unusual responses in this category were "The city of Atlantis, the lost continent, and it's surrounded by a dome and it's sinking into the ocean... crashing

through all the coral"; and "A sea cucumber that has thrown out its intestines to catch a crab." Perhaps it stretches word derivations too far to suggest that "the lost continent" sounds like a rephrasing for "the slippage of repression"; but surely the sea cucumber suggests an apt though ugly metaphor for the hostile use of unconscious PK.

3. Aggressive responses: Six of the seven foregoing responses with inanimate movement were aggressive. In addition, there were four vivid responses of animal aggression: "Two elks locked in a fight"; "A vampire bat . . . with its wings outspread and its hind feet ready to perch on its prey"; "A pack of hyenas or wolves, and . . . they could be having a fight with the hunter . . . meanwhile the other two are trying to get a carcass of a deer hanging above. Could also be the same pack of hyenas or wolves and along comes a hawk or eagle and sinks its talons into the carcass and the wolf pack tries to get it back, after they have half-eaten it"; and "Two squids attacking two larger squids that are badly mauled and dying . . . a shiny object that was sunken a long time ago and they're fighting over it."

These responses should be examined to see if they are consistent with Michael's having deliberately perpetrated an aggressive hoax on his parents and other adults, and either enlisted his sister's aid or hoaxed her too. Aggression is clearly strong; this is consistent with the possibility. On the other hand, aggression is so blatantly overt that it symbolizes outbreaks of rage or forceful greed rather than concealment and long-term plotting. The elks and bat imply that Michael would "go it alone"; the squids imply that he would cooperate with his sister against the parents; the shift from wolf pack to hawk and back again implies that long-term cooperation in aggression has not been well established. On the whole, these responses seem to me not to support the hoax hypothesis.

4. Identification figures: In addition to the possibility of identification with some of the aggressive responses above, is the following possible identification: "Could be a polliwog or a baby frog emerging from its egg nest, its egg jelly. The space could be where it bored a hole so it could make its escape . . . sometimes the frog dies because he can't get out." This highly original response seems to symbolize not only a feeling of oppression and a need for escape, but also a recognition that the oppression is protective and nurturant. Nurturant feelings were expressed in two other responses also, which mentioned food and "the mouth of a nest." These imply that Michael felt he had a tender and loving home, even though its restrictions sometimes began to smother him.

In summary, there is little or no support in the Rorschach protocol for the possibility that Michael thought of himself as a clever, successful schemer who could conceal his effective aggression. Overt aggression of a frank type was present; but there was no evidence of habitual, sophisticated fraud. On the other hand, the protocol looks as if Michael thought of himself as protected and tenderly cared for, but oppressed and held down under. This is the pattern which classically makes a child grow up to be "good" because parental love and care

make moral precepts binding. There is also very strong evidence, both from the number of responses and from their distinctive content, of violence which broke out of itself and destroyed without awareness. The Rorschach seems to me to look more like what we would expect of a child who showed poltergeist activity than like what we would expect of a schemer.

APPENDIX B

A Mathematical Description of Ostensible RSPK Occurrences

J. L. ARTLEY

This short discussion presents a mathematical model developed from data provided by W. G. Roll from an investigation of a series of apparent RSPK ("poltergeist") phenomena. The model is a first attempt at developing a mathematically-oriented description of such phenomena. This approach offers a means of providing a precise description and of comparing different phenomena within a well-defined, common framework. For example, by analyzing the data reported by Roll, it is possible to characterize the occurrences as a function of the distance, R , from the source in terms of two parameters. The term "psi field" is used in the way defined by Roll for the region in space, usually surrounding a physical object, in which psi phenomena (in this case RSPK occurrences) are observed. The following development indicates the steps taken in the development of a possible mathematical description of the occurrences.

The tabulation below lists the number of occurrences which were manifest within a given distance of the source person. These distances are approximate so we should expect the results obtained from them to be approximate.

Distance From Source in Feet	N (Number of Occurrences)
1-5	19
6-10	9
11-15	12
16-20	5
21-25	2
26-30	1

The data in this tabulation are used to plot the observational points indicated in Figure 2 (see above). The distance chosen for each interval corresponds to the average of the upper and lower

limits of the distance of the interval. The smooth, solid curve shown in Figure 2 is an attempt to draw a smooth, monotonically decreasing curve through the points. The average deviation of these points from the smooth curve is 2.4 occurrences.

In order to fit the observational points with an analytical function, two kinds of analytical expressions were tried. One involved the inverse law and is of the following form:

$$N = \frac{28}{R} \text{ occurrences} \quad (1)$$

The constant 28 was chosen to cause the inverse law curve to pass through the point at $R = 28$ feet. The standard deviation of this inverse law curve from the observationally determined points is 5.4 occurrences. The motivation for using the inverse law is that the law provides a well-known mathematical function which decreases monotonically with distance from the origin (source). This inverse law curve is not plotted in Figure 2 because it is a rather poor approximation to the points. The choice of other constants in the numerator of Equation 1 yielded even larger standard deviation from the points.

It would be possible to try to match the observational points in Figure 2 with the inverse square law which is a well-known mathematical form associated with points sources. This particular form does not fit the data as well as the inverse law of Equation 1 so it is not described in detail.

Another well-known function which decreases monotonically with distance from the origin is the exponential decay curve. The exponential decay curve therefore was used to match the points. There are two arbitrary constants in the exponential decay curve as used here; these two constants were chosen to cause the exponentially decaying function to pass through the first and last experimental points (at $R = 3$ and $R = 28$ feet). This exponential decay function is expressed:

$$N = 27e^{-0.118R} \text{ occurrences} \quad (2)$$

This function is plotted as a dashed line in Figure 2. The standard deviation of this curve from the observational points is 3.3 occurrences. The exponential decay curve does not fit the data precisely, but it does follow the general trend of the data.

It is possible to develop a simple model which yields Equation 2 as a logical description of RSPK phenomena. First, assume that the source person establishes a psi field intensity, ψ , in the region. The stronger the psi field in the region, the more occurrences one would

expect to observe. The number of occurrences observed should also be proportional to the number of susceptible objects per unit volume of the region. That is, where there are more susceptible objects within a given volume, more occurrences would be expected to be observed in a given field strength. This leads to the assertion that the number of occurrences, N , is related to the psi field strength, ψ , and the susceptible object density, δ , by the expression:

$$N = \delta\psi \quad (3)$$

That is, the number of occurrences, N , is directly proportional to the product of the field strength, ψ , and susceptible object density, δ .

We also assert that the field intensity will be greater in a region where the negative rate of change of occurrences with distance is great. That is, we write:

$$\psi = -k \frac{\partial N}{\partial R} \quad (4)$$

Equation 4 is a fairly common condition in field situations. The "k" in Equation 4 is a proportionality constant.

If it is assumed that the susceptible object density, δ , is constant in the region, we may combine Equations (3) and (4) to obtain:

$$N = -\delta k \frac{\partial N}{\partial R} \quad (5)$$

Solutions to Equation 5 are of the form:

$$N = K e^{\frac{R}{\delta k}} \quad (6)$$

where K is a constant of integration. Comparison of Equation 6 with Equation 2 indicates that the present series of RSPK occurrences may be characterized by Equation 6 with $K = 27$ and $1/\delta k = 0.118$. That is, two parameters, K and δk which are constants in a given situation, may be used to describe the manner in which occurrences behave as a function of distance from the source person. The quantity δk has dimensions of length and may be designated the penetration length of the field. In the present RSPK occurrences the penetration length is 8.5 feet. K can be defined as the source strength. With this definition the source strength of the case is 27 occurrences. The source strength indicates the number of the occurrences when extended back to the source

($R=0$). The penetration length is an indication of the distance the field penetrates into the region around the source person. The source strength is clearly a function of the number of occurrences that are observed. In general, the greater the number of occurrences associated with a given RSPK case, the greater the strength of the source.

It is quite possible that other functions may be used to give a better approximation to the occurrences as a function of distance from the source. As more data become available it should be possible to fit them to various analytical expressions. The value of fitting these data with particular such expressions is related to the possibility of identification of the phenomena with well-known functions associated with typical behavior in other situations. The exponential decay which has been used here suggests the propagation of some influence from a source into a surrounding "lossy" medium in which the influence of the source decays as the distance from the source increases. This decay is a common description of signals propagated in a lossy medium.