

## RSPK AND CONSCIOUSNESS

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**ABSTRACT:** We review some important RSPK cases and discuss physical theoretical concepts that may account for the phenomena. A major problem for the RSPK researcher has been to identify the energy that causes object movements. As a first step in understanding RSPK, Puthoff proposes that the agent makes coherent the random fluctuations of the zero-point energy (ZPE), a plenum of electromagnetic energy that fills space and interacts with gravitation and inertia. Joines has previously suggested that the RSPK process involves psi waves from the agent. The ZPE concept fills in the picture: Psi waves produce a coherent signal directed at a physical object and ZPE provides the energy for RSPK. In the light of the ZPE theory, Joines analyzed the attenuation effects in the Miami, Olive Hill, and Tina Resch cases. The best fit was the product of an exponential decay curve and an inverse distance curve, suggesting that the ZPE may be the connection between psi waves and electromagnetic waves. Friedan's theory, presented in his book *Physics from Fisher Information*, has implications for the understanding of how RSPK and psi information can be acquired by physical objects, including human observers and information taken to be a physical entity that can flow from one system to another.

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*Keywords:* poltergeist, conscious, subconscious, agent, object movement

RSPK primarily consists of movements of household objects and furniture, that is, objects weighing a few ounces to several pounds. In other words, the occurrences are energetic displays involving material objects that ordinarily are constrained by inertia and gravitation. As a rule, couches and tables move shorter distances than lighter objects, which is to be expected if the light and heavy objects are both subject to energies of the same intensity. At the same time the events reflect the psychological relationship between the agent and others in the area, including investigators.

The first poltergeist case one of us explored (WGR) (Pratt & Roll, 1958) was "the house of flying objects" in the town of Seaford on Long Island. Detective Joseph Tozzi, who was in charge of a police investigation, said that he and another police officer had witnessed some of the occurrences and could not explain them away as trickery. At first Tozzi suspected Jimmy, the 12-year-old son in the family, because he was usually at home and awake when things moved. Pratt and WGR subsequently spent several days in the home during which time there was an incident in the basement when they were with the family upstairs.

Similarly to most other psi researchers, Pratt and WGR thought the incidents were due to unconscious PK by the person who was at the center of the activity, in this case Jimmy. They named the phenomena "recurrent spontaneous psychokinesis" or RSPK. The things that were affected usually belonged to the parents and the events often happened in their living space. For instance, two porcelain figurines, a male and a female, broke in the sitting room, which was reserved for the adult members of the family (Roll, 1968). Psychological studies of the boy suggested that he had strong feelings of anger, especially towards his father.

Jimmy was evidently the source of the energy because the incidents clustered around the boy and then became less frequent with increased distance. Such attenuations are also shown by known forms of energy. Unlike inanimate forces, however, the activity in Jimmy's home was confined to the living space he shared with his family. There were no incidents at his school nor, as far as Pratt and WGR knew any occurrences in the yard outside the home. The energy seemed to have had a psychological component that was confined to the space Jimmy shared with his family.

WGR made similar observations at other RSPK sites. For instance, in the Newark case (Roll,

1969), the disturbances occurred in an apartment occupied by the 12-year-old agent and his grandmother. The neighbors knew about the incidents but none of them reported anything out of the ordinary in their own apartments. The incidents did not extend beyond the boy's psychological space.

The six cases we investigated all showed a significant attenuation with distance. At this time, we were collaborating with a colleague of one of us (WTJ) from the Department of Electrical Engineering at Duke University, Dr. John Artley, through the Psychical Research Foundation where WGR was project director. This collaboration was extended to include Dr. Don Burdick of the Department of Mathematics at Duke, and we four examined similarities between the RSPK attenuation and known physical forms of attenuation.

But was the effect real? There seemed to be genuine RSPK incidents in all six cases, as attested to by WGR and other witnesses. Objects that moved in close proximity to the agent often did so when the agent was unobserved, such as when the agent was preparing to go to sleep. It was possible that some of the incidents close to the agent were due to normal throwing of nearby objects and that this resulted in the clustering of occurrences close to the agent. There were three cases in which this could not have been the explanation. In the Miami case (Roll & Pratt, 1971), the Olive Hill case (Roll, 1972, Ch. 11; Roll & Stump, 1969) and the Resch case (Roll, 1993), the incidents used for our analysis took place when the agent was being observed by outside witnesses, usually by WGR or his colleagues. This was also true for occurrences in close proximity to the agent. A summary of the three cases follows.

### **Three Evidential Cases**

#### **Miami, Florida: An Experiment at an RSPK Site**

When Gaither Pratt and WGR (Roll & Pratt, 1971) arrived at Tropication Arts, a warehouse for novelty items in Miami, Florida, the police had noticed that there were certain shelves from which things were more likely to take off than others; so-called area focusing. The incidents were rarely seen, and when news media pointed their cameras to the active sites, this too inhibited the occurrences. Because direct observation suppressed the activity, the officers used empty soft drink bottles as "decoys" placing them in the special sites. Several crashed to the floor when no one was near, including Julio Vasquez, a 19-year-old shipping clerk who seemed to trigger the incidents. There had been object focusing as well, beer mugs and "Zombie" glasses being especially active. Direct observation inhibited the events, so an experiment was set up by using these types of objects as targets for macro-PK, placing them in the special sites, and having the owner and employees stay away from these parts of the warehouse. In this way Pratt and WGR could be certain that no one except themselves were near the targets. For instance, WGR was watching Julio place a toy alligator on a shelf when a Zombie glass four feet behind him fell to the floor. Both his hands were occupied; in the right he held the alligator, in the left his clipboard. Two other workers were present but they were more than 15 feet from the glass. They could not have picked it up previously and then thrown it because WGR had placed the glass on the shelf and no one had been near it since then. The incident had an intriguing aspect. WGR wanted to find out if the objects simply slid off the shelves or if they could be made to rise up in the air. He had therefore placed some notebooks in front of the glass and other objects along the sides. These were undisturbed, so the glass must have moved up at least two inches before falling to the ground. Later, a box of ten beer mugs WGR had placed as a target on the shipping desk crashed to the floor two to three feet away. Julio was five feet from the desk, walking towards WGR and away from the desk, and WGR was looking directly at him when the box came down. The only other employee present was behind WGR.

The Zombie glass and the box of beer mugs were among ten target objects that moved from an experimental area under the following conditions. Pratt or WGR had previously examined the object and the area where it was placed; one of the two had the area under surveillance from that time and until the event. One of the two went to the area immediately after each event, and before any of the employees.

Once there, they again examined the object and area. The two incidents were also among seven that occurred when Pratt or WGR had Julio in direct view. These events could not be accounted for except by macro-PK.

Mischo (1968) has suggested that the objects affected by RSPK are “substitute objects” that represent people associated with the objects. The Miami case is a good example. The events mostly consisted in the movement and breakage of merchandise belonging to the owner. According to Gertrude Schmeidler, who analyzed the Thematic Apperception Test and the Rorschach test (in this study as in most of others studies conducted by WGR), Julio regarded the owner as “phony and cheating” (Roll, 1972, p. 171). There was a subtle change during the investigation. Pratt and WGR hoped to witness the occurrences, and after a few days things began happening in their presence, often when they were looking at Julio. It seemed as if he was rewarding their attention with object-movements. The breakages would probably have continued whether they were there or not, but they would obviously not have involved the objects they set out. The meaning of the events had changed, and thereby, the course they took.

### **Olive Hill, Kentucky: Direct Observation of Moving Objects**

John and Ora Callihan had seen most of their crockery lamps, porcelain figurines and other breakables carried out as buckets of shards (Roll, 1972; Roll & Stump, 1969). The Callihans occupied a four-room house in Olive Hill, a small town in the Kentucky mountains with their grown daughter. When their 12-year-old grandson, Roger, visited to help with chores, he would share their bedroom. To escape the “raw gas” they thought caused the incidents, they moved to another house. After about a week, the occurrences started up again, and then spread to Roger’s own home. He was present during 178 of the 199 reported incidents. When John Stump, a research associate from the Psychical Research Foundation, arrived things had been quiet for two days but the next day there were more than 50 incidents. It seemed that the poltergeist liked the attention and it was not shy about performing in front of strangers.

At one point, John told WGR that he was in the grandparents’ living room looking at Roger, who was sitting with his back to the TV, when there was a loud crack. Roger jumped away and John saw a cloth doily and a large plastic bowl on the TV fall to the floor behind the set, while the plastic flowers that had been in the bowl remained. Then the flowers slowly moved off the set and also landed behind the TV. Here John found the three items arranged as before, the flowers in the bowl and the bowl on the doily. At the same time these objects moved behind the TV, a clock that had also been on the set moved forward, landing on the floor in front of John, about four feet from the TV. Two Chinese plaster of Paris figurines remained in place. John found no strings or other contrivances, and it seemed impossible that Roger or anyone else could have caused the events normally.

WGR came three days later and joined John, Roger, his parents, and younger sister at their home. Until then the object-movements had been confined to the grandparents’ home, but this changed after WGR’s arrival. Shortly after midnight Roger went into the kitchen with WGR trailing behind, when the kitchen table flew up, rotated 45 degrees and fell down on the backs of the chairs that stood around it, its four legs off the floor. When this happened, both the table and Roger were in full view. The boy had just turned around and was facing WGR when the incident took place.

WGR was quite impressed. The event took place right in front of his eyes and it was substantial. Helen Callihan, Roger’s mother, had served them coffee at the same table a short while before, and the cups and plates crashed to the floor. WGR was prepared if something were to happen. There had been several incidents when Roger was by himself so WGR stayed close by. He and WGR were alone in the kitchen, and WGR could find no contrivances to cause the event. Five minutes later Roger had gone into the living room and was facing WGR, when the coffee table behind him flipped upside down. There was no normal way for him to have done this. Beverly, Roger’s sister, was sitting next to the table in WGR’s line of vision. She might have touched it but could hardly have turned it upside down without detection. John and WGR estimated that the coffee table weighed at least 60 pounds.

Finally, when WGR was standing in the doorway between the living room and the children’s bed-

room, a bottle came off the dresser and landed four feet away. WGR was facing the dresser and saw the bottle in the air. It did not slide off and roll into the room but was clearly airborne. When this took place, Roger was walking away, but clearly within WGR's field of view in the living room. Beverly was standing slightly behind WGR on his left; there was no one else in the room. The bottle had been involved in an earlier incident that WGR had not observed. At that time WGR checked it and the dresser for mechanisms that might have been involved in a fraudulent scheme. He could discover no way in which this event could have been produced normally by Roger or anyone else in the family.

WGR speculated that Roger had been upset at spending his time with the grandparents and that this was part of the explanation for the RSPK breakages in their home. WGR thought that the increase in occurrences when John arrived, and the inclusion of Roger's own home when they were there, might have been due to the attention the investigators paid the boy. As in Miami, the presence of the researchers seemed to have changed the meaning of the events and thereby the course they took.

WGR had hoped to bring both Roger and Beverly to Duke University for psychological tests but the parents were not willing. Mrs. Callihan had formed the opinion that the occurrences were caused by a demon and that far from being helpful, John and WGR had brought the demon from the grandparents' house to her own. She said that the phenomena had to stop and that she must ask them to leave, hoping the demon would follow them to Duke. This did not happen.

### **Chapel Hill, North Carolina: RSPK in a Laboratory**

Stephen Baumann, a neurophysiologist at the University of North Carolina, was setting up tests for micro-PK at Spring Creek Institute in Chapel Hill, a non-profit company founded by researchers WTJ, Edward F. Kelly, and Ross Dunseath, all close friends of WGR and Baumann (Baumann, 1995; Baumann, Lagle, & Roll, 1985). When the equipment was ready, in October of 1984, Tina Resch was invited to participate.

The previous March of 1984, the 14-year-old had been the center of an RSPK case in which massive destruction occurred in her home in Columbus, Ohio. At first, the case did not seem promising. Before WGR arrived at her home, a TV news crew had filmed Tina pulling over a lamp, and the incidents that took place over the first three days that WGR was in the home could have been faked. But then there was a string of occurrences in WGR's presence that he could not dismiss. The first involved an empty teacup WGR had just placed on Tina's bedside table; the teacup flew 12 feet when she was in view on the other side of the bed. Shortly afterwards WGR's tape-recorder and a pair of pliers he had just put down moved several feet.

The first test of the Resch phenomena was done by an electrician (Bruce Claggett); the family had called him when lights and electrical appliances turned on by themselves (Roll, 1993). Claggett found nothing wrong and supposed that Tina had surreptitiously turned on the switches.

After WGR arrived at the home, he and Claggett did an experiment. After Mr. and Mrs. Resch had gone on an errand and only Tina and four young foster children were home, Claggett, WGR and Tina made a circuit through the ground floor of the home, turning off lights and taping down switches as they went. WGR insisted that Tina stay right beside him and not get ahead of him. She did this, and at no time was she out of WGR's sight during the next three or four circuits that were made through the home. As fast as WGR would tape light switches down, he would look over his shoulder and see the lights come on. He would look at the switch that controlled that particular light and see that there was no tape there, and yet there was no one in the house except Tina. Claggett, WGR, and four young foster kids who were playing in the family room and oblivious to what was going on at that time. (The family room was outside the circuit.) Claggett never saw a switch move. At one point WGR decided to try to catch a switch in motion. He sat in the living room observing a particular switch for 15 minutes, but nothing occurred.

It is doubtful that the focusing on light switches would have happened if Claggett had not been present; certainly his Scotch Tape would not have disappeared. It seemed that Claggett's interest in the events matched Tina's need for attention; the occurrences were meaningful to both. After Claggett's visit



there was much breakage of glass, throwing of food and flights of objects, some of these hitting Tina. The occurrences seemed to reflect her feelings about her family and herself (Carpenter, 1993). But when Claggett was with the girl, and later when she came to North Carolina, the incidents lost their angry edge. The RSPK that had been destructive in her own home in Ohio became supportive of Tina's social relationships in North Carolina.

When WGR brought Tina to North Carolina, the incidents continued in his home, at the office of Dr. James Carpenter, a parapsychologist and psychotherapist, and in the presence of another psychologist.

By the time Baumann was ready to test her, the activity around Tina had died down, except for the bending of four eating implements. To reactivate the phenomena, it was decided to use hypnosis (Stewart, Roll, & Baumann, 1987). A psychotherapist, Jeannie Stewart (now Dollar) hypnotized Tina in the garden of WGR's home in Durham where she was staying. Stewart was counseling Tina and also participated in the research. The focus of the procedure was to evoke the bodily sensations associated with the occurrences. When Stewart asked Tina to recall an RSPK episode and pay attention to the way her body felt, Tina said her head and stomach hurt, as they had during the RSPK events, and Stewart suggested that the sensation in the stomach could be one of warmth and that instead of the headache there would be a sense of excitement. When Tina said she felt the warmth, Stewart asked her to visualize the movement of one of the objects that had been placed on a table. Four were the eating implements she had bent at home and the others were personal items. Nothing happened and they got up to get a drink. As they walked towards the house, one of the spoons fell to the ground. Stewart was not watching the girl so it was possible she had thrown it.

After having checked that all objects were on the table, Stewart had Tina walk in front of her as they started the walk to the kitchen again. As the girl approached the door, a deodorant stick moved to the ground six feet from the table. Stewart was watching Tina and saw no unusual movements. Next a spoon moved three feet when Tina was inside the house with Stewart. Finally, when Tina once again was walking from the table to the house, Stewart saw something hit Tina's head and found the fork on the ground. Tina cried, "stop hurting me," and flung the fork away.

The question in WGR's mind when he brought Tina to Spring Creek Institute was whether PK could be used as an adjunct to medical treatment. Baumann (1995) did two tests with Tina; in one she tried to influence electric discharges (action potential) of a nerve cell preparation, in the other she tried to change the resonant frequency of a piezoelectric crystal. These materials are found in the tissues and bones of the human body. The results were promising but there were problems in the test procedure that made them difficult to evaluate.

The RSPK continued at Spring Creek Institute during breaks in the tests with the nerve cell and the crystal. Tina was evidently able to control the timing of the events as well as the targets. The PK machines and computers were spared, the occurrences being restricted to tools and unbreakable laboratory equipment.

Because Tina had a degree of control over the occurrences, albeit unconscious, a table was set up with PK targets. If any of these moved, Baumann and WGR would know exactly where the objects in question originated. As a further record, WGR focused a video camera on the table. He had tried to film the occurrences in Tina's home, but the activity stopped when the camera was operating. It seemed that the best chance of recording a moving object was to use a concealed camera so Tina would not know she was being filmed. Baumann, however, felt it was unethical to film without Tina's permission; when she was informed, she gave her permission but the activity ceased. The occurrences resumed after the camera had been dismantled.

Tina was not allowed near the target table; otherwise her movements during the rest periods in which the macro-PK occurred were not restricted. When there was a sound of an object hitting the floor, everyone froze in their positions so that these could be recorded. The heaviest object to move was a 12-inch crescent wrench that had been inside a closed tool box near the target table. While Stewart and Baumann were standing between Tina and the target table and facing her, there was a loud noise from down

the hallway behind the girl. The wrench from the tool box near the target table had smashed against the open door to a second laboratory room, several feet behind Tina, and landed inside. An indentation on the door showed the point of impact. After passing Baumann, WGR, Stewart, and Tina without notice, the wrench had traveled 18 feet down the narrow hallway, took a curved path to enter the open door of the laboratory and then moved another four feet after hitting the open door. It was a powerful flight.

WTJ and one of his graduate students (Randall Takemoto-Hambleton) were assembling a piece of equipment in the second laboratory room during the flight and crash of the wrench. WTJ was facing a glass window on the hallway that ran the full length of the laboratory wall. He observed some movement through the window to the hallway just before the wrench crashed into and bounced off the opened door, but that could easily have been reflection off the glass. The flight of this wrench was most impressive: It came from a closed tool box in one laboratory room and traveled approximately 25 feet along a zigzag path to a second laboratory. To get out of the tool box and travel unobserved by several alert observers may be a case of what Hans Bender refers to as “the penetration of matter through matter” and travel through a higher dimension (Bender, 1969).

A bit later that day, as Randall was walking down another long hallway to leave Spring Creek Institute, he observed that Tina and Stewart were also leaving and walking down the same hallway some 30 feet behind him. Just then he heard a loud crash behind him, and he turned to observe that a fire extinguisher had jumped from its moorings on the wall to crash onto the floor midway between him and Tina. Randall did not see how this could happen by any normal means. It is noteworthy that Randall and Tina had had a lively and friendly conversation earlier in the day. It could be that the wrench and fire extinguisher occurrences had to do with Tina’s need for attention and her positive connection with Randall.

Most of the targets at Spring Creek Institute were too small to cause damage. WGR was seated at the target table when a small plastic level disappeared without notice. It evidently moved down the central hallway, making two turns and traveling about 38 feet to the room where Stewart and Tina were standing. Stewart heard a sound behind them and found the level on the floor. When this happened Tina had both hands in her purse searching for her plane ticket. Another time WGR was sitting at the table and watching Tina seat herself by the window, when a battery hit the window above her head. Stewart sat opposite Tina and also had her in view. A minute later, when they were in the same positions, an “L” bracket hit the window. Both were PK targets. Tina then went to the door of the room, and was standing quietly with her back to the room when Stewart and WGR heard a sound and found a drill bit from the table on the floor about ten feet away. When this happened WGR was watching Tina; she was standing quietly with her hands resting on either side of the door frame, looking out. Altogether, there were 21 movements of objects when Tina was under observation, of which eight came from the target table.

### **Zero-Point Energy**

In each of the three cases, the number of object movements decreased with distance from the agent. Taking the agent to be the origin of the force or signal affecting the objects, this force or signal appeared to be attenuated in the empty space between the agent and the objects.

In WGR’s attempt to understand psi phenomena, he speculated (Roll, 1964) that an object is associated with a “psi field” which interacts with the physical component of the object and also with the psi fields of other objects, thereby resulting in ESP and PK. The psi field of an object, which could be animate or inanimate, contains information about the object and is also a source of energy that may affect the psi fields of distant objects and thereby their physical condition.

More recently (Roll, 1977, Roll & Persinger, 1998), WGR proposed that RSPK may be due to electromagnetic energy from the agent which is converted to the kinetic energy of object movements. He speculated (Roll, 2000) that the process may involve the suspension of the earth’s gravitational field in proximity to the agent. Since then we have also learned about an electromagnetic medium that fills space and could interact with gravity and inertia.

According to Hal Puthoff (1997a, 1997b), a physicist and parapsychologist, empty space is not

truly empty but is filled with zero-point energy (ZPE), which remains active at absolute zero temperature (-273.15 degrees Celsius) where all thermal effects are frozen out. For example, as the temperature is lowered to absolute zero, liquid helium remains a liquid rather than freezing to a solid, due to the remaining ZPE. To cause helium to freeze requires the removal of additional energy equal to 25 atmospheres of pressure. Puthoff's main concern has been to develop a technology to mine ZPE as a non-polluting and renewable source of energy for space travel. For our purposes, his most interesting proposal is that the ZPE may furnish a mechanism for RSPK through the interaction of ZPE with gravitation and inertia (H. E. Puthoff, personal communication, February 8, 2001).

Inertia, the resistance of an object to acceleration, is a familiar phenomenon but lacks a scientific explanation. Puthoff (1997a) regards inertia as a product of the ZPE. The phenomenon, Puthoff explains, results from acceleration of an object relative to the fixed stars. The resistance or drag is delivered by the pressure of ZPE that fills the space between us and the stars. The inertial mass of an object on earth would result from the mass and position of all the matter in the universe. This is known as "Mach's Principle," after the Austrian physicist and philosopher of science, Ernst Mach (1838–1916). This principle was the advent of quantum theory that established the vacuum as an active place, with particles and fields continuously fluctuating about their baseline values (see also Gribbin, 1984, 1995).

If in fact the conscious or unconscious intentions of a person, such as an RSPK agent, may interact with the ZPE, then this implies that the vacuum has a consciousness component or receptor. Puthoff adds, "The question you raise—How does one cohere the ZPE to produce effects?—remains a mystery; we only know that if you can do it, the effects would follow easily, as the energy available is potentially more than enough to account for the observation" (H. E. Puthoff, personal communication, February 8, 2001). The reference here is again to Mach's Principle and the supposition that a coherent message or signal conveying mass and position may be sent via the vacuum fluctuations between objects in the universe.

Puthoff's ZPE theory could further the understanding of RSPK in several respects:

1. If space is not truly empty but filled with energy, there would be a connection through this field of energy between the agent and the objects that the agent seems to affect. The agent, and the rest of us as well, would literally be "in touch" with all objects in the universe.
2. If ZPE represents a source of energy that the RSPK agent taps into, the agent's role would not be to generate the energy for RSPK, but to make coherent the random fluctuations of ZPE and thereby diminish the effect of inertia and gravity (the quantum state) that ordinarily keeps an object in place. The short duration of most RSPK occurrences suggests that coherence is sustained only very briefly. (When there are sounds not caused by object-movements, they are usually percussive rather than sustained.)
3. Again with reference to Mach's Principle, if the agent manipulates ZPE and thereby produces a coherent message or signal directed at a physical object, the process may be attenuated by the random ZPE fluctuations that surround the agent and the object, thereby resulting in the attenuation of RSPK. ZPE at the same time would provide the energy for RSPK and also result in the attenuation of object movements with distance.
4. The selection of objects that are targeted in RSPK would be determined by their quantum informational components and the mind of the RSPK agent. For instance, objects that represented individuals with whom the agent has a tense relationship would be more likely to become RSPK targets than other objects.

### **Psi Waves and the ZPE**

RSPK usually includes movements of objects that occur in the presence of someone, typically a boy or girl in their early teens (Roll, 1977). If this person is absent or asleep, the occurrences usually cease.

If trickery and errors of perception have been ruled out, as has been done in most instances, the investigator is left with the fact that household objects, from drinking glasses and decorative items to heavy

pieces of furniture, move without tangible contact. With such obvious effects there should be an obvious cause. But we could find no evidence of a force that seemed strong enough for the observed effects.

The search has not been entirely fruitless. One of the first things we have noticed about RSPK objects is that they usually belong to, or are associated with, individuals with whom the agent has an intense emotional relationship. This is usually negative but can also be positive. When the occurrences were investigated in Miami, Olive Hill, and at Spring Creek Institute, they often took place when we were observing the agent. It seemed that our attention was a catalyst for the incidents.

A second major feature of RSPK is the attenuation in the number of movements with increased distance from the agent. (Because it is difficult to locate the source of sounds, it is not known whether they follow the same trend.) We have also examined the directions and lengths of movements in relation to the position of the agent in Miami and Olive Hill (Roll, Burdick, & Joines, 1973, 1974). The data seemed to suggest a beam of energy that rotated around the agent. However, when we made a similar study of the object-movements associated with Tina Resch (Roll, Burdick, & Joines, 1999) there was no evidence at all of this pattern. We have no explanation for the discrepancy between the three cases.

A third feature of RSPK is object or area focusing. Certain objects such as a specific piece of furniture, types of objects such as bottles, or areas in the house such as a particular room, are repeatedly affected (Roll, 1977). There were some hints in our research about the type of energy that might be involved. A likely candidate could be subconscious focusing of intent or emotion by the RSPK agent on test subjects, with concomitant electromagnetic radiation in the invisible ultraviolet range of wavelengths (Joines, Baumann, & Kruth, 2012).

The onset of RSPK tends to coincide with disturbing events in the life of the agent such as illness or change of residence (Roll, 1977), and with increases in geomagnetic activity (Gearhart & Persinger, 1986; Roll & Gearhart, 1974). The geomagnetic perturbations, however, seem much too weak to provide the necessary energy. Furthermore, the RSPK usually continued after the geomagnetic field had returned to normal. It seems that a perturbed geomagnetic field could act as a trigger for the initial events but the energy that brings on the occurrences comes from another source. It is quite possible and logical that an increase in geomagnetic activity could change the sensitivity level of the RSPK agent and thus encourage the onset of RSPK activity where otherwise the activity may not occur. Puthoff (2001) suggests that the geomagnetic activity disturbs homeostasis of the normal process so that the function leading to RSPK "can break out of otherwise constraining bounds." The same may apply to local electromagnetic anomalies that have been found at some RSPK sites (Roll & Persinger, 1998).

The brains of RSPK agents may be prone to electromagnetic discharges (Roll, 1977). About a fifth of known RSPK agents show symptoms that suggest complex partial seizure (CPS) which may be due to recurrent electromagnetic discharges. WGR suspected that if the central nervous system of RSPK agents were suitably monitored at the time of RSPK incidents, electromagnetic spikes would be recorded. Although such spikes or signals seem much too weak to affect objects in the environment, they could be examined for correlation with local geomagnetic activity.

WGR suggested (Roll, 1964) that PK and ESP may be understood in terms of "psi fields" that surround animate and inanimate objects. Psi fields have psychological and physical properties and connect people with distant objects thereby accounting for psi phenomena.

WTJ (Joines, 1975; see also Roll & Persinger, 1998) has extended this line of thinking in his proposal that psi energy, like electromagnetism and sound energy, is transmitted in waves. Thus, psi waves are related to physical energies but also have a psychological component. If psi waves represent a new form of energy, there may be no equipment to measure them directly. This may not be an insurmountable obstacle; the same process that generates a psi wave, WTJ suggests, may cause an accompanying electromagnetic wave, which can be measured. As an illustration of a process in which one form of energy is the source of another form, WTJ mentions a tornado which is produced by thermal processes and which generates an electromagnetic wave at specific frequencies due to the swirling electrical charges within the funnel. This wave can be used to detect the approach of a tornado.



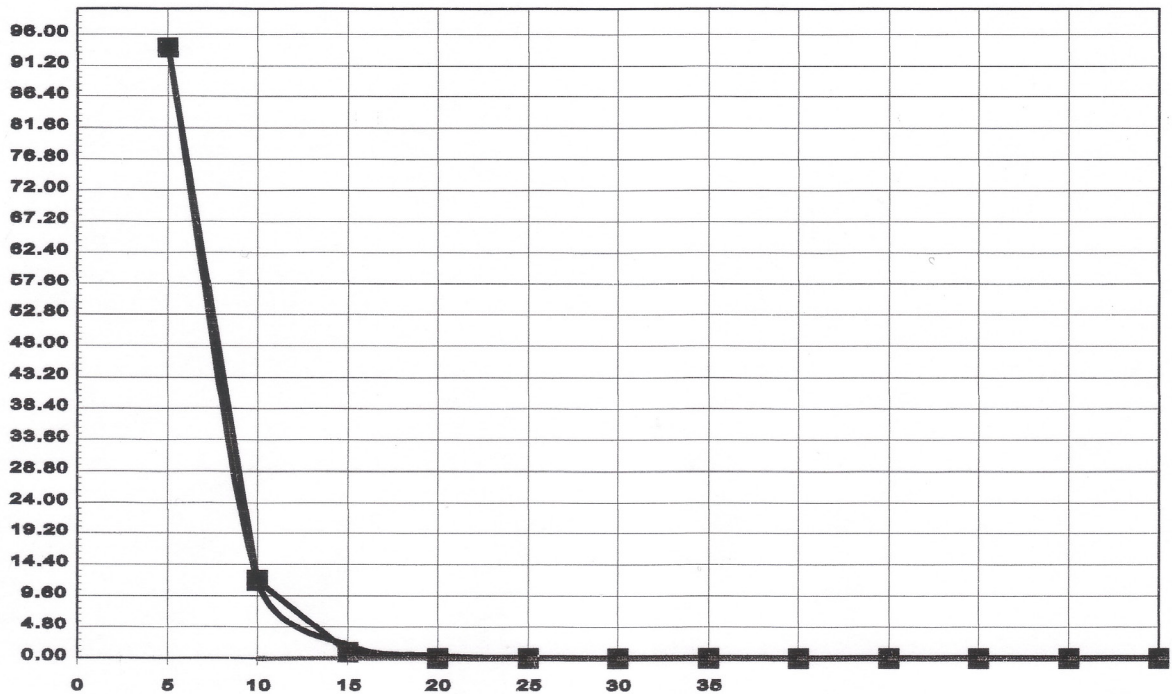


Figure 1. Miami Case: Number of Occurrences versus Distance from Agent Fitted to  $(350/D)EXP(-D/15)$

If a spherical concentration of psi energy contains electrical charges as does a tornado, the region would behave as a tuned electrical circuit and would radiate at a frequency depending upon the size of the spherical region. During an RSPK investigation, WTJ (Joines, 1975) detected a spherical region of space which emitted radiation at a frequency of 146 MHz. This detection was made on two separate occasions using a hand-held radio receiver. The region was about two feet in diameter, which is consistent with the resonant volume that would produce the 146 MHz frequency; and the transmissions persisted for about one minute. Such a concentration of electromagnetic energy of this type lends support for the concepts of both ZPE and psi waves.

A similar observation (Morris, Harary, Janis, Hartwell, & Roll, 1978; Roll, 2000) was made during an out-of-body study at the PRF in which Keith Harary attempted to affect the behavior of a cat one quarter of a mile away. MHz frequencies were measured on six occasions at this site. During one of the trials, a 145 MHz activity lasted almost exactly the duration of the OBE. On four occasions there was an increase in already-present MHz activity during experimental versus control periods, twice at 160–165 MHz and twice at 190 MHz, and in one trial there was no MHz activity during either period. The similarity of most of these values to WTJ's observation is suggestive.

Although WTJ's idea made WGR feel that he was seeing the light at the end of the tunnel, the question remained how a sufficiently intense psi wave to account for object-movements could be generated. The answer may be coherence of the ZPE due to the intense emotions that seem to be associated with RSPK. For example, a small signal of information may organize and generate a large source of energy.

In the light of this possibility, WTJ has analyzed the attenuation effects in the Tina Resch, Miami, and Olive Hill cases. These three cases are the strongest in terms of evidence for RSPK of those that we investigated. In previous analyses of the three cases (Roll, Burdick, & Joines, 1973, 1974, 1999), we found that an exponential decay curve fit the data points better than an inverse distance curve. WTJ has recently reexamined the three cases in the light of the ZPE theory. According to this analysis, the best fit of the data points in the Miami and Resch cases (see Figures 1 and 2) is provided by a product of an exponential decay curve and an inverse distance curve. The equation WTJ used for both cases is:

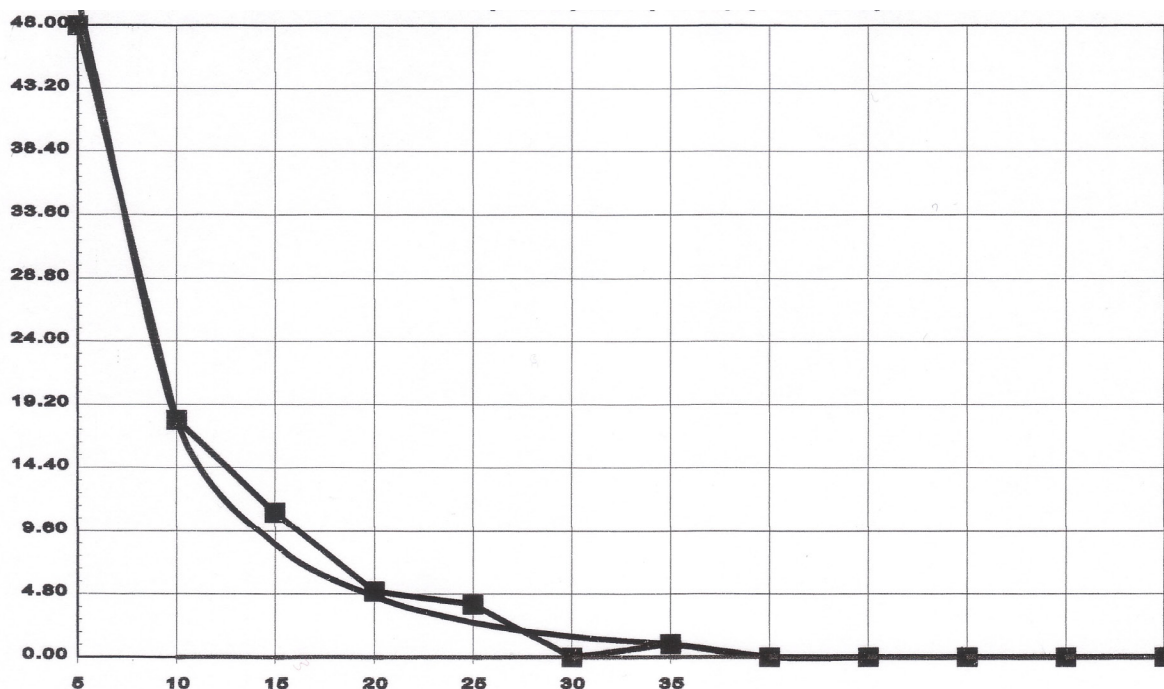


Figure 2. Resch Case: Number of Occurrences versus Distance from Agent Fitted to  $(350/D)EXP(-D/15)$

$$N = (350/D)EXP(-D/15)$$

where N is the number of occurrences and D is the distance in feet from agent to event.

The Olive Hill case (Figure 3) had only four points of distance (D), but the number of occurrences again fitted nicely to the same type of curve with different constants. That equation is:

$$N = (1843/D)EXP(-D/3.66)$$

These results are interesting because electromagnetic field intensities propagating outward from a source have this same type of dependence upon distance. If this were an electromagnetic wave, the  $350/D$  and  $1843/D$  terms would account for the spreading of the field intensity as the wave propagates outward from the source, and the  $EXP(-D/15)$  and  $EXP(-D/3.66)$  terms would account for the attenuation caused by the medium through which the wave propagates. It is a tantalizing coincidence that the Miami and Resch data points in Figures 1 and 2 fit exactly the same equation with the same constants.

Electromagnetic waves are similar to acoustic waves in that they are described by the same equations. For each type of wave the product of frequency (number of wave oscillations per second) times wavelength (distance between peaks of the wave) equals the velocity of propagation. The acoustic or sound wave cannot propagate through a vacuum. It requires a material, such as water, air, metal or wood, through which to propagate. However, an electromagnetic wave propagates quite well through a vacuum.

A vacuum has no mass and no net electrical charge. A propagating electromagnetic wave relies upon the concept of equal and opposite charge oscillating along with the electromagnetic field intensity. The electric field intensity is a vector beginning on a positive charge and ending on a negative charge. The vacuum may contain the equal and opposite charges, but they must have either no mass, or the mass of one charge must be the opposite of the other. The electric field intensity is polarized in a direction perpendicular to the direction of propagation and the polarization changes sign as the field oscillates through zero to reach a maximum in the opposite direction. This vacuum fluctuation about a zero point is the ZPE

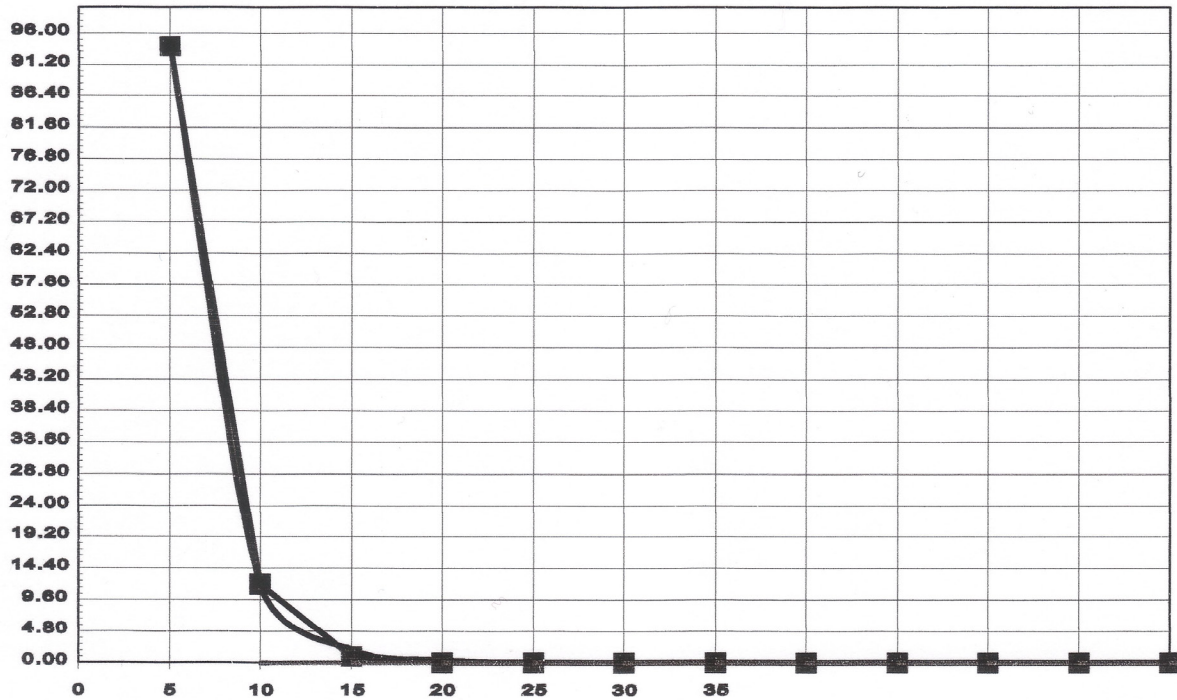


Figure 3. Olive Hill Case: Number of Occurrences versus Distance from Agent Fitted to  $(1843/D)EXP(-D/3.66)$

fluctuation, and it has been suggested as the means by which an electromagnetic wave propagates.

Our theory is the psi wave contains coherent information signals from the mind of the agent that is guided through the ZPE to the target. At the target the psi wave signals interact with the ZPE within or around the target such that a directed force is generated that moves the target object to its destination. We do not know exactly how the psi wave (which may be electromagnetic) interacts with the ZPE within or around the target, but consider the following: The stable state of an object can be determined by solving Schrodinger's wave equation. In the solution there appear four quantum numbers that determine the stable state of the object in that particular location. If any one of these four numbers is changed the object may have to move to another location to be stable. One of these numbers has to do with the spin orientation of an electron (clockwise or counterclockwise). It would seem that just a small amount of signal energy at the right frequency could change the electron spin. (The psi wave, or electromagnetic wave, from the agent could be at just the right frequency to induce electron spin resonance.)

### Observer Participation

Puthoff (1999) has drawn attention to another physical theory in which consciousness or information is central to physical reality. Roy Frieden (1998) has derived most known physics—from statistical mechanics and thermodynamics to quantum mechanics, the Einstein field equations, and quantum gravity—from a new theory of measurement which incorporates the observer into the phenomenon that he or she observes. "The 'request' for data creates the law that, ultimately, gives rise to the data. The observer creates his or her local reality" (p. i). The theory is not an outgrowth of quantum mechanics but of the work of R.A. Fisher, the British statistician. "Fisher information," written "Fisher  $I$ ," is a "kind of 'mother' information" (Frieden, 1998, p. 32–33).

In a review of Frieden's book, Robert Matthews (1999) draws on other sources to outline Frieden's thesis. Frieden's search for the best possible description of physical phenomena focuses on information obtained from nature through observation and information that nature has but which is difficult to obtain.

The two types of information are designated *I* and *J*. *I* is Fischer's information obtained from observation and *J* is the quantity of information presented by the phenomenon measured. The purpose of physics is to extract as much as possible of *J* by measurements that take the form of *I*. In other words, we want the information difference, *J* minus *I*, to be as small as possible.

It turns out that for this difference to be as small as possible, the phenomenon must obey a differential equation. Differential equations are formulae showing how the rate of change of a certain quantity is affected by outside influences. For instance, Newton's second law of motion relates the acceleration of an object to the force applied:  $F = ma$ , that is, force equals mass times acceleration. Acceleration is the rate of change of velocity, which is the rate of change with distance. Also, Maxwell's differential equations show that a time-varying magnetic field generates an electric field, and a time varying electric field generates a magnetic field, and both fields initially arise from external sources of charge and current. Similar formats show up across all of physics.

From a psychological perspective, you could say that *I* is knowledge of which the observer is aware; it is *conscious* knowledge. On the other hand, *J* is knowledge of which the observer is unaware; it is unconscious knowledge.

By incorporating the observer into the phenomenon under measurement, "the observer becomes both a collector of data and an activator of the physical phenomenon that gives rise to the data" (p. 1). The same idea has been stated by J. A. Wheeler (1990): "Observer participancy gives rise to information; and information gives rise to physics" (Quoted by Frieden, 1998, p. 1.). The equating of perception with reality has been voiced in different terms by the British philosophers, George Berkeley (1710/2008), Bertrand Russell (1926), and H. H. Price (1940).

Frieden "... regards reality as being perpetuated by requests for knowledge. ... Observer participancy ... adds a new, creative dimension to the nominally passive act of observation" (p. 108). He draws a distinction between his concept of creative observation and logical positivism. While logical positivism holds that all statements other than those describing or predicting observations are meaningless, Frieden goes a step further by stating that the observations are themselves meaningless except insofar as they create local physics. Observation, and the information to which it leads, is an energetic exchange between observer and object, it is "... a physical entity that ... can be transferred, or can 'flow,' from one system to another ..." (p. 106).

Frieden's (1998) approach leads to the assertion that "... *the meaning* of the acquired data to the observer" (p. 235) affects the observation. His account is thereby "knowledge based" as well as physical. Stated succinctly, "*acquired knowledge reflects physical state as well*" (p. 236).

This is where Frieden becomes really interesting. When you bring in acquired knowledge you bring in the history of the observer, including the individuals who imparted the knowledge to the observer. In addition to cognitive knowledge that can be expressed by the equations of physics, knowledge has an emotional aspect that infuses observation with energy. Frieden does not deal with the emotional aspect of observation; but emotion undoubtedly affects observation, the observations by physicists and the observations by lay individuals. Following Frieden's approach, we would expect that the emotions of the observer would affect local reality. This is what we see in RSPK.

According to Frieden, "making a measurement is a quantitative way of asking a question." He adds, "It is interesting to consider whether asking a qualitative question, as well, leads in some sense to a physical phenomenon" (p. 108). Continuing along this line of inquiry, the question arises whether the observations and actions of daily living create the reality we inhabit.

Frieden (1998) says that insofar as "the observer is part of the observed phenomenon ... a full quantum treatment of the data collection process should include the observer's internal interactions with observed data values. This would require at least a five-dimensional analysis of the measuring apparatus and the observer as they jointly interact: four-dimensional space-time, plus one 'reading' internal to the observer" (p. 252). The "internal 'reading'" presumably refers to the meaning of the acquired data to the observer.



Because Frieden opens the door to five-dimensional analysis, there are a few RSPK reports in which the object movements invited a five-dimensional analysis. Bender (1969) described how a lawyer who had taken an interest in RSPK—his office was the scene of the Rosenheim events—did an experiment in the home of a family in Nicklheim where RSPK was reported in proximity to the 13-year-old daughter. The family had told him that objects would disappear from the home and then fall to the ground outside. The lawyer placed a bottle of perfume and a bottle of tablets on the kitchen table, asked the family to go outside, then closed all windows and doors and went outside himself. “After a short time, the perfume bottle appeared in the air outside the house, and a bit later on, the bottle of tablets appeared in the air at the height of the roof and fell to the ground in a zigzag manner” (p. 96). Referring to different dimensions Bender noted, “Clearly, no room is closed if an object can take a trajectory in higher space. It will, in addition, appear or disappear instantaneously” (p. 101). Owen (1964, p. 294ff) explored the idea of higher space for similar reasons.

Also, an incident in the Resch home is suggestive of a five-dimensional analysis. Mrs. Resch told WGR that she was making breakfast one morning when the eggs flew up from the carton and smashed against the ceiling. To preserve those that were left, she asked Tina to put them in the refrigerator. When the girl had done so and closed the door, Mrs. Resch said, the eggs continued to come out and smash. She did not see them come out, but Tina claimed she saw an egg penetrate the door. The event is of little evidential value but is reminiscent of other RSPK cases in which objects were reported to move out of or into closed space.

Speaking of RSPK, Bender (1969) found “psyche and matter . . . so inseparably entangled that the discrimination between an external (physical) and an internal (psychological) aspect might . . . be an inadequate way to grasp what essentially happens.” (p. 100). This is true also of ordinary experience. In addition to their sensory side, objects have the quality of meaning. We pay attention to things because of their importance to our lives, not because of their sensory qualities; or more accurately, we pay attention to the sensory aspects of a thing because of its meaningfulness. In extrasensory perception in which the sensory aspect of the object is missing, its meaning may be apprehended. The same may be true for subliminal sense perception (Dixon, 1979). From a psychological perspective, objects are not only material, they have a meaning component. Note that the term is used in a cognitive/informational sense and a conative/energetic sense. It is the meaning of things that determines our movement in four-dimensional space-time, that makes us approach some objects and spurn others. Emotion moves us mentally and physically. If matter and meaning are connected it does seem possible that emotion may move things out of view, into space-time. Consider memory. To remember is to bring a mental object, like an image or emotion from the past into the present; to forget is when a mental object is left behind. If we suppose that the memory/meaning of a physical object is part of the object, the object too may disappear when it is repressed or forgotten.

In studies of PK in which the participants’ task was to affect random physical processes, Robert Jahn and his associates (Jahn et al., 1997) found that subjects who were far removed from the machines were as successful as when in the same room. This would make sense if the intent of the subject as contained in the psi wave is aimed for the target at its particular location. The successful participants spoke of “some form of bond or resonance with the device, akin to that one might feel for one’s car, tools, musical instruments or sports equipment” (p. 359). This emotional bonding or resonance with an object would seem to support Bender’s finding in the previous paragraph.

The RSPK agent is usually unaware of playing any role in the object movements, percussive sounds and other unusual occurrences of which he or she is the center. If we compare this situation to ordinary behaviors, in these too the person is unaware of the (physiological) processes that result in a certain act, but the person is usually conscious of having caused the act, or at least can be made aware of having done so. In RSPK, on the other hand, the person is typically unaware of contributing to the event in any way at all. There are accounts of individuals, such as D. D. Home (Crookes, 1889) and Matthew Manning (Owen, 1978), who have advanced from RSPK agents to subjects in tests of macro-PK in which they were evidently able to exert some degree of conscious volition on the events. Small groups of people who have

no history of RSPK but met regularly for the purpose of generating macro-PK have also reported success, including RSPK-type effects (Batchelder, 1966; Brookes-Smith, 1973; Brookes-Smith & Hunt, 1970; Owen & Sparrow, 1976). It appears that the conscious exercise of macro-PK is not in principle beyond voluntary control.

RSPK is a vivid illustration of the difference between Fisher's *I* type of observer participancy that represents the familiar object and the unknown *J* that is concealed in the object. If the object is a figurine that has just moved, the *I* would include the observation that it is made of porcelain and has certain colors; and the *J* would include the factors that caused the figurine to move, that is the factors that the researcher is seeking to understand, such as the apparent emotional significance of the figurine to the agent, the process that transforms emotion to motion, and so on.

Perception is usually limited to what the biological organism and its brain allows us to perceive, and what it allows us to perceive is what's biologically useful or at least not harmful. What remains unknown in the perceived object (*J* in Frieden's sense) includes knowledge that is repressed from consciousness. This would be knowledge or information that is stored in the object, repressed from consciousness, but known subconsciously by the person. This information is therefore ignored, that is, it remains unconscious. A change in the observer's value system from "personal" to "transpersonal" may widen the interaction between observer and object so that more of the unconscious becomes conscious (or more of the *J* becomes *I*). The unconscious in this case would include information acquired by the observed object. The subconscious information (*J*) in the mind of the observer becomes conscious (*I*) in the observer and his perception of the object.

Frieden does not deal with the emotional-energetic component of objects; this belongs to the realm of *J* as far as most physicists are concerned, but emotion shows itself when objects that have an emotional charge are affected in RSPK. Along with other psi phenomena, RSPK may help to unearth the *J* information that is concealed in the physical environment.

### Discussion

In the course of our explorations into RSPK, the movement of large-scale physical objects without tangible contact, we thought that these obvious physical effects must be due to an obvious energetic source. Our investigations, however, have only suggested weak electromagnetic emissions from the agent and possibly weak geomagnetic perturbations at the onset of the occurrences. At the same time, the RSPK agents showed strong emotion, but we knew of no process that could transform emotion to motion except within the body. Puthoff's concept of the vacuum as a plenum of energy and information/consciousness that interacts with inertia may be such a source.

Frieden does not deal explicitly with psi, but his concept of observer participancy has the effect of viewing psi on par with other occurrences in nature. If observation affects the energetic and informational components of its object, other observers may be affected by the prior perception. The assumption is made that the meaning an observer attributes to an object does not vanish when it is no longer in the sensory field. You could say that Frieden regards the environment as an extension of the observer. If the observer packed sufficient energy, there would be no conceptual obstacle to RSPK. Other forms of macro-PK, including RSPK, would be an intense form of observer participancy. "Meaning" is another term for information-emotion-energy. Objects, you can say, are endowed with two types of meaning, the meaning attributed to the object by its present observer, and the meaning the object has acquired from observers in the past. The former meaning is overt (Fisher *I*), the latter usually concealed (*J*).

Also, after many RSPK disturbances have occurred the object movements appear to be more purposeful and less destructive. This is consistent with transferring subconscious information (Fisher's *J*) to conscious information (Fisher's *I*). Both RSPK and PK have the element of intent or motivation that is mostly hidden in the subconscious for RSPK (Fisher's *J*) and is mostly overt in the conscious for PK (Fisher's *I*).

The theory that the observation of an object affects the object may be expressed in predictive

hypotheses that can be tested against past and future tests. For instance, in a typical test of ESP, in which the sensory components of the object are absent, the participant may be able to interact with its information-energy components; in brief, with its meaning. An object's meaning in turn would be provided by the participant, the experimenter and others connected with the test. Observer participancy implies the experimenter effect that has been seen time and again in psi studies.

Here we must bring in psychometry, the practice in which an object is used to evoke images of past events of which the object was part. In psychometry, information acquired by the object in the course of past observations is evidently accessed by a present observer. Psychometry is widely practiced by psychics who are working for the police in solving crimes or locating lost persons (Duncan & Roll, 1995), but it is almost untouched by present-day researchers. In one of the early psychometry tests (Roll, 1967), the participant described impressions about pumice stones that had been cut into similar shapes and then exposed to different treatments (such as being placed in a refrigerated solution or in a wall clock). The participant reportedly gave appropriate responses in all instances (e.g., "I feel a sensation of intense cold, in the tips of my fingers," or, "[I hear] the tick-tock of a watch. There seems to be a church in the vicinity as I hear the sound of bells.") This would be consistent with observer participancy. If observation interacts with its object, it is no longer the same object after it has been observed.

Observation participancy may aid the understanding of common psi occurrences, such as clairvoyance in which there is no "telepathic sender" and the object's known sensory stimulating properties—such as the capacity to reflect light—are unavailable, and if the operational target is not the object's sensory stimuli but its information-emotion-energy, then it makes sense that this could match the information-emotion-energy of the subject.

As regards RSPK, we see that the object is a focus of attention because of its intense meaning. Because observation is a psychological process, the phenomena should not only reflect the laws of physics, but psychological laws as well, and this is what we find in RSPK. If perception creates the data, we would expect these to reflect the intentions of the perceiver and others connected with the study. This would apply also to observations by physicists. It is interesting that in physics experiments in which there is no tangible contact between observer and object, it does not seem possible to distinguish between observer participancy and PK.

### **Predictions**

In future studies of RSPK in which the distances between agent and objects are measured, we would expect the data to fit a product of an exponential decay curve and an inverse distance curve, as shown by WTJ in the present paper. This is what happens with an electromagnetic wave and a sound wave.

In future studies, the weights of objects that moved should be measured. We would predict that the product of object weight times distance moved—the work done or energy expended—would fit the square of field intensity versus distance from the agent.

### **Therapeutic Intervention**

People who experience RSPK are often concerned about three things: the destruction and upheaval resulting from the RSPK, worry that their home or business has been invaded by demons, and how to stop the turmoil. We know enough to assure people that they are not contending with demons but that the phenomena are likely due to stress involving the agent and others and that the best recourse may be therapy to relieve the stress. At the same time, the agent may be offered the opportunity to take part in tests of macro-PK in which the stress would be replaced by the excitement of testing. The possibility that RSPK could aid scientific research may remove its negative connotations. It should also be made clear to the people that RSPK rarely lasts more than a couple of months (Roll, 1977) and may be terminated sooner if the agent or others in the primary social group move from the area.

Myers (1903), one of the principal founders of parapsychology, postulated a “metetherial environment” as a world where life and thought are carried on apart from matter (pp. 215–218). The metetherial environment is equivalent to the “subliminal self” where the self extends beyond the borders of the familiar, waking or “supraliminal” self. Myers thought that the metetherial environment might be continuous with the ether. The ether has been replaced by such concepts as the ZPE. If we follow Puthoff, the ZPE has energetic as well as consciousness components, not unlike Myers’ metetherial environment.

If a message may be sent from agent to object via the ZPE by causing the random fluctuations to become coherent, then such practices as meditation, yoga and biofeedback that facilitate the “one-pointedness” of consciousness may result in the coherence of the ZPE, which in turn may lead to voluntary macro-PK.

If the issue is approached in terms of Frieden’s observer participancy, relatively little of the ZPE is known (the ZPE is mostly *J* rather than *I*). The exploration, moreover, is mostly focused on the energetic aspects of the ZPE (e.g., Chan, Aksyuk, Kleiman, Bishop, & Capasso, 2001; Puthoff, 1997a, 1997b). However, if a conscious or subconscious component from the psi wave extends into the ZPE, scientific observers who are able to enter altered states, as in Tart’s (2000) proposal of “state-specific sciences,” could play a significant role in elucidating this aspect of nature and human nature.

The all pervasive nature of both RSPK and PK occurrences demonstrate that the life energy within or around us, that we may come to understand more fully and tap into, has a greater potential for our use than we have yet realized.

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### Acknowledgements

Comments supplied by the two referees for this manuscript were very helpful and much appreciated. Also, we acknowledge with gratitude the fine editorial aid provided by our colleagues, Carlos S. Alvarado, Nancy L. Zingrone and John Palmer. This work was supported in part by the Psychical Research Foundation.

### Abstracts in Other Languages

#### Spanish

#### RSPK Y CONSCIENCIA

RESUMEN: Revisamos algunos casos importantes de RSPK y discutimos conceptos teóricos físicos que pueden explicarlos. Un problema central para el investigador de RSPK ha sido identificar la energía que causa los movimientos de los objetos. Como primer paso en la comprensión de RSPK, Puthoff propuso que el agente hace coherentes las fluctuaciones aleatorias de la energía de punto cero (ZPE), un pleno de energía electromagnética que llena el espacio e interactúa con la gravitación y la inercia. Joines sugirió

previamente que el proceso RSPK implica ondas psi desde el agente. El concepto ZPE completa la propuesta: Las ondas psi producen una señal coherente dirigida a un objeto físico y la ZPE proporciona la energía para RSPK. Considerando la teoría ZPE, Joines analizó los efectos de atenuación en los casos Miami , Olive Hill, y Tina Resch . La mejor explicación está basada en el producto de una curva de decaimiento exponencial y una curva de distancia inversa, lo que sugiere que la ZPE puede ser la conexión entre las ondas psi y las ondas electromagnéticas . La teoría de Friedan, presentada en su libro *Physics de Fisher Information* , tiene implicaciones para la comprensión de cómo RSPK y la información psi pueden ser adquiridos por los objetos físicos , incluidos los observadores humanos y la información que puede ser interpretada como una entidad física que puede fluir de un sistema a otro.

*French*

## RSPK ET CONSCIENCE

RESUME : Nous passons en revue certains cas de RSPK et nous discutons des concepts de physique théorique qui peuvent rendre compte de ces phénomènes. Un problème majeur pour le chercheur en RSPK est l'identification de l'énergie qui cause les mouvements des objets. Une première étape pour comprendre la RSPK, Puthoff a proposé que l'agent rendait cohérent les fluctuations aléatoires de l'énergie au point zéro (ZPE), un plénum d'énergie électromagnétique qui remplit l'espace et interagit avec la gravitation et l'inertie. Joines a auparavant suggéré que le processus RSPK impliquait des ondes psi de la part de l'agent. Le concept de ZPE entre dans ce tableau : les ondes psi produisent un signal cohérent dirigé à un objet physique et le ZPE fournit l'énergie pour la RSPK. A la lumière de la théorie ZPE, Joines a analysé les effets d'atténuation dans les cas de Miami, Olive Hill et Tina Resch. Le meilleur ajustement fut le produit d'une courbe de décroissance exponentielle et une courbe inverse de la distance, suggérant que la ZPE peut être la connexion entre les ondes psi et les ondes électromagnétiques. La théorie de Friedan, présentée dans son livre *Physics à partir de l'information de Fischer*, a des implications dans la compréhension de la façon dont la RSPK et l'information psi peuvent être acquises par des objets physiques, incluant des observateurs humains et une information prise comme étant celle d'une entité physique qui peut passer d'un système à un autre.

*German*

## RSPK (SPUK) UND BEWUSSTSEIN

ZUSAMMENFASSUNG: Wir stellen einige wichtige Spuk (RSPK)-Fälle vor und diskutieren physikalische theoretische Konzepte, die die Phänomene erklären könnten. Ein Hauptproblem für den Spukforscher bestand darin, die Energie ausfindig zu machen, die die Bewegungen der Gegenstände verursacht. Ein erster Schritt zum Verständnis von Spukvorgängen besteht einem Vorschlag von Puthoff zufolge darin, dass der Spukagent Zufallsfluktuationen der Nullpunktenergie (NPE) eine Kohärenz verleiht, einer elektromagnetischen Energie, die den Raum vollständig ausfüllt und mit Gravitation und trägen Massen wechselwirkt. Joines hat den Vorschlag gemacht, dass der RSPK-Prozess Psi-Wellen umfasst, die der Agent aussendet. Das NPE-Konzept vervollständigt das Bild. Psi-Wellen erzeugen ein kohärentes Signal, das auf ein physikalisches Objekt gerichtet ist, und die NPE sorgt für die Spukenergie. Im Licht der NPE-Theorie analysierte Joines die mit zunehmender Entfernung schwächer werdenden Effekte, die in den Miami-, Olive Hill- und Tina Resch-Spukfällen beobachtet wurden. Die beste Übereinstimmung lieferte das Produkt einer exponentiellen Zerfallskurve mit einer inversen Distanzkurve, was nahelegt, dass die NPE die Verbindung zwischen Psi-Wellen und elektromagnetischen Wellen darstellt. Friedans Theorie, dargestellt in seinem Buch *Physics bei Fisher Information*, hat Implikationen für ein Verständnis, wie RSPK und Psi-Information durch physikalische Gegenstände aufgenommen werden können, einschließlich

menschlicher Beobachter, und wie Information als eine physikalische Entität aufgefasst werden kann, die von einem System zum anderen fließt.