

RESEARCH ARTICLE

Laboratory Research on a Presumably PK-Gifted Subject

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Abstract—Between June 2014 and December 2015, a PK laboratory was organized in Buenos Aires. Up to five video cameras were installed to record the events. Various devices were assembled to measure physical, physiological, and environmental variables. 23 meetings were held with a presumptive PK subject, identified in previous research. The subject was apparently able to move a table at will, through an alleged “PK force,” and the phenomena were documented and recorded on several occasions. Although contactless movement of the table or other objects could not be achieved, muscular effort was ruled out as the cause of the observed movements. One experiment developed by William Crawford was repeated, although Crawford’s results were not replicated. EEG studies were performed with the subject at rest and also during the production of the phenomena. Unexplained anomalies were observed in the EEG data obtained during the production of the phenomena, and the normal curve of a random number generator also deviated significantly ($p = 0.008$) during the trials. No variations of electric and magnetic fields were found to be associated with the phenomena. Stephen Braude visited the laboratory and attended 3 meetings. He offers his observations and commentary in the Appendix.

Background

People who could apparently produce ostensible psi phenomena more or less at will were the essential raw matter for the first psychical researchers of the nineteenth century. However, their prominence declined somewhat when J. B. Rhine and others changed strategy and conducted psi experiments using more ordinary people as subjects. Nevertheless, the search for and the investigation of psychically gifted subjects still occupies a strategic place within the parapsychological community. Moreover, although ostensibly gifted PK subjects have been identified regularly since the late nineteenth century, the investigation of those subjects has been, and remains, a challenge.

One of the emblematic cases is that of Nina Kulagina, a Russian woman visited by several prominent investigators (Benson 1972, 1973, Pratt &

Keil 1973, Cassirer 1974, Keil & Fahler 1976, Keil, Benson, Ullman, & Pratt 1976) who reported observing distant movements of tiny objects and the deviation of a compass needle up to 70°. Cold War tensions prevented additional, and closer, examination of Kulagina's phenomena. Another promising case (unfortunately failed in the experimental stage) was that of Felicia Parise, a co-worker of Charles Honorton. After watching some Kulagina films, Parise found she could repeat some of her feats working in informal conditions (Honorton 1993). However, although in a later visit to The Foundation for Research on the Nature of Man, Parise could deviate a compass needle and change the signals of a metal detector device (Watkins & Watkins 1974), she refused to go on, claiming she felt uncomfortable with the proposed method of work—as she revealed in a recent interview (Pilkington 2015).

Other subjects have collaborated more enthusiastically. Eusapia Palladino could levitate tables putting her hands over them, move distant objects, and produce apparent materializations; she was studied thoroughly by many researchers (see, for example, Feilding, Baggally, & Carrington 1909, Bottazzi 2011, Morselli 1908, Carrington 1913, Courtier 1908, and the discussion in Braude 1997). One of the first special subjects who gladly agreed to be investigated was D. D. Home. Home was investigated meticulously for nearly 25 years by many researchers. These included William Crookes, who designed several devices to register and certify the reduction in weight of bodies and the displacement of objects, and who concluded,

These experiments appear conclusively to establish the existence of a new force, in some unknown manner connected with the human organization, which for convenience may be called the Psychic Force. (Crookes 1874:9)

For a recent survey of Home's case, see Braude (1997).

A long series of systematic experiments to study the mechanisms of PK was that of the engineer William Crawford (Crawford 1916, 1921), who organized a sitter group through a spiritualist circle focused on an exceptional subject, the teenager Kathleen Goligher. Beginning in 1915, Crawford conducted more than one hundred sessions with Miss Goligher, the results of which led him to postulate that “psychic rods” of ectoplasm exiting the body of the subject stick to objects and move them. Crawford even succeeded in photographing some of those apparent ectoplasmic extrusions. It should be noted, however, that these “rods” were also discussed critically, and that some commentators accused Miss Goligher of fraud. (For further discussion, see Braude 1997 and Nahm 2014a.)

In any case, although some of the physical phenomena attributed to Miss Goligher have been reported by other investigators, Crawford's exact tests have never been replicated (or apparently even attempted), and no other investigators have photographed ectoplasmic rods such as those provided by Crawford. Another impressive case was that of Rudy Schneider, studied by Eugene and Marcel Osty (1931) at the Institut Métapsychique International of Paris, where Schneider not only moved objects at a distance but also interfered with the path of an infrared beam. (These cases are also surveyed in Braude 1997.)

The Red Lights Group

Nowadays, there is not much interest in searching for and investigating promising macro-PK subjects. Most such subjects emerge, as in the past, through the activities of so-called sitter groups. Kenneth Batchelder (1966, 1984) helped to reinvigorate interest in this activity and to demonstrate its suitability for parapsychological research and theory construction. The Red Lights Group in Buenos Aires was founded on Batchelder's ideas as well as those taken from other similar and successful projects of the last decades (Owen & Sparrow 1976, Williams & Lang 2002, Storm & Mitchell 2003, Wilson, Williams, Harte, & Roll 2012). These various studies have much in common, including a shared belief that PK-induced table movements are possible.

The Red Lights group began to work in April 2013 (Gimeno 2015). The plan was that the nine group members would meet once a week for at least three months, to sit around a table with hands on top, with good illumination, and with a coordinator urging "*If there is someone present, able to move the table, or produce raps or other physical phenomena, we invite you to try, as we are here for that.*" From the very first meeting, the table exhibited anomalous movements, and these increased in number and magnitude as weeks passed, occasionally becoming quite intense and uncontrollable. For example, in one meeting the table began to rotate right and left (like a compass), 40° or 50° to each side violently and rapidly (approximately twice per second). In one of the last meetings a strategy was designed to identify which sitter(s) were responsible for the movements. To do that, the coordinator asked each attendee to leave the table, one after the other. That procedure indicated quite clearly that Ariel Farias was the only sitter whose presence at the table seemed necessary for the table's movements. Because Ariel was willing to collaborate in a long-term investigation, the authors organized a formal Psychokinesis Laboratory for that purpose. The present report describes the work done during this research.

The participants in the Red Lights Group meetings were strongly

motivated to obtain results, and that motivation increased further when some participants attributed the table movements—although without any evidence—to actions by a recently deceased relative of one of the attendees. Those sitters believed that the spirit of the deceased relative had agreed to help the investigators move the table in the way they requested. In the ensuing enthusiasm for their apparent contact with the deceased, many felt that the phenomena should escalate and perhaps lead to the total levitation of the table. But the identification of Ariel as the probable sole and indispensable causal agent demoralized most other attendees who had also wanted to be the psychically gifted subject. From that moment on, the psychological atmosphere of the sittings deteriorated, and various attendees began to miss the regularly scheduled meetings.

We had considered organizing a new sitter group to accompany Ariel, modeled after the earlier Red Lights Group. However, it became clear that the complex interpersonal relationships of the former group participants had complicated not only the documentation of the phenomena but also the attempt to rule out the hypothesis of fraud. As a result, we adopted an alternative plan of working only with Ariel, on the assumption that he was indeed the sole (or at least the principal) causal agent responsible for the table movements. We knew there was a risk that the phenomena would decline in magnitude and frequency, as they had for many former PK subjects, especially since the investigators could not duplicate the motivations and excitement of discovery that characterized the activity of the Red Lights Group. Another concern was that Ariel had some fear of developing weird or unpleasant phenomena which some Red Lights Group members had assigned to the activity of discarnate spirits (a point of view for which Ariel had little sympathy).

The Laboratory

The working group was managed by Alejandro Parra, in collaboration with the investigators Juan Gimeno and Darío Burgo. The place selected to install the laboratory was the Instituto de Psicología Paranormal de Buenos Aires (The Institute for Paranormal Psychology of Buenos Aires). The Institute allowed us to use two rooms, one for general work (24 m²) and another to store equipment and hold some special meetings (16 m²). The main source of funding for this work was from a Gilbert Roller 2014 grant, devoted to fund research projects in the field of macro-PK, awarded by the Parapsychological Association.

To facilitate the measurement and recording of phenomena, the authors built a large wooden frame, similar to a cube with sides of 2 meters. The meetings were recorded with a video device PCBOX model PCB-



Photo 1. Panoramic view of the PK laboratory showing the wooden frame for mounting video cameras, with Ariel Farias at the center. There are cameras in the left column, above Ariel and near his left leg. To the right, there is another camera mounted in a tripod. At the right column, the microphone is mounted. Behind Ariel, one of the investigators is monitoring the work through the screen of the DVR. The photo shows Ariel trying to raise a little wooden table (weighing less than 400 g), mounted on a plastic structure, over a piece of flat glass, this last supported by a scale. This setup allowed Ariel to experiment with variations of the main phenomena, and to get feedback from the scale's display variations, during concentration and work.

DVR9004K, with 4 standard-definition security cameras, each of these equipped with infrared illumination. A 500-GB disk gave us the chance to store all the audio and video of the meetings for further scrutiny. The audio track was recorded by the same device, via a high-sensitivity microphone specially adapted for environmental sounds. Two independent cameras and an audio recorder were also used, to take photos, videos, and audio. To help with data collection and data correlation with video and audio records, we also built a multivariable recorder with 16 independent channels, the main core of which is a PC. The primary purpose of this device is to translate the electrical signals of different sensors into values that can be processed with standard software. Five electronic scales were modified, one of them to

measure the weight of the subject and the others to measure the weight and forces developed in the table and other objects. Among other sensors, two for temperature and one for estimating breathing rhythm were developed and built, all them pluggable to the recorder. Not to be plugged in to the recorder, two indirect indicators were designed to detect magnetic and electric fields. Also available were a random number generator (RNG), a laser light emitter, and a device to conduct and record electroencephalography tests.

Between July 1, 2014, and December 18, 2015, we held a total of 26 meetings (see Photo 1). As required by the investigators, Ariel attended 23 of those meetings to try to psychokinetically produce diverse table movements. The other 3 meetings (without Ariel) were conducted to measure the possibility of producing the same movements via normal muscular force. Several external observers were invited to attend: Sergio Matteucci (one meeting), Aníbal Melgar, Andrea Romano, and Naum Kliksberg (2 meetings), Alejandro Parra and Stephen Braude (3 meetings).

Description of the Main Phenomenon

The main device was a round wooden table, with three legs, and with an approximate weight of 14 kg and a diameter of 1.05 m. The table was almost identical to the table used in the decisive meetings held by The Red Lights Group, and Ariel felt comfortable and safe working with it.

During the three meetings held without Ariel, the investigators observed (testing the table's movements by themselves) that all the horizontal movements were easy to reproduce with muscular force. It was also easy to raise any leg by pressing the table downward, near the opposite border (e.g., to raise leg 2, press downward near the border between legs 1 and 3, and so on). Excluding complete table levitation (which we never achieved), the only movement the investigators were unable to reproduce through muscular force was raising the table leg closer to the subject (leg 1), with the table leg between the subject's legs (but without any physical contact with the table leg), and with only the subject's palms touching the table. Another important issue was to minimize the friction force exerted by the table legs 2 and 3 against the ceramic tiles of the floor. Those tiles were already rather smooth and slippery, but we also had to make sure that the legs were not jammed in the tile junctions (in the following paragraphs the reader will understand the importance of this last sentence).

In these conditions and with normal illumination, Ariel would try to will leg 1 to rise. That result was achieved from the very beginning of the research and then repeated several times (Video 1). In the best meetings, Ariel needed 5 or 6 minutes to achieve it; in others he had to try for one hour or even more before succeeding. There were also a few meetings (6 out

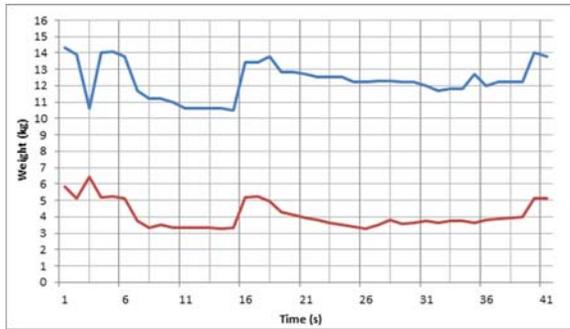
of 23) where Ariel could not raise any table leg, despite trying for several hours with periods of rest.

Video 1. Ariel Farías raising the table leg. A camera is located above and at his left and another under the table. The microphone is installed on the right column. The left screen shows the multivariable recorder data, the right screen shows the 4 camera images taken and recorded by the DVR. Meeting 21 (12-14-2015). Watch at <https://youtu.be/Stoi27PugKI>

As the meetings progressed, new elements were added to the Lab. At first, a scale was installed under table leg 1 (the scale was called b1), allowing Ariel to have an easy view of the display so that he could monitor the way the weight decreased from 4.8 kg approximately to zero, when the leg rose. This scale (b1) also allowed the detection of leg 1's weight reduction even when the leg had not risen. Moreover, we located that display within easy view of Ariel so that he could see how the weight started to decrease when he touched the table. Ariel claimed that he found this form of feedback very helpful. Later on, three new scales were added, two under legs 2 and 3 (called b2 and b3, respectively) and the other under Ariel (called Scale B). At the beginning, the scale values were recorded with two cameras of the DVR. The values were later recovered watching the videos and taking note of the values manually, at a rate of one record per second. Once the multivariable recorder was operational, this task was automatically performed, recording two values per second of each channel, leaving those values in a *.dat file, easily processed by any standard software. After that, the four cameras were used exclusively to take images of the meetings: one overhead for monitoring Ariel's hands, another in close range to leg 1, and the others in long-range views, taking in the whole scene from opposite angles (Video 2).

Video 2. Two cameras simultaneously capture the raising of the table leg. One is panoramic and the other takes a close range view of Ariel's hands and arms. Meeting 13 (12/02/2014). Watch at <https://youtu.be/rdTBwRkypqo>.

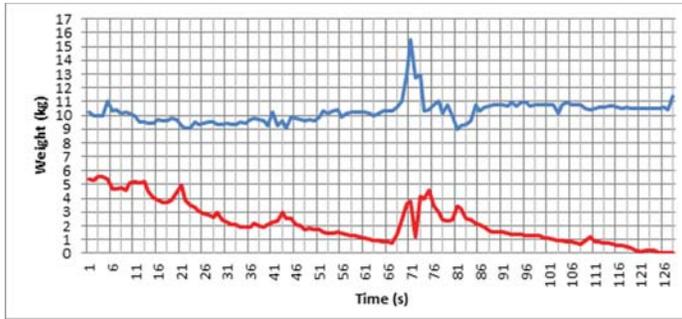
The B scale, used to measure the subject's weight, was at first intended to replicate some experiments developed by William Crawford. However, we also found an unexpected and valuable use for it: It could detect indirectly when leg 1 was raised by muscular force and when it was raised by an unknown force, presumably PK. During the simulation sessions (i.e. those which Ariel did not attend), we observed that leg 1 could be raised by muscular force, taking advantage of the high friction of the hands against the table, especially with sweaty hands. We also observed that, with the sitter's hands on the table and exerting muscular force with arms



Graph 1. The blue (upper) line shows the weight of the subject trying to raise leg 1 with muscular force. (The graphic scale was modified to appreciate the details. Add 85 kg to obtain the real values for the blue line.) The red (lower) line shows the weight measured by scale b1, located under the table leg 1. During the first 15 seconds, the seated investigator tried to raise leg 1 by exerting a horizontal force with the hand palms toward the center of the table. Scale b1 shows a weight loss of up to 2 kg, but scale B (measuring the weight of the subject) loses up to 4 kg, making the maneuver evident. Then, between seconds 15 and 17, the table finally moves ostensibly in the force direction, which makes the experiment come back to the start. At second 39, the table moves again in the force direction. With this maneuver, table leg 1 was never separated from the floor or scale b1. Meeting 11 (11/04/2014).

positioned horizontally toward the center of the table, the weight measured in b1 decreased from 4.5 to 2kg approximately.¹ However, this muscular maneuver could be detected by scale B, which registered a decrease in sitter-weight of 4 kg or even more (see Graph 1). Anyway, whether the sitter went on exerting a higher force with the arms, before b1 decreased to zero, the table eventually began to move, slipping on the floor as the friction force was defeated by the horizontal component of the muscular force, leaving visual evidence of the maneuver. So, that is why it was important to reduce and keep to a minimum the friction between the table legs and the floor, and also to keep an eye on legs 2 and 3 to ensure that they were not stopped or held in place by anything on the floor.

On the other hand, when Ariel (seated) put the palms of his hands on the table without exerting a muscular force, while b1 progressively went down to zero, his weight decreased only 2 kg, equivalent values to the mass of Ariel's body when he gently leaned forward (see Graph 2), while his hands and the table stayed immobile. These elements suggest strongly that leg 1 would not have been raised due to muscular force, but to an unknown force, presumably PK.



Graph 2. The blue (upper) line shows Ariel's weight while he was trying to raise leg 1. (The graphic scale was modified to appreciate the details. Add 85 kg to obtain the real values for the blue line.) The red (lower) line shows the weight measured by scale b1, located under table leg 1, and which registered the continuous decrease in weight until the value reaches zero at second 126 and leg 1 rises. In the meantime, Ariel's weight varies in the range of 2 kg. The perturbation shown in both lines between seconds 66 and 86 is due to secondary movements of Ariel, mainly to sit comfortably. Meeting 8 (09/16/2014).

Some Notes about Ariel

An all too familiar mistake in psi research is to treat the official subject as the only essential factor in eliciting the desired phenomena. In this case, the group comprising Ariel and the investigators functioned from the start as a unified group of friends who extensively talked about diverse subjects before starting the work prepared for each meeting. Also, the group gathered outside of the laboratory, not only to organize some tasks, but also to enhance this relationship. In addition, all decisions about tests, devices, schedules, etc., were arranged with, and previously sanctioned by, Ariel. This comfortable and relaxed climate can easily be seen in the videos of the meetings, where one can observe the harmonious and easygoing group dynamics.

As far as psi-conducive conditions are concerned, Ariel has proven to be a very cooperative subject, and someone who is not easily perturbed. He can work with several levels of illumination and is not seriously distracted or disturbed either by ambient noises, the movement of people surrounding him, or interruptions by the investigators to rearrange the cameras or adjust some other device. Moreover, he does not require any elaborate ritual to produce the phenomena. To feel more comfortable, he removes his ring, wrist chain, and watch. He can start working from a standing position or

sitting in a chair, touching the table's surface with the palms of one or two hands. He concentrates by keeping silent and closing his eyes from time to time. Once the table leg rises, he can start talking and laughing without any problem, and he can usually maintain that state of affairs for several minutes.

However, it must be admitted that we never solved the problem of motivating the subject to the degree present in the sitter group of 2013. We tried, no doubt with some exaggeration, to stress the importance of the ongoing investigation, both for parapsychology specifically and for science generally. Some of the motivational activities were publishing articles in magazines or journals (including Gimeno 2015), and organizing a conference in which we presented our work and at which Ariel would answer questions from the attendees. We also prepared a documentary posted on YouTube: <https://www.youtube.com/watch?v=99hpf2ryQ-w>. However, occasionally during our conversations questions arose that betrayed our lack of a clear direction—e.g., What are we going to do with this? or What is the purpose for such efforts? In fact, the frequency of very successful meetings began to fall off with time, as did the intensity of the phenomena. Finally, the news that Ariel would be a father for the first time, in February 2015, made the investigators re-evaluate the schedule of tests and consider ending the research. Nevertheless, testing was extended until December 2015, due to the visit of Dr. Stephen Braude.

The only thing that seemed to reverse the decline in Ariel's phenomena was the occasional visit from a "VIP," or at least from certain of them. Ariel could clearly anticipate how the attitude of the visitor would influence his will and temper. We had requests from professional magicians, orthodox scientists, and professed skeptics (actually psi-deniers) certain from the start either that Ariel's phenomena were fraudulent or that his investigators had committed some kind of error which they were determined to uncover. Previous encounters with members of that latter group had been unpleasant and inhibiting for Ariel. So further requests from that group were indefinitely delayed. On the other hand, when the visitor showed respect for and knowledge of the evidence for macro-PK and arrived with an open but critical mind, Ariel considered the situation to be a positive challenge. Indeed, these occasions often yielded some of his best results in terms of intensity and duration of the phenomena.

Attempting to Confirm the Hypothesis of Crawford

When W. J. Crawford tried to confirm the hypothesis that subjects moved objects psychokinetically by means of a "psychic rod" emerging from the body, one of his methods was to use *markers*:

In order to obtain data concerning the shape of the ends of the structures and also of their methods of gripping the table, I often covered the undersurface and legs of the table with soot obtained from a turpentine lamp. In this way, wherever the structures touched, marks were left on the soot. It was soon found that there were two chief methods of levitating the table, viz. from the undersurface and by the legs. (Crawford 1921:167)

During meeting 12, 11/18/2014, an experiment based on the same ideas was developed, using methods and materials available nowadays. The undersurface of the usual wooden table was covered with a piece of fabric and then that fabric was covered with soft foam, as can be seen in Photos 2, 3, and 4. Before the work began, several photos of the table were taken of the irregularities of the foam (some at close range), in order to compare them with the possibly different shapes they would have at the end of the experiment in case the material had been disturbed by something like a psychic rod. Three cameras were arranged to take direct images of the surface covered by the foam; another camera had a general view; and a fifth camera monitored Ariel's hands (see Video 3).

Video 3. Ariel can be seen raising the table leg covered with foam. Note that he tried to raise the leg with other parts of his body, not only with his hands. Meeting 12 (11/18/2014). Watch at <https://youtu.be/UoeolzGjvk>.



Photo 2. The piece of fabric had been nailed to the undersurface of the table, ready for the foam.



Photo 3. The table with the foam spread over the surface of fabric and the leg.



Photo 4. The table in the work position. Ariel sat close to the leg covered with foam.

Ariel concentrated and worked for more than an hour, and on several occasions raised the foam-covered table leg. At the end, several photos of the whole undersurface covered with foam were taken. After a detailed scrutiny in situ and further analysis of the video and photos taken before and after the experiment, not a single spot or tiny mark was found. Moreover, the cameras focused on the foam did not reveal the presence of any psychic protrusions from Ariel. Thus, although the session produced more evidence of Ariel's PK, it failed to replicate Crawford's result and provide evidence of a psychic rod.

Influence on a Random Number Generator

Since the appearance of modern random number generators (RNGs) based on subatomic processes seemingly impossible to influence normally, psi researchers have tried to find correlations between certain types of human behavior and low-probability deviations in the output of an RNG (see, for example, Schmidt 1973, 1974, 1976, Jahn et al. 1997, Radin & Nelson 1989, Radin et al. 2006, Bösch, Steinkamp, & Boller 2006, Bierman 1996, Bierman & Houtkooper 1975, Wilson et al. 2012).

In the present study, a Psyleron RNG version 1.64d was used during 14 sessions to collect data. In some of them, the differences between "non-activity" and "supposed PK activity" were easily apparent, as can be observed from Graphs 3 and 4.

However, as in most meetings, the periods of activity and rest were alternating, and a thorough analysis was necessary. To do that, 7 segments from 5 to 26 minutes each, of supposed "PK activity," were selected. Then, segments identical in extension and quantity were selected randomly, to be used as a control group, with two distinctions: without Ariel in the lab and with Ariel in the lab (at rest). So there were 21 segments in total, with 7 for each of the three conditions. With the Z values of each segment, the adding was obtained applying the Z (Stouffer) to each condition. See Table 1.

But, having in mind that any variation, negative or positive, would have the same meaning, the value of Z (Stouffer) was not representative. When doing the math, the sign of each individual Z value is preserved, so eventually the plus and minus signs would neutralize instead of add. To avoid this slant, the value of χ^2 was calculated in order to obtain the variance of each condition, giving Table 2. It can be observed that the A condition, which picks the variance of the RNG segments during the "supposed PK" moments, has a probability of occurrence far from the values of chance, while the other two groups (without Ariel and with Ariel but at rest), have a variance inside the values expected in an RNG.



Graph 3. RNG values taken before Ariel Farías’s arrival. All values are clearly inside the chance area. Meeting 7 (09/02/2014), from 4:12 p.m. to 6:12 p.m.



Graph 4. RNG values taken during Ariel Farías’s work trying to move the table. Values go in and out of the boundary line of chance. Meeting 7 (09/02/2014), from 6:13 p.m. to 7:11 p.m.

TABLE 1
RNG during Supposed PK Activity (A),
RNG without Ariel Fariás (B), RNG with Ariel Fariás at Rest (C)

Condition	Z (Stouffer)	p (1 tail)
A	-1.87	-0.03
B	1.25	0.11
C	-0.66	-0.25

TABLE 2
RNG during Supposed PK Activity (A),
RNG without Ariel Fariás (B), RNG with Ariel Fariás at Rest

Condition	χ^2	Degrees of Freedom	p (1 tail)
A	17.64	6	0.008
B	6.95	6	0.22
C	4.50	6	0.47

Electroencephalogram (EEG)

There have been previous attempts to study EEGs of psi subjects during the production of phenomena. In Argentina, Dr. Orlando Canavesio (1951) detected an original pattern which he called the “meta-psychic state,” similar to the alpha state. Also Motoyama (1964) observed the so-called “ramp function,” characteristic of the deep dream, in waking subjects while ostensibly demonstrating ESP, something also detected in Matthew Manning during informal tests of metal bending (Owen 1974). Similarly, Targ and Puthoff (1974) reportedly studied the EEGs of Uri Geller during ESP tests, but without specifying the results.

In Ariel’s case, we conducted two EEG studies. The first one was on 09/02/2014, called “Base,” with Ariel at rest, and subjected to sensorial excitation with light, sound, and touch, as well as during hyperventilation and recovery from it (see Photo 5). The second was on 09/16/2014, with Ariel producing apparent PK (see Photo 6 and Video 4).

Video 4. Ariel Fariás raising the table leg while the EEG is running.
 Watch at https://youtu.be/KjfAmN-_9iI.

The first study did not reveal any clinical abnormality, according to the medical report we solicited from Dr. Lucio Huayhua, Neurosurgery, Registration Number 88351. The report states: “Normal voltage plot with

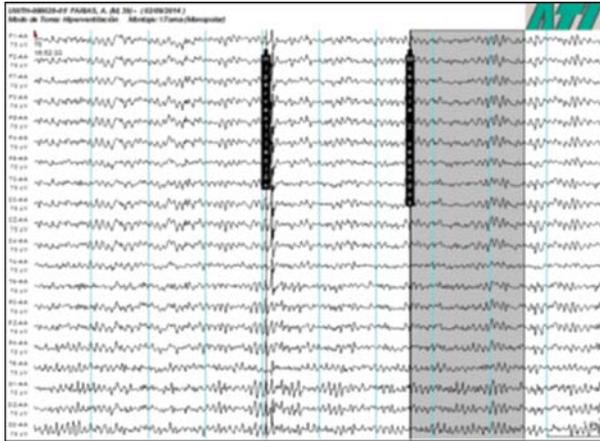


Photo 5. Ariel at rest during the EEG "Base," with the electrodes already connected, following the indications of Aníbal Melgar. Behind, Andrea Romano takes videos to document the test.

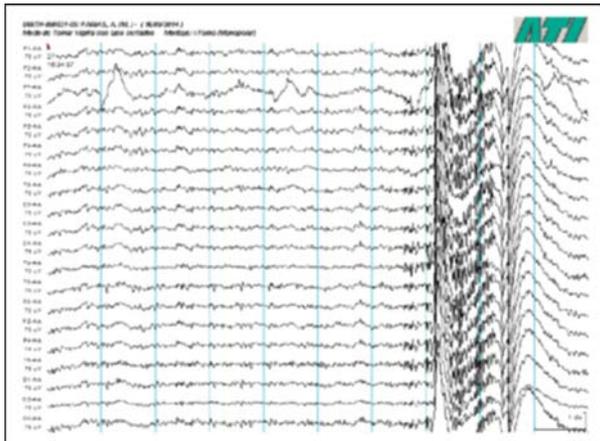


Photo 6. Ariel seen from his back, concentrating on trying to raise the table leg, with the electrodes already attached to his head by means of a cap especially designed for this test by Andrea Romano and Anibal Melgar.

good reactivity. With Alpha activity to 8 cycles / second in posterior areas. During plotting, tip wave activity is evidenced in bifrontal areas, with left frontopolar focus” (see Graph 5). The second EEG, during Ariel’s ostensible PK, detected anomalous curves and values that seem not to be explicable as “artefacts” (see Graph 6).



Graph 5. Part of the EEG “Base” plot. During this period, Ariel was still, with eyes closed and hyperventilating. The values and shapes seen are normal.



Graph 6. Part of the EEG plot during apparent PK. Ariel was still, with eyes closed, hands on the table, and hyperventilating. A big electric perturbation is observed at the end of the plot, while the scale under the table leg indicated a weight reduction of 2.6 kg (the initial weight was 4.8 kg). The table leg rose nineteen seconds after the perturbation, by which time the EEG appeared to be normal.² See Graph 8 for a zoom-in.

So far it has not been possible to recruit another neurologist to perform a more detailed analysis.

Variations of the Main Phenomenon

After Ariel reached the point where he could raise the table leg almost at will, and having the movements carefully measured and recorded, as well as differentiated from superficially similar movements produced by muscular force, we proposed several tests to improve on the already achieved results. As a result, Ariel tried several times to levitate the whole table, but at best he was only able to raise a second leg for a few seconds. Ariel also tried to levitate a much lighter table, weighing 5 kg, of the same size and shape as the usual table, and looking like wood but made from expanded polyethylene. The reduction in table weight did not seem to matter. Although Ariel did not manage a full levitation in those trials, he again raised one or two legs. He also tried, unsuccessfully, lifting other wooden devices placed on the table as well as lifting the table when it was hung from ropes. On the other hand, when sheets of paper were placed between Ariel's hands and the table, as in some meetings of the Red Lights Group, the table continued moving despite the inclusion of this barrier. However, the results were not consistent for any of the former conditions, though reductions of the table weight—less than 300g—were achieved in all these conditions.

In an effort to study the possibility of movement of an object without contact, a test setup was arranged with a container full of water and an object floating within it. With calm water, no wind or vibrations, Ariel tried to move the object, bringing his hands to less than 20 cm from the container, but without any detectable result.

Although Ariel enthusiastically accepted our invitations to try our variations in protocol, he became bored in a few minutes if the hoped-for results were not achieved, asking then to return to the well-known movement with the wooden table. It was evident that he felt much more comfortable repeating the main phenomenon than trying new ones. When we asked Ariel about this, he mentioned something he had also said in a meeting of the Red Lights Group—namely, that he is enthusiastic with tiny movements of the table, but if those movements grow in magnitude or become weird, he starts to fear that he will become part of an uncontrollable situation, similar to the poltergeist events that troubled him so much when he was a teenager. In response to that admission, we arranged a series of interviews between Ariel and Dr. Alejandro Parra. Parra is a psychologist specializing in the treatment of symptoms originating from the observation of diverse psi phenomena. Unfortunately, this activity could not be completed.

Other Variables Associated with the Main Phenomenon

As far as Ariel's general will, temper, and mood are concerned, it was evident, though not surprising, that his production was best on days when he appeared to be free from personal and work-related concerns. He was also stimulated by the progress of the research and receiving favorable feedback from invited observers. In fact, the most effective stimulus to success was the occasional visit from a VIP. Meeting 14, held on 12/18/2014, combined both of these positive stimuli. The objective of this session was to see if Ariel could improve his performance under hypnosis, a strategy that appealed greatly to Ariel, not only because of its novelty but also because Dr. Alejandro Parra planned to attend the meeting in order to hypnotize Ariel. Although it appeared that Ariel could not be hypnotized, he was nevertheless still able to raise the table as he had done in previous meetings. Finally, the best meeting of all happened on 12/14/2015 during the visit of Stephen Braude, recognized by the group as a leading authority on macro-PK, who travelled from the United States to witness Ariel at work (see Photo 7).



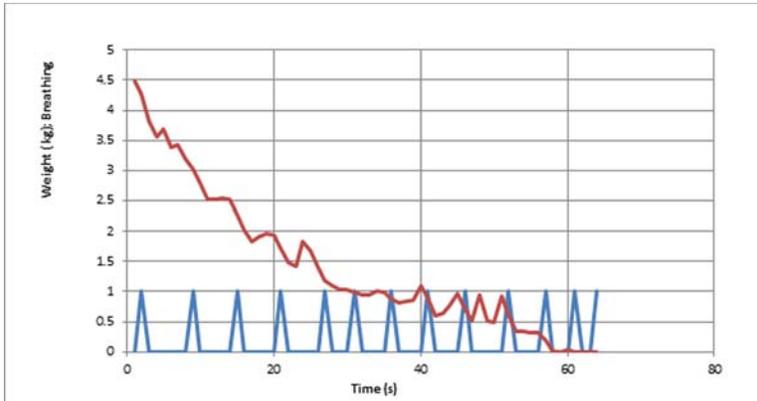
Photo 7. Stephen Braude, Ariel Farías, Juan Gimeno, and Darío Burgo in the psychokinesis laboratory.

We should also note that we often verified that Ariel's hands were not sticky (although, as we mention below, we found them to be cooler than expected). Moreover, given the proximity of observers to Ariel throughout the trials, as well as the recording of the sessions from multiple angles, there was no opportunity for Ariel to gain access furtively to any previously hidden sticky substance.

As far as other physiological parameters are concerned, Ariel usually mentioned feeling an intense heat in his hands before and during the production of the phenomenon. This is especially curious in view of the fact that observers consistently found Ariel's hands and forearms to be noticeably colder than their own. To examine the matter further, two temperature sensors of tiny mass were developed (one for each hand) and attached to the multivariable recorder. With an ambient temperature of 19.5 °C, the temperature of the hand palms became stabilized during the test at 32.7 °C for the left hand and 33.1 °C for the right (normal body temperature in Celsius varies between 36° and 37°). Thus, it appears that Ariel's experience of intense heat in his hands is a purely subjective sensation. We also observed some perspiration in Ariel's hands, which we attributed to the tension experienced or the effort expended during the tests. Other, more diffuse, sensations expressed by Ariel at the end of some meetings, were a bit of confusion lasting for a few minutes and a contracture in his shoulders which sometimes lasted until the next day.

It is also worth mentioning how Ariel described his experience of producing the table movements. In addition to anticipating by a few seconds when the phenomenon would begin, he said that in the very moment the table began to move, he felt sensations similar to those felt by an airline passenger when the plane takes off. He also said that when the table leg rises, it's "similar to when you put on your shoes; at the beginning you feel the difference between bare and covered skin, but in a few seconds you forget this difference and begin to feel the shoes as a part of you." He described the inverse sensation (removing one's shoes) when the force disappears and the table leg falls down to the floor. Regarding those and other biographical aspects, Ariel is preparing a more extensive and detailed paper.

The physiological process apparently most clearly related causally to the phenomenon was hyperventilation, which Ariel had spontaneously begun to practice, and which he continued to utilize in key moments once he realized that it speeded the weight reduction of table leg 1. To quantify this variable, a microphone was used to identify the breathing rhythm. We also designed an instrument to be attached to Ariel's chest. That instrument is based on a pump sphygmomanometer (the hand instrument designed to



Graph 7. The red (top) curve expresses the weight measured by the scale under table leg 1, closest to Ariel. The peaks of the blue (lower) line show the moments of breathing. Meeting 6 (08/26/2014).

measure blood pressure), but modified to measure the pressure of an air bag through an electronic sensor. The signal produced by this sensor is then amplified and sent to the multivariable recorder, digitalized, and presented in an Excel sheet, along with other signals. The air bag is attached to the chest with flexible strips. The idea is not to measure a value, but the variation among values, discriminating peaks and valleys of the variations, which are directly related to the breath pulses. Thus, the signals (a pulse with each breath) were sent to the multivariable recorder in order to correlate them with the rate of weight loss of leg 1, as can be seen in Graph 7.

As far as physical variables are concerned, it did not matter whether the room was darkened or filled with bright light. Moreover, the possible existence or generation of very low frequency electric fields was tested by two procedures. First, we built an “ad hoc electroscope,” composed of a rod of isolating material from which hung several thin pieces of cotton thread, similar to a hairbrush. Putting this device close to Ariel’s body, hands, and the table during his work, no disturbance of the threads was observed. Second, hundreds of tiny circular pieces of paper (5 mm in diameter) were spread close to Ariel’s hands while he was working, without the detection of any movement in the pieces of paper. To detect very-low-frequency magnetic fields, two compasses were used, one close to Ariel’s hands and the other near his head during his work, without any observable disturbance of the needles. Also, during several meetings, an audiocassette was stuck in the table’s undersurface, close to Ariel’s hands. The music prerecorded there remained unaltered, which presumably would not have been the case had

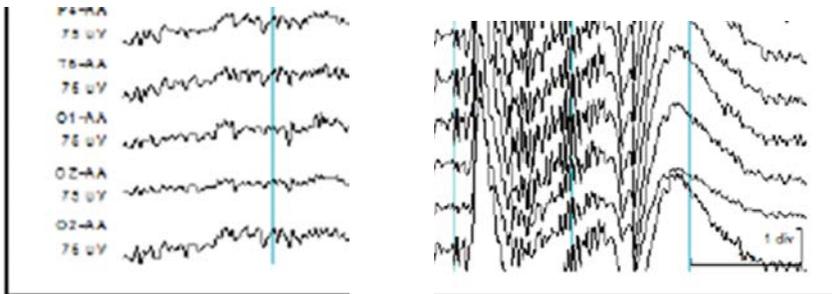
a magnetic field influenced the tape. The negative results in these informal tests did not encourage the researchers to try more accurate measurements, which in any case would have probably exceeded the group's modest budget.

Conclusions

The research reported in this article concluded on December 18, 2015, after eighteen months of work. Meanwhile a psychokinesis laboratory had been organized, with a small budget and few human resources, though with great enthusiasm and dedication. Although we were unable to try all the experimental protocols we considered during the course of our investigation, we nevertheless consider it to be an achievement that a presumably gifted PK subject agreed to work with us for such an extended period, and under conditions that were often either taxing or simply boring. We think it is quite clear from the material we have compiled that Ariel has, non-fraudulently and almost at will, succeeded in psychokinetically producing (admittedly unspectacular) table movements, and that Ariel's abilities merit further, and better-funded, investigation. Moreover, although we tried to replicate W. J. Crawford's strategy for detecting the presence of a "psychic rod" that produced object movements, our results were negative.

Notes

- ¹ The term "approximately" is due to the not-very-refined method used to register the weights and the accuracy of the scales. These measurements were taken in the early days of the laboratory, reading the scale displays on the videos, and jotting down the values. Then, in 2015, we built the PC-based multivariable recorder.
- ² Regrettably, this trace does not permit a clear view of the time scale. For Graphs 5 and 6, they are (see Graph 8 for zoom-in of Graph 6):
 - 75 μ V/division (vertical) (lower left corner on Graph 6).
 - 1 second/division (horizontal) (lower right corner on Graph 6).



Graph 8. Zooming in on Graph 6.

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Devices and Equipment

- 1 video recording system, PCBOX model PCB-DVR9004k
- 1 camera, Panasonic, model DMC-FH6 Lumix, 14 Mpx
- 1 camera, Sony, model Cyber-shot, 6 Mpx
- 1 MP3 recorder, Philips, model SA1105/55
- 1 random number generator (RNG), Psyleron, version 1.64d
- 1 PC laptop, Lenovo, model G550
- 1 microphone, NYH, model NYH301
- 4 scales, SWAN, model SF-400 (0 to 7 kg)
- 1 scale, GAMA, model SCG430 (0 to 180 kg)
- 1 compass, Recta, model DS-40
- 1 compass, no brand, no model
- 1 laser pointer ($P < 50\text{mW}$, wavelength $650 \pm 10\text{ nm}$)
- 1 multivariable recorder, 16 analog channels, PC-based, Acer-Mate, model 433S

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Appendix by Stephen Braude

The first thing to note about Ariel as a subject is how unpretentious and cooperative he is. Needless to say, in that respect he stands in marked contrast to many other ostensibly gifted PK subjects (e.g., Kai Mügge—see Braude 2014, 2016, Nahm 2014b). Ariel has no reservations at all about working under bright light and under very close scrutiny, including close-up video monitoring from multiple angles. I'm very impressed by him personally, and it's clear that Ariel is not driven by a desire to be a PK superstar or guru. I found him to be a down-to-earth and humble family man, reasonably content with a steady day-job, naturally curious about the PK abilities he has discovered (as well as psychic abilities generally), and with no religious or metaphysical axe to grind.

During my visit to Buenos Aires, I was able to schedule three sessions with Ariel, with a break of one day between sessions. This was a more intensive schedule than Ariel was accustomed to, and that was probably one of several factors resulting in getting our best results on the first scheduled

day. Before commenting on that day's results, let me mention briefly what happened in the second and third sessions. Session number 2 was a group sitting. In retrospect, I regret having agreed to this, although it seemed like a sensible arrangement at the time. Ariel had been very productive in session 1, and since we knew that the most dramatic table movements observed in the earlier Red Lights Group had occurred during group sittings, we wondered (in the spirit of Batcheldor) whether a group sitting would relieve Ariel of some of the responsibility for the phenomena and lead to even more impressive effects. Indeed, the table glided rapidly and dramatically around the room, but there were no partial levitations, which is really the phenomenon we had hoped to record. Although the videos (showing fingertips lightly touching the table) suggest strongly that unconscious muscular movement can't account for the table's trajectories, the recorded phenomena are clearly less interesting than the partial levitations recorded two days earlier.

Session number 3 yielded almost nothing, but that seemed clearly to be the result of Ariel's preoccupation with the aftermath of a motorcycle accident the day before, in which his bike was totaled and he only barely escaped serious injury. Ariel did his best to focus on the matter at hand, but he was still rattled from the previous day's events and worried about insurance and financial issues.

During session number 1, we got results from Ariel right from the beginning, and I made high-definition video recordings of six partial levitations. The levitations were also documented with four standard-resolution security video cameras located beneath the table and above and behind Ariel. It was clear that Ariel was not engaged in trickery or inadvertently using friction from the table legs on the relatively slick tile floor to lift the table. Indeed, Ariel was able to achieve this result using only one hand on the nearby edge of the table (see Photo 8).

Ariel also managed to raise the table when (at my suggestion) he placed his forearms on the table. Clearly, the weight of Ariel's arms on the nearby part of table would have tended to weigh *down* that side of the table. Ariel was in no position in that case to place his hands sufficiently forward on the table to make the side close to him rise (see Photo 9).

I'll just note for the record that I suggested to Ariel that he try *cabeza-PK*—that is, trying to lift the table by placing his head on it. Ariel, as usual, complied cooperatively, but he found this arrangement both amusing and uncomfortable, and it didn't succeed.

I should also note that there was nothing unusual or suspicious (e.g., hidden magnets or hooks) about the construction of the table (see Photo 10). Moreover, because I examined Ariel's hands and forearms between



Photo 8. Ariel raises the table with only one hand.



Photo 9. Ariel raises the table using his forearms.



Photo 10. Nothing special about the table.

levitations, I can confirm that they were never sticky and also that they were unusually cool to the touch.

It was especially interesting to see the readouts from the strain gauge placed under the nearby leg of the table. Ariel liked to watch this feedback, because he could see when his efforts were beginning to work, even before the table leg had risen from the floor. Even though the table didn't rise, the default weight of the table on the strain gauge changed continually and became *lower*, rather than higher as would ordinarily happen when the weight of fingers or hands is added to the table.

Although I consider the work conducted with Ariel so far to be impressive, I believe we must still regard it as preliminary. If Ariel can remain interested enough to continue with this line of investigation (something that can't be taken for granted—after all, the phenomena get pretty boring after a while), there is more we can do to document the levitations more clearly, and probe more thoroughly into what's going on. I'm currently pursuing options for bringing Ariel to the U.S. and recording the pressure on the table in a more fine-grained way.