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EDITORIAL

It's probably no secret to readers of this *Journal* that working in areas of frontier science can very easily test one's character and bring out the best and worst of human behavior. I mention this now because a few months ago the journal *Studies in History and Philosophy of the Biological and Biomedical Sciences* published a significant new issue (Volume 48, Part A). It contains a lengthy special section on psychical research, guest-edited by Andreas Sommer. I'll probably comment again about this journal issue in later Editorials, but this time I want to focus on the first paper to catch my attention. Not surprisingly, I suppose, it was written by a philosopher, Ian James Kidd from Durham University, and it boasted the intriguing title, "Was Sir William Crookes epistemically virtuous?" (Kidd 2014).

One reason this caught my eye is that I've written quite a bit about Crookes's work in parapsychology (see, e.g., Braude 1985, 1997, 2007) and have indicated why I consider that work to be important. But Kidd's essay also interested me because I had only recently become aware that a growing number of philosophers had picked up an old philosophical thread (arguably started by Aristotle) and were creating a new—and I'd say worthwhile—philosophical specialty called *virtue epistemology*, which roughly parallels developments in an area of moral theory called *virtue ethics*. Virtue epistemologists quite plausibly maintain that traditional forms of epistemology—perhaps especially those practiced by my colleagues in analytic philosophy—miss something crucial by failing to account for the normative dimensions not just of knowledge specifically but also of rationality in general.

I'd long been impressed by the view of one of my philosophical heroes, C. S. Peirce, who considered logic in its most general sense to be the ethics of belief. So I was naturally pleased to see the authors of one recent book in virtue epistemology (Roberts & Wood 2007) begin their book with the following passage from Peirce:

... in induction a habit of probity is needed for success. ... And in addition to probity, industry is essential. In the presumptive choice of hypotheses, still higher virtues are needed—a true elevation of soul. At the very lowest, a man must prefer the truth to his own interest and well-being and not merely to his bread and butter, and to his own vanity, too, if he is to do much in science. This ... is thoroughly borne out by examining the characters of scientific men and of great heuristic students of all kinds. ... we can perceive that good reasoning and good morals are closely allied; and I suspect that

with the further development of ethics this relation will be found to be even more intimate than we can, as yet, prove it to be. (*Collected Papers of Charles Sanders Peirce* CP 1.576)

Recent works in virtue epistemology typically progress along two main paths. First, some authors address and try to solve (or dissolve) traditional issues in epistemology, such as the intractability of the so-called “Gettier problem” (concerning the analysis of knowledge as justified true belief). Their alternative approach aims instead for a virtue-based analysis of knowledge, competing with the more traditional analyses found in analytic philosophy. A prominent example of this approach is Zagzebski (1996). Second, some authors focus almost exclusively on the epistemic virtues themselves, whether or not this study illuminates the problems considered in more traditional epistemology. Roberts and Wood call this “regulative epistemology.” So they focus on providing accounts of “the habits of mind of the epistemically rational person” (Roberts & Wood 2007:22)—for example, love of knowledge, firmness, courage, and caution.

For those intrigued by these recent philosophical developments, I can recommend the books already mentioned, and also Baehr (2011), DePaul and Zagzebski (2003), Fairweather (2014), Fairweather and Zagzebski (2001), and Sosa (1992, 2007).

And I’d like to think that many *JSE* readers would want to consider the relevance of virtue epistemology to their own interests. Indeed, to me it seems obvious that rationality—both generally and certainly in areas of frontier science—is not simply a matter of making decisions in an allegedly objective, disinterested way, as many philosophers and others try to describe it. That’s why game-theoretic accounts of rationality, say, miss something crucial. I think a deeper account of rationality would have to have a kind of virtue ethics as a component. Rationality is about decisions, of course. But it’s also about making decisions in the face of real-life challenges. For example, being able to weigh alternative scientific hypotheses is not something that happens in an emotional or psychological vacuum. Often enough, we make those choices under pressure—for example, the pressure of challenges to positions on which we’ve staked our careers, or simply challenges to beliefs with which we’re comfortable or familiar.¹ Our ability to confront those tests successfully requires industry, honesty, dedication to the truth, and sometimes intellectual courage. Scientists who lack these virtues are not simply exhibiting moral failures such as indolence or cowardice; they’re also exhibiting fundamental failures in rationality. Baehr makes the point very nicely.

. . . inquiry has a robustly active dimension. It involves observing, imagining, reading, interpreting, reflecting, analyzing, assessing, formulating, and articulating. Success in these activities . . . requires an exercise of certain intellectual character traits. It can require, for instance, that one engage in *attentive* observation, *thoughtful* or *open-minded* imagination, *patient* reflection, *careful* and *thorough* analysis, or *fair-minded* interpretation and assessment. As this suggests, inquiry makes substantial personal demands on inquirers. It demands an exercise of a range of "intellectual character virtues." (Baehr 2011:1)

. . . personal character is not exhausted by moral character. It also has an epistemic or intellectual dimension: a fully or broadly virtuous person can also be counted on to care deeply about ends such as truth, knowledge, evidence, rationality, and understanding; and out of this fundamental concern will emerge other traits such as inquisitiveness, attentiveness, carefulness, and thoroughness in inquiry, fair-mindedness, open-mindedness, and *intellectual* patience, honesty, courage, humility, and rigor. (Baehr 2011:2)

I'm personally very pleased to see virtue epistemology develop as a philosophical area of specialization. For one thing, it makes me feel less lonely about expressing my contempt (as I often do) for the intellectual dishonesty and cowardice I so often see in the many attempts to thwart or denigrate research in the empirical domains discussed in the pages of this *Journal*. I've been chided by some of my colleagues for speaking out forcefully against the individuals I've targeted. But I consider my criticisms to be a form of justifiable moral outrage, and I see nothing wrong in strongly condemning bad behavior, whether it's that of a serial rapist or someone merely posturing as a scientific authority. After all, it's clearly intellectually dishonest to pontificate confidently about matters about which you *know* you're ignorant, or to knowingly ignore evidence opposing the position you favor, as career skeptics often do. And it's cowardly to reflexively condemn or avoid research into subjects that challenge familiar, comfortable views.

I've addressed this issue in the past, before I realized that my concerns could be buttressed by developments in virtue epistemology. For example, I noted the following (Braude 2008).²

It continues to amaze me how carelessly and unscrupulously otherwise smart and honest people argue against the existence of psi generally and its more dramatic manifestations in particular. There are, of course, careful, courageous, and reflective critics of the field. But too often critics resort easily to lines of argument they would be quick to detect as sleazy or indefensible in other contexts—for example, if those arguments had been directed at *them*. In fact, it's almost as if a veil of idiocy suddenly descends on those who are otherwise penetrating and intelligent. In my view, it's unlikely that in most other contexts skeptics would resort so easily to *ad hominem* and straw man arguments. But that's precisely what dominates the skeptical literature. (Braude 2008:109–110)

It's obvious that many skeptics are intelligent people, and I suggest that it's highly unlikely that these shabby criticisms of the parapsychological evidence are simply the sorts of occasional and more or less random spasms of stupidity that all persons experience sometimes. Indeed, if that's all the criticisms were, then presumably those lapses wouldn't occur so exclusively and so transparently in connection with parapsychology. It's much more plausible that many skeptics are simply in a kind of conceptual panic, [and] that in the grip of this panic their reason and integrity go by the wayside. (Braude 2008:111)

Of course as I've noted in previous Editorials, researchers in areas of frontier science also sometimes engage in shoddy (if not disgraceful) intellectual practices. For example, I've criticized certain parapsychologists who (on the one hand) know there's an abundance of serious evidence for psychokinesis from both spontaneous cases and semi-experimental studies of physical mediumship (Braude 1997), and (on the other hand) deny the reality of PK primarily on the transparently lame grounds that they (or others) can't elicit evidence for the phenomenon reliably or clearly under strict laboratory conditions. Although I understand the frustration and resistance of scientists who can't get PK to behave experimentally the way they'd like, why assume from the outset that it's a process that should have been brought into the lab in the first place? The point here is not difficult to grasp. As I've often noted, although many speculate with varying degrees of competence and sophistication about the role of psi in life, in fact we know so little about ESP and PK and their role (if any) in a natural setting outside the lab, for all we know it may be as difficult or inappropriate to study psi experimentally (and expect consistent behavior) as it would be to study sexual arousal, wittiness, or athletic proficiency in the lab. If PK fails under strict experimental protocols to behave like a paradigmatic, non-intentional, purely mechanical process, the obvious conclusion, to me at any rate, would be not that it may not exist but that we're applying the wrong tools to examine it.

Analogously, it would be equally and obviously foolish to conclude that penile erections are illusory—or simply that their existence is unconfirmed—because (some porn stars possibly notwithstanding) they can't be produced reliably under the cold scrutiny of experimenters and strict laboratory controls and conditions. The same holds, clearly, for the ability to produce witty remarks and the ability to return tennis serves (among many other abilities—see Braude, 2014, Chapter 6 for more on this). And needless to say, we know indisputably that erections, witty remarks, and returned tennis serves occur, and that this knowledge can't be undermined by familiar and inexcusably glib appeals to the fallibility of

eyewitness testimony, especially under conditions relevantly different from those which encourage or facilitate eyewitness errors.³ So maybe PK won't be amenable to the sort of analysis and experimental investigation some scientists would like to give it. But so what? It's both arrogant and shallow to think that Nature should conform to our preferred methods of description or inquiry, or yield its secrets only in those forms we're prepared to accept, and I believe it's appropriate to denounce that methodological pretentiousness for what it is. The more admirable epistemological stance, I believe, is to be open to the wisdom of Aristotle's ancient claim that different domains demand (or at least may demand) different modes of investigation and explanation, and thus to be alert for, and more prepared to deal with, the cards we've been handed.

Oh, and in case you were wondering, Kidd concludes that Crookes was indeed epistemically virtuous. I urge you to consider his arguments for that conclusion—and in fact to read Crookes's splendid and admirable *Researches in the Phenomena of Spiritualism*, which may now be accessed for free, along with some other parapsychological classics, on the Esalen Center for Theory and Research website. For Crookes's book, the link is <http://www.esalen.org/ctr-archive/crookes-researches.html>. Moreover, the book may be downloaded for free at archive.org: <https://archive.org/details/researchesinphe02croogooq>. Those who read this work will understand clearly why Kidd takes the position he does.⁴

Notes

- ¹ There's seductive security in familiarity, of course, and not just with respect to one's empirical and theoretical commitments. Probably it's also one reason people remain in toxic intimate relationships—a significant obstacle to risking the unknown in the hope of finding a more compatible partner. In any case, familiar scientific theories offer an analogous comfort, despite what may be their obvious and even fatal flaws or limitations. My favorite example is memory trace theory (see Braude 2014).
- ² These comments were made in connection with parapsychology, but (as far as I can tell) at least some of them could apply equally to other domains of frontier science—e.g., Ufology, LENR, homeopathy, and cryptozoology.
- ³ For details about the reliance on eyewitness testimony in connection with psi phenomena, see my extended treatment (Braude 1997), or the more compact treatments (Braude 2007), and my Editorial to *JSE* Volume 28, Number 2, Summer 2014.
- ⁴ I'm grateful to Stan McDaniel and Ed Kelly for helpful comments on early versions of this Editorial.

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RESEARCH ARTICLE

Twitter Followers Biased to Astrological Charts of Celebrities

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Abstract—Astronomical relationships at the birth times of a practical subset of the top 1,000 most popular Twitter users indicate that an ancient prediction for identifying strength in “followers” for the subset is indeed markedly likelier as the number of Twitter followers increases. Using publicly accessible data, it is shown that the incidence of this astronomical relationship at birth is higher than expected among these Twitter celebrities by using a Monte Carlo simulation, and that a strong positive correlation exists between these Twitter celebrities’ follower numbers and incidence of this astronomical relationship in their birth charts. Within the top 500 Twitter users, the regression relation is similar, but even more acute. Finally, we confirm that Twitter ranking joins many other phenomena in Nature by following the Zipf–Mandelbrot law.

Introduction

Celebrities engage our imagination, our curiosity, and our attention. We follow their words, actions, and even their fashions (James 1993). Very recent developments in social media have allowed us to obtain metrics for the first time of the magnitude of a person’s followers (Twitter 2013).

In this study, we demonstrate that the number of Twitter followers among the well-documented most popular Twitter celebrities is correlated to an astronomical factor based on the celebrities’ times and places of birth, a factor that for millennia has been a signature for a person’s ability to attract “followers.”

This signature is from the ancient system of *Jyotisha Shastra* (Jyotisha) developed in India and now increasingly popular globally. Jyotisha has an extensive literature from astronomical texts to texts giving sets of rules for predicting human, mundane, and meteorological phenomena based on the output from astronomical computations.

If such rules have any validity, then they should be able to be subjected to tests. One example is that a greater incidence of Mars found in certain angles to the Ascendant in the birth charts of well-known athletes has been observed, but in an environment of some debate (Ertel & Irving 2000). While that is partially an empirical observation and partially related to certain theories, our article restricts itself to testing a Jyotisha rule per se.

This article arose from an initially tongue-in-cheek investigation of a rule concerning “followers” and Twitter. Normally, it is very difficult to find a numerical assessment of someone’s following. Politicians are subject to polling, but these results are notoriously fickle and may not represent a genuine following of the person. The emergence of Twitter has provided a numerically assessable following for subscribers. An investigation of this following and the application of the Jyotisha rules to estimate components of the birth charts of Twitter celebrities based on their follower numbers is made here using publicly accessible data and standard statistical methods (Harrell 2001).

Methods

Jyotisha includes the luminaries (the Sun and the Moon), the five planets visible to the naked eye, and the two nodes of the Moon. These are referred to as grahas. In the scheme investigated here, defined in Jaimini Maharishi’s *Upadesa Sutras* (MJUS) (Rath 2002), the South node of the Moon is omitted and the remaining grahas are assessed for the geocentric longitude (longitude) and degree advanced within the sidereal sign in which they are placed. The sidereal zodiac was defined by a committee of the government of India led by N. C. Lahiri and defines the starting point of Libra as the longitude of the star Spica based primarily on *The Surya Siddhanta, a Textbook of Hindu Astronomy* (Burgess 2002).

In the sidereal zodiac, there are twelve signs, each of 30 degrees. Each sign occupies a house fully. In the described computations herein, a ‘house’ is identical to a sign except that houses are numbered starting from the sign rising on the east, which is designated as house number one. Quadrant or ‘kendra’ houses are those at right angles to each other.

The graha positions at the time of birth are sorted by degree except that the North node degree is subtracted from 30 due to its mean retrograde motion. The graha with the highest degree is designated the *AtmaKaraka* (AK), and that with the sixth highest degree is called the *PutraKaraka* (PK). Since the AK refers to the self and the PK for celebrities refers to the collection of followers, the strength of the following is claimed to be related to their mutual relationship. MJUS defines this relationship as strongest when the two are in mutual angles (*kendra*). For example, if the AK is in

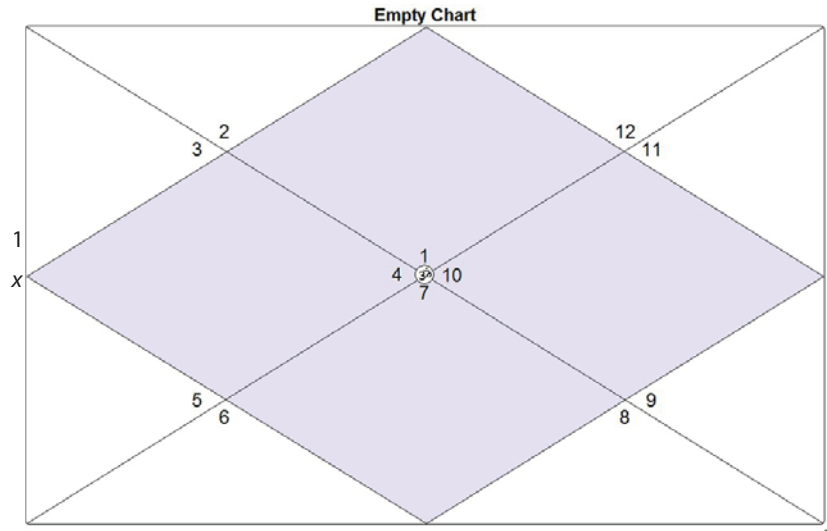


Figure 1. Kendra houses with respect to the top middle diamond are shaded in an empty chart.

the sign of Aries, then the kendras are the houses where Cancer, Libra, Capricorn, and Aries itself are placed. That is, the kendras are always 1, 4, 7, or 10 signs/houses away from each other (Crane 1997). The standard direction in which to count is counterclockwise.

Jyotisha prescribes many different “charts” or diagrams for placement of the grahas. The main ones are the *rashi* (D-1), which is the astronomically observed placements, and the *navamsha* (D-9), which is a subchart constructed by dividing each sign into nine parts, each of which is then assigned the name of a sign in consecutive order running continuously.

In Figure 1, we see the twelve houses in an empty geocentric sidereal Vedic chart. Each section denotes a house (and sign) and is labeled from one to twelve. Houses one, four, seven, and ten are the kendra houses with respect to the top middle diamond (house one) and are shaded. In the subsequent diagrams, the very smallest numbering refers to the actual sidereal zodiac sign in each house as the house itself is invariably defined by the position in the diagram, the first house being always top central.

As an example, we selected the top ranking celebrity at the time of our Twitter snapshot. Figure 2 is the D-1 of Justin Bieber (birth information: March 1, 1994, 00:56 a.m., London, Ontario, Canada; B Rodden rating) and Figure 3 is his D-9. We see that the AK is Mercury (noted as Me) and PK is Saturn (noted as Sa). A kendra relationship is seen in the D-9 but not in the D-1.

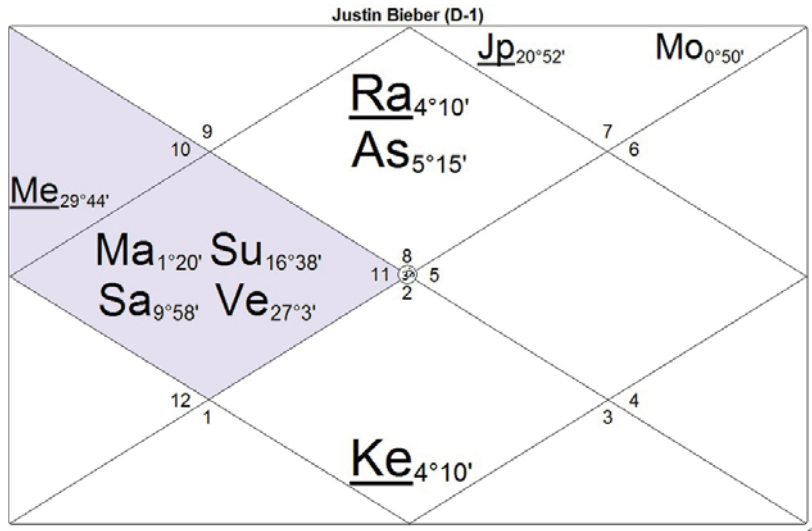


Figure 2. The rashi chart (D-1) of Justin Bieber. The PK is inclusively two houses away from the AK.

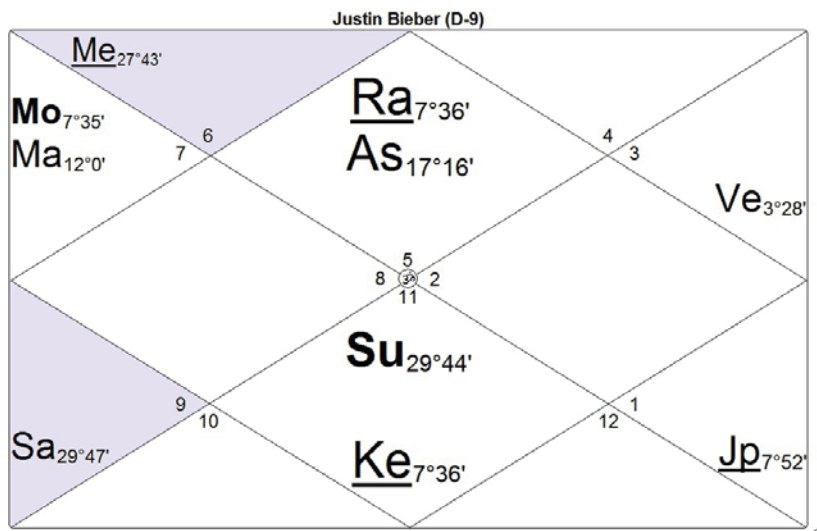


Figure 3. The navamsha chart (D-9) of Justin Bieber. The PK is inclusively four houses away from the AK. Hence, the AK and the PK are in a kendra relationship.

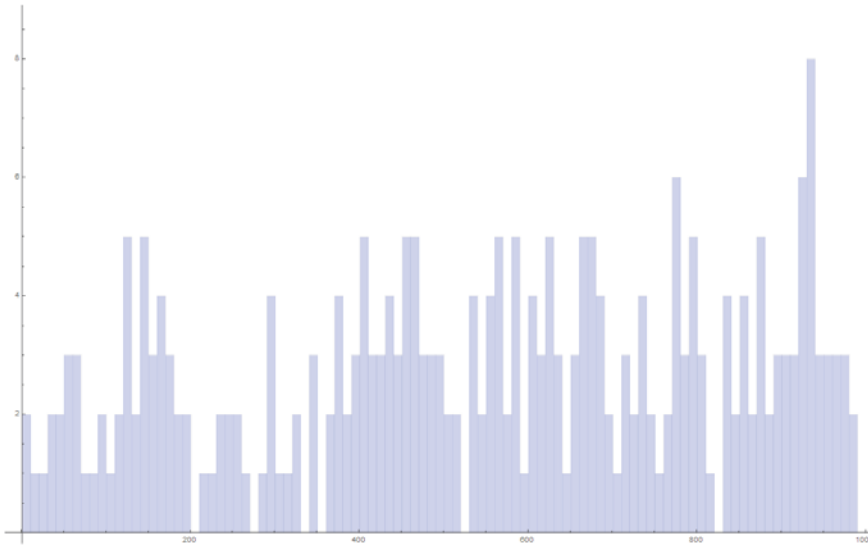


Figure 4. The distribution of 268 observed business accounts throughout the top 1,000 Twitter users. Each bar represents a ranking set of 10.

The list of the top 1,000 most popular users of Twitter on July 14, 2013, at approximately 3:20 p.m., Mountain Standard Time, USA, was captured by screenshots of the list given at <http://twitaholic.com> at that moment. Also provided on that site at that time were the users' rankings and the total number of followers per user.

There were 268 business users (such as CNN), which were excluded. These were spread out fairly uniformly across the rankings (see Figure 4.) The birth time, date, and place (which give us the chart) for each human user in the list was sought from <http://astro.com>. We excluded charts that were of poor accuracy (X, DD, D, or C Rodden ratings) and kept those of high AA, A, or B Rodden ratings (Astro-Databank 2013). The Rodden rating system was developed to facilitate research. The accuracy of birth date and time for many thousands of persons, some famous, were assessed by the editors using standardized criteria. The standards range from the time on a birth certificate (AA), a direct quote from the celebrity (A), or from a biographer (B), etc. Ratings of B and above are thus reasonably reliable, and only and all those Twitter celebrities with B or greater ratings were used. Ensuring that we have good quality data was of top priority and is the main reason that so many birth charts were dismissed.

There may also be some professional bias in the birth information that

is made available by astro.com. However, as those who collected the data are not involved with Jyotisha to any significant extent and are unlikely to have even heard of the obscure rule we investigate, any effect can be reasonably neglected.

For various cultural reasons, this database (Astro-Databank 2013) may not provide a representative sampling of the broad expanse of demographics of the top 1,000 Twitter users. However, our experimental design is intended to provide a robust approach for investigating the group of users for which we could obtain data.

In this way, we created a group of 84 Twitter Celebrity Charts, or the TCC group. The astrological software Shri Jyoti Star (Foss 2013) was used to create the users' charts in the Jyotisha system, using the standard Lahiri ayanamsa and mean nodes, these being the most common choices among Jyotisha scholars. We observed the number of houses from the AtmaKarak to the PutraKarak in both the rashi chart (D-1) and navamsha chart (D-9) for each person. Each chart was scored 1 if a kendra relationship was found. Otherwise, it was scored 0.

For the purpose of comparison, a Monte Carlo approach was employed. In order to generate a chart, the birth time, date, and place were required. Following the steps of bootstrap resampling, the data from the TCC group were used by random selection to generate Monte Carlo sets, each of 84 synthetic charts. This technique overcomes many issues related to selecting a comparison population. For example, as Jupiter and Saturn move slowly, a particular angular relationship might be more common in the TCC group than in an unrelated comparison group. Also, people in general are not born at random times of the day or week or even season (Centers for Disease Control 1999, Goodman, Nelson, & Maciosek 2005). The geographic distribution is also highly skewed in the TCC.

A Monte Carlo simulation through bootstrap resampling satisfies many of these concerns (Efron 1979). It tells us that the elements of data of the 84 Twitter celebrities for birth year, birth month, birth day, and birthplace in random permutations can be used as a sample space for the general population from which the initial sample of 84 comes, however mysterious that general population may be. In other words, the only exactly nontilted dataset to build from the complex distributions of the values given in the births of the 84 celebrities is one expanded from that dataset itself.

This is sensible. For example, many of the celebrities were born in the Los Angeles, California, USA, area. You would want the sample space to be also drawn from theoretical births in the Los Angeles area in the same proportion. Similarly, 1962 was a high time for the year in which our Twitter celebrities were born. That year should be weighted to have more

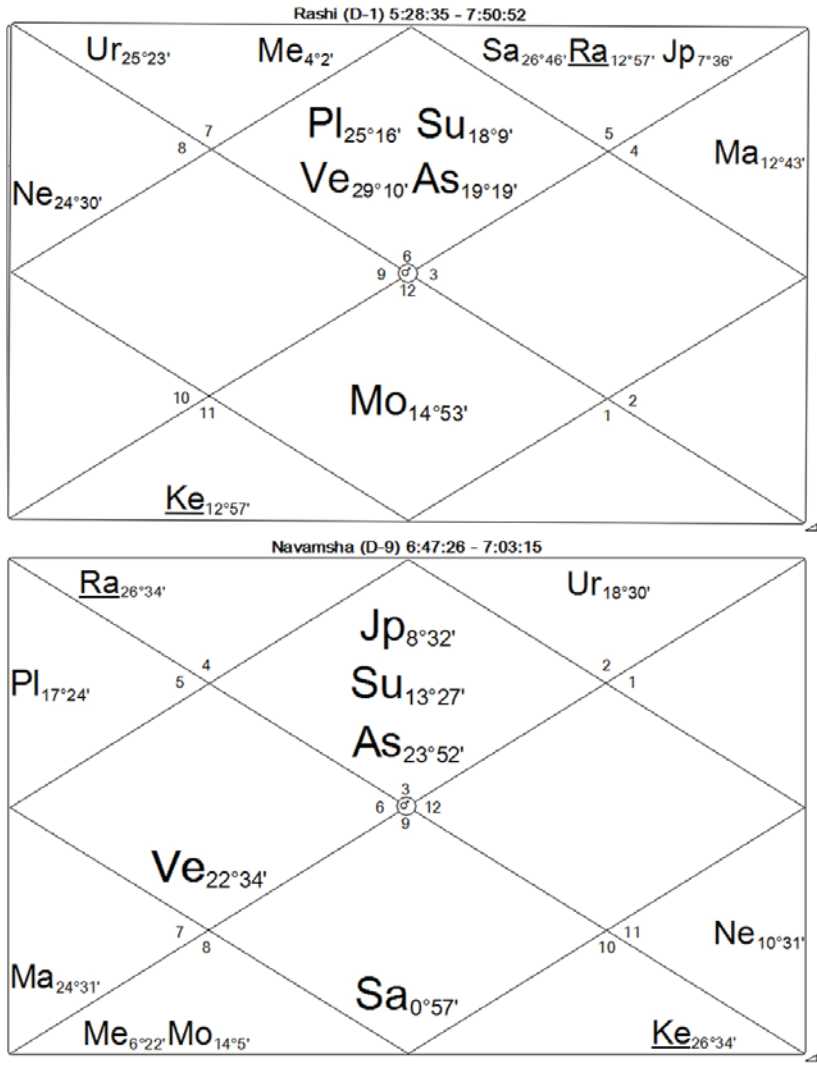


Figure 5. Random chart from the Monte Carlo set. Time is 7:00 a.m.

representatives in our simulated births, and so on. The only major concern that is not answered by this technique is the drops in weekend births, induced and elective (Lerchl & Reinhard 2008).

We found 84 Twitter users among the top 1,000 whose birth data is presented by astro.com with high accuracy. These 84 users are considered celebrities, but the more than 4 billion fictitious people represented by the

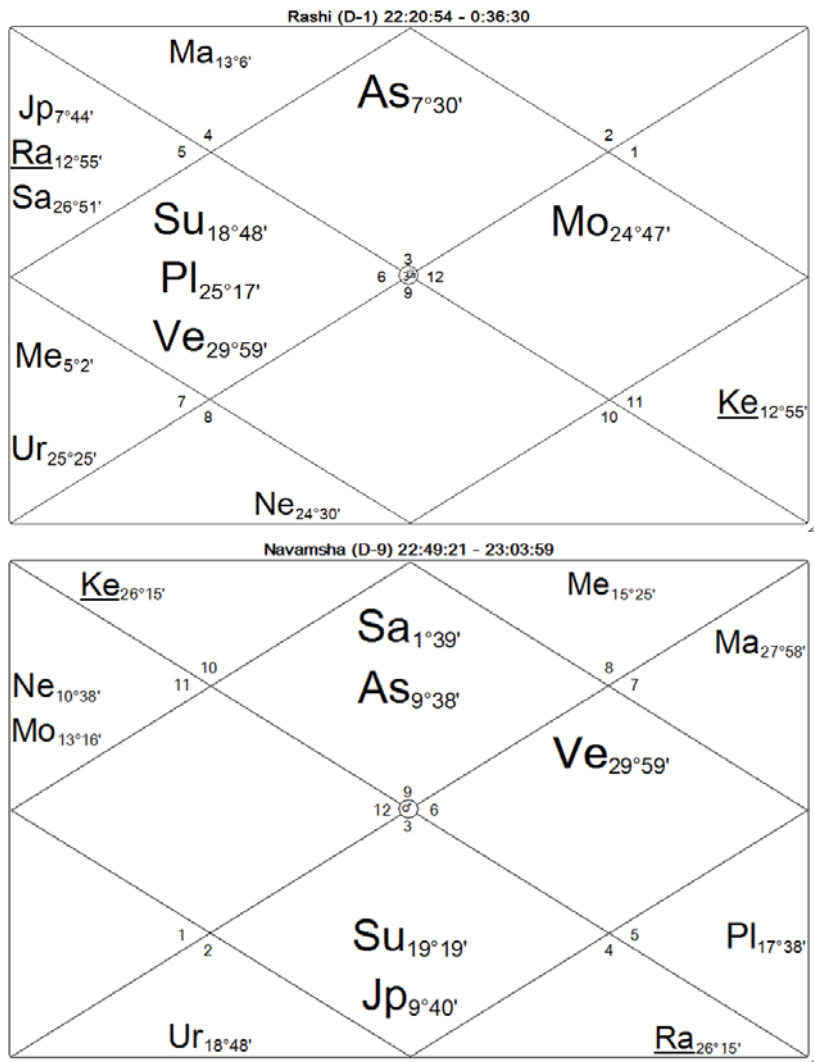


Figure 6. The same number of houses between AK (Venus) and PK (Mars) occur as in Figure 5 even though the time is 10:54 p.m.

84⁵ permutations of their birth days, months, years, times, and places do not have to be, and it is this larger population that we wish to sample.

In order to determine an adequate sample set in groups of 84 synthetic charts and to ensure low probabilities of both type I and type II errors, we generated sample sets, monitoring mean, until $\alpha < 0.05$ and power or $1 - \beta > 0.90$, where α is the probability of a Type I error (a false positive) for

the TCC group incidence and β is the probability of a Type II error (a false negative) (Faul, Erdfelder, Lang, & Buchner 2007). This gave us 65 sets of 84 charts per set for a total of 5,460 synthetic charts.

There are some difficulties with constructing random charts in this manner. 1) A birth date of 29, 30, or 31 will not match with a birth month containing fewer than that number of days. If such a month and date were co-generated, we rejected that combination and chose a replacement entry. This occurred 61 times in creating 5,460 charts. 2) Pennsylvania and Illinois had periods where some hospitals applied daylight saving time and some did not. In these cases, we followed the state law at that time. 3) The Dalai Lama was born in a remote place under Local Mean Time. When this place occurred in a synthetic chart, the nearest place in our atlas was used with the time zone equivalent to the date and place of that chart.

The effect of both of the latter two issues is minimized by the nature of the rule investigated. It seeks a certain coarse angular relationship between two heavenly bodies which remains the same for many hours and is independent of the ascendant.

To demonstrate this principle, a random chart choice from our Monte Carlo sample space is given as an example. The time, date, and place are October 5, 1979, at 7 a.m. in Inglewood, California, USA. The AK is Venus, and the PK is Mars. There are eleven houses between the AK and the PK inclusively in the D-1 and two houses between them in the D-9. These numerical relationships are maintained throughout most of the day, from 3:23 a.m. to 10:54 p.m. in this particular case. See Figure 5 and Figure 6 for the comparison D-1 and D-9 charts at 7:00 a.m. and 10:54 p.m., respectively, on that day at that place.

Hypotheses

Hypothesis One

H1₀ (Null): The incidence for kendra between AK and PK in either the D-1 or D-9 for the Twitter Celebrity Charts are close enough to the incidence in the Monte Carlo chart distribution so that the p-value for the celebrity set incidence is greater than α , while $\alpha = 0.05$, and $1 - \beta = 0.90$.

H1_A (Alternative): The incidence of such kendra in the Twitter Celebrity Charts in comparison to the Monte Carlo set results in a p-value that is less than α , while $\alpha = 0.05$, and $1 - \beta = 0.90$.

Hypothesis Two

H2₀ (Null): There does not exist a regression $f(x)$ with a positive slope describing y such that the p-value < 0.05 for the coefficient of x , where x is

number of followers and y is incidence of kendra in either the D-1 or D-9 in the Twitter Celebrity Charts.

H2_A (Alternative): There exists such a regression $f(x)$ whose graph has a positive slope describing y with a p-value for the coefficient of $x < 0.05$.

Explanations

In Hypothesis One, we test whether the incidence of kendra in either the D-1 or D-9 has a significantly different value for our Twitter celebrities than could be expected in the general Monte Carlo group.

In Hypothesis Two, correlation is tested between Twitter follower numbers (x) and kendra incidence in either the D1 or D-9 (y) using a regression function. If there is such a relationship, then the regression function would have a high goodness of fit with the data with respect to x to support the Alternate hypothesis, while a poor fit would support the Null hypothesis. The uniformly positive slope ensures that as the number of followers increases, kendra incidence increases, which is our ultimate goal to demonstrate.

Note that the goal in H2 is one of correlation, not causation.

A substantiating result in Hypothesis Two would *not* allow the prediction of follower numbers based on a person's chart (as tantalizing a prospect as that may be). Rather it would allow quite the opposite: the determination of the likelihood of an earlier astronomical occurrence at the time and place of a person's birth based on the person's follower numbers, especially if those numbers are high. This astronomical occurrence would then be easily verifiable by astronomy or astrology software or an ephemeris, etc.

Results

Distribution of Number of Houses between AtmaKaraka and Putra-Karaka Follows Cultural Prescription in the Twitter Celebrity Charts

As mentioned above, the standard sidereal chart depicts twelve equal houses that represent the circle of the zodiac. It is commonly divided into quadrants. The houses are simply the zodiacal signs. Houses one through three are called the first quadrant, houses four through six are called the second quadrant, houses seven through nine are called the third quadrant, and houses ten through twelve are called the fourth quadrant.

The kendra (houses one, four, seven, or ten) of each quadrant is in general culturally considered the strongest relational influence, followed by the next house, the panapara, also called succedent (houses two, five, eight, or eleven). The next house, the apoklima of a quadrant (three, six, nine, or twelve houses) is considered the least relationship of influence for that

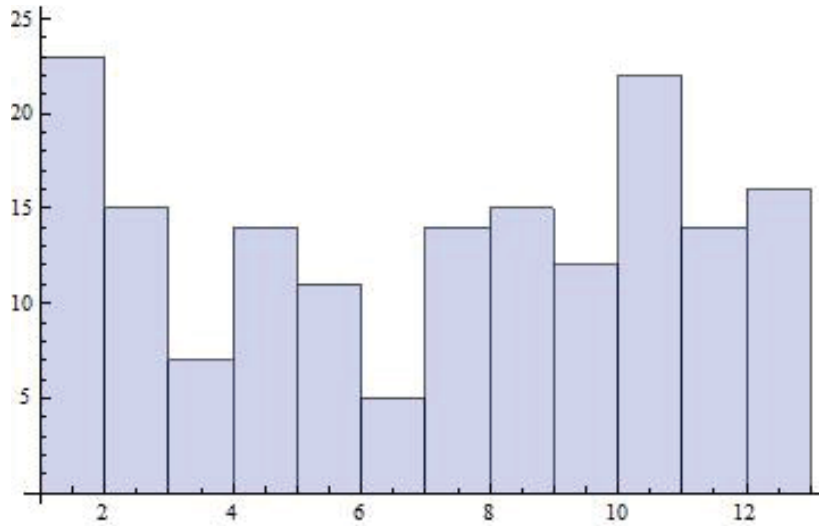


Figure 7. Distribution of total house relationships (D-1 and D-9) between AtmaKaraka and PutraKaraka in the Twitter Celebrity Charts.

quadrant (Rudhyar 1972). Among the kendras, the fourth house relationship is considered the least as it is the “midnight house” to the first. That is, a chart at midnight has the Sun in the fourth house (Rudhyar 1972).

Notice that as demonstrated in Figure 7, these theoretical principles are suggested by the celebrity data. In observed celebrities of the TCC group (Figure 7), for quadrants one and two, the kendra is strongest, the panapara follows, and the apoklima for that quadrant is weakest. For the third and fourth quadrants, the panapara and apoklima are almost equal in results. Of the kendras, the first house is strongest, suggesting that a conjunct relationship between AtmaKaraka and PutraKaraka is the most common kendra relationship for celebrities. The tenth house (conventionally indicating fame) and its quadrant follows closely, then the quadrant belonging to the house opposite the ascendant (the seventh house), and finally last is the midnight house of the fourth, its panapara and its apoklima.

Figure 8 shows by comparison the distribution of houses in the Monte Carlo group. The slight increase in houses one, two, and three is likely explained by the relative proximity of the Sun, Mercury, and Venus. These would be seen in the D-1, and Figure 9 does show the uneven distribution across houses in the D-1 of the Monte Carlo set. Figure 10 shows a relatively even distribution across houses in the D-9 of the Monte Carlo set.

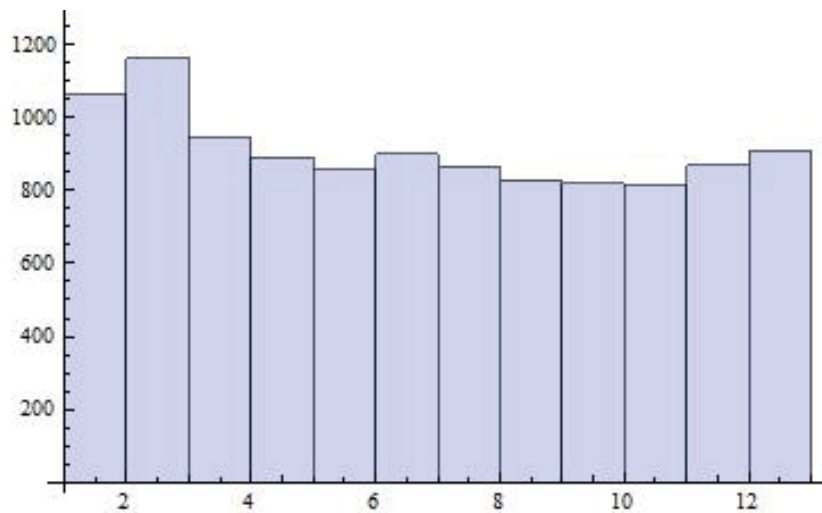


Figure 8. Distribution of total house relationships (D-1 and D-9) between AtmaKaraka and PutraKaraka in the bootstrapped Monte Carlo group.

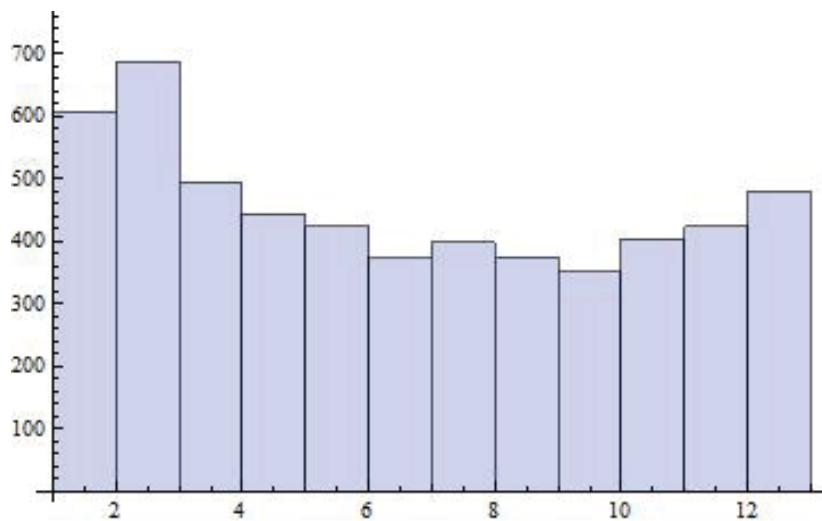


Figure 9. Distribution of house relationships between AtmaKaraka and PutraKaraka in the D-1 only of the bootstrapped Monte Carlo group.

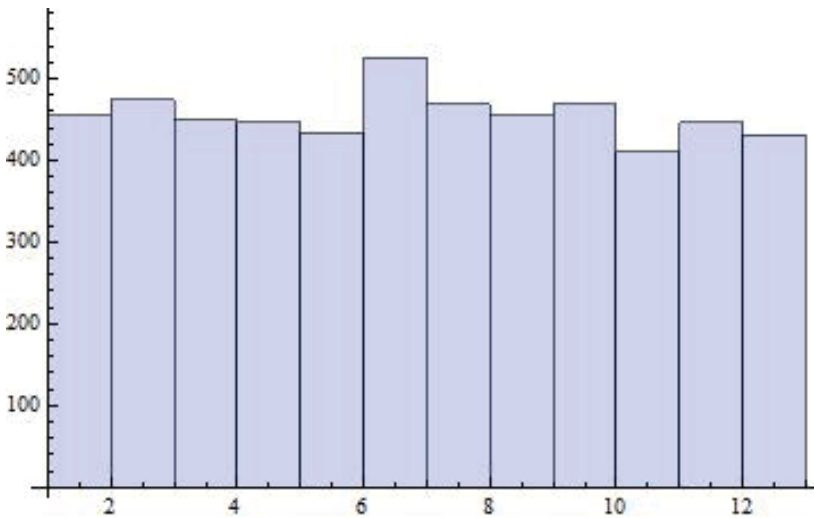


Figure 10. Distribution of house relationships between AtmaKarakas and PutraKarakas in the D-9 only of the bootstrapped Monte Carlo group.

If we compare the two groups for kendra, panapara, and apoklima totals based on the data presented in Figure 7 and Figure 8, there is a significant difference: Pearson's $\chi^2 = 9.38555$, $df = 2$, $p\text{-value} < 0.01$, substantiating the cultural prescription.

These results are an extension to the rule we are testing and are not, as such, directly related to our hypotheses, but are relevant as descriptive information and as interesting and supporting evidence that some ancient astrological principles related to kendra for certain celebrities (i.e. the ones in our TCC group) are indeed showing up in our data. The next two sections directly address Hypotheses One and Two.

Incidence of Kendras between AtmaKarakas and PutraKarakas in Either the D-1 or D-9 for our Twitter Celebrity Charts Is Significantly Higher Than That in the Bootstrapped Monte Carlo Set

We show three methods that satisfy the requirements of $H1_A$. The first method is through a standard normal approximation of the results of kendra incidence in the Monte Carlo set. The second method is through a more precise discrete Fisher's hypergeometric approximation which also provides a better fit. The third is Fisher's exact test.

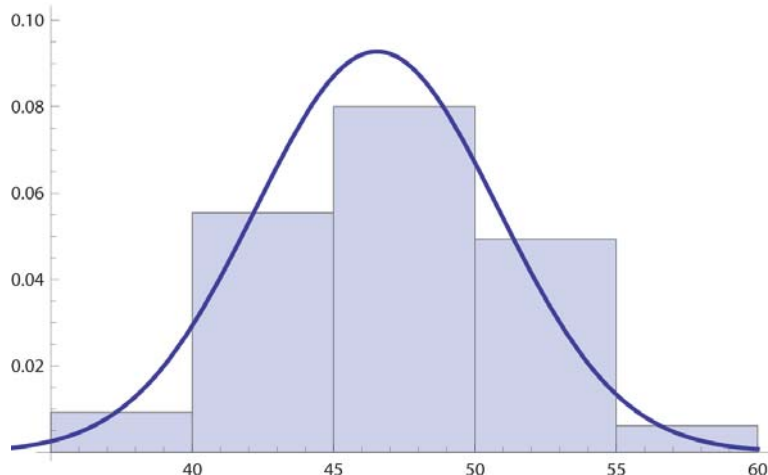


Figure 11. Best fit normal approximation of the Monte Carlo group.

Figure 11 shows the Monte Carlo set data with its best fit normal curve. Table 1 shows the property values for this normal approximation of the Monte Carlo set and the incidence of 60 kendra relationships out of 84 found in the TCC group.

Figure 12 shows the Monte Carlo set data with its best fit hypergeometric discrete distribution. Table 2 shows the property values for the hypergeometric approximation with an incidence of 60 out of 84 (a proportion of 0.714286) found in the Twitter celebrity set and 3,025 out of 5,460 (a proportion of 0.554029) found in the bootstrapped Monte Carlo set.

TABLE 1
Property Values of the Best Fit Normal Approximation

Property	Value
Pearson's χ^2 p-value	0.695358
Mean of the Monte Carlo set	46.5385
Standard deviation of the Monte Carlo set	4.33401
z-score of celebrity incidence	3.10601
One-sided p-value of celebrity incidence	0.000948136
Post hoc actual α	0.0442110
Post hoc achieved $1 - \beta$	0.9115779

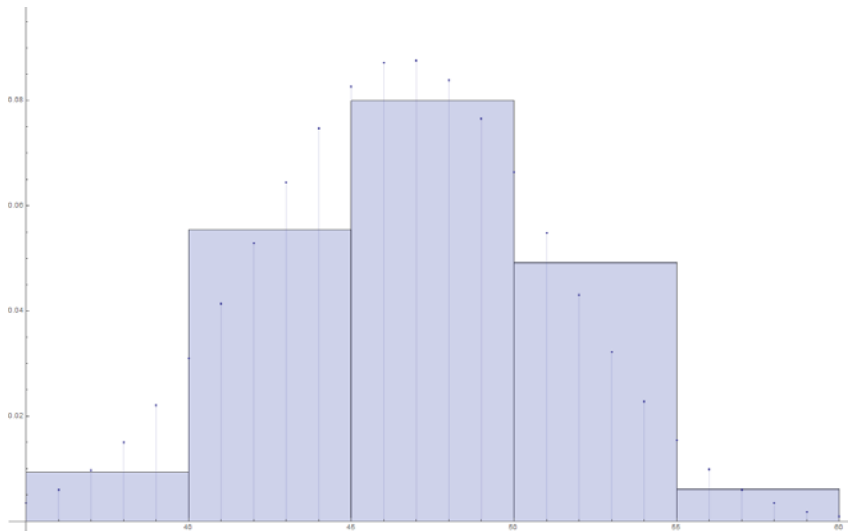


Figure 12. Best fit hypergeometric approximation of the Monte Carlo group.

In both types of best fit approximations, the kendra relationship is more common in the TCC group (one-sided p-value $< \alpha/2$), while $1 - \beta > 0.90$.

The Fisher's exact test yields a one-sided p-value for celebrity incidence of 0.00204829, where actual α is 0.0397944 and actual power is 0.9012414.

Therefore, we accept the first hypothesis of $H1_A$: The incidence of a kendra relationship between the AtmaKarakas and the PutraKarakas for our Twitter celebrities in either the D-1 or D-9 is likely to be significantly higher than expected by either approximation of the bootstrapped Monte Carlo set or by the conservative Fisher's exact test.

TABLE 2

Property Values of the Best Fit Hypergeometric Approximation

Property	Value
Pearson's χ^2 p-value	0.851499
Mean of the Monte Carlo set	46.5455
Standard deviation of the Monte Carlo set	4.52142
One-sided p-value of celebrity incidence	0.00177024
Post hoc actual α	0.0397919
Post hoc achieved $1 - \beta$	0.9020865

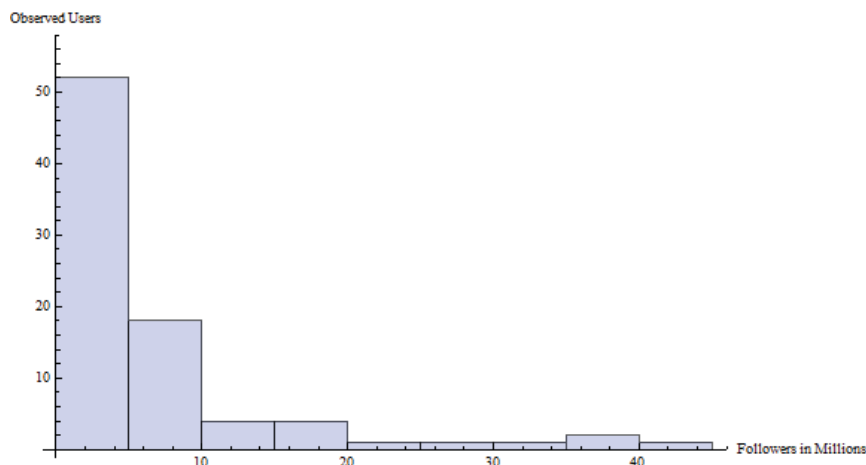


Figure 13. Distribution of number of users (y-axis) in the celebrity group per number of followers (x-axis).

A Positive-Sloped Predictive Relationship between Number of Followers and Incidence of Kendra in Either the D-1 or D-9 Exists in the Twitter Celebrity Charts

Looking at the celebrity dataset, we wanted to test its non-normality with regard to followers so as to select a proper statistical approach to finding the correlation regression function relating followers to kendra incidence. Figure 13 is a distribution chart suggesting an exponential decrease in observed Twitter users as followers increase in the celebrity set. Figure 14 shows a distribution in a probability plot that also suggests non-normality. If the data in the probability plot of Figure 14 were to follow the dotted line, we would know that the data follows a normal distribution. Instead, the curve suggests an exponential quality (Harrell 2001). Such exponential curves have been observed in social media (Faloutsos, Faloutsos, & Faloutsos 1999, Niu & Peng 2013).

Therefore, a nonlinear binary regression method called *probit* was used. The curve of probit regression is highly similar to logistic regression (Harrell 2001). While logistic regression retains descriptive value in the form of an odds ratio and, perhaps, a more easily understandable equation, we would be remiss in using logit (logistic regression) over probit, since probit is a better fit for our data by all measures, including lower AIC (Akaike Information Criterion) and BIC (Bayesian Information Criterion) values as well as lower $-2 \log$ likelihoods and p-values.

The following is the best-fit probit regression equation using x in millions of followers

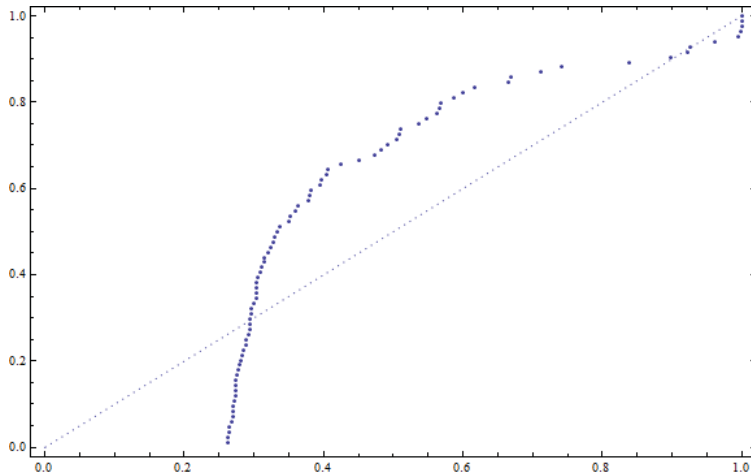


Figure 14. The probability plot of the distribution of followers suggests exponential quality against normality (the dotted line).

$$f(x) = 1/2(1 + erf\left(\frac{-0.101327 + 0.0877916x}{\sqrt{2}}\right)),$$

where $erf(z) = (2/\sqrt{\pi})(\int_0^z e^{-t^2} dt)$.

Figure 15 shows a graph of $f(x)$ in red applied to the dataset in blue. The x-axis shows the number of followers. The y-axis shows either a 1 (for a kendra relationship between the AtmaKaraka and PutraKaraka in either the D-1 or D-9) or 0 (for no such kendra relationship in either the D-1 or D-9) at that level of followers.

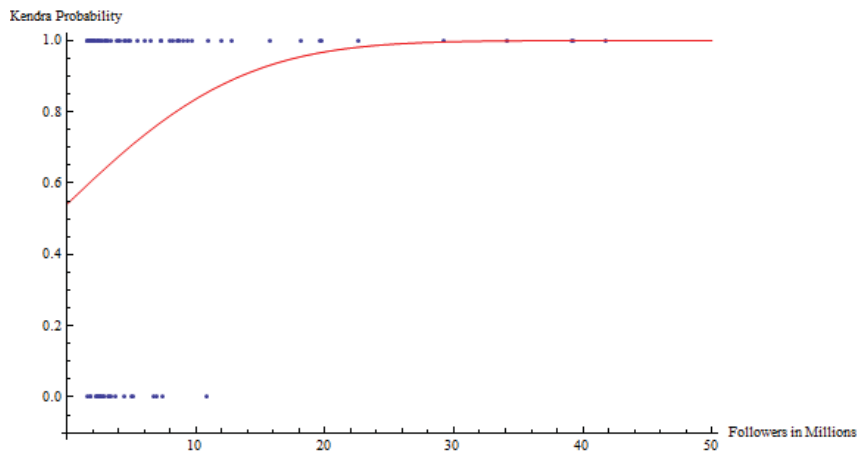


Figure 15. The probit regression equation $f(x)$ in red applied to the dataset in blue.

Table 3 and Table 4 tell us more about the regression parameters and properties. Most of these values are of use in comparing two different models of the same data to see which would be a better match. Note the low-enough p-value that is less than 0.05 for the coefficient of x . The slope of the probit curve is also positive as seen in Figure 16, even as it approaches zero.

TABLE 3
Probit Regression Parameters of $f(x)$ for Top 1,000 Twitter Users

	Estimate	Standard error	z-statistic	p-value
1	0.101327	0.242606	0.417661	0.6761956
x	0.0877916	0.0433124	2.02694	0.0426686

TABLE 4
Probit Regression Properties of $f(x)$ for Top 1,000 Twitter Users

AIC	96.479
BIC	101.341
McFadden Likelihood Ratio Index	0.0798959
Log Likelihood	-46.2395
Likelihood Ratio Statistic	8.03028

In considering the data, we also want to emphasize that the important high tail in Twitter accounts with highest follower numbers is more representative of that whole region than, for example, an equal number of accounts in a middle group. As you can see in Figure 17, Twitter users with the top 10 ranking (each bar represents a group of 10), i.e. those with the very highest follower numbers, are at least twice as likely to have an accurate chart representation on astro.com than any other group. This makes sense. The most popular people are apt to be investigated most thoroughly by writers on astro.com. Thus the important high tail region in the regression relation is likely to be the most representative relatively speaking within the span of celebrity Twitter users on astro.com, even as its represented users are more spread out in terms of follower numbers (see Figure 13). Thus this region is more suited to demonstrating any effect that may be present.

The second hypothesis of $H2_A$ is thus accepted.

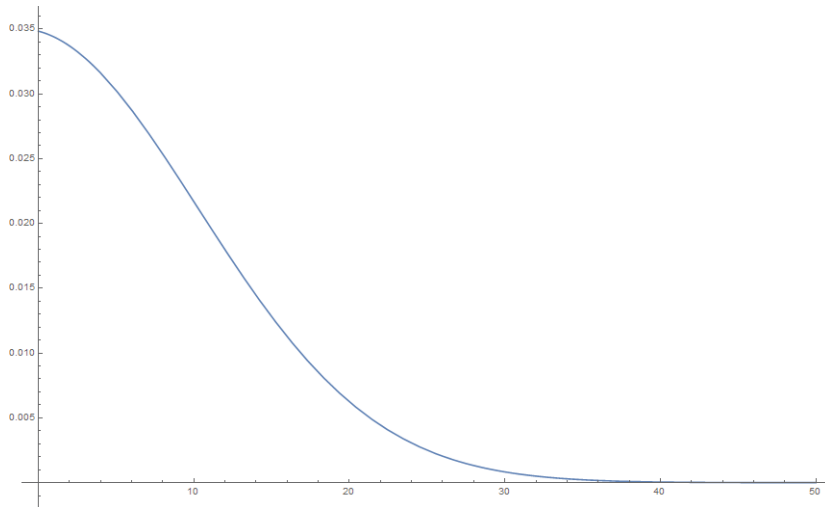


Figure 16. This plot of the derivative of $f(x)$ shows that the slope is always greater than zero.

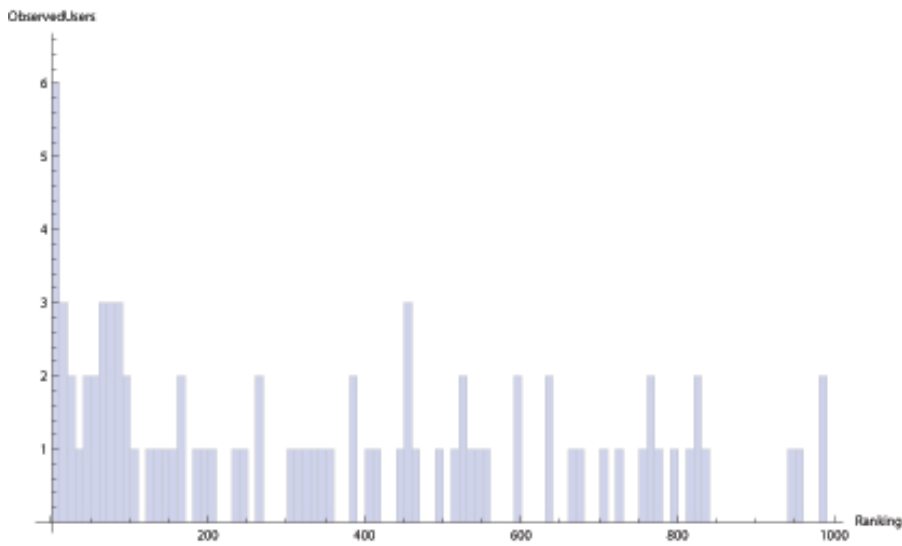


Figure 17. Distribution of number of users (y-axis) in the Twitter Celebrity Charts per ranking level (x-axis).

Sampled within the Top 500 Twitter Users, Kendra Incidence Is Particularly Sensitive and Significant in Correlation to Follower Numbers

Culturally, the search for kendras between AtmaKarakas and PutraKarakas in a chart as a sign of strength in followers is used for only the most popular and successful people. For anyone else, even low-level celebrities, the relationship is said to signify more the person's relationship with his or her children.

Being among the top 500 Twitter users at the moment of data collection, the top 56 of our celebrities were isolated to see if they are particularly subject to this theory of kendra relationship.

Probit regression was also used on this subset of data since p-values, -2 log likelihoods, and AIC and BIC values were lower than for logistic regression here as well. The probit regression equation of $g(x)$ was obtained:

$$g(x) = 1/2(1 + \operatorname{erf}\left(\frac{-0.54886 + 0.168171x}{\sqrt{2}}\right)),$$

where $\operatorname{erf}(z) = (2/\sqrt{\pi})(\int_0^z e^{-t^2} dt)$.

More information on the regression equation can be seen in Table 5 and Table 6. A graph of $g(x)$ is seen in Figure 18 where the x -axis shows the number of followers and is applied to the dataset. The slope is steeper than

TABLE 5
Probit Regression Parameters of $g(x)$ for Top 500 Twitter Users

	Estimate	Standard error	z-statistic	p-value
1	-0.548868	0.420098	-1.30652	0.191375
x	0.168171	0.070756	2.37678	0.0174647

TABLE 6
Probit Regression Properties of $g(x)$ for Top 500 Twitter Users

AIC	60.5573
BIC	64.6434
McFadden Likelihood Ratio Index	0.18585
Log Likelihood	-28.2786
Likelihood Ratio Statistic	12.911

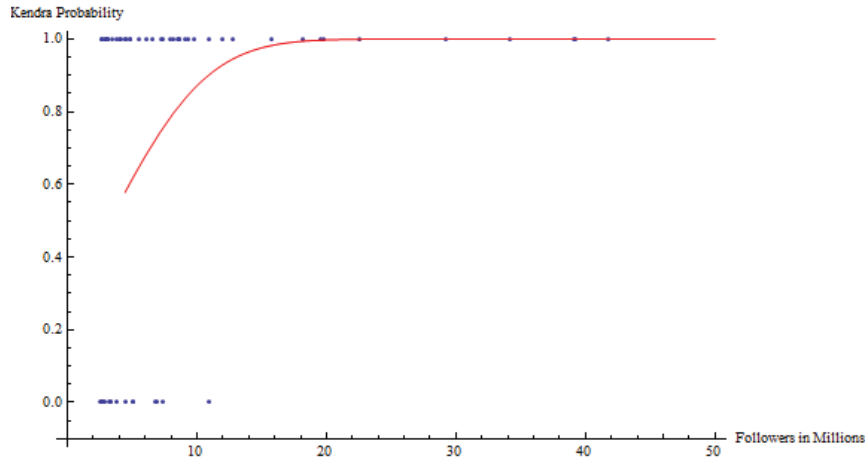


Figure 18. The probit regression equation $g(x)$ in red applied to the dataset in blue.

for $f(x)$, suggesting a higher rate of return of kendra incidence as followers increase in this subgroup. The p-value for the coefficient of x is also less than 0.05 and, as seen in Figure 19, the slope is always positive.

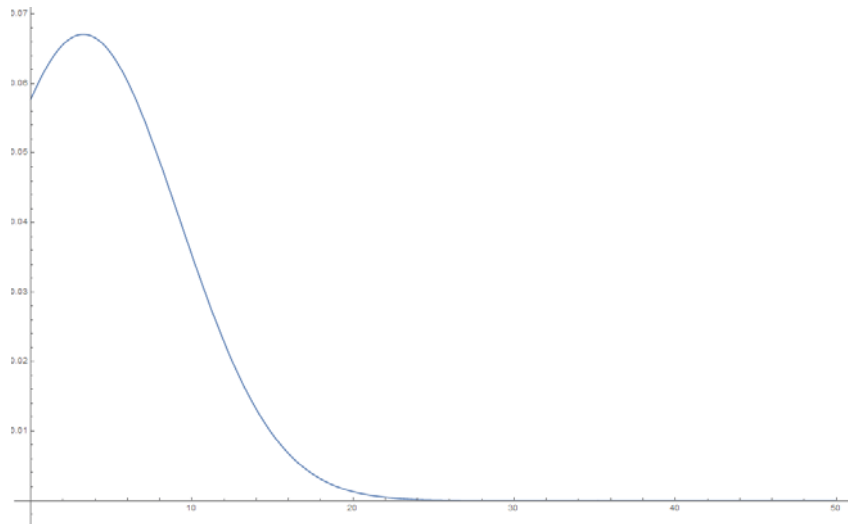


Figure 19. This plot of the derivative of $g(x)$ shows that the slope is always greater than zero.

Remark: Uniform Predictive Relationship for Twitter Ranking as a Function of All Followers Exists

We decided to graph the relationship between ranking and number of followers for the 84 Twitter users whose data we had, considering them a sample of the total top 1,000 users. The following is not immediately related to kendra incidence or astrology.

Refer to Figure 20 and Figure 21. Using standard nonlinear curve fitting, we found that the equation that gives a strong approximation to the relationship between ranking and followers is

$$\begin{aligned}
 \text{Ranking}(x) = & -15.20365 + \frac{631.71567}{x} \\
 & + (2.9832613 * \sinh(-23.1646477 + 0.3764134 x) / (10^7 x))
 \end{aligned}$$

in which x is the number of followers for a particular user of Twitter.

The implication here is that ranking is not in a haphazardly decreasing relationship to the number of followers. Instead, a precise uniform natural law involving an inverse power, as well as the natural number e (in \sinh), is at work all along the set of sampled Twitter users. Their followers are fulfilling this law.

As seen in Table 7, $p < 0.001$ for all terms, affirming the accuracy of the terms in the relationship as seen in the graph of Figure 21. The R^2 value is 0.999905, affirming a very high confidence of fit.

In fact, the current simple standard model of $c + b/x$ can only achieve an R^2 value of 0.992555. (For a best fit with our data, c would be -121.981 and b would be 1.62665×10^9 . The reader can see the difficulty of relying on such a model by referring to Figure 22 which shows this particular $c + b/x$ best-fit graph.)

TABLE 7
Parameter Table for Ranking as Function of Followers

Term	Standard error	t-statistic	p-value
631.71567	32.6135	19.3698	<0.0001
-15.20365	2.48423	-6.12353	<0.0001
-2.983261×10^{-7}	4.16×10^{-9}	-71.7053	<0.0001
0.3764134	0.0135846	27.7089	<0.0001
-23.16465	5.93425×10^{-10}	-3.90354×10^{10}	<0.0001

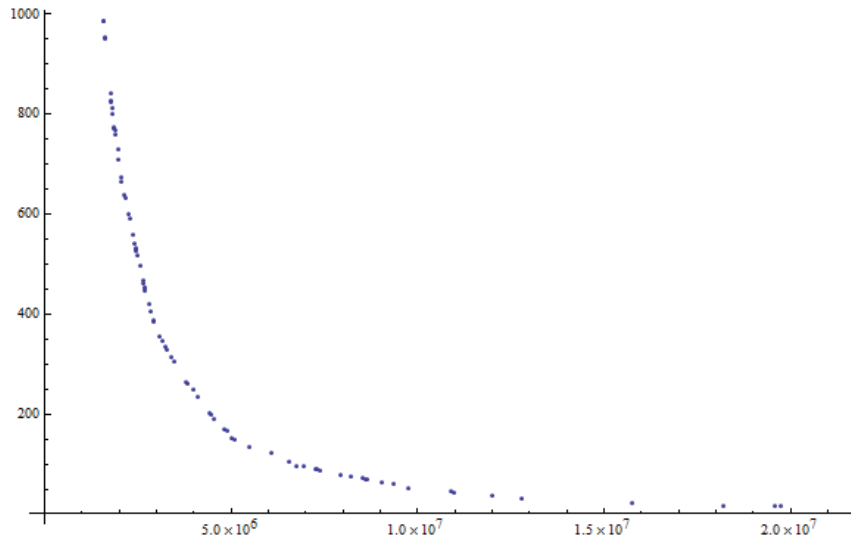


Figure 20. As followers increase (x-axis), the ranking decreases (y-axis).

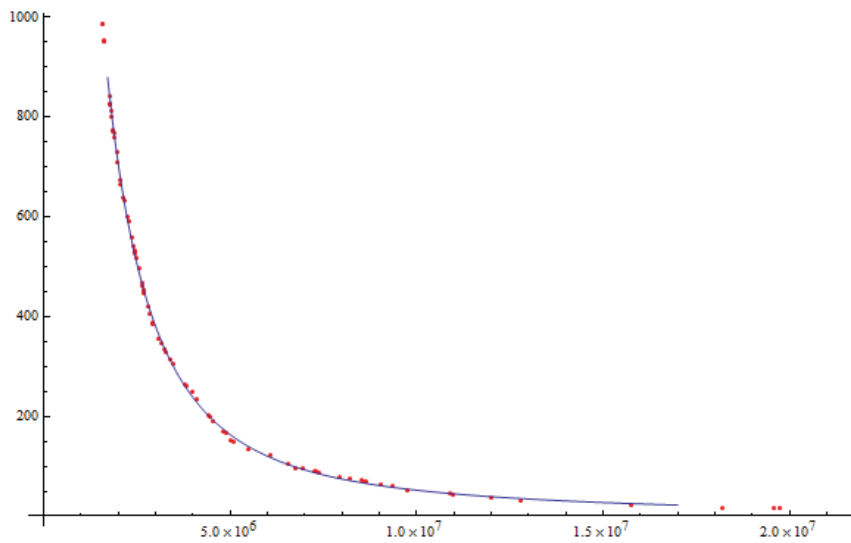


Figure 21. The approximation equation of Ranking (x) in blue is applied to the observed ranking by number of followers, which is in red.

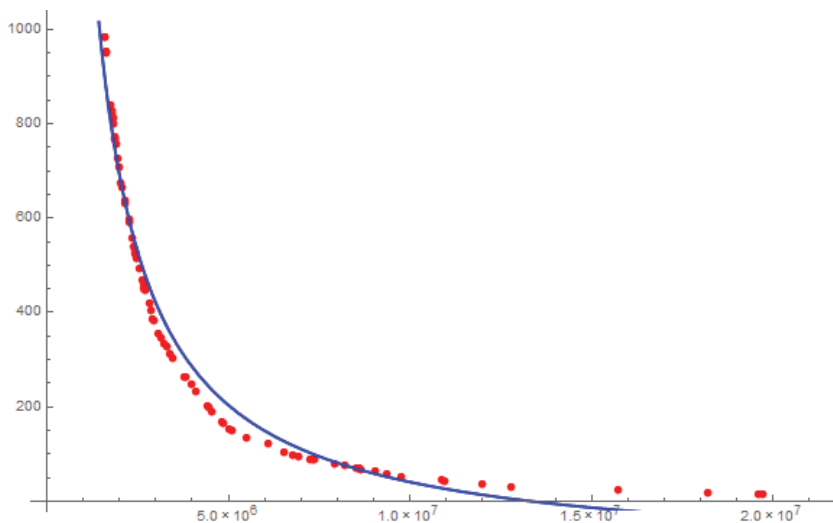


Figure 22. The error of a simple $c + b/x$ best fit model of ranking as a function of followers is demonstrated.

The full nature of the observed data in the Log–Log plot in Figure 23 (including the small curve) verifies that Twitter ranking as a function of followers is yet another remarkable instantiation of the Zipf-Mandelbrot law, joining the relationships in occurrences of words in texts, sizes of cities, abundances of species, and measurements of “pleasing” music, among other examples in Nature (Mandelbrot 1971).

Conclusion

We attempted to demonstrate the force of an ancient astrological prescription for estimating a person’s number of followers. This prescription is a kendra relationship between AtmaKarakas and PutraKarakas in either the D-1 or D-9, an astronomical observation at time and place of birth, which was here determined to be of significance in correlation to number of Twitter followers for a subset of the top 1,000 Twitter users as observed at a moment in time.

The kendra relationships of this prescription are far greater in incidence in either the D-1 or D-9 in our Twitter Celebrity Charts than could be typically expected based on the Monte Carlo distribution, thus satisfying hypothesis $H1_A$. Moreover, kendra incidences in either the D-1 or D-9 in the celebrity set are significantly correlated with number of Twitter followers, increasing as the number of followers increase, satisfying $H2_A$.

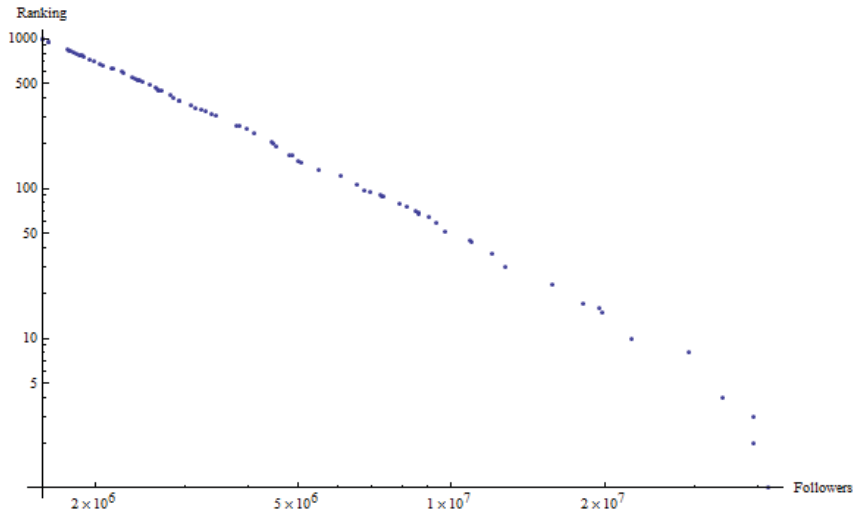


Figure 23. Log-Log plot of observed Twitter ranking over observed number of followers.

We therefore accept both hypotheses and conclude that probability of incidence of kendra relationship between AtmaKaraka and PutraKaraka in either the D-1 or D-9 is high for our Twitter celebrities and becomes higher for the Twitter celebrities with higher follower numbers, especially for celebrities at the very top echelon.

We propose that the validity of cultural Jyotisha astrological maxims should be considered in light of the demonstration in this paper of the prospect of predicting a component of the astronomy at the time and place of a Twitter user's birth based on his or her Twitter follower numbers via the application of Jyotisha rules.

Acknowledgments

Available upon request: Twitaholic.com screen captures; Monte Carlo spreadsheets; Shri Jyoti Star chart list; and Calculations output.

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RESEARCH ARTICLE

The Human Bio-Energy Field Detected by a Torsion Pendulum? The Effect of Shielding and a Possible Conventional Explanation

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Abstract—J. N. Hansen and J. A. Lieberman at the University of Maryland have published accounts of their use of a simple and inexpensive torsion pendulum to detect and measure a time-varying force exerted by the human head. In view of control experiments intended to rule out conventional explanations in the form of electrostatic or convective forces, they suggest that this force may be due to a “field of bio-energy . . . [that] is the basis of many forms of traditional medicine that have been practiced for thousands of years” but which has heretofore been undetectable by science. We have replicated their basic results using similar equipment (Hansen 2013 personal communication), furthermore ruling out magnetic forces and using a different means of ruling out electrostatics. However, it was found that the use of a specially constructed plastic shield to more rigorously rule out convection from the warm human head entirely eliminates the external torque on the pendulum. It therefore appears that either the origin of the force is convective, or else the material of which the shield is made blocks the human bioenergy field.

Keywords: bioenergy field—torsion pendulum—convection

Introduction

One may define the bio-energy field as that which mediates effects such as distant healing or psychokinesis. Efforts have been made to detect this field via the phenomena of light refraction and scattering, skin conductance, electrostatic potential, magnetism, brain activity (via electroencephalography or functional magnetic resonance imaging), effects on random event generators, and gamma radiation (Oschman 2000, Swanson 2011). All of these tend to require either sophisticated, expensive equipment or subjects with exceptional psychic ability, or both. Hansen and Lieberman

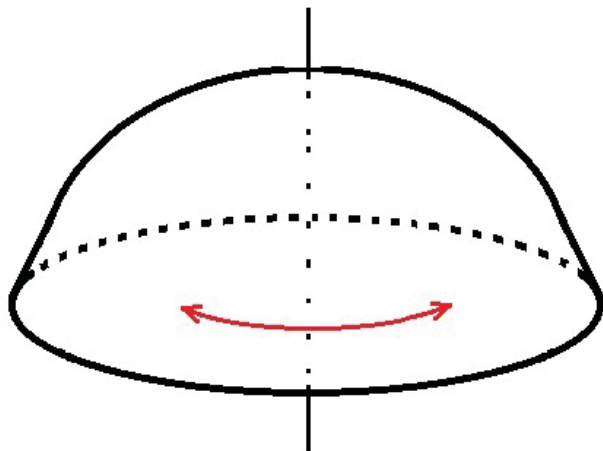


Figure 1. The only moving part in this experiment: a mesh dome food cover. The only mode of oscillation that does not damp out in a few seconds is rotation about a vertical axis. This mode has a period of about 29 seconds and decays with a half-time of roughly 70 seconds.

claim to have found a simple, inexpensive way to detect the bio-energy field of the average person. Thus their method could accelerate progress in understanding the putative bio-energy field, by enabling essentially anyone to investigate its properties. It was decided to begin such a program by building an apparatus similar to that of Hansen and Lieberman's.

Replicating Hansen and Lieberman's Results

The pendulum is a dome-shaped, steel mesh food cover of the kind used to keep insects off food at picnics (Figure 1 and Figure 2). Its diameter is ~ 35 cm, and its mass is ~ 150 grams. It is suspended from a fixed support by a ~ 1.9 cm length of 30-pound-test nylon fishing line. The pendulum has several modes of oscillation, but all of these quickly damp out except rotation about a vertical axis. The latter mode is damped simple harmonic motion (DSHM) which can be described by

$$x = Ae^{-\gamma t} \cos(\omega t + \delta) \quad (1)$$

where x is the horizontal position of a target on the rim of the dome. Its period, $T = 2\pi/\omega$, is ~ 29 seconds, and the damping constant γ is about 0.01 sec^{-1} (Figure 3).

In order to record the oscillation, a paper target consisting of a 1-cm white circle on a black background is attached to the rim of the dome (at a radius of 16.5 cm). A gentle, tangential puff of air starts the pendulum

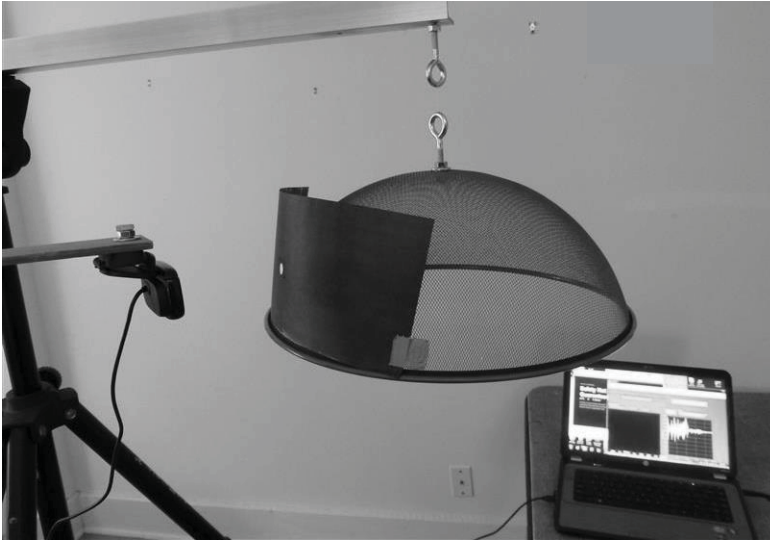


Figure 2. The experimental setup. From left to right, the webcam, the white target dot, the dome pendulum, and the computer running the LabVIEW software.

oscillating rotationally with an amplitude of a few degrees. A videocamera (webcam) ~ 10 cm away from the target records the motion of the target (see Figure 2). Following Hansen and Lieberman's procedure, the camera's

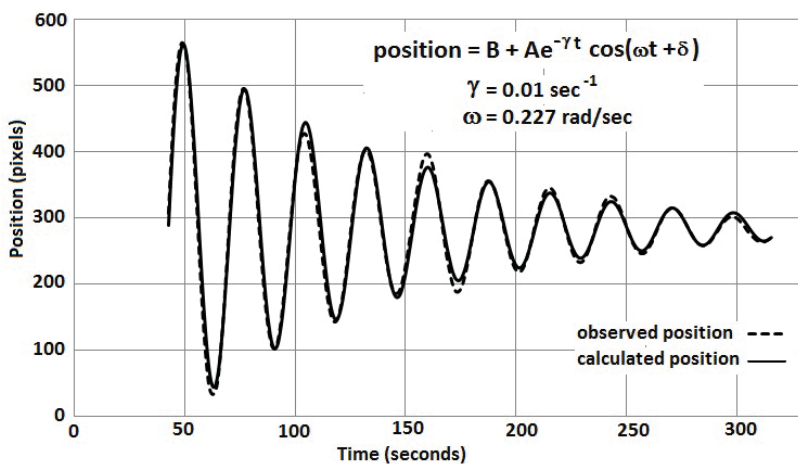


Figure 3. A comparison between calculated damped simple harmonic motion and observed oscillation of the pendulum in the absence of a human subject under the dome.

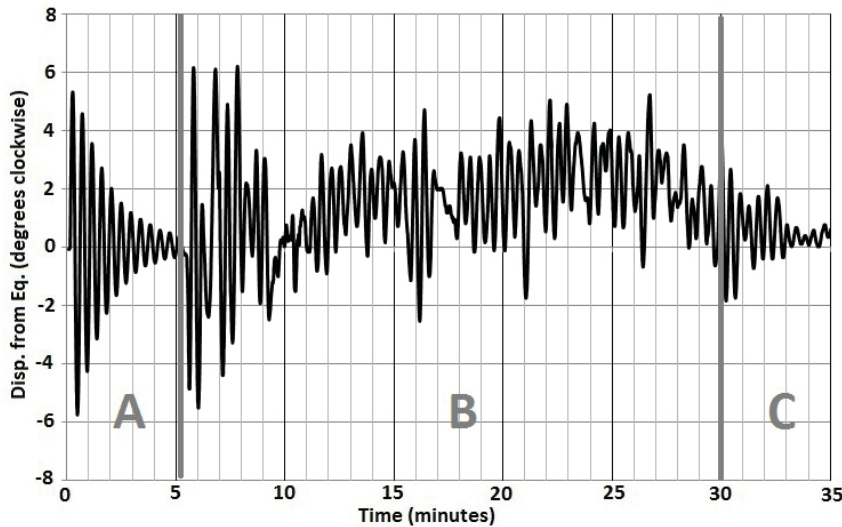


Figure 4. A typical run, from the Excel file of the webcam's output. In time segment A, the pendulum oscillated freely, with no one under it. In segment B, the subject sat still under the dome. At 30 minutes, the beginning of segment C, the subject exited the pendulum and left the room.

output is sent via USB cable to a laptop computer running a proprietary adaptation (He 2013) of LabVIEW software which records the horizontal position of the target and stores the data in an Excel file.

Figure 4 presents a typical result. First the pendulum was given a tangential impulse, causing it to execute DSHM, as shown in time segment A. After about 5 minutes a human subject sat down under the dome with the top of his head inside it, taking care not to touch it in any way or create any significant air currents. Then the subject sat still under the dome (segment B) until 30 minutes had elapsed. At the latter time, with similar care, the subject slid out from under the dome, and went into another room for the remainder of the run (segment C).

Sitting under the dome causes the oscillations to become erratic and usually shifts the equilibrium position by an angle of several degrees. The other modes of oscillation don't appear to be affected.

This effect appears to be common to all people. Hansen and Lieberman report similar results with more than a dozen subjects (Hansen & Lieberman 2013), and we have observed this phenomenon with six persons.

To rule out electrostatic forces, Hansen and Lieberman repeated the experiment using a copper wire instead of a nylon fiber to suspend the pendulum, and they grounded the pendulum and the subject during the



Figure 5. The experimental setup with the “Windshield,” a cylinder of construction paper and foamboard. The pendulum is free to oscillate inside it.

experiment (Hansen & Lieberman 2013). As an alternative method of ruling out electrostatic forces, we used a piezoelectric pistol (Milty no date) to eliminate static charges. This did not alter the pendulum’s strange behavior.

To rule out magnetic forces, the experiment was performed with an entirely non-ferromagnetic, non-conductive pendulum (a plastic tub) as well as with the steel mesh pendulum; the results are similar in both cases.

To rule out convection currents caused by the warmth of the human head, Hansen and Lieberman (2009, 2013) substituted a heated cooking pot for the human subject’s head. We attempted to do the same, but found the results inconclusive and decided instead to construct a system that would more completely isolate the pendulum from wind and convection currents.

Results with Shielding

Because the pendulum is extremely sensitive to ambient air currents, the first component of the shielding system consists of a “Windshield,” a cylinder of black construction paper suspended around the pendulum from above (Figure 5). When one’s head is inserted under the pendulum when it is protected only by the Windshield, the results (Figure 6) are similar to what has already been presented.

The second stage of shielding the pendulum consists of a “Helmet” made of a plastic hemisphere into which the head fits snugly and which is surrounded by a layer of insulating foam and then a coaxial (essentially concentric) plastic food bowl (Figure 7). The Helmet protrudes through

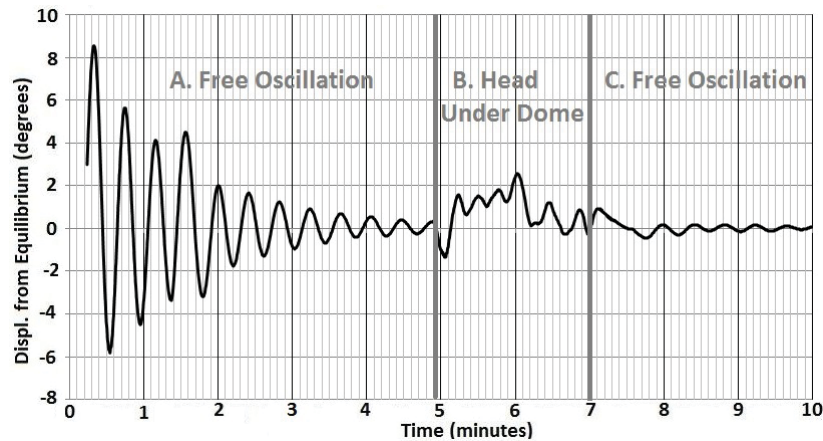


Figure 6. A typical run with the “Windshield” in place. The three time segments are as described for Figure 4. (The glitch at ~1.5 minute was most likely caused by the subject waving his arm too close to the apparatus.)

a sheet of plywood, up into the pendulum. The board through which the Helmet protrudes rests on legs made of PVC pipe; this is shown in Figure 8. Thus one’s head can still be inside the pendulum dome but without exposing



Figure 7. Left: The “Helmet” under the suspended pendulum. Right: The “Helmet” seen from below. Construction of the “Helmet”: Inner layer is a rigid plastic hemisphere with a 20.3 cm inside diameter, ~0.3 cm thick; Outer layer is a soft plastic food container with a 23.2 cm inside diameter at the rim. Between the two layers is a mixture of Dow Chemical “Great Stuff” insulating foam and DAP Products multi-purpose foam sealant.



Figure 8. The experimental setup with the “Windshield” and the “Helmet.”

the pendulum to convection currents. Under these conditions, insertion of one’s head up into the pendulum (Figure 8) had no noticeable effect on its DSHM (Figure 9).

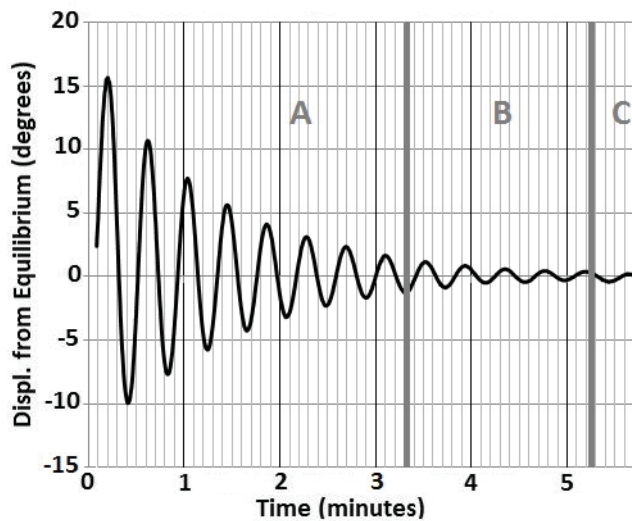


Figure 9. A typical run with both the “Windshield” and the “Helmet” in place. The three time segments are as described for Figure 4. Note that having the subject’s head under the pendulum has no discernible effect.

Discussion

It appears that either 1) the “new cranial force” under investigation is merely due to convection currents from the head, or 2) the plastics of which the Helmet is made act as a shield against the “new cranial force.”

It is useful to estimate the force or energy required to perturb the motion of the pendulum and compare it with what is available from natural convection around a human head. To estimate the tangential speed of the pendulum, we use the fact that, for simple harmonic motion, the maximum speed equals the amplitude times the angular velocity. Thus, from Figure 3, the speed of the pendulum’s rim (when passing through equilibrium) is roughly $(150 \text{ pixels})(0.014 \text{ cm/pixel})(0.23 \text{ rad/second}) = 0.5 \text{ cm/second}$. Clark and Toy (1975) have measured the speed of convective air flow around a 33 °C human head in 23 °C ambient air to be in the 5–30 cm/second range, more than 10 times greater than the maximum speed of the pendulum.

Of course, convection currents are mostly vertical while what is needed to explain the pendulum’s perturbation is a horizontal force. However, if the flow of air is turbulent there could easily be a horizontal component to this motion. Clark and Toy (1975) found significant differences in the rate of heat loss from different parts of the head: From the forehead they measured 130 W/m^2 , but only 79 W/m^2 from the temple. This difference would surely cause a temperature gradient and hence some turbulence. In addition, the human head is not cylindrically symmetric, further increasing the likelihood of turbulence.

An additional consideration arguing against attributing the effects seen to a “human bioenergy field” is that, in general, effects such as psychokinesis, distant healing, and extrasensory perception are reportedly not affected by spatial or temporal separation, nor by intervening matter. [See for example Targ and Puthoff, (2004), Hasted (1981), Braud (2003), Schwartz (2007).] Furthermore, such “paranormal” abilities are anything but uniformly distributed among the population, but the ability to perturb a torsion pendulum appears universal.

In order to show that a torsion pendulum can actually detect a human bioenergy field, a material would have to be found that insulates the pendulum from convection currents and yet still allows oscillations to be perturbed in the way reported by Hansen and Lieberman.

Acknowledgments

We are grateful to Thomas Arnold and Eugene Ruocchio for materials used. We also thank J. Norman Hansen for his advice and encouragement to “repeat and extend” his work, and to seek “a conventional explanation for these surprising results” (Hansen & Lieberman 2013).

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COMMENTARY

A Reply to van den Berg and van der Sluys: Effects Resembling a Bio-Field on a Torsion Pendulum Cannot Be Caused by Heated Air Currents Generated by the Subject

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This paper is a reply to the paper “Is the Human Bioenergy Field Detected by a Torsion Pendulum? The Effect of Shielding and a Possible Conventional Explanation” by W. H. van den Berg and W. G. van der Sluys, *Journal of Scientific Exploration*, 29(1), this issue. The latter paper was inspired by “Use of a Torsion Pendulum Balance to Detect and Characterize What May Be a Human Bioenergy Field” by J. N. Hansen and J. A. Lieberman, *Journal of Scientific Exploration*, 27(2), 205–225, 2013. Throughout this current paper, we will use abbreviations to refer to our paper and the van den Berg paper. Accordingly, the van den Berg/van der Sluys paper will be abbreviated as vdB, and the Hansen/Lieberman paper will be abbreviated H&L. To facilitate access to the H&L paper, it is available at: <http://hdl.handle.net/1903/15607>

We believe the most important result in the vdB paper is that it confirms the results presented in our H&L paper. vdB constructed a torsion pendulum balance identical to ours, and performed experiments similar to ours. Their results are consistent with ours in every detail. They acknowledged the simplicity of the pendulum in both its construction and use, and that it produced consistent results, in experiment after experiment; and the results of all those experiments were consistent with our results. Replication of an experiment in other laboratories and obtaining the same results is a crucial stage of the scientific process. Other investigators have communicated to us that they have replicated our results, but this is the first instance we know of in which confirmation of experiments using our pendulum has been published.

vdB also reports the result of an experiment we did not do. They placed a thick plastic shield between the subject and the pendulum, and found that the effects of the subject on the pendulum were eliminated. Since we did not do an experiment of this kind, their result is not a contradiction, but an extension toward something new. They performed this shielding experiment with the intent to completely rule out the possibility of air convection currents created by heat evolved from the head of the subject as the cause of the effects on the pendulum. They provided two possibilities to explain the loss of the effect caused by the shielding. One is that heat-generated air currents are responsible for the effect, and when the shield blocks the air currents the effect on the pendulum is lost. Alternately, it is possible that the thick plastic blocks the putative bio-field from reaching the pendulum. They chose the first explanation, and argued that the shielding effect was probably caused by the elimination of air convection currents generated by the subject. We choose the second explanation, which is that the thick plastic blocked the bio-field from reaching the pendulum. We here provide evidence and arguments for this position that we believe are strong. Whereas we present new experimental data to support this, the H&L paper is already replete with similar evidence and arguments that the putative bio-field cannot be the result of heat-induced air currents. We present nothing that is not already embodied in the H&L paper, but merely present in a way to more effectively communicate the idea that the effect on the pendulum is not due to heat-induced air currents by the subject while under the pendulum.

We now address several aspects from the vdB paper with which we do not agree. The Introduction in vdB states that “One may define the bio-energy field as that which mediates effects such as distant healing or psychokinesis.” They also refer to the bio-field throughout as **THE** human bio-field; implying that only one human bio-field is possible. In contrast, H&L refer to the detected phenomenon as “what may be **A** human bioenergy field,” (taken from the title of the paper, with emphasis on **A**, not **THE**). Nowhere in H&L do we claim that what we observed is related to psychokinesis, energy healing, or any other psychic phenomenon. Our claim is much more modest; merely being the detection and measurement of effects exerted on a torsional pendulum by a subject seated under it. Since the effects were so unusual, we advanced the speculation that it could be the consequence of a human bio-energy field. If a human bio-field exists, there could be several kinds of them, just as there are several conventional means of communication such as voice, facial and body gestures, etc. The novel approach of H&L was to build a detector using the premise that there could be a bio-field that exerted a physical ‘pushing-type’ force, instead of the more common photon detectors. The pendulum accordingly could respond

to these pushing forces, in which the putative bio-field would push against the pendulum to induce oscillations. We accordingly discovered strong effects by a subject on the pendulum, which were detected and measured by a physical device that can be easily replicated.

If you were to place a thick plastic shield between the subject and the pendulum, the pushing force would initially be against the shield, and the pendulum would only respond to whatever pushing force remained after pushing against the shield. For the pushing force to survive passage through the shield and then push against the pendulum would violate fundamental principles of physics; i.e. you can only use a force once, and if it is utilized to push against the shield it cannot subsequently push against the pendulum. The vdB paper instead states:

... that, in general, effects like psychokinesis, distant healing, and extrasensory perception are reportedly not affected by spatial or temporal separation, nor by intervening matter. Furthermore, such "paranormal" abilities are anything but uniformly distributed among the population, but the ability to perturb a torsion pendulum appears universal.

This is a breathtaking statement that implies not only wide acceptance that these psychic phenomena exist, but that their fundamental properties are well-known and understood. Whereas beliefs in these phenomena and their qualities are popular, none are accepted by mainstream science; therefore this argument is highly inappropriate, especially in that it suggests that the pendulum effect is not 'spooky' enough to qualify as a genuine bio-field. Also dubious is the argument that the pendulum effects cannot be due to a bio-field because all subjects exert these effects. Whereas vdB states that the ability to invoke psychic phenomena is believed to be limited to those who are innately gifted and highly trained and practiced, we take a contrary view that any genuine human bio-field could only exist if it provided an important biological role and therefore be subject to natural selection, just as our five senses have been. The five senses are accordingly available to all, and not limited to the innately talented and trained. However, there are traits common to all, such as musical ability, that can be enhanced by talent and training; as exemplified by virtuoso musicians who perform feats far beyond the ordinary. We accordingly recognize that the pendulum is a potential bio-feedback device, by which the subject, while watching the motions of the pendulum on a computer display, could be able learn to manipulate the bio-field in a way to consciously control the motions of the pendulum. This would require extensive experimentation, but if it were achieved should be qualified as "psychokinesis." Some subjects may be able to achieve this more easily than others, just as some learn to play an

instrument more easily than others. Since this has not been achieved, it is inappropriate to use the term psychokinesis here.

Whereas several arguments can be presented to establish that the pendulum effects cannot be the result of heat-generated convection air currents from the subject, we will focus on the most important one. It is that H&L demonstrated that the subject effects on the pendulum persist long after (30–60 min) the subject has departed from the pendulum. This phenomenon was clearly shown in Figures 8, 9, and 10 of H&L, and the significance was thoroughly discussed, and appeared prominently in the Abstract of the paper. Persistence is especially evident in Figure 10, in which the pendulum and subject were grounded. The post-subject data region extends for 45 min, and effects are still strong at the end of the 45-min time period. (A copy of the H&L paper is available at the UM Digital Repository: <http://hdl.handle.net/1903/15607>).

A fundamental principle of pendulum physics is that if the pendulum is driven by an outside force and the force is removed, then the pendulum will **immediately** return to classic non-driven motion. We performed control experiments that used streams of compressed air to drive the pendulum, whereupon the pendulum immediately returned to classical motion when the stream of air was discontinued, as dictated by classical physics; shown here in Figure 1. In contrast to the effect exerted by a compressed air, the persistence of subject effects after the subject has departed is a consistent feature in virtually every experiment we have performed. Moreover, it is clearly manifested in Figure 4 of the vdB paper, in which the oscillation pattern of Region C, which is after the subject departed, is very different from Region A, which shows the oscillation of the pendulum prior to the subject being seated under the pendulum and therefore reflects its classic pendulum motion. It would have been good if more data from Region C had been collected before the experiment was terminated, which would have better demonstrated the persistence of the subject effects; but persistence is clearly shown in their own experiment, nevertheless. They ignored the significance of it.

Instead of replicating the H&L Figures 8, 9, 10 here, we will present the results of some newer experiments that show similar results. Among many dozens of experiments, preference was given to those in which data was collected for an extended period of time after departure of the subject. For this, we chose an experiment that extended over several hours, during which the subject was first seated under the pendulum and departed after 30 min; and re-seated after an hour, followed by data collection for 30 min; the subject then departed again, and data collection continued during the subsequent post-subject region. This is therefore a duplicate experiment

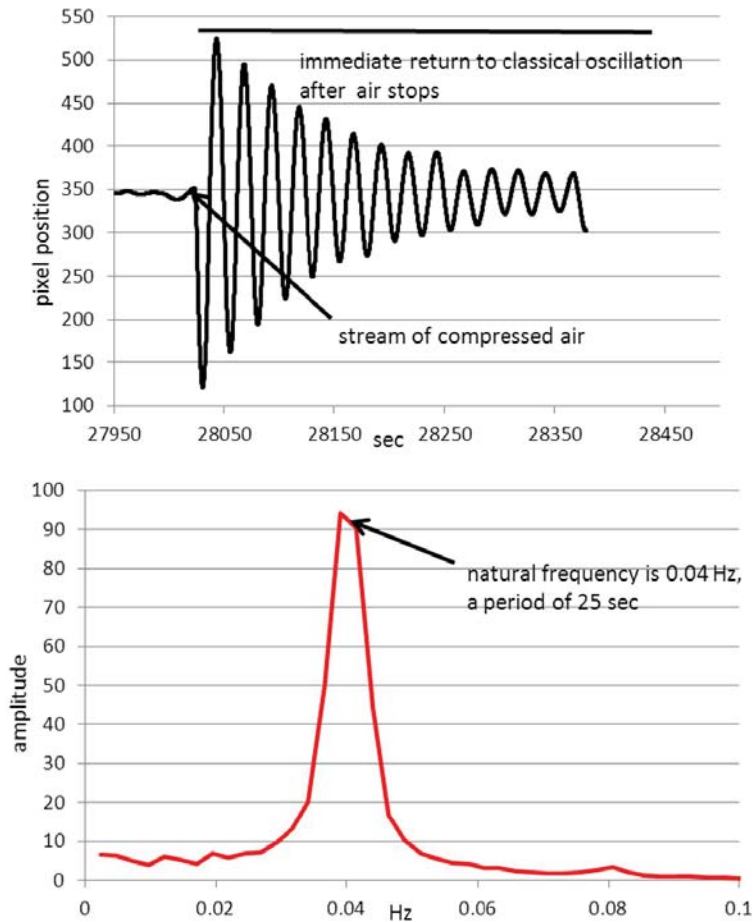


Figure 1. This figure shows the immediate recovery to classical oscillation after the pendulum has been subjected to a brief stream of compressed air. (Upper Panel) Shows the profile before and after the puff of air. (Lower Panel) Shows the FFT analysis of the entire recovery region of the data. It shows a single frequency peak of 0.04 Hz, which is the natural frequency of the pendulum. If the recovery had not been immediate, more than the natural frequency should have appeared. This recovery experiment was performed multiple times, and the result was always the same. This suggests that the persistence of effects after the subject has departed means that, despite the absence of the subject, the energetic effects imparted by the subject are still able to drive the pendulum to non-classical behavior.

using the same subject for two successive experiments on the same day, during which time data was collected continuously. The results are shown below as 'Run 1' and 'Run 2'.

The Oscillations of the Pendulum Deviate from the Natural Center of Oscillation When the Subject Is Present, and This Deviation Continues After the Subject Departs

Run 1 is shown in Figure 2, in which the upper panel displays the data for the entire run, and the lower panel displays the data from just the post-subject region, after the subject has departed from the pendulum. Both the subject-

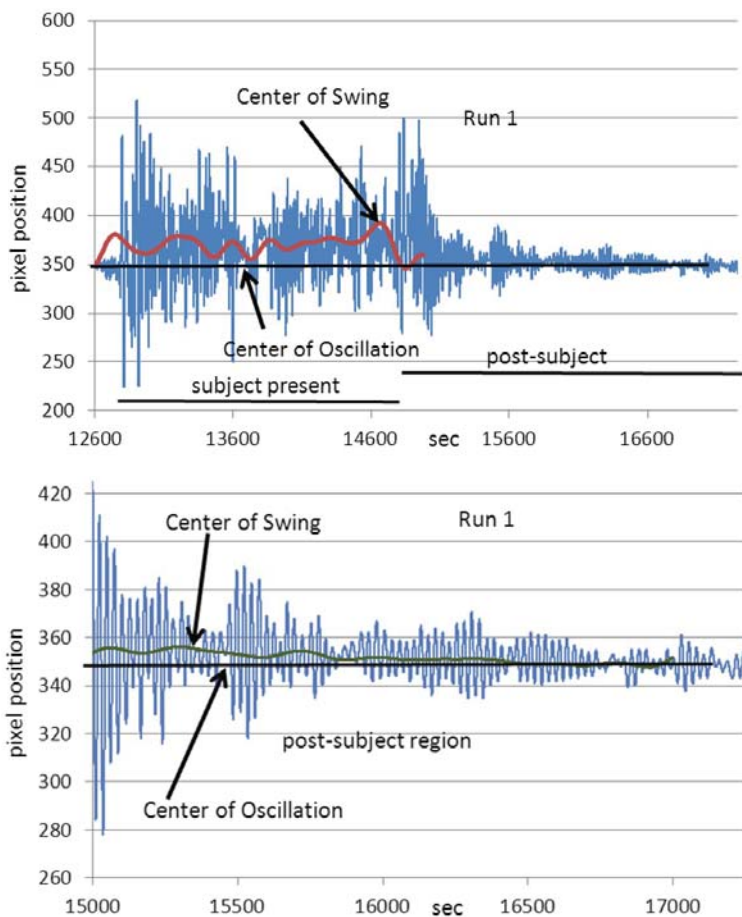


Figure 2. Data from Run 1.

(Upper Panel) Displays the data for the entire run, which includes the time the subject is present and the post-subject region.

(Lower Panel) Displays the data just for the post-subject region. The natural Center of Oscillation is indicated by a horizontal line, and the curved line connects the mid-points of the individual swings of the pendulum. The mid-points are substantially displaced from the COO throughout the run, indicating a spiral vortex of some kind. These effects persist throughout the post-subject region.

present region and the post-subject region show displacements from the natural Center of Oscillation (COO) of the pendulum as shown by a curve that goes through the midpoints of the individual swings. If the COO had not shifted, the curve going through the midpoints would coincide with the COO; instead it is significantly above the COO, which was also observed in vdB. H&L argued that this displacement would require a force in the form

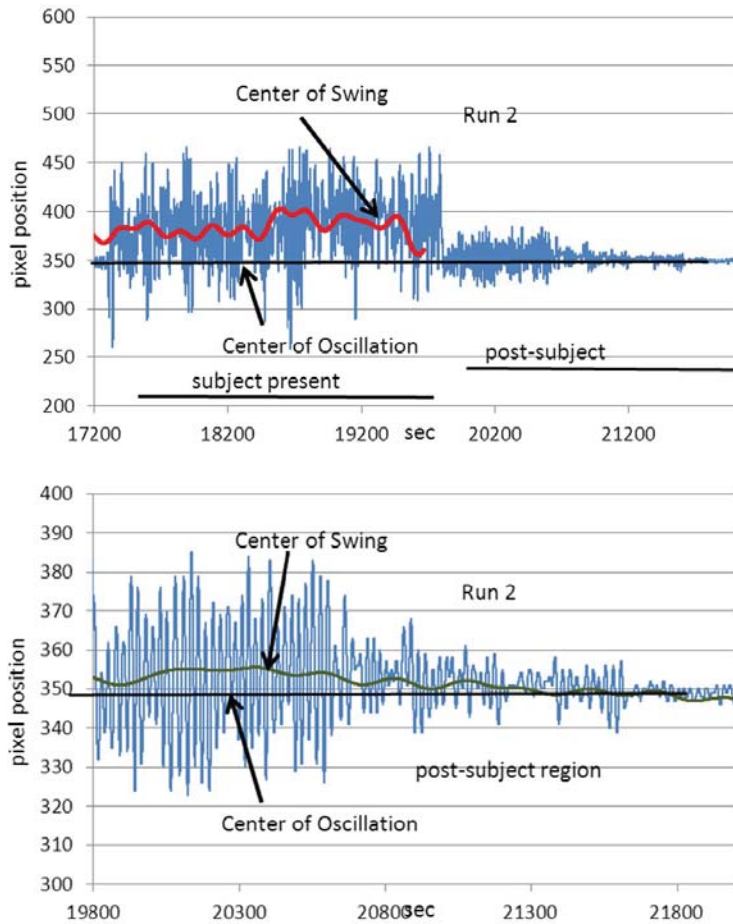


Figure 3. Data from Run 2.

(Upper Panel) Displays the data for the entire run, which includes the time the subject is present, and the post-subject region.

(Lower Panel) Displays the data just for the post-subject region. The natural Center of Oscillation is indicated by a horizontal line, and the curved line connects the midpoints of the individual swings of the pendulum. The mid-points are substantially displaced from the COO throughout the run, indicating a spiral vortex of some kind. These effects persist throughout the post-subject region.

of a spiral vortex, and this spiral vortex drags the pendulum away from its natural COO.

Run 2, which was performed an hour later on the same subject, is shown in Figure 3. The upper and lower panels display the entire run and the post-subject region, respectively. Although there are differences in the details of what occurs during Run 1 and Run 2, the general patterns are the same. We see this consistently, in that every experiment is unique in its details; but all the experiments display the same central elements, such as displacements from the COO and persistence of effects after subject departure. It is especially to be noted that the variations in amplitudes and deviation from the natural COO persist throughout the post-subject region in both experiments. This means that both the spiral vortex and the energy required to drive the amplitude changes throughout the post-subject region must still be present despite the absence of the subject. Since these effects persist throughout the 40-min post-subject time period, it is untenable that they could be the result of heat-induced air convection currents generated by the presence of the subject. The pendulum is constructed of steel mesh, so any accumulation of heated convection currents would be rapidly dissipated through the top of the pendulum. Moreover, instead of simply damping down as expected, the amplitudes alternately increase and decrease, creating a kind of ‘bubble’ effect in the amplitude pattern; an effect we see in every post-subject region we have examined. In the post-subject region of Run 2, the displacement from the natural COO actually increases for about 10 min, whereupon it gradually relaxes back toward the natural COO. Once again, the argument that these effects could be exerted by a long-departed subject is untenable.

Subject-Induced Frequencies Also Persist Long After the Subject Departs from the Pendulum

Although not addressed in the vdB paper, a very important component of our data analysis in H&L is Fast Fourier Transform (FFT) analysis of the oscillation pattern of the pendulum, which reveals all of the frequency components that are present in the oscillations of the pendulum. Whereas the pendulum in the absence of a subject oscillates with a single frequency as expected (Figure 1), when a subject is present, the pendulum oscillates with many new frequencies, displayed in Figure 4 for Run 1, and Figure 5 for Run 2. Moreover, Figures 4 and 5 show that these new frequencies persist into the post-subject region, albeit with reduced intensity, just as the deviations in the COO persisted. The appearance of these new frequencies in all stages of the experiments is rather astonishing, and it implies that the putative bio-field is not just a spiral vortex, but one that contains many frequency components. The detected frequencies are quite low, extending

below 0.001 Hz, and up to about 0.1 Hz. This can be compared to brain wave frequencies which are in the 4–30 Hz range, a thousand times higher. It is to be noted that the pendulum is an oscillator which is most sensitive to frequencies that are close to its fundamental frequency, so the fact that the pendulum with a fundamental frequency of 0.04 Hz does not detect frequencies above 0.1 Hz does not prove that they are not there, but instead could be undetectable with this particular pendulum with its particular fundamental frequency.

It seems improbable but possible that heat-induced convection currents from the subject could contain spiral vortexes and a rich mix of frequencies. However, it seems impossible that these heat-induced convection currents could continue to exert spiral vortex and frequency effects long after the subject has departed. Whereas vdB argued that strong air currents can be generated as a consequence of local differences in temperature around the head of a subject, this argument should not be applicable once the subject is no longer present.

It is as if during the time the subject is under the pendulum, the bio-field exerts its effects on the motions of the pendulum, and that these effects are somehow ‘imprinted’ on to the pendulum, so that after the subject departs the imprinted pendulum continues to oscillate with the same characteristics as when the subject was present, although less strongly. It is difficult to avoid the idea that the bio-field has caused the atomic/molecular structure of the pendulum to shift to a higher-energy quantum state, and this state would have to possess both spiral vortex and frequency aspects that could continue to exert their effects entirely on their own, after the subject has departed. We know of no quantum states that would possess these characteristics, but our results argue that there must be quantum states that possess these characteristics. It is to be noted that these persistent effects are observed in pendulums constructed of coco fiber and plastic, and not restricted to steel mesh pendulums. Whatever these elevated quantum states may be, they can be induced in a wide variety of materials. Hubris would suggest that we claim something entirely new that is unknown to physics. We prefer to believe that, although we do not know of quantum states that can explain our results, others with greater knowledge of physics may be able to account for it.

In conclusion, our results, especially the post-subject effects on the pendulum, provide a robust argument that the subject effects on the pendulum cannot be due to heat-induced air convection currents generated by the presence of the subject. Put simply, if they were heat-induced effects, they should vanish as soon as the subject departs. They do not, but persist

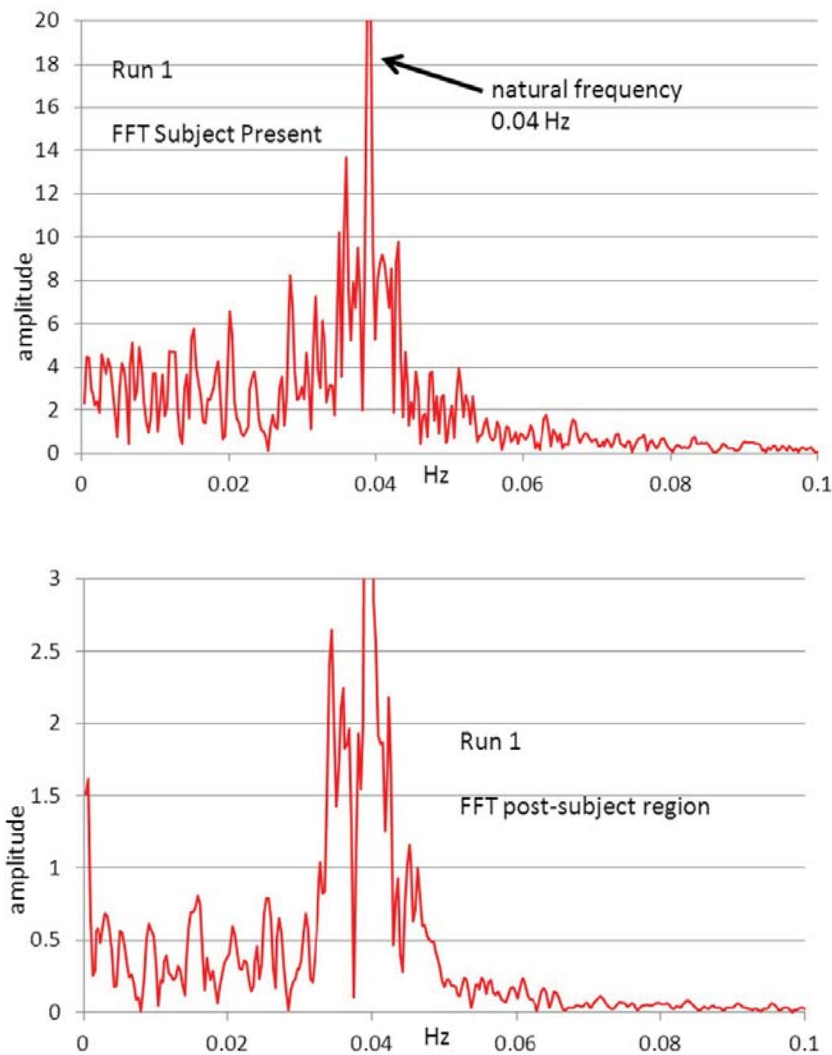


Figure 4. FFT analysis of the data from Figure 1.

(Upper Panel) Displays the frequency components of the region when the subject is present.

(Lower Panel) Displays the frequency components of the post-subject region. Although the amplitudes of the frequencies are diminished in the post-subject region, the complexity of frequencies seen in the subject region is retained in the post-subject region.

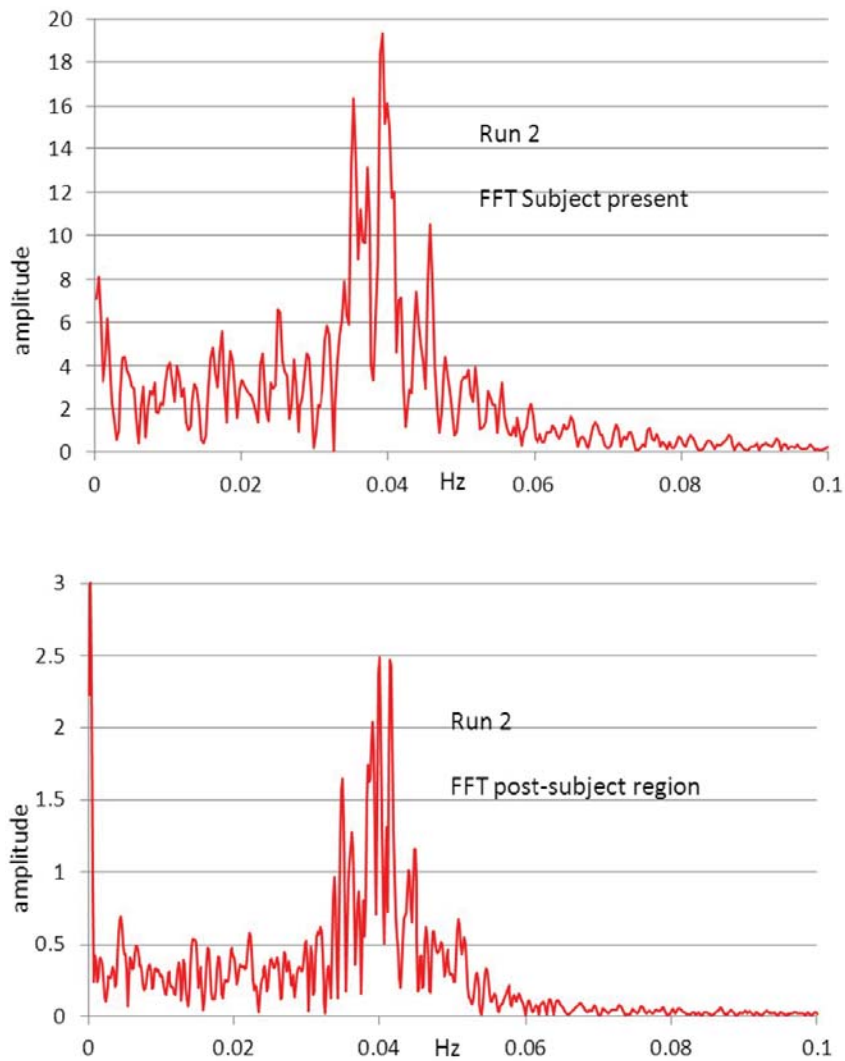


Figure 5. FFT analysis of the data from Figure 2.

(Upper Panel) Displays the frequency components of the region when the subject is present.

(Lower Panel) Displays the frequency components of the post-subject region. Although the amplitudes of the frequencies are diminished in the post-subject region, the complexity of frequencies seen in the subject region is retained in the post-subject region. The natural frequency of the pendulum is 0.04 Hz.

for 30–60 min after the subject departs. Other arguments to bolster this are presented above, but the persistence of the effects after departure of the subjects should be enough to rule out heat effects on its own. We believe that the argument by vdB that the pendulum effects are due to heat-induced air currents is refuted by what we have presented.

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COMMENTARY

Response to Hansen and Lieberman

WILLEM H. VAN DEN BERG

WILLIAM G. VAN DER SLUYS

Published March 15, 2015

It is indeed interesting that the non-classical behavior of the pendulum persists after the human subject has departed. We did observe this, but generally not for as long as reported by Hansen and Lieberman (H&L).

We too performed Fast Fourier Transform (FFT) analysis of some of our data recorded before, during, and after the subject's head was under the dome. See Figure 1, which shows persistent (but greatly diminished) erratic behavior even after the human subject's head was removed from the dome. However, it seemed to us that wishful thinking would be required to conclude that the same frequencies were present both after and during the head's presence. FFT analysis of any chaotic oscillation is bound to show a variety of frequency peaks.

Hansen and Lieberman's suggestion that "the bio-field [causes] the atomic/molecular structure of the pendulum to shift to a higher-energy quantum state, and this state would have to possess both spiral vortex and frequency aspects that could continue to exert their effects entirely on their own, after the subject has departed" is breathtaking, considering the difficulty so far encountered in demonstrating quantum effects in macroscopic objects (see for example O'Connell et al. 2010).

We think a more likely explanation is persistent non-uniform temperature distribution.

The question of whether the effects are induced by convection might best be settled by the following experiment. Replace the human head with a non-living object of the same size, shape, texture, humidity, and temperature. If the perturbation of the pendulum is still observed, then convection currents are likely the mechanism. If not, then we really do have a bio-field and a way to detect and measure it.

We currently do not have the time or wherewithal to perform this experiment, but we encourage others to do so.

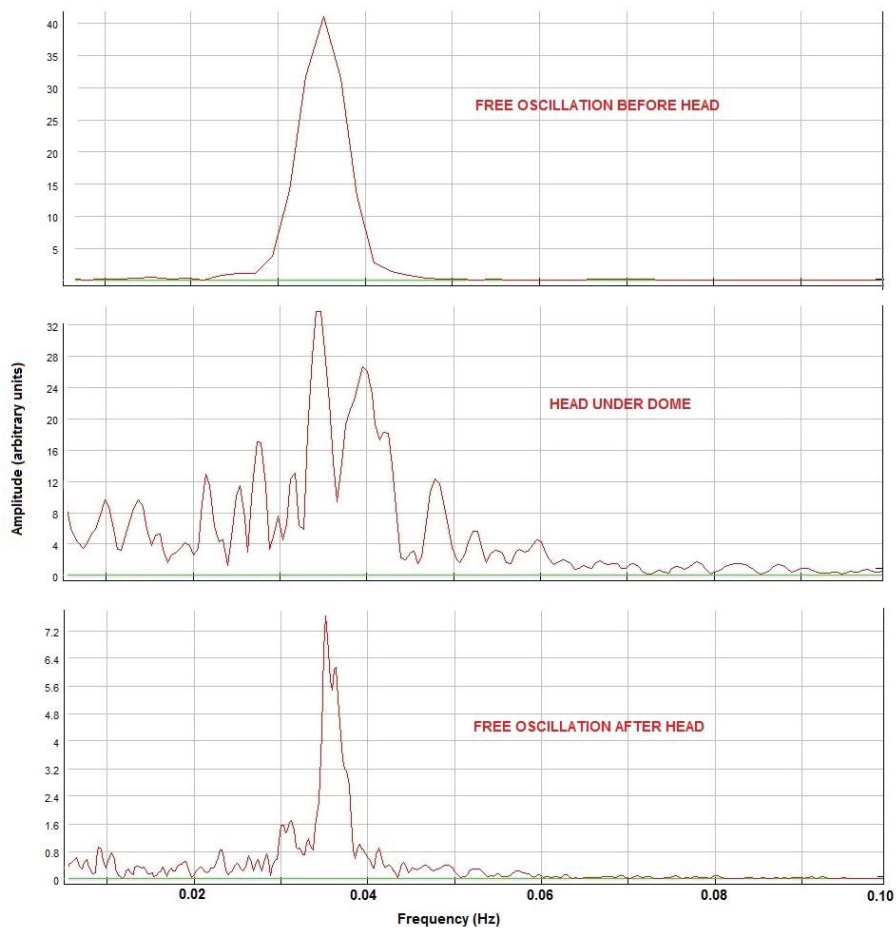


Figure 1. Fast fourier transform (FFT) analysis of a typical experimental run, showing the frequencies present before, during, and after the subject's head was under the pendulum dome.

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COMMENTARY

**Introduction to Charles Honorton's 1993 Firsthand
Report on Felicia Parise and Rosemarie Pilkington's 2013
Interview with Felicia Parise**

STEPHEN E. BRAUDE

Published March 15, 2015

Readers of the *JSE* will have recently been exposed to some data and issues regarding macro-PK (see, in particular, Volume 28, Number 2). And probably many *JSE* readers realize that some individuals seem to have demonstrated the ability to psychically influence, and in particular *move*, ordinary visible objects outside of the spiritist context characteristic of physical mediumship—that is, by means of one's own ostensible PK abilities and without invoking the assistance of deceased spirits to produce the effects. The Russian Nina Kulagina may be the best-known twentieth-century example. However, another interesting mid-twentieth-century case, roughly contemporaneous with that of Kulagina, is the case of the American Felicia Parise. However, very little has been written about this case. I'm pleased, then, that we're able to present in this issue Rosemarie Pilkington's recent interview with Felicia in 2013, which brings the case up to date and contributes substantially to what little is known about it. Moreover, for readers who've never heard about Felicia—and to refresh the memories of others—we're pleased to reprint the late Charles Honorton's 1993 report of his firsthand experiences with Felicia.

REPRINT

This paper from the Journal of the American Society for Psychical Research 87, 329–340, 1993, is reprinted with the permission of the American Society for Psychical Research.

A Moving Experience¹

CHARLES HONORTON²

Abstract—This is a popular account of the author’s firsthand observations of special subject Felicia Parise’s experimental work at the Maimonides Dream Laboratory and her ability to move small objects apparently by PK. It was originally written as a chapter of a book on parapsychology that was never published. Parise’s macro-PK, which is featured in the article, was inspired by firsthand observations of Soviet star PK subject Nina Kulagina made by Western parapsychologists Montague Ullman, Gaither Pratt, and Jürgen Keil. Honorton describes Parise’s first solo efforts, his own observations, and those of a magician/photographer, Norman Moses, who made a film of her moving objects. Also described is research conducted by Gaither Pratt at the University of Virginia and by Graham and Anita Watkins at the Institute for Parapsychology in Durham, North Carolina, USA. Parise specialized in moving pill bottles and compass needles, and in film fogging.

October 13, 1971. I picked up the bottle and examined it carefully. There was nothing attached to it: no strings or strands of hair; no concealed magnets or other devices. I set it back on the countertop directly in front of me. Felicia, standing a foot and a half to my right, again began silently concentrating on the bottle. I placed my left hand palm down on the counter in order to detect any vibrations on its surface. There were none. The bottle again began moving slowly forward and to my right. Felicia’s fingertips resting lightly on the edge of the counter were nowhere near the bottle. I thought to myself, *The counter is slick and probably not level; the bottle’s just sliding.* Then something happened that forced me to reconsider. The bottle stopped, it started again, stopped, started again, stopped, and started a third time. After traveling a distance of approximately four and a half inches, the bottle suddenly reversed direction and began moving back toward me. Felicia, now obviously very agitated, threw up her hands exclaiming, “That’s it! That’s enough!”

This all started months earlier when Monte Ullman returned from a sabbatical trip to parapsychological centers in Eastern Europe. While in

the Soviet Union, he had personally observed a Leningrad housewife, Nina Kulagina, move small objects without apparent contact. The objects, including upright pen tops, large paperclips, and a box of wooden matches, were observed by Monte to move both independently and together, toward Kulagina, in short jerky movements, about an inch at a time. These observations occurred in Monte's hotel room in Leningrad, on a table covered by a tablecloth. The objects were his.

Kulagina's apparent psychokinetic ability had been under investigation by Soviet scientists for several years before it became known to Western parapsychologists. Among the other Western scientists who have seen Kulagina in action are Gaither Pratt of the University of Virginia School of Medicine and Jürgen Keil of the University of Tasmania Department of Psychology. Pratt is one of the most experienced parapsychological investigators in the world today. An early collaborator of J. B. Rhine at Duke University, his research has ranged from controlled laboratory experiments in ESP and PK to field studies of poltergeist phenomena and trance mediumship. Gaither specializes in the study of persons with exceptional psi ability.

Between 1970 and 1972, Gaither made several trips to Leningrad to observe Kulagina. On one occasion, he and Keil saw a small block of wood which they brought with them move toward Kulagina, "angling slightly toward her left and rotating slowly in a clockwise direction." During this same visit, Gaither gave Kulagina a sealed plexiglass cube containing two dice and some red aquarium gravel. While Kulagina was unable to move the dice, the cube itself started moving toward her.

Along with other Western investigators, Gaither attempted to organize an international, multidisciplinary investigation of Kulagina, and to get the sponsoring governments to request permission from the USSR for such an investigation. The request was denied, and the American sponsoring agency was told that parapsychology was not studied in the Soviet Union.

Monte returned from Leningrad with a 16-mm film showing Kulagina moving a number of small objects without apparent physical contact. She produced large needle deflections on a compass, and a variety of small objects could be seen moving toward her on the table surface. To her right in the film was Eduard K. Naumov, a leading Soviet spokesman for parapsychology, who was a member of the All-Union Scientific Research Institute for Medical Technology in Moscow. Naumov was later arrested and sentenced to two years of hard labor in a Soviet labor camp on a charge of accepting fees for a lecture in a Moscow club. According to "An Appeal to Soviet and Foreign Public Opinion," by the Russian physicist Rev Regelson, Naumov was imprisoned because of his frequent and friendly communication with foreign scientists during a period in which, "for politi-

cal reasons, the Soviet authorities have decided to concentrate research and publication in the hands of compliant protagonists" (*London Times*, Nov. 18, 1974). Naumov has since been released.

Monte presented the Kulagina film along with his own observations at a research meeting at Maimonides Dream Laboratory in New York City. After showing the film, he presented a slide showing an electrocardiogram (EKG) of a disembodied frog's heart, maintained in saline solution. According to the report he had received in Leningrad, Kulagina had been instructed first to accelerate the heartbeat and then to stop it. This is exactly what the slide showed.

Among those present at the meeting were the magician Milbourne Christopher and Felicia Parise. Christopher is one of the most skilled performing magicians in America and is generally acknowledged to be the foremost scholar of modern magic. He is well-known for his authoritative biography of Houdini and for several books debunking fraudulent mediums and describing techniques for simulating psychic phenomena. He was strongly inclined to believe Kulagina's phenomena were fraudulent, but he demurred when I pressed for a bill of particulars as to her *modus operandi*. Magicians do not like to reveal the tricks of their trade.

Felicia Parise, a medical technician in the Department of Hematology at Maimonides, has been engaged in leukemia research for a number of years. She is a vivacious and attractive woman whose interest in parapsychology began as a result of a series of personal ESP experiences. In 1968 she began volunteering as a research subject in our laboratory. Felicia's exceptional ESP ability became apparent in the first experiment we did together. This was a study of hypnotically induced clairvoyant dreams in which hypnotized subjects were given suggestions to dream, while in hypnosis, about pictures sealed in opaque envelopes. In this experiment, Felicia reported a hypnotic dream about "A room with party decorations . . . No decorations on the floor, they were all on the ceiling and walls . . . Red balloons. . . ." This was an accurate description of the target picture, which was of a Japanese temple with a large red Japanese lantern hanging from the ceiling.

Encouraged by her initial success, I arranged for Felicia to participate in two all-night pilot sessions for a study we were planning on ESP in nocturnal dreams. She was wired with electrodes permitting us to monitor her brain waves and eye movements during the night, and she slept in our electrically shielded, soundproof room, which is located about 70 feet from the room where the sender would attempt to telepathically influence her dreams with a randomly selected target picture.

During these pilot sessions, Felicia was not successful in picking up the target pictures the sender was attempting to telepathically communicate to her. Her mind, it appeared, was literally elsewhere. During the

first night, her most vivid dream was of being involved in a car accident on the Verazzano Bridge between Brooklyn and Staten Island. While this dream bore no relation to the official target for the evening, we learned the next day that a close friend of Felicia's had been involved in a motorcycle accident while crossing the Verazzano the night before.

In the second pilot session, Felicia reported a terrifying dream in which she saw her elderly grandmother sitting unconscious on the floor in a pool of blood. Again, this dream bore no correspondence with our target picture. Returning home in the morning, however, Felicia received a telephone call from a relative, telling her that her grandmother had fallen during the night, cutting her head as she fell. She was found sitting on the floor, dazed, and bleeding from the forehead, but she was not seriously injured.

Incidents such as these occur fairly frequently in the laboratory. They are frustrating because they occur outside our experimental design. While common sense tells us that these events are spontaneous manifestations of ESP and not sheer coincidence or rational inference, they do not provide the same degree of confidence afforded by ESP interactions occurring within the experimental context, where we can safely exclude alternative explanations. This, after all, is the primary reason for adopting an experimental approach, so that we can eliminate all of the factors other than the one we are attempting to study. Yet the experimentalist pays a price for attempting to force nature to play by his rules. These sessions were recorded as failures.

Felicia was more successful in picking up our official targets in a formal experimental study involving eight nightly sessions spread over a period of several months. As in the earlier pilot sessions, she slept in the shielded room, about 70 feet from the room where the sender, looking at randomly selected target pictures, attempted to telepathically influence her dreams. The degree of correspondence between Felicia's dream reports and the target pictures was strong and consistent. They were among the best telepathic correspondences we have obtained, even with exceptionally talented persons, and would be expected to occur by chance approximately once in a billion such experiments. If we repeated this experiment around the clock, that is, in three eight-hour sessions per day, 365 days a year, with only chance results, we would expect results similar to those obtained by Felicia to occur only once in a million years!

Felicia has also reported numerous spontaneous precognitive experiences. In another laboratory dream session in July, 1973, she was awakened and reported a dream in which she saw a coworker looking at a picture of a collapsed building on the front page of the *New York Daily News*. After giving her dream report, Felicia said to the experimenter, Steve Goldfinger, "Mark this one down Steve, it's precognitive." Two weeks later,

the old Broadway Central Hotel collapsed and the *Daily News* carried a picture of the wreckage on its front page.

Around the time we finished the eight-night dream study, I began encouraging Felicia to exercise her “psychic muscles” in a variety of informal ways, such as trying to pick up information about people by free associating to personal belongings, such as a ring or a watch. She was very hesitant about this at first, but she gradually gained confidence in her abilities as she received positive feedback about the accuracy of her “readings.”

Although she had herself never experienced psychokinetic phenomena, upon seeing the Kulagina film and listening to Monte’s account of his own observations, Felicia was immediately and totally convinced that Kulagina was genuine. She was noticeably irritated by Milbourne Christopher’s vague dismissal of Kulagina as well as my skepticism. I had expressed reservations based on the fact that Kulagina’s object movements always seemed to occur in the direction one would expect if they were guided, say, by a strand of hair: Kulagina’s objects (in the film at least) always moved toward Kulagina.

Unknown to me or to anyone else, Felicia set about quietly to see if she could herself produce psychokinetic movement of small objects. Initially, she tried to induce movement by entering a relaxed, meditative-type state. When this failed, she attempted to induce a state of anxiety and to project the anxiety onto the target object. This also failed.

During this period, Felicia was undergoing a great deal of emotional turmoil. Her grandmother, whom she loved very much, was slowly dying in the hospital. One night after returning from the hospital, Felicia decided to try to psychokinetically move a small, clear plastic pill bottle. The bottle, partially filled with denatured alcohol, served as the nocturnal resting place for her cosmetic eyelashes. Just then the telephone rang. It was a message from the hospital: Come quickly, your grandmother is dying. As Felicia reached for the bottle to put it away, it moved away from her.

In the weeks that followed her grandmother’s death, the movements became more frequent and more controlled, though always accompanied by stress and exertion. Felicia told no one about this for more than a month following the first, spontaneous, movement. She was afraid her eyes were playing tricks on her. She wanted to be sure in her own mind that what she thought she saw was really happening.

During the summer of 1971, I was in Durham, North Carolina, at the Psychical Research Foundation, where I was working with another talented psychic practitioner, Sean Harribance. One day I received a letter from Felicia saying that she had, after several months of consistent failure, succeeded in psychokinetically “zapping” a small alcohol bottle. After returning to New

York, I went to visit her. I jokingly asked how much of the alcohol she had to drink before she saw the bottle move, and I wondered aloud if the movement was similar to what I had occasionally experienced after a third martini. Felicia was not amused. She promptly invited me into her kitchen.

She placed the bottle on the formica countertop, about a foot from the edge. I could clearly see that while her fingertips rested lightly on the edge of the counter, she was not otherwise in contact with either the counter or the drawers beneath it. She silently peered at the bottle for several minutes. Her concentration appeared to become more intense. Then she exclaimed that the bottle had moved. I had not seen any movement. She repeated her silent vigil for several more minutes. I then observed the bottle move an inch and a half or two inches to the right and toward the back of the counter, away from Felicia. When it came to rest, she said, "OK. That's enough."

It wasn't enough for me. It was at this point that I picked up the bottle and examined it. Before the second set of movements described earlier, I said to Felicia, "All right, let me try it." She stepped away as I set the bottle in front of me on the counter. I waited for it to "slide" again, but it remained stationary until Felicia reappeared and resumed her concentration.

I became quite familiar with Felicia's kitchen that night. She went off into the living room to do some household chores while I played detective in the kitchen. I examined the counter, the drawers, and attempted to repeat the bottle movements I had observed by pressing gently, then firmly, against the sides, top, and underside of the counter. I forcibly jarred it. I moistened the counter surface and the bottom of the bottle by spilling some of the alcohol. All of this was to no avail. I was completely unsuccessful in reproducing the movements that had occurred earlier in Felicia's presence. After half an hour of intense, frustrating, and, at times, paranoid detective work, I sat down on the kitchen floor, wet from perspiration, exhausted, and confused. My mind reeled back and forth between the only two logical alternatives: Either I had been deliberately deceived and was at a loss to discover the mode of deception, or else I had witnessed, for the first time in my parapsychological career, genuine large-scale psychokinetic effects.

I had known Felicia for about three years by this time. I had observed her exceptional ESP ability under carefully controlled conditions in the laboratory and *prima facie* spontaneous ESP in informal conditions outside the laboratory. She had never given me the slightest reason to suspect her honesty. Yet . . . I looked up and saw Felicia standing in the entranceway peering down at me with an amused expression on her face. We looked at one another for a long moment, and then she said, "Okay, Mr. Wise Guy. How much of the alcohol did *you* have to drink before *you* saw the bottle move?"

I had trouble sleeping that night. I had been doing parapsychological research for more than six years prior to this experience, and although I had obtained statistically significant evidence for PK in controlled laboratory experiments involving influences on delicate electronic equipment and had even been a successful subject in such experiments myself, I had never before observed large-scale, observable effects that did not require statistical analysis and that were not produced by obvious fraudulent manipulation or self-delusion. I had observed a lot of that.

The entire history of gross-object PK, from the table-rappers of the 1850s onward, was filled with fraud and malobservation. While some of the effects produced by physical mediums early in this century [20th century], such as Eusapia Palladino and Rudi Schneider, appear from the written reports to have been competently investigated, the frequency of detected fraud made it easy to discount them entirely and to retreat behind the protective walls of the laboratory where it was possible to observe effects that, while less dramatic, occurred under conditions I could adequately control.

And even though I knew both Monte Ullman, with whom I had worked closely for five years, and Gaither Pratt, one of my early mentors in parapsychology, to be cautious, critical, and highly experienced investigators, I realized that I had not taken their reports of Kulagina very seriously. In the world of the senses, seeing is believing, and as the critics of parapsychology have repeatedly demonstrated, no amount of statistical evidence will carry the impact of one direct, observable, personal experience. "Statistical evidence," someone once said, "is something about which everyone is always very polite." The irrationality of this has always bothered me. Time and again I have encountered serious scientists who were either skeptical or indifferent to controlled experimental research in parapsychology, but who would confide in me after a lecture: "But you know, my grandmother was psychic. One time she had a dream that . . ." And so it would go. Now I had to confront the fact that I myself shared this irrational ambivalence, but in my case the prejudice was reversed. I tended to ignore or dismiss the more dramatic, large-scale phenomena that occurred outside the laboratory.

I realized that if what I had witnessed in Felicia's kitchen was genuine, I could no longer maintain this rather smug, albeit comfortable, position. I also realized that just as I had not fully accepted Ullman's and Pratt's observations of Kulagina, others would not accept my observations of Felicia. It would be important to have others observe it for themselves, and, if possible, to get it on film.

During the months that followed, I was able to repeat my initial observations under similar conditions on numerous occasions. Felicia developed

the ability to deflect the needle of a compass. In working with the compass, she frequently placed her hands around the sides of the compass, about six inches over its surface. She was occasionally able to deflect the compass needle a full 360 degrees, although more frequently she produced smaller deflections, between 5 and 90 degrees. While observing this, I developed a habit of unexpectedly taking her hands and passing them directly over the face of the compass. This was to ensure against the possibility that she had concealed metallic shavings underneath her fingernails. In no case did the compass needle deflect when I did this. I should add that Felicia's head never approached the compass as would be expected, say, if she had concealed metal in her mouth or hair. (This possibility has been suggested with regard to another psychic practitioner who deflects compass needles.)

I have never had the slightest reason to doubt Felicia's honesty. She has always been cooperative and amenable to reasonable suggestions for improving the conditions of observation. She was very much aware of the extreme incredulity surrounding claims of this type, and she fully understood and appreciated the need for extreme caution.

The sessions were always a strain for her. She would become very intense, perspire freely, and have great difficulty responding coherently to speech for several minutes after a successful session. She often developed a runny nose, runny eyes, and trembling, which frequently accompanied these other physical effects. Her effort obviously involved a high level of psychological arousal. The same is true of Kulagina. The Soviet investigators report that Kulagina's pulse increases to a rate of 150–240, and she often experiences pain in her upper spine and neck, an increase in blood sugar level, and weight loss of up to two kilograms, within an hour of a session. Felicia assures me there are less strenuous ways to lose weight. She describes herself during a session as trying to develop rapport with the target object. She focuses her attention on the object until, "that's the only thing there." She picks a spot on the object and fixates on it until everything else seems to disappear. She speaks of "pitching," that is, working up excitement to a point where "I want to make it move more than anything else."

A film was made in March, 1972, in Felicia's kitchen. Below is a description of that session by Norman Moses, the photographer. Mr. Moses, unknown to Felicia at the time of the filming session, is an amateur magician who is acquainted with the techniques through which psychic phenomena are simulated in the branch of magic known as mentalism:

On Monday, March 27, I arrived at Felicia Parise's apartment at approximately 6:00 p.m. I set up my equipment, which consisted of a Kodak Super 8 motion picture camera, tripod mounted, and a quartz iodine light source. I requested, and received, permission to inspect the objects to be used in

the PK experiments. They consisted of a few small corks, some pieces of twisted aluminum foil, an empty plastic pill vial, a similar vial partially filled with water, and a pocket compass. Since Felicia does most of her experimenting on her kitchen work counter, she felt that she could best recreate the conditions for success by performing the experiments in this familiar location. This made it necessary to take all the photographs from the side and slightly behind the subject.

The first try was with the empty vial. It moved almost immediately. Unfortunately, I was still in the process of setting up the gear, and was thus unable to record this particular movement on film. The next objects tried were the corks. These were placed on a disk of black paper (to enhance their visibility), and then covered with a very heavy glass bell jar. [Pyrex glass, $\frac{1}{4}$ inch thick, 12 inches high, 12 inches in diameter, five gallon fluid capacity, 15 pounds.] Movement was achieved after about two and a half minutes [and] consisted of a rocking motion of one or more corks. At no time did the corks move in unison, or all at the same time, as would have been the case, for example, if the counter had been jarred or kicked. The next objects were the strips of foil. The results were better than with the corks. The movements were crisp and rapid. The pieces of foil seemed to act as though they were charged with electricity.

The water-filled vial was . . . next. . . and here Miss Parise achieved her best results . . . The vial moved several times, changing direction from time to time, and at varying speeds. I would estimate that the vial covered a total distance of between six and ten inches.

The final experiment was with the compass. This, again, was covered by the bell jar. After about two minutes, the needle began to move. The arc it described kept increasing, until, finally, it made a complete revolution. . . . I observed that these experiments had a pronounced enervating effect on Miss Parise. In fact, this film, with a total running time of ten minutes, took about four hours to shoot. After each try, it was necessary for Felicia to rest for about fifteen minutes. During these experiments, she perspired freely, and developed a runny nose. After each try, she seemed confused and exhausted, and had difficulty in comprehending and answering questions for about ten minutes.

Another interesting note, was the effect of these experiments on Felicia's dog. Alpha, a miniature poodle, is a very friendly, playful little dog. Whenever Felicia was conducting the experiments, however, the dog would begin to whine, and would not stop until the experiment was over. Whenever Felicia succeeded in moving an object the dog would become quite agitated, and commence furious digging movements on the kitchen linoleum. From his vantage point on the floor, it was impossible for the dog to have seen any of the objects moving.

I have been an amateur magician for some years, and am fairly well versed in the various methods by which magicians might manifest such phenomena. I made a fairly thorough inspection of the countertop upon which the experiments were conducted, and failed to find anything which might conceivably have been used to produce these effects.

(Signed) Norman Moses

In the summer of 1972, I took Felicia on a trip down the Eastern seaboard of the U.S. We stopped first at the University of Virginia in Charlottesville for a short visit with Gaither Pratt. At first Felicia did not want to perform for Gaither. When he asked if she would like to see his films of Kulagina, she became enthusiastic. Watching Kulagina again, Felicia became very excited. Almost before the Kulagina film had ended, Felicia asked Gaither for a compass. He produced one that he had used successfully with Kulagina. This further increased Felicia's interest. Gaither placed the compass on top of a small Parson's table on top of the large library table. The compass was almost at Felicia's eye level. We could view the compass from all sides, including the underside of the Parson's table. Felicia did not use her hands this time, but merely concentrated on the compass, standing in front of the table. She obtained deflections of the compass needle almost immediately.

In Durham, North Carolina, I arranged for a session at J. B. Rhine's Institute for Parapsychology with Graham and Anita Watkins. The Watkins had been conducting well-controlled, ingenious experiments related to psychic healing. They would render two mice unconscious with ether, then have a psychic come into the room, look at the mice through a glass partition, and try psychically to make one mouse awaken before the other. The mouse designated for psychic wake-up service was chosen on a random basis after both were etherized, in order to avoid bias. In a series of experiments, Graham and Anita accumulated strong evidence that the mouse concentrated upon was the "mouse that roared" first. Their findings were later independently confirmed by another team of investigators.

It was about 97 degrees in Durham that day, and the humidity wasn't lagging far behind. The air conditioning in the Institute's basement laboratory was out of commission. Felicia had to completely disrobe in the presence of Anita and another female lab assistant in order for them to attach EKG and other physiological monitoring devices to her body. This also provided them an opportunity to satisfy themselves that Felicia was not concealing magnets or other devices that could be used to simulate PK. Felicia was becoming noticeably uncomfortable and irritated as Graham and Anita began pasting EEG electrodes to her scalp. Looking at Graham, with his long full beard, and Anita, with her pixy-like face, and all those wires reminded me of Santa and his helper decorating a Christmas tree.

Felicia had no success with either a bottle or a compass placed on the opposite side of a glass partition. She tried very hard, and it was obvious to everyone present that the strain was very great. After nearly two hours of consistent failure, Graham moved the compass to a chair in front of Felicia. It was placed inside a magnetic field detector (similar to those now used to

prevent unscheduled detours to Cuba in all of our airports), on top of a carefully sealed packet of unexposed photographic film. Other film packs were placed at various distances from the compass, which was tested for proper operation. The magnetic field detector was connected to an audio oscillator which produced a constant tone over a loudspeaker.

After a few more minutes of intense concentration, Felicia started getting deflections of the compass needle. As the needle began to move, there was a distinct change in the sound frequency of the magnetic field detector, which finally shattered completely as the compass needle reached its maximum deflection of 15 degrees. The needle movement was slow and steady and reached its maximum deviation from north over a period of two minutes.

The needle remained 15 degrees off north, even after Felicia stopped concentrating on it. It was totally unresponsive to either a knife blade or a bar magnet placed directly over its surface. When Graham picked up the compass and carried it about four feet from the area of concentration, the needle returned to north and was normally affected by the knife blade. But when he returned the compass to the area of concentration, the needle again moved 15 degrees off north and was again incapable of being influenced by either the knife blade or the bar magnet. The needle gradually returned to north, over a period of almost half an hour, and was then normally responsive to the knife blade. The Watkins had earlier observed similar "lingering" effects in their etherized mice experiments.

The film pack beneath the compass was found to be almost totally exposed, and the other film packs, which had been spread at various distances from the area of concentration, were partially exposed. The degree of exposure decreased in proportion to the distance between the film pack and the compass.

Had we, with this crude instrumentation, detected an unknown energy flow between Felicia and the compass? Later tests with the field detector showed that the shattering of the tone, which had accompanied the compass needle movement, could only be simulated by placing a very large metal mass (a two-pound roll of solder) inside the field coil. It appears that some invisible force penetrated that electrical field.

Soviet investigators of Kulagina have reported film-fogging effects similar to those we observed with Felicia. Based on this and other effects associated with object movement by Kulagina, one of the principal Soviet investigators, University of Leningrad neurophysiologist Sergeyev, has newly conceptualized a form of biological energy, which he calls *bioplasma*. According to Sergeyev, bioplasma is concentrated in the head region. He speculates that PK involves a laser-like polarization of the bioplasma, which acts as a material force on the target object.

Such theories are problematic. The kind of energy required to push around a plastic pill vial or a cork is presumably different from the kind of force required to spin a compass needle. Bioplasma would have to be an ecumenical energy form; electromagnetic on this object and gravitational on another. It would presumably have to be converted into nuclear force in order to influence electrons in the electronic PK experiments we discussed in the last chapter. Perhaps there is an ecumenical, undifferentiated energy, currently unknown, and capable of conscious direction, which can manifest in whatever form is appropriate to the occasion, appearing as electromagnetic influence on Tuesdays and Thursdays, as gravitational influence on Mondays and Wednesdays, and as a nuclear force on Fridays and Saturdays. (All that conversion presumably requires at least one day of rest.)

Perhaps. But in spite of some provocative and tentative findings, bioplasma and other psychic energy theories are still premature. Until we learn to produce psychokinetic effects more or less on demand, we will be unable to reach definitive conclusions as to its mode of operation.

The session in Durham took its toll on Felicia. She became moody, withdrawn, even hostile. She refused to speak to me during most of our stay in Durham. She was through, no more demonstrations, I was using her, only interested in the PK, insensitive to her feelings. I regret to have to admit that she was right, at least to some extent. Since that first night in October, I had been pushing her. In my eagerness to firmly establish the genuineness of her PK ability, I ignored the increasing indications that it had become too much of a strain for her. I failed to appreciate what a profound impact the development of this ability had on her. She had begun to wonder if she was some sort of a freak. "Is it really me? Am I really doing this?" She had gotten into it in the first place to satisfy her own curiosity as to whether she could herself do what she saw Kulagina do. That curiosity had long since been satisfied. Now there were all these incredulous people making demands on her to perform, telling her by implication, "We trust you Felicia, but you must understand that what you are doing is absolutely incredible. We must eliminate every conceivable possibility that you're cheating." The tolerant amusement with which she had earlier greeted skepticism now changed to impatience, frustration, anger, and, finally, to rage.

Felicia was (and is) convinced that she must work herself into a hyperactive state in order to exert a PK influence. She nearly always was physically exhausted after a successful session. I suggested to her that this hyperactive state might not really be necessary: that Kulagina had been her model and Kulagina gets worked up, so Felicia thought she must too. She did not accept this at all, even after an episode in the laboratory that strongly suggested it.

Several months prior to our visits to Charlottesville, Virginia, and Durham, North Carolina, Felicia was in my office. I prodded her to “zap” my compass, which lay on the corner of my desk. She was in a hurry to return to her own lab where she was running an important blood test and didn’t want to get worked up for PK. I persisted, however, and as she was about to leave, she jokingly waved her hand in the direction of my compass and said, “Abracadabra!” The compass needle immediately deflected 90 degrees. (When I then took her hand and placed it directly over the compass, the needle remained perfectly still.)

The Durham experience brought to a close Felicia’s career as a PK subject. She had her own life to lead and a position of respect within the medical center. She had no desire to be a sideshow attraction for a group of parapsychologists who sat around at cocktail parties passionately debating the relative merits of the *t* test and the critical ratio of the difference. She continues with success to explore her ESP abilities in the laboratory, but she has, she insists, retired forever from PK. Felicia hung up her compass, and the alcohol bottle has again become the nightly depository for her eyelashes.

Notes

- ¹ We are indebted to Donald McCarthy for this paper, which he says was originally written as a chapter in a popular book on parapsychology that Honorton was thinking about writing in the early 1970s.—Ed.
- ² Minor points in this paper have been emended by two referees, and it has been minimally edited in line with standard APA *IJASPR* style.—Ed.

INTERVIEW

Interview with Felicia Parise, August 6, 2013**ROSEMARIE PILKINGTON**

Rpilkin603@aol.com

Introduction—In Chapter 23 of my book *The Spirit of Dr. Bindelof: The Enigma of Séance Phenomena* (Pilkington 2006), I called Felicia Parise “A Mini Kulagina.” I had read about this remarkable woman and had heard much about her from mutual friends and colleagues who had worked with her, but nobody seemed to know where she was or what had become of her. So my chapter was written without ever having met her. What I knew was that she had worked at Maimonides Hospital in Brooklyn, New York, at the time Montague Ullman, Stanley Krippner, and Charles Honorton were conducting experiments in Dream Telepathy there (Ullman, Krippner, & Vaughan



1973), and that she had volunteered to participate in the program and had turned out to be one of their best subjects. She was discovered to have strong clairvoyant and telepathic abilities and was willing to work with researchers. When Ullman returned from a visit to the then USSR, where he witnessed and examined Nina Kulagina, who was being studied by Russian scientists for her ability to move objects, deflect compasses, and affect even excised frogs hearts, he brought back a film showing some of her feats. In addition to Honorton and Krippner, a professional magician and members of the Lab including Felicia attended the showing. Most of those present doubted Kulagina’s ability and speculated on how she might be performing some trick. Felicia, however, believed her to be genuine and decided to try to learn to move small objects as well, which after a long time and much effort she did. [See Pilkington (2006) and especially Honorton (1993, 2015 in this issue) for a detailed, informative, and amusing account.] Felicia participated in many successful PK experiments but eventually gave up her activities because of the physical toll they exacted. At least that was the

reason given in most online search results. But perhaps it's really because Felicia is a very private person who was bothered by the inevitable doubting and questioning of those who could not accept the evidence. I had tried unsuccessfully several times to locate Felicia, but one day to my amazement a friend discovered both her Manhattan address and telephone number. It seems she had for years kept her number unlisted, but (perhaps weary of paying the attached fees) had finally allowed it to be published and we were able to get the information. (She has since withdrawn its publication.) Felicia graciously received my inquiries, and since she was coming to Staten Island, where I live, to see relatives, she visited me at my apartment where I took the photograph you see in this article. We sat down for her interview in August, 2013, but didn't get together to go over the transcript, clarify questions, etc., until the summer of 2014. I am grateful to Felicia for sharing her experiences with us. We can all learn a lot from her.

Rosemarie: Today is August 6th, 2013, and I'm sitting with Felicia Parise, and asking her about her life and her experiences. Felicia, you haven't been around in a long time. A lot of people have a lot of questions about you. First, I just want to ask you, how did you get started in this field? Were you always a sensitive? Did you have experiences when you were younger?

FELICIA: I did notice some inaccuracies in what has been printed about how I got started in Parapsychology. I was working at Maimonides Hospital in the Department of Special Hematology. During this time, [scientists in the] dream lab, which was located in the basement of the Community Mental Health Building, were asking subjects to participate in ESP experiments. I was not interested, but a girlfriend of mine had lunch with a Doctor [K. Ramakrishna] Rao. He was an Indian doctor who was here in the U.S. working with Monte [Montague Ullman], Chuck [Charles Honorton], and Stan [Stanley] Krippner.

Dr. Rao started talking to a friend of mine named Diane. He caught her attention with experiments they were doing. During this time, they were doing clairvoyance in the soundproof room, with relaxation techniques, perhaps a mild hypnosis. Diane was very interested. She said, "Okay, I'd like to try this," and she said, "put my name down and put my girlfriend, Felicia's name down, too." When she finished lunch and came back to the Laboratory and told me what she had done, I was not that enthusiastic. I said, "You don't really know what they are doing down there." I just didn't think I would be interested.

So, the day came when Diane was to take part in the experiments in the soundproof room with Charles Honorton. She described what she did and it was piquing my curiosity. Diane didn't do too well and was not asked back.

When my turn came, Dr. Rao called me and we set up a date. I went to the dream lab and the first person I met was Charles Honorton. I was kind of surprised at Chuck's appearance because my girlfriend never mentioned that he was so short [Honorton had Toulouse-Lautrec syndrome]. Chuck went into detail about the experiment: He was going to talk to me, and I would, hopefully, experience a mild hypnosis, and when he felt the time was right he would put an envelope on the arm of the chair and ask me what I thought was in the envelope or what was going through my mind.

We did this with three different envelopes. When the experiment was over, Chuck read back to me everything I said about each envelope used in the experiment. I was then handed several pictures and asked to choose which of these pictures were used in the experiment and in what order they were they presented to me. I had to try to match the pictures to the thoughts I was having during the process. I found the whole experience very pleasant. I am an easy subject to hypnotize, or so I was told. I described to him what was going through my mind, and what I said was transcribed and then it was given to a secretary or someone who had nothing whatsoever to do with the experiments. What they did was open the three envelopes, read my transcript, and try to match the transcript to the three pictures used in the experiment.

The first time, I did well: I got a direct hit on all three pictures. Chuck asked me to come back and try it again. I was very curious about all of this. It was very different and pleasant. We arranged a time and day. I went again to the Dream Lab. Chuck and I repeated the whole procedure over again.

I did very well. Time went by and Honorton contacted me again. This time, he said he would like for me to participate in a dream telepathy experiment. He explained how this takes place and that I was to sleep [in the lab] overnight and I should bring something appropriate to wear.

So, the time and day were set. It was a Friday night, I remember. I met a gentleman, whose name slips me at this time, who was a schoolteacher. He lived in Manhattan and he was going to participate as the sender. I had electrodes placed all around my head. Years ago, they used to use this collodion.

Rosemarie: Oh, they glue the electrodes onto your head.

FELICIA: They glued electrodes onto my scalp. They were very careful and used a solvent to get them off: The first time I met Malcolm Bessent, he had done dream telepathy so many times he had bald spots on his scalp from the electrodes being glued and removed. He had little bald spots. Anyway, I really got into these experiments, I liked doing them, and I kept producing

good results. Chuck would say to me, "Well, what do you think about this?" and I said, "I don't know why you are all getting excited, because to me it's just good guessing." He said, "That's okay, just keep guessing." So, eventually, I became very interested, and that was my introduction to parapsychology.

Rosemarie: Had you had previous psychic experiences?

FELICIA: At this point, Chuck started to question me about any experiences as a younger person. One experience really stuck out in my memory. I was about the age of 16; I had a friend who enlisted in the Air Force. His name was Robert Curran. His brother lived right next door to my parents' house. That is how I got to know Robert. He made me promise that I would write him when he went away. We corresponded back and forth.

When he'd come home, we would hang out together. We were really getting to know each other. He went back to Ellsworth Air Force Base in Rapid City, South Dakota. I don't remember how long he was away when I had a dream. I can't even say it was a dream, because I didn't remember dreaming anything, but during the night I just jumped up and I couldn't breathe. I knocked over something on the lamp table. My mother came in and I said to her, "I'm having such hard time breathing; I don't know what is wrong with me." She just sat with me for a while and then it passed. I was breathing just fine. Everyone went back to sleep. End of story? Not quite. The next day, we got a telegram from Bob's brother informing us that Bob had choked to death during the evening. It seems he had a tumor on his trachea and nobody knew about it. He woke up to go to work and couldn't breathe: He choked to death. He was only 23 years old. His passing was a very sad thing.

Rosemarie: And that was the same night that you had the experience?

FELICIA: Yes. Normally, I would not remember anything like that, but this was not a little thing. It was just the night before. I said to my mother, "My goodness, no wonder I couldn't breathe last night." She said, "Well, yes, those things happen, you know. Maybe he was thinking about you when he passed." And that was the end of it; we never discussed it again. These things happen and that is the way it is.

Rosemarie: You didn't take it as being anything terribly unusual.

FELICIA: No, not at all. Then, Chuck asked me about my family, if anybody in my family had had these kinds of experiences. I said, "I don't know." So, he said, "Well, why don't you ask?" I did. I started asking around, different aunts and so on, it seems that my grandmother had experienced "poltergeists," which blew my mind. Because at this time I was already into parapsychology, learning all I could, and I knew what poltergeists were. And I knew it was often related to a young person.

Rosemarie: Very often a young person, but not always.

FELICIA: I questioned my aunt about it, and she didn't really know anything about parapsychology, about these things. I said, "Well, explain it to me. Did things just fall over or explain what happened." But she, with no coaching—I give you my word, nobody coached her—she said, "well, sometimes something would fall off the wall, but mostly these little statues that were around the house exploded." In the meanwhile, I'm listening to this, with my mouth wide open; I never heard of these stories before.

Rosemarie: This is your paternal or maternal grandmother?

FELICIA: My mother's mother. Then I started asking questions about this on my father's side. And my Aunt Grace, who was the oldest of 12 children—

Rosemarie: Wow.

FELICIA: —yeah, she told me that my father swore up and down that he saw a ghost. Years back, they didn't have plumbing in the house and so they had an outhouse. And the boys used to go in the outhouse, and my father was terrified to go to the outhouse because that's where he saw this ghost. I couldn't believe that all this was going on and I never heard about it.

Rosemarie: You hadn't heard of it before?

FELICIA: No, I'd never heard about it. But, other than that, like presently, I have one cousin who bugs me all the time; "If you hear anything, I'd like to attend a lecture or there's an experiment, don't forget me, I want to be included" because she feels that she has some ability.

Rosemarie: It sometimes runs in families.

FELICIA: She's the only one who says this to me, and I have a lot of cousins and relatives.

Rosemarie: But your mother never had any kind of experiences?

FELICIA: No, she never related anything to me.

Rosemarie: Well, very often it skips a generation; so that your grandmother would have it and then you might have it as well. So, you do have a background of some psychic functioning in your family.

FELICIA: Yes, but to learn about it as an adult is to me, mind-blowing.

Rosemarie: Before the interview started we mentioned Ingo Swann. I don't think he had any experiences until he was an adult. What were the inaccuracies in material printed about you that you noted earlier?

FELICIA: In one of the books, I don't know if that was your book (Pilkington 2006) or someone else's but it was when it mentioned the people who were invited to see the film that Monte brought back from Russia and it said Felicia had a strong interest in parapsychology, so she was invited. I was already doing experiments in telepathy and clairvoyance plus readings at that time.

Rosemarie: I got my material for your chapter in The Spirit of Dr. Bindelof from the article by Chuck Honorton that appeared posthumously in JASPR. (Honorton 1993, 2015 this issue). In it he said you had had a series of personal ESP experiences but didn't specify when or what they were. He does say that on seeing the Kulagina film and hearing Monte's account you were immediately and totally convinced of her abilities. So you felt she was genuine?

FELICIA: Yes that is true.

Rosemarie: And, of course, having the abilities yourself also—

FELICIA: Well, I didn't know at the time I could do PK. Seeing her film inspired me to try.

Rosemarie: What angered you about the men who watched the Kulagina film with you? Is it that they made excuses because they did not want to accept the phenomena?

FELICIA: Well, yes. Because later on, I myself began to understand that people who work so hard in physics and in all kinds of other areas are used to seeing phenomena that are very micro. They get very small effects, if any.

Rosemarie: Which are not threatening to their worldview.

FELICIA: Nothing visual; their results are statistically significant. Those were the first words I learned when I got into Parapsychology.

Rosemarie: So, when they see a large effect—

FELICIA: Oh! Yes there is no question; you cannot deny what you see. But, when you actually see it with your eyes, there's something in the mind [that rejects it]—

Rosemarie: It's called cognitive dissonance.

FELICIA: Yes exactly. You know, you don't take it for what it is; you try to figure out "How could she do that?" Or "How could you do that?" Instead, the fact of the matter is that it's not only me but there are other people out there who can do it. In the beginning, it was very difficult for me to do PK. I believe it got a little easier as time went by. Just like an athlete, the more they practice the better they get. I remember the first time Chuck handed me an object and said, "Felicia what's going through your mind?" I laughed and asked, "What am I, a gypsy now, too?" But, after doing a reading on an object the first time, and being correct about what I said, it got easier to be spontaneous and not think about being right or wrong.

Rosemarie: You start learning what it feels like?

FELICIA: Yes. When a reading is correct, most often I do not remember what I said later on.

Rosemarie: Do you have a physical feeling?

FELICIA: I have an anxious feeling.

Rosemarie: Are you actually in kind of an altered state, do you think?

FELICIA: Yes, I am not aware of my surroundings for the time. I think what it is, is that I'm not paying attention to my surroundings. I'm too busy watching what's going through my mind. As I said before, the more reading you do, the better you get at it. The same applies to dream telepathy. Only thing different is I do not have to do anything to prepare myself except go to sleep—my favorite thing. I just had to go to sleep, and the same thing with the hypnosis. As a matter of fact, I got to like working under hypnosis so much that Chuck stopped it.

Rosemarie: Why?

FELICIA: Because he didn't want me to use this as a crutch: He didn't want me to rely on the hypnosis.

Rosemarie: Some say that all hypnosis is self-hypnosis.

FELICIA: Maybe so, but you need to have a great deal of trust for the one doing the hypnotizing.

Rosemarie: —you probably could get into that state. And, probably, that's what you were doing without realizing it.

FELICIA: Or I am extremely suggestive?

Rosemarie: Steve Braude said he wanted to ask you about the fact that you had to work so hard to produce your effects. He said to ask what was going on in your head and how did you think the movements were caused by you? I've often thought that because you watched Kulagina and you knew how difficult it was for her and that she suffered physically, that you kind of adopted that method, so that you became that way, too. Do you think that there's any truth in that, or do you think it is just the nature of the force or whatever that's enervating?

FELICIA: I think that's true. I think I might have been mimicking her. Chuck believed that's what I was doing and that [it wasn't necessary for me] to work so hard, because he had seen the things like the spontaneous experiences we had together.

But before we go any further with the PK, I want to make sure that everybody reading this understands that I feel solely responsible for what

I'm doing. In other words, I don't feel like there's a spirit or somebody guiding me or anything. Because I have been asked that a lot.

Rosemarie: Somebody wanted me to ask that, and I felt very silly asking you because I assumed that you didn't feel that way.

FELICIA: No, I don't feel that way.

Rosemarie: So, no spirits, no ghosts involved, this is you, your psyche, and your life force.

FELICIA: Yes, I feel whatever I'm doing is coming from me without any spiritual help. Although, the more I got involved with parapsychology the more sensitive I became. I'm telling you, Rosemarie, I've had experiences that are so hard to even explain or to have people understand.

Rosemarie: Can you give an example?

FELICIA: Well, I mean, everything seemed to be so acute, my hearing, I feel like it got very acute. I could hear things like—my senses became more heightened.

Rosemarie: I see. That's interesting.

FELICIA: I was driving to work one morning and I stopped for a light on this corner and it was in the springtime. I just happened to look over at this man's lawn. In the middle of the lawn were tulips, but they were all tightly clustered together. It was magnificent, I mean it was so beautiful to look at, and I could have sworn I heard them humming.

Rosemarie: The tulips humming.

FELICIA: Yes maybe that's just your imagination when you see something so beautiful like that.

Rosemarie: Perhaps.

FELICIA: And, at the time I was having my house built in Manhattan Beach and so I had a lot of my plants and cuttings in my laboratory on the windowsill. I had a southern view. I had ideal exposure, and a lot of the doctors used to bring me their plants because their plants were failing for

whatever reason and they said, here, look you have such a green thumb, look at how beautiful all your plants look. They walked in with those little potted plants some hanging over and just on their last legs. Now, again, I don't know if [my abilities have] anything to do with [the plants'] survival, but, in my favor, I had ideal exposure. Sometimes, I'd be at my desk working and I think I would hear them growing. I thought, "Oh, my God, I'm losing it altogether." Really, I heard a crack like, very low crackle kind of noise, I turned around and I said, "Geez, I can hear them growing."

Rosemarie: Well, it reminds me of synesthesia: as when people hear music and they see colors, or vice versa. Leonard Bernstein used to say that a certain key would be a certain color to him. You're seeing beautiful colorful tulips and you're hearing sound—

FELICIA: A hum.

Rosemarie: A humming sound. It could be that kind of thing.

FELICIA: It could be. I don't know.

Rosemarie: It's also part of being a sensitive; sensitive to all these things. And tapping into things that normally we don't.

FELICIA: Well, you know, I'm sensing no matter what area parapsychology you might explore, the more you do, the more heightened you become.

Rosemarie: More in tune with yourself?

FELICIA: Right. More aware. You see a lot more going through your mind. It's a matter of just paying attention; watching what's going through your mind's eye. You could do that with your eyes wide open. It wasn't until I got involved with the dream lab at Maimonides, that I learned not all people think in pictures—I dream in pictures—until one day Chuck put me straight: He said, "No, not everybody thinks in pictures." I found that very strange. How do you know what's going on if you don't see? To this day, I think, whatever I'm thinking about is in pictures. Isn't that strange?

Rosemarie: And you see them clearly?

FELICIA: Oh, yes, I was in my 30s when I first found out that not everybody thinks in pictures.

Rosemarie: It reminds me of the young girl who couldn't understand the purpose of card games because she knew all the cards in your hand without looking at them. So, she could never figure out the purpose of the silly game. Like you she thought everyone could do that.

FELICIA: Yeah, really, until somebody tells you different, how would you know? You don't know.

Rosemarie: Marvelous. So, you have what I would call the psychic syndrome. You have it in all ways.

FELICIA: Yes, I do everything.

Rosemarie: Because most people know you for the psychokinesis, let's talk about that famous little vial with your eyelashes in it. The way the story goes, from what Chuck wrote—and I have printed it in the "Bindelof" book—was that you were annoyed with those men, the magician Milbourne Christopher and the others.

FELICIA: I can't remember all their names now. Just because they can duplicate the effects of PK through sleight-of-hand does not mean that PK does not exist, it means they are good at sleight-of-hand.

Rosemarie: —but, you got angry with them.

FELICIA: Well, yes.

Rosemarie: First of all, they were men and this woman was being made fun of—

FELICIA: Yes, but they were laughing at the PK as if to say, "I know how that's done." I had no idea that Chuck didn't have any room in his thoughts about psychokinesis being something that really exists. Because I think, after all these years, Chuck and I got very close, and I trusted him completely, and I think that's why whenever I did anything with him the results were good. Had I known that Chuck didn't believe PK could be done, I might never have tried to do it.

Rosemarie: Yes. There was that bond.

FELICIA: And any readings I did for him were very good.

Rosemarie: So, you did psychic readings as well?

FELICIA: Yes, it used to blow my mind! One time he came back from, I don't know if it was Edinburgh or North Carolina, wherever he was, he came back and I was talking about how his trip went and what did he do, where did he go, and then out of the blue, he hands me a photograph of this young lady. He said to me, "What do you think about this?" I looked at it and I gave a reading about the young woman in the picture. I did not know Chuck was interested in her. I said a lot of things, which later I found out were accurate. But, one thing I did say that I remember was, "She's engaged to be married," and we found out later on, that yes, she was engaged to be married.

Rosemarie: But, he didn't know it?

FELICIA: He didn't know it, no. I don't know if it happened while he was there or what.

Rosemarie: How about precognition?

FELICIA: Oh yes we used to have a place where we used to send our thoughts on that. It was founded by Robert and Nancy Nelson and was called the Central Premonitions Registry. I foresaw a big earthquake in Ankara, Turkey, that caused severe damage about eight days later. I also had a precognitive dream about a building collapse while I was asleep in the dream lab. There was an article about it in *The New York Times* (Thompson 1973).

Rosemarie: Yes, you were supposed to be dreaming of a target but instead of dreaming of the target you had a dream in which you saw the picture on the front page of a newspaper reporting that the building collapsed.

FELICIA: Right, the person writing this down was a young man, named Steve. He woke me up and said, "Felicia, what is going through your mind?" and I said to him, "Steve, write this one down: It's precognitive." And that was the collapse of the building. That was about eight or nine days before the event. [The *Times* article says that Felicia had the dream on Friday, July 20, 1973. The collapse took place on Friday, August 3rd.] Usually, when I get a precog it's kind of like a week or so before. Like 9/11. Oh, I had it way, way before the actual happening.

Rosemarie: Okay. So, now we're moving up to the 21st century. Are you still having them?

FELICIA: Well, that was in what, 2001?

Rosemarie: Two thousand one.

FELICIA: Well, my God, I would have to be dead not to pick up on something like that, you know? I mean, I was just moving into Manhattan. I moved right after 9/11.

Rosemarie: And, what did you dream?

FELICIA: Well, I didn't dream, it was—

Rosemarie: A waking vision?

FELICIA: Yes. You know, it just kept coming into my thoughts—I didn't know what the hell those numbers meant.

Rosemarie: What numbers? You dreamt of 911?

FELICIA: Yes, but that's the emergency number. But, it was like I couldn't get it out of my thoughts. I even said to my girlfriend, Diane, "I don't know what the hell these numbers mean, but I can't seem to get them out of my mind." And she says, "I'll go play the lotto." And then, of course, when this all came to pass she said to me, "Your face got ashen." But, I had no idea what was going to happen.

Rosemarie: Did you have a feeling that it was something bad that was going to happen?

FELICIA: I had the feeling it was something big. Oh, I knew it was something; something was coming up but I couldn't put my finger on it. I couldn't get these numbers out of my mind. You know, they would just pop in my head for no reason. I'd be making dinner or something and I'd be thinking about that number.

Rosemarie: That number that has become infamous.

FELICIA: Yes, yes. For sure.

Rosemarie: You and Malcolm Bessent used to read for each other, I believe.

FELICIA: Yeah. We used to try to read each other unsuccessfully. But, there was always one image in my mind. When I did anything with Malcolm, and that is photography.

Rosemarie: Photography?

FELICIA: I used to see him with a camera all of the time. And I would tell him. And he said, no, no, no, I don't plan to do anything about photography.

Rosemarie: So you had precognitive visions of him with a camera and later on he did become a photographer. I think he wound up even later selling cars or something.

FELICIA: I don't know what the hell he was doing. He used to go back and forth, you know. He had a work visa. So, he would come here and work. Malcolm also did Remote Viewing—projecting your mind to a particular area and relating what you're seeing. Malcolm did some of that very successfully. He did experiments like that, with Stan Krippner and a colleague. They would go to a place and then ask Malcolm where they had been or where they were going and what they did there. And Malcolm did very well with that.

Rosemarie: We started to talk earlier about an experiment you did with Malcolm Bessent that was interesting because of its perceived failure.

FELICIA: The long distance telepathic experiment, with Malcolm. That was the first time, in the four years that I was involved with parapsychology—there were times afterward but this was the first time—I experienced constantly describing a picture in the target pool that was not the target. What a letdown that is! You talk about frustration. Oh, God!

Rosemarie: When was this? I'm not quite sure I understand you. When did you have this experience where you described something that wasn't the target?

FELICIA: We were doing an experiment with the BBC. That's how come we got a film, and you know Chuck was working with the producer who was setting this up and getting the targets and everything.

Rosemarie: The producer was choosing the targets!?

FELICIA: Yes. Chuck didn't really have anything to do with the targets as such. Because, you know, when you work with outsiders, you want them to do whatever it is that they have to do to get the experiment together. And Chuck felt that he didn't want to put his two cents in because then, you know, if there's any question about it, "Oh, sure!" you know.

Rosemarie: Yes, he didn't want any accusations of it being set up.

FELICIA: Right, exactly. These people were strangers to us. But, they even paid for the phone calls. At the time, it was expensive for me to talk to Malcolm over the phone. And, don't forget, England is five hours ahead of us. So, poor Malcolm had to stay up until it was like 11 o'clock New York time. So, God knows it was like four o'clock in the morning and he had to stay up because I had to go to sleep.

Rosemarie: Right.

FELICIA: So, Malcolm is going to be the sender. He's going to look at the target and try and send me the details. I'm in the soundproof room, wired up and I'm asleep. Well Chuck finds out that the men, the producers there in the room next to the soundproof room were watching the EEG and everything else going on. One producer, the head of the show there, knew what all the pictures looked like in the target pool.

Rosemarie: Uh, oh!

FELICIA: Say there were five envelopes—

Rosemarie: Right, he knew what was in each.

FELICIA: This clown knew what the pictures were! So, when I started dreaming about three people, a mother, father holding a child, my mind went to a religious picture of Mary, Joseph holding infant Jesus. Every time they woke me up, the picture was stronger and stronger and I didn't deviate at all. So, at the end of the session, they opened the five envelopes and asked me to choose the target. It was Sonny and Cher holding Chastity. So, I was dreaming of three people all night. But, it wasn't *that* target picture at all. I picked the one that I was dreaming about and that was when Chuck found out that the producer knew what all five pictures were. When I started

talking about the husband and wife holding a child, he assumed it was the religious picture.

Rosemarie: And he focused on it.

FELICIA: “Oh,” he said, “I know which picture that is.” And he’s feeding it to me all night. The whole thing was contaminated.

Rosemarie: Of course.

FELICIA: Very frustrating.

Rosemarie: That’s what happens when you have people involved who don’t know what they’re doing.

FELICIA: They did not realize that what they were doing would influence me.

Rosemarie: But I had started to ask you, before we segued into precognition and dream telepathy, about the exhaustion and other physiological after-effects of your PK performances. Maybe we should go back a little bit, to when you were first starting to try to move that plastic vial. So, you saw this film with Nina Kulagina moving objects.

FELICIA: Yes. I wanted to see if I could do it and it just bugged me that just because a magician could duplicate what she was doing doesn’t necessarily mean that it’s not real. It just means he or she is a good magician. I didn’t tell anybody I was going to try PK because I didn’t know if I was going to be successful. But, I believed that [Kulagina] could do it.

Rosemarie: So, therefore, you believed it was possible to do?

FELICIA: Oh yes, I believed it was possible and then don’t forget, after four or five years in parapsychology, I experienced things that I never in my life thought I could do.

Rosemarie: Right. So, this was just one step further.

FELICIA: Yes, kind of like you feel invincible. You know, “I could do that.” And, well, it was worth a try, and I did it. I tried with the plastic bottle, my eyelash bottle. Before the plastic bottle, I tried influencing a compass with no success. I then tried it with the little plastic bottle. Why the bottle? When

I came home every night I took the bottle out, put it on the counter and put my false eyelashes in it. (Everybody wore them in those days so I did too.) So it was there every night and I decided to use it to practice. I tried to approach it calmly at first, just relaxing my mind and letting my eyes see it move—Imagining the bottle was moving.

Rosemarie: In other words, visualizing it moving?

FELICIA: Yes I was visualizing it moving, but it wasn't really moving. Not at that time.

Rosemarie: But you were visualizing how it would look when it moved, is that right?

FELICIA: Right. And, I visualized it from the very beginning moving away from me.

Rosemarie: Not toward you as Chuck had made fun of with Kulagina?

FELICIA: No, never toward me. It just came very natural that, I would be pushing instead of pulling it. But, that didn't seem to work and that's when I started thinking, "Well, how did she do this?" She looked very excited and so I tried mimicking her.

Rosemarie: What were you mimicking?

FELICIA: I was trying to work up an excitement. Like thinking, you know, how would I feel if it did move? And, that excited me.

Rosemarie: So, you have this elation or excitement—

FELICIA: Yes I was anxious; I worked myself up into an anxious state.

Rosemarie: So, you would consciously work yourself up into an anxious state?

FELICIA: Yes. But, when I was successful the first time, I wasn't absolutely certain the bottle moved because it happened so fast. I was in a hurry to get back to the hospital. My grandmother had taken a turn for the worse and I wanted to be with her. I reached for the plastic bottle in order to put it away and that was when it moved away from me.

Rosemarie: Was that your mother's mother?

FELICIA: Yes. She was the one who experienced poltergeist activity as a young woman. She was ill and in the same hospital I worked at. I made it my business to drop in to see her during the day, and then when they called me, that she had taken a turn for the worse, I got very excited. I had been dreading this moment—

Rosemarie: Of course. So, you were agitated?

FELICIA: Yes. I wasn't thinking about moving the bottle, I was thinking of getting dressed and getting back to the hospital. I went to reach for the bottle to put it away and that was when I thought I saw it move. But, I wasn't sure, and I didn't have time to fool with it. After she died and things calmed down, I got back into my routine at work and with my family. That's when I finally started all over again trying with the bottle. [At the Rhine labs] in North Carolina they asked me these questions, which also made me think. I told them that I know when I am going to be successful because—[I don't know] if it's a before or after effect—but I get a rush.

Rosemarie: A rush?

FELICIA: Yeah. I get a rush. Do you know what a rush is?

Rosemarie: Like an excitement through your body?

FELICIA: Yes, but fast. Like a jolt.

Rosemarie: And where does it come from?

FELICIA: Here, from the pit of your stomach. You feel it, as if somebody frightens you. You get a jolt. That's a rush. That's what it feels like, and I was sure the bottle moved this time. It frightened me to actually see the bottle float away from me like that. I didn't try to move the bottle for a couple of days after that.

Rosemarie: Because you got scared the first time? So, then what brought you back to it, more curiosity? "Can I do it again?"

FELICIA: Yes, exactly. The second time, it moved away from me and to my right a little bit. It curved a little. Unbeknownst to me at that time, it was

going uphill. Later on Chuck tested it with a level.

Rosemarie: Yes. He wrote about that. [Honorton 1993, 2015 this issue]

FELICIA: But I didn't know—[The counter] looked all flat to me.

Rosemarie: It was on the same kitchen counter, then?

FELICIA: That was where I first showed Chuck. He actually got pale. He got pale and said, "Do it again." He did not believe his eyes. I did not do it again for him at that time because I felt he needed time to collect his thoughts.

Rosemarie: —as you were saying people, like Chuck—this is their life, they're looking at these minute differences and they theorize, they read stories about macro-PK, they accept it intellectually perhaps but they kind of dismiss it. And then, when it actually happens, it really changes their worldview.

FELICIA: I'll tell you something, truthfully. I had so much respect for Chuck and the work that he was doing, all the writing, publishing, and fundraising. He was a great researcher. I also worked at the ASPR, with Karlis [Osis] and a random generator. Karlis took me upstairs where he had a machine called a random generator. There were two lights on it, a red and a green and they would keep lighting up randomly—I was asked to influence the machine to produce more of one color than the other. In other words, if you just let it run by itself, it should be 50/50.

Rosemarie: And you would have to try to skew it?

FELICIA: Right. But, again, here, the results are all statistical.

Rosemarie: Minute results, which are not scary—

FELICIA: Right. Then when I went to the FRNM [The Foundation for Research on the Nature of Man, Rhine's original foundation, now the Rhine Center] I worked with Graham Watkins and his wife Anita. I was thinking about it this morning. But, you know, this was a long time ago, in the early 1970s. As a matter of fact, they had presented that work I did at the PA [1973 Parapsychological Association convention at the University of Virginia. See Watkins & Watkins 1974]. I was there at that time, and I

was so embarrassed: I had to get up to show people who I was. I did a lot of interesting work down there; I also worked with plants and beans and water. In the plant experiment, you have to hold the water [in a beaker]. They then use it to water plants.

Rosemarie: Ah, similar to the healing experiments that were done with Olga Worrall and others. And did you have good results with that?

FELICIA: I never knew, well Chuck told me. I don't know if it was written up. Oh, many months later, he said to me, "Remember that experiment you did? Well, yours wasn't the tallest," he said, "but, it sure was the healthiest."

Rosemarie: That's a very good sign. Have you ever tried to do any kind of healing with people or animals?

FELICIA: I used to with my grandmother because she had a lot of edema in the legs from congestive heart failure. And, you know, it's hard to say, her legs did look better—she said they were better—but, it's hard because you're so personally involved. You know, it gets very hard for me; I did leukemia research, and oncology for our cancer patients. I've been successful at so many things. Suppose I'm successful in giving a little relief to someone. I looked at these patients everyday lining up outside my laboratory door. They sat in the hall waiting for their blood tests. I just felt very conflicted to get involved in healing because of the work I was doing. We did oncology as well. And, we used to get a lot of breast- and colon-cancer patients. Those were the two. We used to get a lot of other things, you know, cancer of the gallbladder, the stomach, etc. But, primarily, my department handled the breast and the colon. So, you know, I felt conflicted. But, when I was at the FRNM with this couple, the Watkinses, I did PK. But, I also did the etherized mouse experiment. I think I told you about that (Watkins & Watkins 1971, Watkins, Watkins, & Wells 1973)

Rosemarie: Tell us about the etherized mouse experiments. You had control mice and experimental mice.

FELICIA: Right, but they came from the same litter of the same parents, of the same everything. There was a glass or plastic partition between the mice and myself. The partition went down the middle and on the left there were maybe six mice and on the right, there were another six siblings. Both sets of mice were etherized and put to sleep. I had to decide whether I wanted to wake those on the right or those on the left. I tried to wake up one set

before the other ones came to on their own (without my trying to influence them). They were the control group. I don't know how the study came out. I never heard.

Rosemarie: They never gave you the results?

FELICIA: —I never got feedback from that. No.

Rosemarie: That's too bad.

FELICIA: Yes, I know. But, I was very pleased to hear about the plants.

FELICIA: And, of course, I did the PK there, and that was also written up in the journal. And, that's when I was invited to Virginia where the annual PA meeting was because the Watkinses were going to present the experiments they did with me, the PK with me in their laboratory. After the presentation, they said, "And, she's here today, Felicia, please stand." I wanted to crawl under the seat.

Rosemarie: Well, at least they gave you some credit—you know, what annoys me is when these researchers take all the credit for something and the person who's doing the hard work doesn't get any—

FELICIA: I was so embarrassed.

Rosemarie: Well, you shouldn't have been. You certainly deserved to be acknowledged.

FELICIA: That's when they had their film. They had put this compass on a wooden chair, but, before that, I was partially disrobed and the female, Anita, was there with me.

Rosemarie: To search you, in other words?

FELICIA: Well, she was looking. That's okay. Yes and I rolled up my pants to the knee. I pushed them all the way up over my knee and on the top I had my bra, but I had an examining gown on, which buttons in the back. I wore that because I was wired from head to foot. I had a blood pressure monitor, a plethysmograph, and, of course, EEG and EKG monitors. There were bunches of wires hanging everywhere. Then I walked outside with her. Her husband was outside. He put the compass on a chair. Later, I found out that

there was unexposed film under the chair and all around the room.

Rosemarie: Oh, unexposed film to see if you would affect that. I see.

FELICIA: It was really hard for me. Chuck was there, and he always used to chew on his pipe. He was watching all of this and it took a long time because I had all these strange people around me. Except for Chuck.

Rosemarie: Sure, you were uncomfortable.

FELICIA: Yes, they put Chuck right in front of me. I don't know if that helped, but, finally, I got the compass needle to deflect about 15 degrees. And then back and then I tried once again, and again, it went maybe 15 degrees, I don't know how much they say it went, but it looked to me about 15 degrees. Then later on, I found out that film that was under the chair was completely exposed, and the other films—one set of films was a foot away—maybe two, another, three feet and with distance the films were less and less exposed.

Rosemarie: But, you didn't know the film was there?

FELICIA: No, I didn't know the film was there.

Rosemarie: So, you weren't trying to do anything to the film.

FELICIA: No, I didn't know they were there. That's when they told me my blood pressure went up and heart rate and pulse. Everything started to rise as the needle rose.

Rosemarie: As you deflected the needle?

FELICIA: Right. I forgot what else they told me. Anyway, Chuck, again, got pale—he said he had an “Out of Pipe Experience.” His pipe went flying.

Rosemarie: Why did that happen? Because of the deflection of the compass you mean?

FELICIA: Yes, It frightened him again.

Rosemarie: Or amazed him!

FELICIA: Both! He eventually got used to seeing it. I mean, that's after I had done all these other things like [deflect a compass] on his desk.

Rosemarie: He wrote that every once in a while, when you were trying to influence a compass, he would grab your hands and pull them away to make sure you hadn't put magnets underneath your fingernails or something like that.

FELICIA: Right. Monte [Ullman], too. He used to look in my mouth.

Rosemarie: To make sure you weren't hiding anything in there?

FELICIA: Right.

Rosemarie: Well, I guess they have to do all these things; I'm sure Monte was not as frightened of it because he'd had experiences as a young person with Gil Roller in the Bindelof group.

FELICIA: Well, he looked a little stunned. He had like a really expensive compass.

Rosemarie: So, you used his compass?

FELICIA: Oh yes, I never brought an object. What they placed in front of me was what I tried to move.

Rosemarie: Now, did they write up those experiments?

FELICIA: I don't know. I don't think so. I did so much—Stan's tests and his notes. I did a lot of work down there [at Maimonides]. Some I know is written up, like the experiment with "The Grateful Dead" (Krippner, Honorton, & Ullman 1973, also <http://stanleykrippner.weebly.com/a-pilot-study-in-dream-telepathy-with-the-grateful-dead.html>).

Rosemarie: Now, there are some people in the field who are getting back into investigating PK. If they want to get somebody who they feel may be a little talented or they want to teach them how to do it, could you give them any kind of advice? For instance, we talked about building up the energy, the agitation, whatever, getting excited.

FELICIA: Right.

Rosemarie: Now, the compass, was it the same kind of thing?

FELICIA: Yes, it was the same kind of thing. It wasn't any easier—

Rosemarie: So, if I were trying to deflect a compass, what would you tell me to try to do?

FELICIA: Keep your hands away from it. And believe you can do it.

Rosemarie: Keep your hands away from it? Kulagina used to put her hand over it.

FELICIA: No, no, no. Don't put your hands on anything. In the film that I have, I had a big bell jar, a glass bell jar turned upside down—

Rosemarie: And underneath the glass were these objects for you to move. So, that was the same for the compass, the same kind of force or whatever—

FELICIA: Yes, there were small objects and there were little twists of aluminum foil and toothpicks.

Rosemarie: Things that were nonmagnetic—

FELICIA: Yes, that's what I wanted.

Rosemarie: And yet, light enough that you could move them.

FELICIA: Oh, no. A lighter object was not different from moving an object perhaps that was a little heavier. Like the alcohol in the bottle was heavier than corks and screws and whatever they gave me.

Rosemarie: Right. I think that's more of a psychological thing.

FELICIA: I do too. The same thing—

Rosemarie: It's like the metal bending; you bend a spoon, but when it comes to something heavy, people don't even want to attempt it because they don't think they can do it. If they feel they can do it, then it's not a problem.

FELICIA: That's it. Now, as you just said, if someone wanted to try this, I can tell you not to bother if there's any doubt in your mind that this cannot

be done. Because you're defeated already. Because no matter how much you [try to] convince yourself, there is always doubt.

Rosemarie: You have to be completely confident in your ability to do it.

FELICIA: Yes, and just as with all areas of parapsychology the more you do, the better you get. Eventually, with such success I started to get a bit paranoid, thinking I might be responsible for every little thing that happened around me. But that passes in time. You wonder if everything around you that moves, or falls down, might be because you are near.

Rosemarie: I see, that you might be causing it.

FELICIA: Yes, I never said it out loud, however. But I would think about it.

Rosemarie: Uri Geller used to say he was almost afraid to fly in planes because he was afraid that somehow he would affect the mechanism in the plane and crash or something.

FELICIA: Exactly. Before I moved to Manhattan Beach, I lived in an apartment that was a small building, not big, and I used to drive back and forth to work, and I didn't want to leave my car in the street. So, right around the corner was a bigger building and they had an underground garage. I went around and the price was right so I got a parking spot there. I think it was a \$10 or a \$20 deposit and you could get a garage door opener so you didn't have to get out of the car, which was all very nice. Well, one time, I came home from work and I had the remote in my hand and I feel very sure that I did not press it to open. I was just about to put my thumb on it and the door opens; the garage door opens. And, I'm looking at this thing, you know, and I say, "Could I have done it just so automatically that I'm not aware?" And, I did it on purpose one time, nothing happened, but then I tried it a third time and the door opened.

Rosemarie: You tried opening the garage door without touching the remote?

FELICIA: Yes, holding the remote. At other times, little spontaneous things like that would happen. I was fully into the PK at this time; I was doing it for Monty, for Chuck, for whomever.

Rosemarie: You know, it's like people who do table tilting. Once they get into doing the phenomena, then things start to happen outside the sitter room.

Watch crystals may break, and if you read the “Bindelof” book, labels in sealed envelopes would get switched, things like that (Pilkington 2006). So, it’s very possible, because that energy or whatever it is, that force, is loosened. So if you want to open that door, you don’t have to do it manually. The force inside you either pushes the button or just opens the door—you don’t have to know how to do it, it just will do it.

FELICIA: But, the thing I’m saying is that it just happened. I only did it twice, once spontaneously, and once deliberately trying to influence the remote. But, there were no controls and no other person to verify it.

Rosemarie: Of course, that worries you.

FELICIA: Yes. That may be because whatever I did—whatever clairvoyance, whatever, was always in the laboratory, and I’m a researcher at heart. So, I never liked to do anything outside of a controlled area because that’s more frightening.

Rosemarie: Well, in the laboratory you have people around you who are encouraging you to do it. Once you come out, there’s nothing to protect you. And you don’t know how this works. You don’t know how your body will react or what you might do. And, was that the only time you had any kind of experiences outside of the lab? Because there’s one that I want very much to ask you about.

FELICIA: Well, a couple of times with Chuck that I wasn’t even aware of and they told me later. One time I was down [in Chuck’s office] on my lunch hour, and I said, “It’s my lunch hour and I want to get back.” So, he says, “Oh, before you go,”—now, mind you, he had the compass in the top drawer of his desk—he opens his drawer and he puts this compass on his desk, and he says, “give it a whirl.” So, I said, “Chuck, I really have to get back,” and I just made the motion [waves hands like a magician] and I went, “Abracadabra!” like that, and I walked back to the elevator. Later, he said to me, “Look, Felicia, you don’t have to agitate yourself and get yourself all worked up. Because you remember when you said “abracadabra” in my office?” and I said, “Yes.” He said, “As soon as you walked out, the needle was deflected.” Another time it was the stapler. You know, a stapler machine. Again, I was fooling around in his office with my abracadabra or something like that, and I’m waiting for the elevator and I hear a crash. Right? They tell me the stapler fell off the file cabinet.

Rosemarie: Fell off the file cabinet? Right after you left?

FELICIA: It was what Chuck told me had happened, after I left his office.

Rosemarie: Well, what I want to ask you about is the story with Chuck's car.

FELICIA: Oh, the window?

Rosemarie: The window, right. What is your recollection of that?

FELICIA: You know, I don't think, I know. Pat [Cooper] said that I broke his window.

Rosemarie: That's the story that he told me and he told Rick Berger. Rick thought it was the windshield, but I remember Chuck saying it was the driver's side window. The story Chuck told me was he was supposed to go to meet you—he was going to some meeting, and then he told you he would come over or something. He was supposed to phone you. I guess he got involved or didn't feel like it. So, he stayed late and didn't even call you. And then, when he went to get his car—it was in a valet parking garage—the valet drove up and was very upset and he swore nobody had been down there or anywhere near the car. But, his side window, he said, was completely smashed out. It was wintertime and Chuck had to drive all the way home to Princeton with no window; it was very cold!

FELICIA: Oh, I didn't think that I did that—

Rosemarie: And then, I'm pretty sure he said when he got home either he called you or you called him and that you said something to him to the effect of "How did you like your window?" In other words, that you had done it to get even with him.

FELICIA: I didn't think he was in Princeton at that time. I thought he was still in Brooklyn. I remember the incident. I just don't remember doing it.

Rosemarie: You don't remember if you were angry with him? You must have been.

FELICIA: No. There was another time with Chuck when he locked his keys in [the car] and I was trying very hard to raise the button so he could open the door.

Rosemarie: Did it work?

FELICIA: No, and it was raining like hell.

Rosemarie: I'm sorry you don't remember more about that story, because that was such a good story. He told it to me and he told other people. I guess we'll all have to get together and compare notes.

FELICIA: There was so much going on at that time. I don't remember half myself.

Rosemarie: But, you stopped doing PK and the story goes that you stopped because it was just too physically wearing.

FELICIA: Yes and I got tired: Your integrity is under fire all the time.

Rosemarie: Right. People are accusing you of fraud—the skeptics and the pseudoskeptics . . .

FELICIA: Yes, and not only that, I didn't like it either because I had a lot of respect for Chuck and I didn't want his integrity to suffer in any way. I tell people I started this only because I wanted to see if it could be done by me. For no other reason. So, now I've done it and I'd like to move on. Plus what also used to really piss me off was, I liked to do the telepathy and the clairvoyance and all the other stuff, and once I started to do PK, that was the end. Nobody wanted me for anything else except this—to move somebody's compass or open somebody's door, you know?

Rosemarie: Right, because talented PK people are much scarcer than ordinary (mental) psychics.

FELICIA: You know, you thought it couldn't be done. I showed you that it could. Everything has to come to an end. What was happening was, I was doing so much of the other stuff [telepathy] that I got saturated. I started to realize that many of the pictures that were used in the experiments were a lot of the impressionists' paintings—a lot of Van Gogh, a lot of . . . you know, and your mind starts getting supersaturated.

Rosemarie: Supersaturated, you mean with the artwork?

FELICIA: Yes. So, when you do experiments—Now you're guessing as to which painting it is instead of just letting it happen.

Rosemarie: Now, reseacrhers don't do that. Now they use photographs or film clips.

FELICIA: Yes, I know, they use other things, photographs and things. But then they used just paintings. I started missing a lot, and that's awfully frustrating because there isn't a damn thing you can do about it.

Rosemarie: I think you were probably getting bored with it at this point. How many times can you do the same thing over and over again?

FELICIA: Yes. I guess.

Rosemarie: But, what about the physiological side of your work? What did you feel and what kind of debilitation was there? Did your eyes bother you?

FELICIA: No, I was just generally tired.

Rosemarie: So, it was really not so much the physical discomfort, but the emotional discomfort from the critics and the people who were trying to prove that you weren't genuine.

FELICIA: Yeah.

Rosemarie: Which is very difficult to take.

FELICIA: Especially, you know, if I don't know these people and they don't know me.

Rosemarie: Right, strangers don't know you, of course. That's got to be extremely unpleasant.

FELICIA: I would never take any financial gain from what I was doing. Even to this day, because I think . . . like Malcolm used do readings. We're all different. I could never do what he did. He used to charge and he used to make a lot. I feel if you do this for money, if you do anything for money, you feel you have to produce.

Rosemarie: And that's the trap that some people may fall into, that they have to perform, and if they're not "on" that day, then they have to supplement it with trickery.

FELICIA: And, I never, you know. I never [cheated]. But I got a thousand dollars once (laughs.)

Rosemarie: You got a thousand dollars for what?

FELICIA: From *The National Enquirer*.

Rosemarie: Oh, right, right. They printed a story about you. But, did they do a good job of reporting?

FELICIA: Yeah. They wrote about the PK.

Rosemarie: And they didn't "elaborate" on it?

FELICIA: Elaborate! I was on the front page. I was so embarrassed.

Rosemarie: No, what I'm asking is did they faithfully report? Did they did write it up well?

FELICIA: Yeah. But, who believes anything in *The National Enquirer*?

Rosemarie: They used to take something that was already sensational, and then they would add to it—and put something phony in it.

FELICIA: Actually, they got my name from the presentation that was done at the PA. You'd be surprised how many people called me about this. And then, also, I helped with publicity for Stan's book—

Rosemarie: Stan's book, Dream Telepathy?

FELICIA: Yeah. I did a couple of shows with Stan. For instance, *To Tell The Truth*. That was fun.

Rosemarie: The TV program.

FELICIA: Yeah, I appeared with two imposters. But they got me right away. You remember that old-time actress, Kitty Carlisle?

Rosemarie: Yes, of course.

FELICIA: Oh, she busted me right away. And you know why? The girls had a difficult time saying electroencephalogram.

Rosemarie: So, it wasn't you that blew it, they did.

FELICIA: Yeah. She said, "Oh, it's got to be her. That rolls right off her tongue."

Rosemarie: She was a very clever lady.

FELICIA: And then we did this program called *Straight Talk* with Stanley Friedman.

Rosemarie: I don't remember him. I remember there was a program called Straight Talk.

FELICIA: Yeah, these are all old TV programs. I used to catch them sometimes late at night—on some bizarre channel. This was all to plug Stan's book about the dream telepathy.

Rosemarie: I wanted to ask you about that film that was made of you moving the plastic bottle. The man who actually took the film—was he a magician?

FELICIA: I don't know.

Rosemarie: Chuck (Honorton 1993/2015) wrote that he was a magician.

FELICIA: I don't know if he was a magician. I didn't know him. He was introduced to me. One of the girls I work with, I think, originally told me that he was a photographer.

Rosemarie: And Chuck got hold of him and had him do the film?

FELICIA: No, after Chuck saw the film, he wanted to meet with him. I think he came down to the lab and he and Chuck had a long conversation. That's when Chuck told me afterward that what he wanted this man to do was to write up exactly what he witnessed, tell what camera and film and whatever were used, and give a statement verifying what he saw. So, after he did the filming, he and Chuck corresponded and—

Rosemarie: But, how did he come to make the film? Did Chuck ask him to make the film?

FELICIA: No, I asked him. I met him at a social party. This girl at work, I don't know who. She introduced me, I think his name, now that I'm talking, I think his name was Norman. [His name was Norman Morse. See Honorton 1993, 2015 this issue.] But no, I didn't know him and I didn't know he was a magician either. I didn't know anything about him.

Rosemarie: But, why did you ask him to make the film?

FELICIA: Because he had the equipment.

Rosemarie: I see. And, you wanted it recorded?

FELICIA: Yeah.

Rosemarie: Makes sense. I had the impression that Chuck had somebody come in to record—

FELICIA: No. Chuck didn't know him either. But, you know, my friend Mary said he did weddings and stuff like that.

Rosemarie: So, he was just the photographer?

FELICIA: Now that you mention this, I had to tell him what it was that he was going to be filming. I remember a very strange look on his face and he was anxious to do it. He said there was no charge or anything.

Rosemarie: When he filmed it, there were just the two of you, Chuck wasn't there?

FELICIA: No, Chuck wasn't there.

Rosemarie: I see. And there was something about the dog?

FELICIA: Yeah, my dog, Alpha, my little poodle. I was doing Alpha feedback at the time and, so when I got the dog I named him Alpha.

Rosemarie: When you would be trying to move something, he would dig at the floor?

FELICIA: Yeah, right.

Rosemarie: And did he seem agitated?

FELICIA: Yeah.

Rosemarie: Any idea what that was about?

FELICIA: No.

Rosemarie: Picking up your agitation perhaps?

FELICIA: He could be. I really couldn't say. You know, after Chuck brought that to my attention, because I wasn't really aware of what was going on around me—I was so focused on what I was doing. But, once Chuck made me aware that the dog was doing that, yeah, I noticed that he did that whenever I used to have success. If I couldn't get the bottle to move, he was okay with it. I mean, he couldn't see from the floor—he was a little poodle.

Rosemarie: But, there was something, something he was sensing at that time, or feeling—

FELICIA: It seemed that way, it did seem that way.

Rosemarie: I think that's significant that somehow the dog was affected by when you were actually moving the object.

FELICIA: Yeah. As I said, I wasn't aware until Chuck told me. Then, I was aware of it. But, I don't know. Could be I wasn't paying attention to him, could that be?

Rosemarie: No, because he wasn't doing it when you weren't successful. When you were concentrating but nothing was happening, he was okay.

FELICIA: Yes, that's true.

Rosemarie: It was as soon as this force or whatever was loosed.

FELICIA: Yeah. Whatever I was doing was agitating him. And, he would, you know—

Rosemarie: *Scratch on the floor?*

FELICIA: Yeah, like trying to dig. I'd stop, he'd stop.

Rosemarie: *When you'd stop, he'd stop.*

FELICIA: Exactly.

I would like to close this interview with my heartfelt gratitude and thanks to all the people who gave me the opportunity to explore talents I never knew I had. If my friend Diane had not spoken to Dr. Rao, I would not have had the experiences of hearing tulips humming on a beautiful day nor hear my plants crackle as they grew. I certainly would never have believed anyone could move objects at will, let alone me. Believe me, I am a changed person today having had these experiences. I see things differently and wonder: How many other people have lived their life and died never knowing or experiencing the things I have. So once again thank you all for your patience, kindness, and, most of all, believing in me and showing me the way.

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HISTORICAL PERSPECTIVE

Note on an Early Physiological Index of ESP: John E. Purdon's Observations of Synchronous Pulse Rates

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Abstract—The purpose of this Note is to rescue from oblivion the nineteenth-century researches of physician John E. Purdon with measures of pulse rate synchrony between two persons. This was done using a sphygmograph, an instrument that measured pulse and provided graphic tracings on paper. According to Purdon, he found some persons reproduced the tracings of others in conditions that he considered to imply a telepathic transfer. Purdon speculated that one person produced emissions of nervous force that were propagated to others via the ether. While this research may be criticized from the point of view of modern research standards, it is presented here as an interesting and generally unknown early instrumental study of the concept of the detection of ESP via a physiological response.

Keywords: John E. Purdon—sphygmograph—physiological ESP response—pulse and ESP

The use of instrumental monitoring of different physiological processes as an index of ESP functioning is well-known in experimental parapsychology.¹ Some of the earlier work on the topic—such as that conducted by Hettinger (1952: Chapter 9) and by a research committee of the American Society for Psychical Research (Anonymous 1959)—is not well-known. But even less known is the Nineteenth-Century work discussed here.²

In this Note, I describe research and observations of instrumental pulse measurements conducted by John E. Purdon in the early 1880s that he believed showed evidence of a psychic connection between two persons. Myers referred to this work as an attempt, which he did not find convincing, “to show by sphygmographic tracing the influence of an agent’s thought in bringing a percipient’s pulse to the same rhythm” (Myers 1893:32), while American philosopher William Romaine Newbold described the work as cases “in which the pulse-wave of one patient seemed to be telepathically transferred to another, the patients giving identical tracings” (Newbold

1902:103). I am presenting a short discussion of Purdon's work for its historical value, and not to defend the investigations as evidence for ESP functioning. That is, I write to inform current students about a nearly forgotten example of the use of physiological measures as ESP responses.³

John E. Purdon and the Sphygmograph

Purdon

According to Stone (1898:414), John Edward Blakeney Purdon was a physician who was born in Dublin in 1839. He was educated and trained in medicine at Trinity College, Dublin. There he obtained a degree in arts in 1862, having been granted the year before a senior moderatorship (honors degree) and a gold medal in Experimental and Natural Sciences. In 1863 he obtained two degrees, Bachelor in Medicine and a Masters in Surgery. Finally, he qualified for the M.D. in 1885.

Purdon lived in India serving as a surgeon in the British Army starting in 1865. During the next years he studied, and presumably treated, diseases such as cholera and dysentery. His work in India gained him "the special recognition of the British government . . . and [he] was recommended for his zeal and ability" (Stone 1898:414).

In 1881, when he made his first observations of synchronous pulse rates, he was in charge of a military hospital in Guernsey, the Channel Islands. After retiring from the Army in 1883, Purdon lived in the United States. He was described by Alfred Russel Wallace as "an army surgeon, who has been much in India, and seems a very intelligent man" (Marchant 1916:195). According to his grave record, he died in 1925 and was buried in California.⁴

By his own admission, Purdon (1892:385) started psychic studies in 1871. This included sittings with medium Florence Cook (Purdon 1902; see also Marchant 1916:195). Purdon's name appears in early member lists published by the Society for Psychical Research (Anonymous 1883:324). In addition to his work with synchronous pulse, Purdon published several papers related to spiritualism and psychic phenomena. These included topics such as materialization phenomena (Purdon 1881c, 1884, 1902), mesmerism (Purdon 1881b), physiological observations and ideas about mediumship (Purdon 1881a, 1885, 1892), and various theoretical ideas (Purdon 1883, 1893a, 1893b).

The Sphygmograph

Purdon's work on pulse synchrony was done using a sphygmograph. This was a device that became fashionable during the Nineteenth Century to measure

the pulse and to provide a graphic representation on paper of such activity. Interest in such measures was part of the concern many had during the period to develop accurate instruments to measure physiological processes (Reiser 1978). Aspects of the history of the sphygmograph, and its variations, have been discussed by Frank (1988), Moss (2006), and Reiser (1978), and there are many publications about it by physicians (e.g., Bramwell 1883, Dudgeon 1882). Initially a bulky instrument, it was considerably reduced in size into a portable machine by Marey (1860), and eventually others developed several even smaller variations (Lawrence 1978, 1979). For a history of this instrument, go to http://vlp.mpiwg-berlin.mpg.de/technology/search?-max=10&-title=1&-op_varioid=numerical&varioid=11

Many had great hopes for the instrument. For example, in his textbook *The Science and Practice of Medicine*, William Aitken (1872) wrote:

In the conventional routine of 'feeling the pulse,' the unaided sense of touch is quite unable to distinguish many of the finer features which the sphygmograph enables us now to appreciate. . . . In place of its being able to take the place of 'feeling the pulse,' it will not only extend our practical knowledge . . . , but it will define and greatly extend our knowledge of the more delicate characteristics of the pulse which the sense of touch fails to discover. (Aitken 1872:313)

Others used the instrument in areas such as the study of the effects of drugs (Owens 1885).

But, as with other physiological measurement instruments, there were also measurement and technical problems as well. Frank (1988:239) has shown an incline in medical articles mentioning the sphygmograph from 1855 to 1879, and a decline between 1880 and 1889. As he observed, "sphygmography in the last decades of the Nineteenth Century did not fulfill the great expectations so enthusiastically announced in the 1860s . . ." (Frank 1988:224).

While Purdon started writing about his use of the sphygmograph in 1881, when the decline in its use had started, the instrument was still used by many. Interestingly, Purdon rarely mentioned which sphygmograph he used, a point made by a commentator (Gillespie 1898). In a later paper Purdon (1901:723) stated he had used Dudgeon's sphygmograph.⁵ The instrument is pictured in Figure 1, but it is unclear if Purdon used the same model all the time.

Purdon's Observations of Synchronous Pulse Phenomena

Purdon published his observations in several places (e.g., Purdon 1882a, 1882b, 1896, 1898), and presented his work at conventions (Anonymous

1889, Purdon 1901; see Figure 2 and Figure 3). His work attracted some attention and comments in various magazines and journals. Examples include *Current Opinion* (Anonymous 1893a), *Edinburgh Medical Journal* (Gillespie 1898), *Medical Age* (Anonymous 1893b), and the *Journal of the American Medical Association* (Anonymous 1889).⁶

Purdon said that while he was working in a hospital in Guernsey two soldier patients, Private W. (an epileptic) and Private L. (who suffered from bleeding from a nostril), both who he believed showed an arthritic diathesis,⁷ reported unusual knocking sounds around them and “the presence, visible and tangible, of a hand, and the figure of a man . . .” (Purdon 1882a:25).⁸ He later found out that the apparitions coincided with a “fit” experienced by the wife of a hospital orderly located on the opposite side of the wall of the soldiers’ room. She was said to suffer from hystero-epilepsy and had occasional “spasms.” The woman, and the soldier, were considered by Purdon to have abnormal nervous systems. Here Purdon shows that he was drawing on the ideas of Charcot (1872–1873) and others (e.g., Richer 1881), which were very influential for a while. Furthermore, and as seen later, Purdon was one of those who combined the idea of abnormal nervous functioning and *real* psychic phenomena, both mental and physical. By *real* I mean here that the phenomena observed were believed by Purdon to be veridical, and not accounted for by conventional processes.

Purdon wrote as follows:

During the ten days that my observations continued, I took many scores of traces with the sphygmograph finding the likenesses between the curve of Private W . . . and the young woman next door to be often remarkable. On one occasion I found that Private W . . . Private L . . . and myself were showing the same pattern almost exactly. That night our neighbour was eliminated as a disturbing cause, for she was laid up with a very bad sick headache . . . (Purdon 1882a:26–27).

In another paper Purdon discussed a “discovery” he made in June of 1881. He wrote:

I was taking the tracing of a young lady who was lying down with a menstrual headache, her hand being held by an older lady, her first cousin, when I suddenly saw the pulse curve change to that of the other, which I had more than once taken that morning. There could be no mistake about the resemblance, for the tracing of the other person was very characteristic and so familiar to me that such would have been a moral impossibility under the circumstances.

I repeated the observation, taking the tracings of each woman repeatedly, and found more or less resemblance between the tracings of the elder and one side of the younger. . . . This relation had to do in my mind with the state of susceptibility to change, disturbance, or irritation of the nervous system of the younger, as depending upon the presence of the catamenia. I did not consider that the factor of blood relationship played any prominent part in the forced resemblance, for in general the tracings were quite dissimilar; nor could any tendon jerk or muscular pressure from the holding of hands account for it, for they were quite quiescent before I started the clock-work of the instrument.

I determined to make an exhaustive study of both pulses, and, during the ensuing month, I made observations every day, or nearly so, and frequently several times a day, night and morning. After the passing away of the menstrual period I was not able to trace any likeness between the pulse tracings of these ladies; and as the time for the return of the same came round I prepared for a careful set of observations. I had everything made ready in the elder lady's room, and succeeded in getting some very sharp tracings, but, strange to say, I did not get the resemblance I had been so earnestly expecting, but a most exact and most perfect reduplication of my own pulse tracing, which was in general quite different from those of either of the two.

Nothing was left to me but to go on observing, and I found that as the days of the periodic disturbance wore away, the tendency to repeat my tracing disappeared also. I continued my observations on these ladies daily for two months more, with complete confirmation of results before obtained; the likenesses being always at the time of the menstrual nusus, and gradually fading away with it.

The younger lady always showed a marked difference in the two wrists at that time, the left being the one which took on the forced likeness, while the right pulse always gave evidence of what I considered to be a hemorrhagic pulse, judging from those I had seen in persons subject to nose bleeding. Be that as it may, the right tracings at the menstrual period were always alike, and always different from the left. I may remark, however, that the tension was much the same, the difference depending on the rhythm of the vaso-motor impulse.

Other observations were done with hospital patients, young and middle-age British soldiers. I was cautious not to be misled by superficial or accidental likenesses, for I made it a rule to regard nothing as a typical likeness where the complete pulsation cycle of the second individual did not fall within the forms of the extremes of the first; that is to say the second man was pronounced *like* the first, when some of his cycles were more like those of the first than the extremes of the first were like one another—and that within a very limited period of time; for the closer the coincidence in time, the more likely was the resemblance to be forced. . . . (Purdon 1898:333)

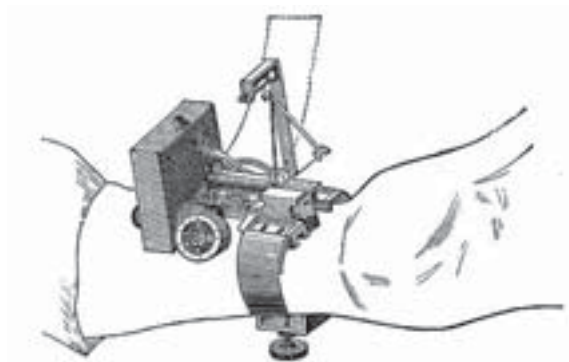


Figure 1. Dudgeon's Sphygmograph (from Dudgeon 1882).

Three men were said to show good results. One suffered from urethritis and the other two from rheumatism. According to Purdon:

Likenesses were observed between the first two named men and also between the second and third; but the most pronounced and truly remarkable resemblances were found to exist when the first-named man influenced the third. (Purdon 1898:335)

Finally, I will present the following observations made by Purdon:

A gunner of the Royal Artillery, very much broken down in health from Gibraltar fever, was in hospital during the latter part of the year, when I had become pretty expert in the practical application of my method of research. This man on occasions showed very remarkable, I do not exaggerate when I say wonderful, resemblances to my right and left radial traces, always, be it observed, taken at the same time. Peculiar tracings of mine that I could have sworn to in a Court of Justice . . . were so closely imitated that, if they were mixed up together, I could not say for certain, which were his and which were mine, and that when his ordinary and undisturbed traces were absolutely different in every respect from mine. I may add that the patient was always better, in fact at his best, when these similarities were most pronounced.

Another man who suffered from what I regarded as a spurious form of angina pectoris . . . at times and when I had been brought into close contact with him for some time, as when I had been sitting on his bed for an hour, showed likenesses to my curves which no impartial witness could ascribe to accident. With varying tensions and with frequent adjustments of the instrument, so as to eliminate chance resemblances as much as possible, all the above men were subjected to observation not once or half

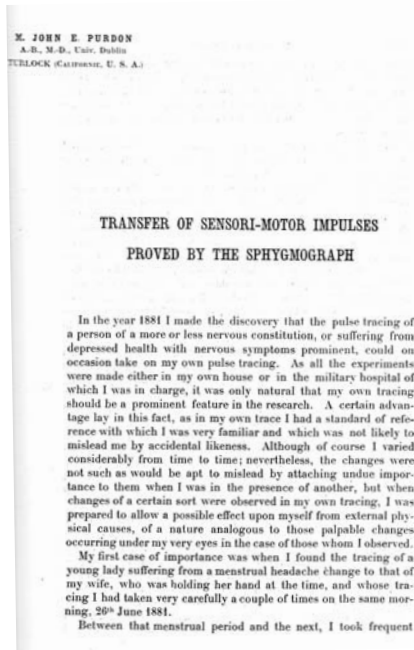


Figure 2. Paper presented by Purdon (1901) at the Fourth International Congress of Psychology in Paris.

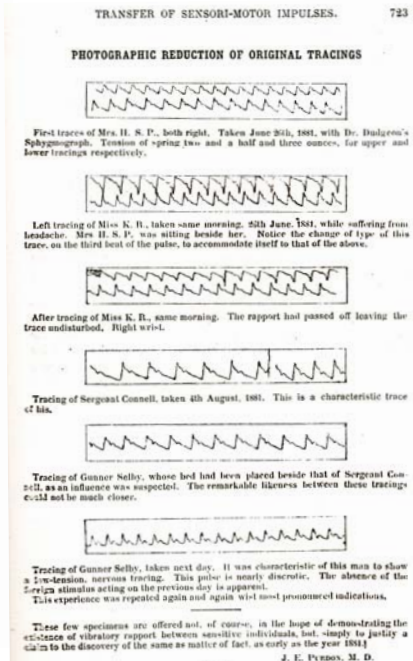


Figure 3. Sphygmographic tracings in a paper presented by Purdon (1901).

a dozen, but many scores of times, out of which many true and reliable likenesses showed themselves in each instance of comparison between the selected couples. I felt, therefore, justified in regarding the discovery as proved. (Purdon 1898:336)

Explaining the Pulse Tracings

Purdon's proposal of a physical transmission to explain his pulse tracings took place in the context of many Nineteenth-Century speculations about brain waves and other physical emanations to account for thought-transference (e.g., Knowles 1869; see also Alvarado 2008) and physical mediumship (e.g., Cox 1872; see also Alvarado 2006).⁹ Furthermore, his use of the concept of ether was consistent with ideas in physics at the end of the Nineteenth Century (Cantor & Hodge 1981, Schaffner 1972), and with its application to the concept of telepathy by some writers, an example being the well-known William Crookes (1899; see also Houston 1892).

For some the ether transcended physics, having metaphysical implica-

tions, as seen in Stewart and Tait's *The Unseen Universe* (Tait 1875; see also Noakes 2005). It was a concept that attracted speculation from spiritualists. For example, in a lecture it was said that "spiritual beings . . . [may] work upon that intermediate ether, and through it . . . influence material objects" (Anonymous 1884:791). The concept was further extended by others when they imagined the existence of a more spiritual ether (e.g., Blavatsky 1877), what Hudson Tuttle called a psychic ether, "the medium through which all spiritual phenomena are produced" (Tuttle 1889:20).

Inspired by the idea of ether of James Clerk Maxwell (1878) and others, Purdon argued that the ether could be seen as the way mental events were propagated. He wrote that the

medium of communication can be nothing else than the ether in special relation with the two nervous systems, which thus function identically through the presence and agency of sympathetic vibrations. (Purdon 1896:110)

Purdon further affirmed that "when one vaso-motor or cerebral center *acts* upon another, it surely does so physically . . ." (Purdon 1898:339).¹⁰

Purdon was led to speculate about an extrasomatic interaction of nerve centers to account for the above-mentioned phenomena, something that was similar in some ways to the ideas of previous theorists regarding nervous and psychic forces, not to mention the mesmeric literature (Alvarado 2006, 2008). He advanced the hypothesis of

a physical disturbance of a rotational character . . . propagated through space from the body of the individual in a state of strain, and that there may thereby be a reasonable analogy to the acknowledged principles of magneto-electric action at a distance, but vastly more complex . . . (Purdon 1882a:28–29)

Regarding the transfer of pulses Purdon wrote:

The medium of communication can be nothing else than the ether in special relation with the two nervous systems, which thus function identically through the presence and agency of sympathetic vibrations. (Purdon 1898:110)

Years later Purdon referred to the psychic rapport he had with his wife. The similarity in their pulses led him to think that they both had a

similar distribution of the blood [that took place] either through the determination of the unconscious self, or through a nervous attraction prelimi-

nary to vital interaction, physical and psychical . . . It would appear as if the common pulse tracing . . . is our lower projection view of a transcendental state of affairs . . . falling outside the limits of our conscious forms of intuition. (Purdon 1902:224)

Here Purdon may have been influenced by the ideas of Frederic W. H. Myers who argued in many of his publications about the importance of the subliminal mind in the manifestation of telepathy (e.g., Myers, 1884, 1885).¹¹

Concluding Remarks

Perhaps it is unfair to comment on Purdon's methodology from the modern point of view. Nonetheless I will make some points that are obvious today but were not so in Purdon's times. By modern standards Purdon's tests are very crude, lacking several methodological precautions considered important today (such as those commented on by Acunzo, Evrard, & Rabeyron [2014]). The evaluation of the results depended on visual inspection of the tracings, something that does not seem to have been done blindly. Furthermore, the reports lack information about checks on the proper functioning of the sphygmograph, potential artifacts related to how the instrument was attached to the arm, the position of the arm and its movements, and environmental stimuli that could have affected the tracings of both subjects. One aspect that was already obvious to some researchers at the time Purdon was working was the need for proper separation between the experimental participants, a problem in some of the tests.

In these current days of "entanglement" and "nonlocality" in which physical transmission models are rejected by many, Purdon's views in which the projection of nervous forces accounted for the mental and physical phenomena of spiritualism and psychical research will appear odd and antiquated to some readers. But both before and during his time there were many such ideas around (Alvarado 2006, 2008),¹² as there are still today in some quarters.

Current ideas of psi as a normal function are different from Purdon's belief that nervous pathology was related to some genuine psychic manifestations. In earlier writings, such as those of physician B. W. Richmond, abnormal nervous constitutions were associated with "real" psychic phenomena (Brittan & Richmond 1853; see also Fairfield 1875, Lombroso 1909, Morselli 1908).

Regardless of how we see Purdon's methodology and theoretical ideas, his work deserves to be remembered if only to credit him for an early empirical attempt to detect ESP functioning via physiological measurements.

Acknowledgements

I am grateful to the Society for Psychical Research for a grant that funded the writing of this paper, and to Leslie Price, who provided me with a copy of an article by Purdon.

Notes

- ¹ Some examples of pioneering work in this area are the studies of Figar (1959), Dean (1962), Tart (1963), and Duane and Berendt (1965). Modern examples include the work of Grinberg-Zylberbaum, Delaflor, Attie, and Goswami (1994), Radin (2004), Standish, Kozak, Johnson, and Richards (2004), and Tressoldi, Martinelli, Semenzato, and Cappato (2011). Reviews of this line of research have been published by Beloff (1974), Modestino (2013), Mossbridge, Tressoldi, and Utts (2012), and Palmer (1978).
- ² Also of historical interest are various observations that have supported the idea that ESP may manifest via bodily sensations and processes. Charles Lafontaine (1847:87) referred to mesmerized individuals who could feel prickings and other stimuli presented to other people, as well as the pains of the diseased who consulted them. Other examples include early through-transference experiments to induce pain sensations (Guthrie 1885), the few cases reported in *Phantasms of the Living* about veridical impressions seemingly related to pain and feelings of illness (Gurney, Myers, & Podmore 1886), psychics' feeling physical discomfort and pain related to people they were "reading" at a distance (Richet 1888), and physiological effects that supposedly indicated the effect of drugs and medicines at a distance (Bourru & Burot 1887). While none of this is proof that actual physiological processes were active expressing ESP-acquired information, they contributed to the idea of the possibility of expressing such information in physiological ways. On the theoretical side, Myers speculated on the possibility "that the telepathic impact may affect some sensitive internal organs . . ." (Myers 1893:32), including vasomotor processes, and stated that motor messages coming from the subliminal mind started "from modifications of the percipient's general organic condition or coenesthesia . . ." (Myers 1893:40).
- ³ Nicol (1973) made reference to Purdon's work.
- ⁴ This date was obtained from *Find a Grave* <http://www.findagrave.com/>. I believe this refers to our John E. Purdon because of information consistent with Stone (1898:414). This includes his birthdate, birthplace, medical degree, and that he graduated from the University of Dublin.

⁵ Years later someone wrote that Purdon had sent him sphygmographic tracings done with Dudgeon's instrument (Anonymous 1917:18). The device, which was smaller and more portable than previous instruments, was described by Dudgeon (1882; see also Lawrence 1979; see Figure 1). According to Dudgeon he introduced the device in 1880 and it was a small model two and a half by two inches in size and its weight was four ounces. He wrote:

When packed in its leather case it can be easily carried in the pocket. It is adjusted to the wrist, the stud on the free end of the spring being carefully placed upon the radial artery immediately above the styloid process of the radius. The instrument is kept in position by an inelastic strap, which may be secured by a tourniquet or simply held by the fore-finger and thumb of the right hand. . . . The pressure of the spring is regulated by the excentric wheel, to any amount from one up to five ounces. When the needle is seen to play freely over the centre of the tracing-paper, the machinery of the clockwork which drives the paper through the machine is set in motion by pushing toward the right the small metal handle on the top of the clockwork box. . . . The instrument is used with equal facility on either arm, and the patient may either stand, sit, or lie. The levers are so adjusted that the movements of the artery are magnified exactly fifty times. The pressure of the spring may be altered without disturbing the instrument. The smoked portion of the paper passes through the instrument in ten seconds; hence six times the number of beats traced on the paper give the number of beats per minute . . . (Dudgeon 1882:29–31).

⁶ See also mentions of the work in forums open to psychic phenomena such as *The Theosophist* (Anonymous 1882a), *Psychische Studien* (Anonymous 1882b), and *Borderland* (Anonymous 1896).

⁷ In addition to many earlier discussions of the concept that we cannot cover here, the topic was discussed in British medical journals around the time Purdon started writing. A physician stated that “there is a basic arthritic habit of body, or diathesis, and that from this issue at least two branches, the gouty and the rheumatic stocks” (Duckworth 1883:194). Another physician referred to arthritic diathesis as a constitutional predisposition to arthritic symptoms that could include such varied things as dyspepsia, renal disease, pneumonia, and skin problems (Hutchinson 1881). Lemoine (1891) reviewed the topic and stated that arthritism generates the nervous diathesis but that “the arthritic is not a neuropath yet, but it is on the brink of becoming one and his children frequently are” (Lemoine 1891:124, my translation).

⁸ As interesting as the apparitional and physical phenomena were, my focus here is on Purdon's writings about his use of the sphygmograph. But it should be pointed out that Purdon (1882a:27) believed the raps

were related to muscular rheumatism and to chorea.

- ⁹ Purdon stated: “My sphygmograph studies were first undertaken in the hope of finding some physiological explanation of the Beattie photographs of thirty years ago” (Purdon 1902:225). This was a reference to photographer John Beattie, who reported obtaining a variety of amorphous luminous forms on photographic plates in the early 1870s (one of Beattie’s early reports was transcribed by Houghton 1882:43–48). It is not clear how the sphygmograph would have helped in elucidation of these phenomena, but perhaps Purdon saw the instrument as the means to detect unknown forces presumably seen in Beattie’s photographs (on this see the ideas of force held by Beattie 1873). Perhaps he made a connection between pulses and invisible forces when he stated that his first exploration was finding a disturbance in the pulse of a sister of medium Florence Cook “on the approach of an apparition visible to herself alone” (Purdon 1902:225).
- ¹⁰ Referring to physical effects at a distance Purdon wrote later that such effects “can be accounted for in psychics as well as in physics by the assumption of a plenum whose elemental constituents obey laws identical with those which enable the ether to transmit energy” (Purdon 1902:225).
- ¹¹ Myers (1892:328) wrote:
- We have . . . dwelt on the knowledge which reaches us otherwise than through the recognised organs of sense. And it is, I hold, in the subliminal region that such phenomena are initiated, and that such knowledge is primarily gained.
- ¹² Many of the British researchers associated with the Society for Psychical Research, however, did not follow physicalistic approaches (e.g., Gurney, Myers, & Podmore 1886).

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ESSAY REVIEW

The Troubles with Psychiatry

Saving Normal: An Insider's Revolt Against Out-of-Control Psychiatric Diagnosis, DSM-5, Big Pharma, and the Medicalization of Ordinary Life by Allen Frances. New York: William Morrow (HarperCollins), 2013. 314 pp. \$27.99 (hardcover). ISBN 978-0-062229-26-7.

The Book of Woe: The DSM and the Unmaking of Psychiatry by Gary Greenberg. New York: Blue Rider Press (Penguin), 2013. 403 pp. \$28.95 (hardcover). ISBN 978-0-399158-53-7.

The mind–body problem has puzzled thinking humans as far back as we have knowledge of human thought, yet we still cannot claim to understand cause and effect in the interactions of the brain's material electrochemistry and the mind's intangible mental processes.

Psychiatry and clinical psychology seek to deal with undesired mental processes even as cause and effect in mind–body interactions remain mysterious. Even the definition of mental illness is arbitrary, determined by what is taken as normal or acceptable in a particular social context. With physical illnesses, patients and society agree that illness is present, but society will often label someone as mentally ill who does not agree that he is ill; and individual psychiatrists all too often reach different diagnoses of any given prospective patient.

In the early part of the 20th Century in the Western world, Freudian concepts were mainstream: Mental processes were seen as autonomous.¹ Although Freud himself was a medical doctor, his acolytes—psychoanalysts—needed training only in psychoanalysis, not in medicine. In the second half of the 20th Century, psychiatry sought to capture for itself the treatment of mental disorders as a medical specialty. To exclude psychoanalysts and clinical psychologists, the biological basis of mental illness was emphasized, since only medically qualified individuals could prescribe drugs. A required corollary was the definition of distinct mental illnesses, a need filled by successive editions of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM).

In practice, however, psychiatry long continued to rely heavily on talk therapy, augmented as seemed appropriate by drugs as well as to a decreasing extent by other physical–biological approaches: insulin-shock or electric-shock therapy or lobotomy. As more substances (“psychotropics”) were found to affect mental processes, drug treatment increasingly began to predominate, and different classes of drugs came to be regarded as appropriate treatment for some of the distinct conditions described in the *DSM*: thus anti-anxiety pills, anti-depressants, anti-psychotics, atypical anti-psychotics, mood stabilizers, selective serotonin re-uptake inhibitors (SSRIs)

Incredible as it may seem, these descriptive names are unwarranted and misleading: the drugs do not have the specific effects implied by those names. They are no more specific than shock therapy or lobotomy. They disturb or disrupt mental functioning, with a great variety of possible consequences—thus some individuals sometimes react to “anti-depressants” (or other mind-altering drugs) by committing suicide; “anti-anxiety” pills in some countries are “anti-depressants” elsewhere.

For chapter and verse supporting these seemingly extreme assertions, see a representative (but far from exhaustive) bibliography that is updated periodically (Bauer 2014). For a summary of the main points, see my Essay Review of one of those books (Bauer 2011).

The *DSM* labels for distinct mental disorders are no more justified than are the names for the purported classes of drugs. Defining a mental disorder requires specifying symptoms that distinguish “normal” from “not normal,” but all the symptoms are matters of degree. *DSMs* are replete with loose criteria that comprise satisfying several of some number of symptoms, for more than some specified period of time, and to degrees that are judged excessive. Decisions are then inescapably subjective and arbitrary.

A system has evolved in which *DSM* labels and drugs for mental illness stand to the benefit of powerful vested interests: not only the pharmaceutical industry but also healthcare and health-insurance corporations, psychiatrists and clinical psychologists and their professional organizations, the National Institute for Mental Health, the World Health Organization, charities and patient-advocate and activist groups. . . . In the absence of established science connecting symptoms of mental illness to proven causes or proven treatments, what happens under this system reflects power relations. The devastating consequences are exposed passionately in these books by Greenberg, a clinical psychologist, and Frances, a psychiatrist. They know one another. Greenberg is barely mentioned in Frances’ book, but Frances features prominently in Greenberg’s—unavoidably, because Frances led the writing of *DSM-IV* and remains a fierce public critic of *DSM-5*; in

Greenberg's account, he and Frances have a passionate friend–antagonist relationship about foundational matters as well as about *DSMs*.

The main theme of Frances's *Saving Normal* is that taking *DSM* criteria and definitions literally has led to an epidemic of *mis*-labeling and over-prescribing. Human beliefs and behavior are hugely diverse, and labels of mental illness should be reserved for conditions where the individual is incapable of functioning without outside help, or feels so disturbed as to seek help; or, with reservations because of obvious political pitfalls, when society regards an individual's behavior or beliefs as "crazy" or "insane."

But Frances takes on an impossible task: attempting to defend the labeling inherent in *DSMs* while acknowledging that there is no factual basis for it. At times he seems self-serving in defending his *DSM-IV*, but overall he makes pointed and largely documented criticisms of the excesses that follow from taking *DSM* labels literally; and he is devastating about the role played by the pharmaceutical industry, enabled by being allowed—since the 1990s in the USA—to advertise directly to consumers, which is not permitted in any other developed country besides New Zealand.

In essence, Frances wants everyone to understand that psychiatry, like medicine in general, should deal with every individual as unique, having recourse to diagnostic labels of convenience and to drugs only after each client's whole circumstances have been understood as fully as possible. He criticizes the formulaic labeling and prescribing that has become standard under bureaucratic, commercial, and legal pressures: General practitioners (GPs)—without understanding what they are doing—write prescriptions for 50% of all anti-psychotics, 65% of stimulants, 80% of anti-depressants, and 90% of anti-anxiety pills (p. 101). Chapter 9 recounts hair-raising cases of damage to particular individuals.

One must surely agree with Frances that all psychiatrists should practice as Frances recommends—and, one suspects, as he himself practiced. But how to achieve that is far from clear, and *Saving Normal* is no help in that respect. Its main attempt, in Chapters 7 and 8, is no more than wishful, for instance in suggesting that commercial enterprises behave other than commercial enterprises naturally do; as well as impractical in outlining how individuals should actively participate in their own diagnosis and treatment. Much of *Saving Normal* is properly sourced and documented, but at times it reads like a "just-so" story, and there are regrettably many citations from *Wikipedia*, a totally unreliable source on anything that isn't 100% cut-and-dried.

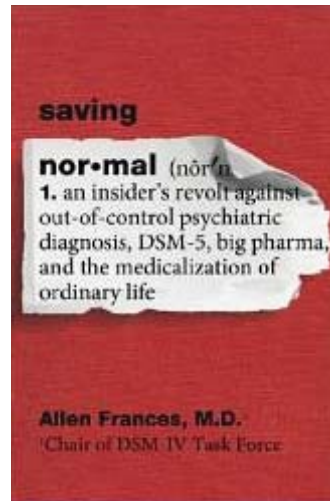
Nevertheless, Frances's book deserves the widest possible readership, for here is one of the foremost psychiatrists of his generation explaining how and why his profession has gone astray and deserves to lose the respect

of its clientele. Frances's utter sincerity is beyond question; he did not undertake his campaign lightly, understanding among other things that "it was bad form to comment on the work of my successors" (p. xvii).

Chapter 4 has informative summaries of psychiatric-type fads of past and not-so-past fads, including demonic possession, hysteria, multiple personality disorder, and witchhunts about alleged sexual abuse in daycare centers. Still-current fads include naming drugs as though they were specific when they are really not and ascribing mental illnesses to "chemical imbalance" of neurotransmitters without a shred of actual evidence; and (Chapter 5) attention-deficit disorder (ADD), childhood bipolar disorder, autism, bipolar II (adult), social phobia, post-traumatic stress disorder (PTSD), erectile disorder, and female sexual dysfunction—the "expectable sexual experience of almost one half of women" (p. 163). Potential fads and epidemics enabled by *DSM-5* include temper tantrums in children (Disruptive Mood Dysregulation Disorder, DMDD, pp. 177–179), the normal decline in memory and attention in older age (Mild Neurocognitive Disorder, MND or MNCD, pp. 179–182, and ADHD, pp. 184–186), gluttony (Binge Eating Disorder, pp. 182–184), grief (Major Depressive Disorder, MDD, pp. 186–188), and the labeling of passionate interests as addictions (pp. 188–192).

Frances is also insightful in pointing out that psychiatry's failings are no different in kind from those of present-day drug-obsessed and drug-industry-influenced medicine overall (p. xix)—including the fad for "screening" as a supposed tool for preventing illness, which instead leads to unnecessary treatment and even direct harm as healthy people are told that they are ill (p. 78 ff.). Then too there is the tendency for specialists to see only their pet condition and to be oblivious to the bigger picture (p. 83).

What everyone should know is that "placebo is the greatest broad-spectrum wonder drug ever invented—cheap, effective for almost all but the most severe of man's ills, and with very few side effects" (p. 97). Indeed, before antibiotics, just about all efficacy of medical practice resulted from placebo (Shapiro & Shapiro 1997). Nowadays, anti-depressant drugs appear to benefit about 10% of patients, whereas placebo is effective with 40% (Healy 2012).



Greenberg's *Book of Woe* brought me innumerable chortles as he demolishes the hypocrisy and incompetence displayed in the production of *DSM-5*. His task is far easier than Frances's: He can just cite self-important people saying absurd things and proposing absurd diagnoses, for instance Delusional Dominating Personality Disorder (DDPD): "a tendency to feel inordinately threatened by women who fail to disguise their intelligence" (p. 237). Having had much fun for 250 pages, Greenberg turns serious and uses a specific case history for a heartfelt plea that psychiatry should be foremost and only about each individual who needs help that is idiosyncratic, unique to that person (pp. 253–262).

The Book of Woe is explicit about the making of *DSM-5*, but the details enable Greenberg to emphasize over and over again that there is simply no evidence-grounded definition of mental illnesses because their causes are mysterious and their symptoms are overlapping and thereby non-specific. Greenberg was a public thorn in the side of the American Psychiatric Association (APA) as *DSM-5* was being prepared. Especially but not only in Chapter 17, Greenberg's quarrels with the APA and with Frances are detailed; summarized polemically at p. 280. The APA bumbled long and incredibly, doubtless in some part because the Association's revenues depend so much on sales of *DSM*; but of course in some other part because, like Frances, they were attempting the impossible: constructing purportedly evidence-based labels and treatments in the absence of the needed evidence. Like Frances, Greenberg illustrates how the loose descriptions of psychiatric ailments allowed an enormous increase in the numbers of the supposedly mentally ill (p. 51 ff.). Elaborate schemes for diagnosing were supposed to be tested in "field trials"; the description of one such trial is uproarious and devastating (pp. 284–291). Trials confirmed that the diagnostic classifications are hugely unreliable (p. 311 ff.).

The Book of Woe begins with an informative historical account of attempts at a classification of psychiatric diagnoses. The APA's shift over how to regard homosexuality illustrates that diagnosis is very much a matter of opinion and ideology (pp. 35–36).

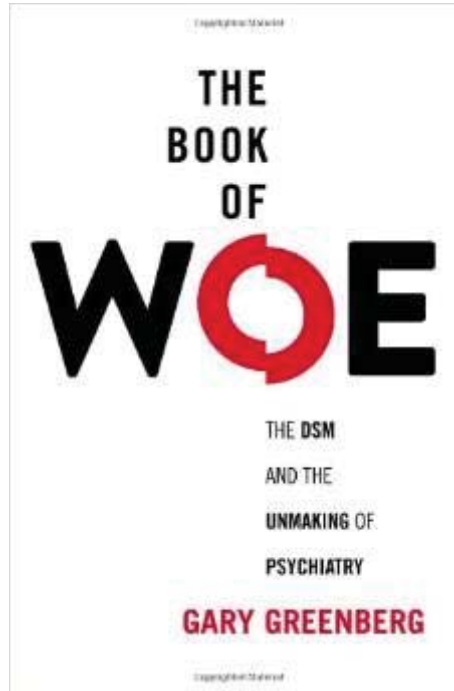
In the 1970s, psychiatry faced a crisis as insurance companies and federal agencies cut reimbursements and funding because of a perceived lack of reliability in the diagnosis of mental illness (p. 35). The profession's response was *DSM-III* (1980), which "looks very scientific" (p. 41). The ambition to be scientific went arm-in-arm with postulating a biological basis for mental illness; correspondingly, the leader of the National Institute of Mental Health (NIMH) appointed in 1996 had a background in neurogenetics (p. 48). The profession also lobbied for legislation to mandate insurance reimbursement for mental illness at the same rate as for physical

illnesses (pp. 50–51, 55–56). In Greenberg’s view, medicalizing mental illness has led to administering “mind-altering medications whose mechanism of action and long-term effects are as unknown as their capacity to blunt feeling is known” (p. 345). “Psychiatrists . . . are not treating the disorders they diagnose”; they prescribe “antidepressants to treat obsessions, antipsychotics to treat depression, mood stabilizers to treat anxiety, and so on” (p. 348). It is only symptoms that are being treated, not identified conditions, ailments, or mental illnesses.

A *New York Times* reviewer (Garner 2013) called both these books depressing and over-long.

Depressing, yes; too long, *NO*. When practices accepted and approved by professional consensus and the usual “experts” are subjected to such sweeping attacks, the mainstream and the popular media are usually quick to cry “conspiracy theories,” “denialism,” “crackpots,” and the like. To establish convincingly the radical fact that orthodox psychiatry is really not to be trusted nowadays requires such concentrated, repeated, documented critiques as appear in these books.

The merest glance at the *DSM-5* confirms that no one ought to take it seriously. The “Inattention” criteria for ADHD (p. 59 ff.) describe behavior quite typical of teenagers. Innumerable instances of “Binge Eating Disorder” (p. 350 ff.) can be seen any day of the week at any buffet restaurant. Erectile Disorder (p. 426 ff.) notes that “40%–50% of men older than 60–70 years complain of occasional problems with erections,” but nowhere is this acknowledged to be *normal* rather than a “disorder.” Political correctness features prominently, for example at p. 749: “*Race* is a culturally constructed category of identity . . . based on a variety of superficial physical traits”; perhaps the next editors of *DSM* would do well to read Ruth Benedict’s *Race and Racism* (1942 and later editions), which distinguishes the biological reality of race—which has important proven



corollaries in medical matters—from the cultural reality of racism. But such clarity of thought and judgment may be beyond people who regard as worthwhile “Conditions for Further Study” such suggestions as “Caffeine Use Disorder” (p. 792) or “Internet Gaming Disorder” (p. 795).

Psychiatry would do well to heal itself of the *DSM*. Indeed, Frances argues that the American Psychiatric Association should not be left to organize and control the *DSM*: “Psychiatric diagnosis is too important to be left to the psychiatrists” (pp. 218–221). This truism parallels the better-known “war is too important to be left to the generals” and illustrates George Bernard Shaw’s deeper insight that all professions constitute a conspiracy against the laity.²

Notes

- ¹ Wilhelm Reich, deviating from and breaking with Freud, insisted that thoughts and emotions are inextricably bound up with physiology and that “body work” should be a part of psychotherapy for many (but not all) patients. But Reich gained few acolytes and his approach never became mainstream.
- ² Preface to *The Doctor’s Dilemma*, play first performed in 1906, first published in 1911. The Preface is as pertinent today as it was a century ago because it points to the conflicts of interest inherent in the medical profession: having a monopoly over diagnosis and treatment and over-setting the boundaries between health and illness at the same time as profiting financially from illness.

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ESSAY REVIEW

On First Volumes and Beginnings in the Study of Psychic Phenomena: Varieties of Investigative Approaches

Revue Spirite: Journal d'Études Psychologiques, 1858, Volume 1. CreateSpace, 2010 (paperback). 356 pp. Free at <http://books.google.com/>

Proceedings of the Society for Psychical Research, 1882–1883, Volume 1. 336 pp. Free at <http://books.google.com/>

Journal of Parapsychology, 1937, Volume 1. 307 pp. Lexscien online subscription. <http://www.lexscien.org/>

Much has been written about the various existing research styles and approaches in science. An example is Alistair Crombie's *Styles of Scientific Thinking in the European Tradition* (1994), in which the author presented a widely cited classification that included axiomatic, experimental, and taxonomic approaches to the study of nature, among others (see also Kwa 2005/2011). Similarly, many approaches coexisted during the Nineteenth Century in the study of the human experience, as seen in the field of psychology. This brought debates and conflicts between case and experimental studies, as seen in the German and French traditions, respectively (Carroy & Schmidgen 2006), and between the use of introspection and studies based on the study of observable phenomena (Brooks 1998). As Danzinger (1990) has argued, the situation was not simply one of differing approaches, but also one of different assumptions and different social research styles and practices.

A similar situation and the topic of this Essay Review is the different approaches in the study of psychic phenomena over time. The purpose of this Essay Review is to introduce to modern readers some of these approaches in the forms of summaries of the contents of three different journals from the past. These are comments about the first volumes of influential publications concerned with the study of psychic phenomena that are probably not familiar to current students of psychic phenomena. Consequently, I hope this Essay Review will inform *JSE* readers about aspects of the beginnings of these publications and about the beginnings of specific research styles, thus providing a more complete historical perspective of the history of research of psychic phenomena that is generally lacking in non-specialists.

To accomplish this I could have selected a variety of journals representing different methodological approaches to psychic phenomena, some of which have been discussed elsewhere (Alvarado, Biondi, & Kramer 2006). I have focused only on three for two main reasons. First, and for practical considerations, this Review would be too long if other journals—publications such as *Annales des Sciences Psychiques*, *Journal of the American Society for Psychological Research*, *Light, Luce e Ombra*, *Psychische Studien*, or the *Revue Métapsychique*—had been included. Second, I feel that the publications I review below—the *Revue Spirite*, the *Proceedings of the Society for Psychological Research*, and the *Journal of Parapsychology*—represent well the various approaches to the study of psychic phenomena. These were foundational journals that clearly articulated the approaches discussed below, and which influence comes to our own time, although the latter topic is not discussed in any detail.

As mentioned before, my comments are limited to the beginnings of the journals and not to their development, nor to their content and philosophy in later years. Rather than a general study of the journals in question, I am merely presenting some comments about what they represented when they started.

Revue Spirite: Journal d'Études Psychologiques

“It is a ‘sign of the times . . . ,’” wrote an anonymous author in *The Spectator*, published in London, “that a ‘Revue Spirite’, containing reports of table-turning, spirit-rapping, and other like manifestations, has been recently established at Paris” (Anonymous 1859). The *Revue Spirite: Journal d'Études Psychologiques* was founded by the French educator Hippolyte Léon Dénizard Rivail (1804–1869), better known by his pseudonym Allan Kardec, to help spread the movement of spiritism, which has received some scholarly attention in recent decades.¹ Together with several books that were reprinted many times (e.g., Kardec 1857, 1861), the *Revue* allowed Kardec to organize spiritism in France and to develop its basic tenets. This took place through the publication of multiple topics such as mediumistic communications and through discussions of phenomena, their cause, and the progress and development of the movement.

Kardec explained in his “Introduction” (pp. 1–6) to the volume why the expression *psychological studies* was part of the title of the *Revue*:

Our scope . . . includes everything connected to knowledge about the metaphysical part of man; we will study it in its present state and in its future state, because studying the nature of Spirits, is to study man, since one day he will form part of the world of Spirits: This is why we have added to

our main title the one of *journal of psychological studies* so as to include the whole range. (p. 6, this and other translations are mine)

This grandiose view of spiritism, an overall philosophy of life and death, was elaborated on by others, including an author who wrote years later:

What is Spiritism? It is the revelation of the history of man, with its relations to various elements of creation; it is the justification of the place that the Creator has impressed on the chain of beings; it is psychology illuminated by revelation. Philosophy directs us to Spiritism, and Spiritism brings us back to philosophy. (Bonnamy 1868:1)

The title of the journal also illustrated how spiritists during the Nineteenth Century and later used the terms *psychology* and *psychological* to refer to spiritism (e.g., Kardec 1857:79; see also the use of *physiological psychology* and *experimental psychology* by Delanne 1897, 1901). This usage represented many things, among them attempts to expand the scope of psychology, to bring spiritism into the academic disciplines that studied human beings, and to legitimize the topic.

Kardec stated in his Introduction that spiritism was not an empirical science in the same way that other disciplines used the term, but that it was a science more in the philosophical sense. The movement, he wrote, had the beginnings of a science in its attempts to deduce explanatory principles. After all, Kardec stated, facts alone do not form a science, “science is born from the coordination and the logical deduction of facts” (p. 3). The main deduction and the most important implications of the phenomena were for Kardec “the communication that men can establish with beings of an incorporeal world” (p. 4). But he also appreciated the philosophical and moral consequences of the movement. In his view spiritist doctrine presented humankind with the “only possible and rational solution of a multitude of moral and anthropological phenomena which we witness daily . . .” (p. 5).

One way in which spiritism was not like the sciences was the sources of information used. While Nineteenth Century science, like all science, was not based solely on facts, it had a strong component of work based on observations of the natural world, as seen in astronomy and geology, and on experiment, as seen in physics. But spiritism, as presented in the first volume of the *Revue*, and elsewhere, was based on revelatory “truth” coming from the spirits. That is, most of Kardec’s efforts were in organizing knowledge given by mediums, as opposed to the more direct observations of nature used by others. A good part of his work was the compilation of the

teachings of the spirits, many of which consisted of answers to questions presented to and answered by mediums.

The way this was done was briefly described in Kardec's *Le Livre des Esprits* (1857), which first edition appeared before the *Revue* was published. Kardec stated in the book that the principles discussed came from the spirits in answer to questions, or from spontaneously given communications. Furthermore, Kardec wrote: "Everything was coordinated so as to present a regular and methodical ensemble and has been made public after having been carefully reviewed many times and corrected by the spirits themselves" (Kardec 1857:31). The topic was briefly discussed in the *Revue* in an article entitled "Différents Ordres d'Esprits" (Different Orders of Spirits, pp. 37–44), which, like most articles in the journal, did not have a particular author. Here it was stated that the work reported in the *Revue* was done following the classification approaches of Linnaeus and others. We are told that spirits were not invented, but that their messages were classified by their similarities (p. 38).

The definition of *empirical* in the *Revue* comes from the fact that information was taken from the above-mentioned sources, but it did not carry any systematic verification. The volume of the *Revue* is full of non-evidential communications that will not impress most serious students of psychical research. Examples of this throughout the volume were communications from St. Louis (pp. 55–56), potter and ceramicist Bernard Palissy (pp. 108–114), Pasha Mehmet-Ali (pp. 114–117), Mozart (pp. 137–142), Louis XI (pp. 144–145), St. Vincent of Paul (pp. 215–218), as well as from an executed murderer (pp. 79–81), an insane person (pp. 164–166), and a suicide (pp. 166–168).

Almost all of these communications referred to spiritual, philosophical, and moral issues. Two examples were those received through Ermance Dufaux (b. 1841), a young medium who specialized in evoking famous historical figures (Dufaux 1855). The *Revue* contains transcriptions of her written communications about topics such as avarice (pp. 55–56) and pride (pp. 132–133). There were also summaries of Dufaux's writings conveying messages from Jeanne d'Arc (ca 1412–1431, p. 32) and King Louis XI (1423–1483, pp. 73–75).

An example of a communication appeared in "Entretiens d'Outre-Tombe" (Interviews from Beyond the Grave, pp. 57–58). The communicating spirit, frequently evoked by her family, was Miss Clary D., who died in 1850 when she was 13 years old. In a séance dated January 12, 1857, they communicated with her through her medium brother. The following is part of the transcribed proceedings (p. 57). Q. and R. stand for question and reply:

- Q. Do you have a precise recollection of your corporeal existence?
 R. The spirit sees the present, the past, and a little of the future depending on its perfection and its closeness to God.
- Q. This condition of perfection is only about the future, or does this also relate to the present and to the past?
 R. The spirit sees the future more clearly as it gets closer to God. After death the soul's sight is embraced by a glance at all its past *emigrations*, but she cannot see what God has prepared . . .
- Q. Do you know when you will reincarnate?
 R. In 10 years or in 100 years.
- Q. Will it be on this earth?
 R. In another world.

As mentioned before, some communications were valued for their content with no external verification other than similarities in content between communications. In a two-page paper entitled “Utilité de Certaines Évocations Particulières” (Utility of Some Particular Evocations, pp. 77–78), it was stated that these messages were valuable because the spirits in question “have acquired a high degree of perfection” (p. 77) that allowed them to “penetrate the mysteries that exceed the vulgar reach of humanity. . . .” (p. 78).

There are also some interesting discussions of spirit life on other planets that illuminate the degree of critical spirit prevalent in this publication.² In one article entitled “Des Habitations de la Planète Jupiter” (Dwellings on Planet Jupiter, pp. 223–232), playwright Victorien Sardou (1831–1908) mentioned communications and drawings he received from Bernard Palissy (1510–1590) and Wolfgang Amadeus Mozart (1756–1791), who were supposed to live on Jupiter. In addition he had several other things to say as communicated by spirits. This included the fact that Jupiter had many highly evolved spirits, that the bodies of the habitants had a light density, and that they also had animals there.³

This was preceded by an article entitled “Jupiter et Quelques Autres Mondes” (Jupiter and Some Other Worlds, pp. 67–73) in which readers were told in all seriousness, and based on spirit communications, that spirits of different spiritual advancement lived on different planets and that Jupiter was the one with the most advanced inhabitants. The author of the article also stated that the residents of Jupiter had a longer lifespan and grew faster than earthlings. In addition, two other things were published in the first volume of the *Revue* about Jupiter. One was a communication from Palissy about Jupiter (pp. 108–114) that had an introductory editorial note saying that the content of the message was similar to those received before. Those similarities were said to be a “remarkable fact that at the very least is a

presumption of exactitude” (p. 108). Probably anticipating incredulity, a note was inserted entitled “Observation à Propos de Dessins de Jupiter” (Observations Regarding the Jupiter Drawings, p. 222), which reminded the reader that the purpose of the *Revue* was the study of all phenomena and that nothing should be neglected. Readers were told that even assuming that the drawings were the product of a spirit’s fantasy they were worth studying, but the possibility that the communications were produced by the medium’s imagination was not discussed, which was consistent with the belief system presented in the *Revue*.⁴

Spirit communications were also used to develop explanations for the phenomena, as seen in a two-part article entitled “Théorie des Manifestations Physiques” (Theory of Physical Manifestations, pp. 121–125, 149–153), presumably authored by Kardec. According to the spirits, physical phenomena were produced by the perispirit, a semi-physical principle separate from the spirit and the physical body that acted following the will of the spirit. Some apparitions and materializations consisted of the spirit surrounded by its semi-physical envelope, which could assume material properties: “The condensation may reach the point of producing resistance and tangibility; . . . but the condensation . . . or better, a solidification of ethereal matter, is not in its normal state, it is but temporary. . . .” (pp. 123–124). It was argued that explanations of physical phenomena were based on “the observation and on a logical deduction of facts: We have concluded from what we saw” (p. 149). But it is evident from the article that instead of observing, Kardec and his followers listened and read the words of the presumed spirits.

Many articles are accounts of cases, mainly taken from the press or from other sources. Examples include “Visions” (pp. 24–26), “Le Revenant de Mademoiselle Clairon” (The Ghost of Miss Clairon, pp. 44–48), “L’Esprit Frappeur de Dibbelsdorf—Basse-Saxe” (The Rapping Spirit of Dibbelsdorf—Lower Saxony), pp. 219–222), and “Phénomène d’Apparition” (Apparition Phenomena, pp. 291–292). These were not original case investigations, but reprints of accounts from other publications that were accompanied by commentary. In addition, there are many other articles about such varied topics as “Différent Ordres d’Esprits” (Different Types of Spirits, pp. 37–44), “Le Magnétisme et le Spiritisme” (Magnetism and Spiritism, pp. 91–92), “Propagation du Spiritisme” (The Spread of Spiritism, pp. 237–243), and “De la Pluralité des Existences Corporelles” (On the Plurality of Corporal Existences, pp. 295–302). The *Revue* also carried articles about medium D. D. Home (1833–1886, pp. 59–3, 88–91, 117–119), spirit photography (pp. 180–183), spirit obsession (pp. 265–276), clairvoyance in somnambules (pp. 313–315), apparitions (pp. 321–324),

and “bicorporeity” (on the separation of the soul and apparitions of the living, pp. 328–331).

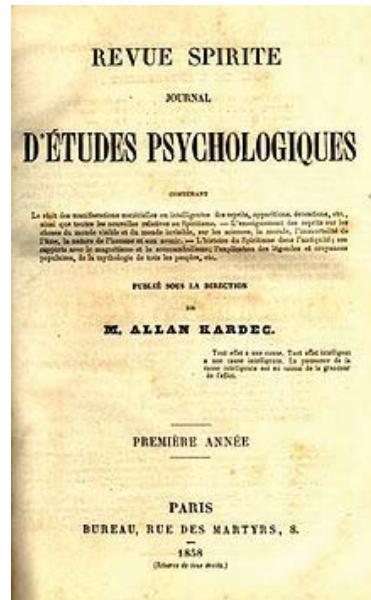
Although I am focusing my comments on only the first issue of the *Revue*, there is no question that historically this was an important journal and one that articulated the philosophy of spiritism. In later years the journal continued to feature Kardec’s initial teachings and inspired many other generations.⁵ The *Revue* was important in spreading the movement, and has continued to our day after many changes and after having suspended publication for a period.

The *Revue*, according to an anonymous critic, “seems to provide us with good buffoonery” (Anonymous 1858:235). I would not put it in these

terms, but more in terms of another contemporary of Kardec, André Saturnin Morin (1807–1888), who argued that Kardec was not critical enough in his evaluation of the truthfulness and identity of his communicators (Morin 1858). Leaving aside the historical perspective, many of us interested in the systematic and scientific study of psychic phenomena cannot see the *Revue* as a good start for what later became psychical research, other than publicizing the existence of psychic phenomena and inspiring a positive attitude toward the topic.

Furthermore, there was no serious consideration in the first volume of the *Revue* of the possibility that the communications were imaginary, or the possibility that they were influenced in various ways, such as through knowledge of other communications obtained by the mediums who were active in spiritist meetings and presumably read the literature. Admittedly, this is speculation, but not farfetched considering what we have learned over the years about the indirect influence of suggestion and the expectations of groups, not to mention the theoretical possibility of personation.⁶ This possibility renders the use of mediumistic communications, at best, a problematic way of obtaining knowledge.

In addition, to consider the content of the *Revue*, and Kardec’s work, as a scientific research program (Moreira-Almeida 2008) begs the question of what science is. It is one thing to observe nature and develop hypotheses



Revue Spirite cover, 1858

based on observed patterns, or to be tested by further observations or actual experimentation, and another thing to use communications through seances, which source is uncertain, as shown in this volume of the *Revue*, to get teachings and answers to questions about the nature of topics such as the workings of psychic phenomena and a variety of moral and philosophical issues. Similarly, it is one thing to report on non-evidential spirit communications and on cases of apparitions and other phenomena discussed in the press and other sources, and it is another to study these phenomena with attention to evidence.

In some ways psychical research was developed to do better than this. It was not only a response to crises of faith and the search for alternate worldviews, but also an attempt to be empirical without depending on difficult-to-interpret revelations from “spiritual” sources. As Frederic W. H. Myers (1843–1901) stated about the approach of British psychical researchers: “We endeavour to approach the problems of that [spiritual] world by careful collection, scrutiny, testing, of particular facts” (Myers 1900a:117). Neither the first volume of the *Revue*, nor later ones, achieved this agenda. It is true that there was an empirical spirit in the journal in terms of breaking with metaphysics and religion, and in collecting information (Chibeni 2014). But the collection of cases was anything but “careful,” there was little “scrutiny” (if any) and no “testing” to speak of unless one considers that asking questions of mediums and selecting and arranging communications was akin to scrutiny and testing in the conventional way. Such an approach was developed in the next publication reviewed here.

Proceedings of the Society for Psychical Research

The four reports of the Society for psychical research which have been issued at intervals during 1882 and 1883 have now appeared in the form of a handsome volume, and it cannot be denied that they constitute a formidable body of evidence in favor of certain beliefs that have hitherto been looked upon with peculiar suspicion and distrust. (Anonymous 1884:40)

These were comments appearing in the journal *Science*, which, with some exceptions, became less positive toward the contents of the *Proceedings of the Society for Psychical Research (PSPR)* in later years.

The *PSPR* was the main organ of the Society for Psychical Research (SPR), which was of basic importance for the development of parapsychology. Its work, conducted by figures such as the above-mentioned Myers, by the Society’s President Henry Sidgwick (1838–1900), and by others such as Eleanor Sidgwick (1845–1936), Edmund Gurney (1847–1888), and William F. Barrett (1844–1925), systematized research into psychic phenomena in

England, but it was also influential in other countries.⁷ The first volume of the *PSPR* bears witness to this.

The volume opens with the “Objects of the Society” (pp. 3–6), in which the purpose of the SPR was stated to be to make “an organised and systematic attempt to investigate that large group of debatable phenomena designated by such terms as mesmeric, psychical, and Spiritualistic” (p. 3), topics referred to as “residual phenomena” (p. 3).⁸ These phenomena and associated matters were entrusted to committees responsible for:

1. An examination of the nature and extent of any influence which may be exerted by one mind upon another, apart from any generally recognised mode of perception.
2. The study of hypnotism, and the forms of so-called mesmeric trance, with its alleged insensibility to pain; clairvoyance, and other allied phenomena.
3. A critical revision of Reichenbach’s researches with certain organisations called “sensitive,” and an inquiry whether such organisations possess any power of perception beyond a highly exalted sensibility of the recognised sensory organs.⁹
4. A careful investigation of any reports, resting on strong testimony, regarding apparitions at the moment of death, or otherwise, or regarding disturbances in houses reputed to be haunted.
5. An inquiry into the various physical phenomena commonly called Spiritualistic; with an attempt to discover their causes and general laws.
6. The collection and collation of existing materials bearing on the history of these subjects. (pp. 3–4)

The tone was set with Henry Sidgwick’s Presidential Address (pp. 7–12) delivered at the first general meeting of the Society held on July 17, 1882. He reminded members that their work “should be carried on with a single-minded desire to ascertain the facts, and without any foregone conclusion as to their nature” (p. 8), acknowledging that different positions were allowed within the Society, including skepticism. In addition to recognizing previous efforts, Sidgwick clearly stated that more evidence was needed to convince the scientific world. Their main task, he said, was to “carefully sift the evidence, and guard against the danger of illusion or deception . . . and then, when the evidence has been sifted by accumulation of personal experiments, make it more available for the purpose of producing general conviction” (p. 11). But he was aware of the incredulity they would have to fight. As he put it: “We have done all that we can when the critic has nothing left to allege except that the investigator is in the trick. But when he has nothing else left to allege he will allege that” (p. 12).

The first volume, containing four issues appearing in 1882 and 1883,

was formed of papers reporting on the collection and analysis of evidence for psychic phenomena coming from accounts and from experiments. Some of these were reports of the above-mentioned committees, among them Barrett, Gurney, and Myers' "First Report of the Committee on Thought-Reading" (1882, pp. 13–34) and Gurney, Myers, and Barrett's "Second Report of the Committee on Thought-Transference" (1882, pp. 70–97), which dealt mainly with experimental studies of the Creery sisters. Reverend Creery informed the SPR of cases of thought-transference observed in his family. According to the first report:

He has a family of five girls, ranging now between the ages of ten and seventeen. . . . The father stated that any one of these children (except the youngest), as well as a young servant-girl who had lived with the family for two years, was frequently able to designate correctly, without contact or sign, a card or other object fixed on in the child's absence. (p. 20)

Several tests were done, many with positive results. Unfortunately in later tests with cards, two of the girls, "acting as 'agent' and 'percipient,' were detected in the use of a code of signals; and a third has confessed to a certain amount of signalling in the earlier series to which reference has been made" (Gurney 1888:269). However, even though it was decided not to continue to use work with the Creery sisters in support of telepathy, we must notice the precautions taken by the investigators and mentioned in the original report, some of which included means to prevent the sisters, or other members of her family, from having knowledge of the target material.

Other reports included Barrett, Keep, Massey, Wedgwood, Podmore, and Pease's "First Report of the Committee on 'Haunted Houses'" (1882, pp. 101–115), and Barrett, Massey, Moses, Podmore, Gurney, and Myers' "Report of the Literary Committee" (1882, pp. 116–155). These, and other reports such as Barrett's "On Some Phenomena Associated with Abnormal Conditions of Mind" (1883, pp. 238–244) and Malcolm Guthrie and James Birchall's "Record of Experiments in Thought-Transference, at Liverpool" (1883, pp. 263–283), point to the empirical approach prevalent in the SPR even if such attempts seem methodologically crude by modern standards.

Such standards are illustrated in the above-mentioned "First Report of the Committee on 'Haunted Houses'" (1882, pp. 101–115). Different from brief and secondhand accounts characterizing most older reports of ghosts, the *SPR* researchers acted as follows:

In the first place, we, of course, begin by tracing every story to the fountain-head. But we do not consider that every first-hand narration of the appearance of a ghost, even from a thoroughly trustworthy narrator, gives

us adequate reason for attempting further investigation. On the contrary, our general principle is that the unsupported evidence of a single witness does not constitute sufficient ground for accepting an apparition as having a prima facie claim to objective reality. To distinguish any apparition from an ordinary hallucination . . . it must receive some independent evidence to corroborate it. And this corroboration may be of two kinds; we may have the consentient testimony of several witnesses ; or there may be some point of external agreement and coincidence—*unknown, as such, to the seer at the time*—(e.g., the periodic appearance on a particular anniversary, or the recognition of a peculiar dress), to give to the vision an objective foundation. (pp. 101–102)

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Proceedings of the Society for Psychical Research, 1882–1883 Table of Contents

Interestingly, the SPR encouraged the participation of its members in conducting research. In doing so, they both exemplified the less professional nature of the enterprise in those early days and its emphasis on data collection. An example was a circular printed in the *PSPR*: “To Members and Associates of the Society for Psychical Research: Circular No. 1. (*Second Edition*). On the General Work of the Society” (1883, pp. 295–302). But in addition to encouraging research into thought-transference, the circular contained statements about our limited knowledge regarding the phenomena and about some precautions needed in its study:

We must specially urge, however, that those who are willing thus to cooperate with us will accurately record the results of every experiment made; we do not desire *selected* results. . . . If the experiment is made with cards the whole pack should be used, and not a selected portion of it. If with num-

bers, names, &c., the principle on which the selection is made should be indicated (e.g., that the number consists of two figures, or that the name is a Christian name), in order that some estimate may be formed of the chances against success. . . . Absolute silence should be secured during the progress of the experiments. If the first trial is a failure, the percipient should learn that fact from the silence of the experimenter, or "agent," as we prefer to call him. It should further be stated what precautions, if any, have been taken to preclude the possibility of learning the object selected by ordinary means. (pp. 297–298)

This, and other cautionary advice regarding other topics such as physical mediumship, shows how the early SPR did not simply care for "facts." Its members, or at least most of those who conducted the work, were mindful of the way they were collected, of possible artifacts and conventional explanations.

In Henry Sidgwick's first untitled Presidential Address to the SPR (1882, pp. 7–12) he stated that he believed it was a scandal "that the educated world, as a body, should still be simply in the attitude of incredulity" (p. 8) regarding psychic phenomena, and that the main aim of the SPR was to end this situation. He admitted that previous efforts had been valuable but affirmed that more work was necessary, work that would carry conviction in the scientific world. Part of this work, he stated, should be carried out using mediums who do not get money for their performances, a way to control for motives for fraud. Regarding this research, Sidgwick believed that

in a matter so strange to ordinary experience I think we may say that it is only gradually that a man learns the complicated precautions that have to be taken in order to exclude all conceivable possibility of illusion or deception. (p. 11)

In the above-mentioned report of the Literary Committee we find the SPR's early attempts to classify apparitional and other experiences collected by the Society via public appeals. This was an initial attempt to classify the cases, seeing them in terms of thought-transference, an idea they would continue to develop later in the *PSPR* and in the first major publication of the Society (Gurney, Myers, & Podmore 1886). It was stated in the report: "In a chaos such as this subject presents, classification, however rude and provisional, is itself light-bringing; it is at any rate an indispensable pre-requisite of any true analysis" (p. 118). The tentative classification, an attempt to bring order into many confusing cases, included: agent and percipient in a normal condition; percipient in an abnormal condition (exalted perception during sleep; exalted perception during trance; exalted percep-

tion at or during death); agent in an abnormal condition (impression from a person in sleep; impression from a person in a state of trance; impression from a dying person; impression from a person who is excited or in danger); agent and percipient both in an abnormal condition (two persons dying or in peril at the same moment; simultaneous dreams; percipient asleep and agent excited; and percipient asleep and agent dying). The state of the situation regarding the classification, it was stated in the report, was “very much in the position which zoology and botany occupied in the time of Aristotle, or nosology in the time of Hippocrates” (p. 149).

In addition, the authors of the report of the Literary Committee mentioned the problem of chance in relation to dreams. This was consistent with interest in conventional explanations, and with discussions of coincidences regarding psychic dreams found during the Nineteenth Century (Alvarado 2012).

Interestingly, there was little in the first volume of the *PSPR* regarding theory. An exception was Barrett’s ideas in his paper “On Some Phenomena Associated with Abnormal Conditions of Mind.” He wrote regarding thought-transference:

The energy of electricity exerts itself in two ways, by transmission along a material conductor and by influence, or induction as it is termed, across space. May not nerve energy, whatever be its nature, also act by influence as well as conduction? (p. 244)

There was more attention to theory in later volumes regarding such topics as telepathic explanations of apparitions, and the ideas of Myers about the subliminal mind.¹⁰ But the publication of the *PSPR*’s initial volume marks an important contribution, an attempt to systematize the study of psychic phenomena that had much impact on the development of psychical research.

As expected, the reception of the *PSPR* varied according to the reviewer. Two contrasting opinions came from American psychologists G. Stanley Hall (1844–1924) and William James (1842–1910). Hall (1887), a skeptic in all things regarding psychic phenomena, was not convinced by the quality of the material. James was more positive and stated that there was a big difference between most of the literature about the “supernormal” and the *PSPR*. In his words, the *PSPR* emphasized quality of evidential material over quantity. “Outside of these ‘Proceedings,’” he wrote, “I know of no systematic attempt to *weigh* the evidence for the supernatural” (James 1892:728–729).

Journal of Parapsychology

While the *PSPR* included some reports of experiments (and this became more frequent in later volumes), this approach was not the main one taken by *SPR* researchers. But it was the research style predominant in the *Journal of Parapsychology*.

Joseph Banks Rhine (1895–1980) promoted in the United States during the 1930s a parapsychological experimental research program. These efforts consisted at first of the now-classic ESP card-guessing studies initially reported in *Extra-Sensory Perception* (Rhine 1934), a tradition that was continued in the *Journal of Parapsychology (JP)*.¹¹

The *JP* was first published in 1937 and was printed by Duke University Press. It was first edited by William McDougall (1871–1938) and Joseph Banks Rhine, with Assistant Editor Charles E. Stuart (1907–1947). It has been argued that: “With the 1937 publication of the first volume of the *Journal of Parapsychology*, a new era of psychical research began” (Tietze 1973:176). Furthermore, the journal has been considered “one of the vehicles through which J. B. Rhine and his associates at Duke University articulated their experimental research program” (Alvarado, Biondi, & Kramer 2006:74–75).

This emphasis was stated in the initial unsigned “Editorial Introduction” (pp. 1–9), which has been attributed to William McDougall (Mauskopf & McVaugh 1980:147). In the Editorial it was stated:

Parapsychology is a word that comes to us from Germany,¹² where for some dozen years past it has been used to denote the stricter inquiries into obscure and questionable forms of mental activity. We think it may well be adopted into the English language to designate the more strictly experimental part of the whole field implied by psychical research as now pretty generally understood. It is these strictly laboratory studies which most need the atmosphere and conditions to be found only in the universities; and it is these which the universities can most properly promote, leaving the extra-academic groups the still-important task of collecting and recording all such reports of phenomena apparently expressive of unusual mental powers as occur spontaneously. . . . We do not claim that any sharp line can be drawn marking off the field of parapsychology within the larger vaguer province of psychical research. Rather, we anticipate that the stricter experimental methods will gradually invade other parts of the province annexing them to their own more special field, until possibly the two shall coincide. But we regard the differentiation of the two terms as useful at the present time; and it is our intention to admit to this journal only contributions that properly fall within the narrower sphere implied by its title; that is to say, reports of experimental studies in the stricter sense and discussions of methods and interpretations of such work. (p. 7)

The experimental emphasis was well-represented in the four issues of the *JP* which appeared in its first volume in 1937. According to my count of types of paper in the first volume, excluding correspondence and notes, there were 16 experimental reports, 4 editorials, 3 reviews of specific topics, 3 summaries and reviews of specific experiments, and 3 discussions of statistical issues.

Examples of experiments include ESP studies such as J. G. Pratt's (1910–1979) "Clairvoyant Blind Matching" (pp. 10–17), J. L. Woodruff and R. W. George's "Experiments in Extra-Sensory Perception" (pp. 18–30), Lucien Warner's "The Role of Luck in ESP Data" (pp. 84–92), and Vernon Sharp and C. C. Clark's "Group Tests for Extra-Sensory Perception" (pp. 123–142).

The experimental approach was not limited to proving the existence of ESP. The *JP* carried interesting experiments to study ESP in relation to other variables, such as J. B. Rhine's "The Effect of Distance in ESP Tests" (pp. 172–184), Margaret H. Pegram's "Some Psychological Relations of Extra-Sensory Perception" (pp. 191–205), and Edmond P. Gibson's "A Study of Comparative Performance in Several ESP Procedures" (pp. 264–275). In addition, several studies were reported about ESP tests with special participants. These were: Louisa E. Rhine's (1891–1983) "Some Stimulus Variations in Extra-Sensory Perception with Child Subjects" (pp. 102–113), Esther May Bond's "General Extra-Sensory Perception With a Group of Fourth and Fifth Grade Retarded Children" (pp. 114–122), Margaret M. Price and Margaret H. Pegram's "Extra-Sensory Perception Among the Blind" (pp. 143–155), and Joseph F. Kubis and Fabian L. Rouke's "An Experimental Investigation of Telepathic Phenomena in Twins" (pp. 163–171).

As is common today with much parapsychological research, the early *JP* reports were full of procedural details and statistical analyses. An example was the following excerpt from the above-mentioned Price and Pegram study with blind participants:

Contents	
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Journal of Parapsychology, 1937

For a total of 2,024 runs there were 11,518 correct calls, or a positive deviation of 1,398. This gives an average of 5.69 hits per 25 calls from a mean expectation of 5. This deviation is 16.99 times the standard deviation. The odds against so large a deviation occurring by chance in this number of trials are 1,054 to one. 28 of the entire 66 subjects had individually significant total scores; that is had positive deviations which were at least 2.5 times the standard deviation. (p. 148)

Because Rhine's work was involved in many criticisms from the beginning (Mauskopf & McVaugh 1980), the *JP* included much about methodology and critiques to show the validity of the ESP work. One of these was J. B. Rhine's "The Question of Sensory Cues and the Evidence" (pp. 276–291). Other defenses were about the statistical analyses used. C. E. Stuart and J. A. Greenwood commented in "A Review of Criticisms of the Mathematical Evaluation of ESP Data" (pp. 295–304) that

[critiques] have been irrelevant in regard to the mean chance expectation, mathematically valid but experimentally trivial in regard to the standard deviations, and mathematically and experimentally valid in regard to the probability statements. (p. 304)

Whatever mistakes or problems were pointed out "in no way affect any of the conclusions heretofore established in ESP research" (p. 304).

Also related to statistics was the reprint of a press release by Dr. Burton H. Camp, President of the Institute of Mathematical Statistics, presented in a section about "Notes" (p. 305) in which Camp stated:

Dr. Rhine's investigations have two aspects; experimental and statistical. On the experimental side mathematicians of course have nothing to say. On the statistical side, however, recent mathematical work has established the fact that assuming that the experiments have been properly performed, the statistical analysis is essentially valid. If the Rhine investigation is to be fairly attacked it must be on other than mathematical grounds.

Interestingly, the publication of the *JP* received publicity in prominent publications such as *Science* and the *The New York Times* (Anonymous 1937a, 1937b). The writer of the latter comment summarized the research style of the Duke group, and of the *JP*, in the following words: "We seem to breathe the bracing air of the laboratory rather than the sticky incense of darkened rooms in which frauds hold forth."

Concluding Remarks

The journals discussed here, surrounded by different social and national contexts, started publication in different eras (1858, 1882, and 1937), and they are still published today. All of them had to carve out their own territory, so to speak, when they started. The *Revue* appeared in a context in which mesmerism was better known, a movement that was not always open to spiritism (e.g., Morin 1858). Similarly, to some extent the *PSPR* and the *JP* represented “new” beginnings in terms of spiritualism and psychical research, respectively. However, it would be wrong to reduce everything to breaks and discontinuities. In fairness, the issue was more one of general trends, and it is important to recognize that there were clear conceptual and methodological connections between the movements.

Mediumship was not the sole province of spiritism during the Nineteenth Century, as seen in phenomena that may be termed mediumistic in magnetic somnambules (e.g., Haddock 1851:Chapter 9, Lausanne 1816:12–26).¹³ Similarly, the concern of early psychical research with hauntings and apparitions (not to mention the examinations of mediumship included in later *PSPR* volumes) shows a connection with the interests of spiritualists (e.g., Ambler 1850, Harrison 1879), and Rhine’s parapsychology inherited a previous interest in experiments and statistical evaluation (e.g., Coover 1917, Richet 1884).

While different, the three journals presented in their pages material showing empirical attempts to study psychic phenomena, even though they represent different research styles. Of the three approaches—the teaching of the spirits, the analyses of testimony, and the conducting of experiments—only the last two are still pursued in parapsychology. In fact, I doubt that today many parapsychologists and readers of the *JSE* will consider the use of mediumistically obtained teachings as a reliable approach to study psychic phenomena, although one may argue that it may be useful to generate hypotheses that may be put to test by other means. But leaving aside modern standards and practices, we must admit that Kardec saw his work as empirical, different from faith, an attempt to collect information from the natural world, albeit from an unusual source.

The emphasis of the *Revue* on the teachings of the spirits as a source of knowledge about psychic phenomena was obviously associated with the conviction that the communications came from spirits. Lacking this belief, most psychical researchers, including those convinced of survival, did not pay attention to such sources and placed their efforts on verifiable mediumistic communications and observable phenomena (e.g., Myers 1903:Vol. 2:117–118). This, and the fact that psychical researchers traditionally have taken

the capabilities of the non-conscious level of the mind more seriously than spiritists and spiritualists,¹⁴ led to the rejection, or at least the classification of this material as uncertain. This was not limited to early French spiritism, but applied as well to many other claims associated with unverifiable psychic sources of information, such as descriptions of the afterlife and philosophical and moral communications (e.g., Davis 1867, Moses 1883). In some ways it may be argued that one of the reasons psychical research developed was to be able to study phenomena without depending on such ambiguous sources of information.

Different from the above, the *PSPR* and the *JP*, not to mention other journals (Alvarado, Biondi, & Kramer 2006), emphasized cases and experiments as the means to generate knowledge for psychical research. Later developments within the SPR and the Duke group, as articulated in the *PSPR* and the *JP*, significantly affected the study of psychic phenomena, transforming it into a more systematic endeavor.¹⁵

While I have written only about the first volume of each of these journals, it is important to remember that they have expanded their coverage over the years. I invite readers to explore these changes to appreciate how the content of the journals and the assumptions behind the content have changed, while, I believe, staying the same in terms of initial purposes.

Notes

- ¹ Some examples of this scholarship, which include information about Kardec, are the works of Edelman (1995), Monroe (2008), and Sharp (2006). The most detailed biographical study of Kardec, although disorganized, is that presented by Wantuil and Thiesen (1984). Moreira-Almeida (2008) has argued that Kardec's work represents a research program into psychic phenomena.
- ² Kardec (1857:37, 159) had discussed before the *Revue* was published the idea that other planets were inhabited, that earthlings could reincarnate on Jupiter, and that spirits from that planet could visit Earth. Previous discussions of planetary topics include the experiences of Emmanuel Swedenborg (1688–1772) with spirits from Mars, Mercury, Jupiter, Saturn, and Venus (Swedenborg 1758/1828), and the "trips" of a young somnambulist to places such as Ceres, Mercury, Jupiter, and the Moon (Anonymous 1837).
- ³ Sardou later expressed doubts about the identity of Palissy (Claretie 1897, de P. 1897).
- ⁴ Referring to Sardou's productions, Camille Flammarion (1842–1925) wrote:

At that time we all thought Jupiter was inhabited by a superior race of beings. The spiritistic communications were the reflex of the general ideas in the air. To-day, with our present knowledge of the planets, we should not imagine anything of the kind about that globe. (Flammarion 1907:26)

- ⁵ The movement was very influential in France (e.g., Edelman 1995, Sharp 2006). It spread to countries such as Italy and Brazil (e.g., Biondi 1988, Machado 1983), but much less so to the Anglo–American world. Historically, reticence to accept some of the claims of spiritism can be seen in the writings of some believers in discarnate agency who assumed, without clear evidence, that the communications coming from Kardec’s mediums were affected by his beliefs (e.g., Aksakof 1875, Home 1877: Part 3:Chapter 3, Myers 1903:Vol. 2:135). In addition, several were skeptical about reincarnation, a main tenet of spiritism (e.g., Coleman 1878, Howitt 1876).
- ⁶ See, for example, the later writings of Flournoy (1900), Janet (1889), Myers (1900b), and Sudre (1946) (see also Alvarado 2011a). While such concepts were developed in detail after Kardec’s times, the idea of psychological influences on phenomena traditionally believed to be produced by spirits was around before Kardec started being involved with mediums. Examples include seeing demonopathy as a contagious condition (Calmeil 1845: Vol. 1:86) and hallucinations as manifestations open to be influenced by the “force of example, by a true moral contagion” (Brierre de Boismont 1845:308).
- ⁷ The best source about early SPR developments is still Gauld (1968). Other perspectives appear in Alvarado (2002) and Cerullo (1982). The SPR also published the *Journal of the Society for Psychical Research*, which circulated only among members. The *PSPR* was the public voice of the Society and it soon became well-known and was received by many libraries in various countries. In addition to the individuals mentioned there were many who helped the development of the SPR, among them Vice Presidents Arthur Balfour (1848–1930), William Stainton Moses (1839–1892), and Hensleigh Wedgwood (1803–1891), and Council Members Charles Massey (1828–1907), Frank Podmore (1856–1910), and George Wyld (1821–1906), among others.
- ⁸ In the United States William James (1842–1910) wrote years later about psychic phenomena as an “unclassified residuum” (James 1890:362).
- ⁹ Karl Ludwig von Reichenbach (1788–1869) postulated the existence of Od, a universal force that was seen and perceived in other ways by sensitive people (see Nahm 2012).
- ¹⁰ There were many ideas of forces and waves of different sorts to account for

telepathy during the Nineteenth Century (Alvarado 2008). Two examples before and after Barrett's paper are those of Houston (1892) and Knowles (1869). Examples of later *PSPR* theoretical discussions include Barrett, Massey Moses, Podmore, Gurney, and Myers (1884), and Myers (1884).

¹¹ On Rhine, see Berger (1988:194–231), Brian (1982), Mauskopf and McVaugh (1980), and Rao (1982). There are also discussions about different aspects of the *JP* (Alvarado 2011b, Alvarado, Biondi, & Kramer 2006:73–75, Broughton 1987, and Mauskopf 1987).

¹² The term *parapsychology* was used in the title of a journal, *Zeitschrift für Parapsychologie* (1926–1934), and in many works, among them those of Oesterreich (1921) and Driesch (1932). For context information, see Sommer (2013).

¹³ For discussions of this interesting issue, see Crabtree (1993:196–212) and Crockford (2013).

¹⁴ The skeptical attitude of spiritists and spiritualists about the capabilities of the subconscious mind and of dissociation as an explanatory principle of mediumship was evident in several publications (e.g., Delanne 1902), and it continues to our day. The use of the subconscious mind to explain mediumship in the French context has received some scholarly attention (Alvarado 2010, Lachapelle 2011, Le Maléfan 1999, Monroe 2008).

¹⁵ While some may see the *PSPR* and the *JP* as examples of methodological progress in the scientific study of psychic phenomena, others may see them as too reductionistic, as having limited too much both the possible methodologies of study as well as the phenomena.

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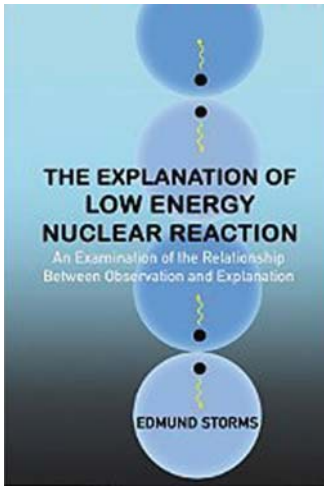
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BOOK REVIEW

The Explanation of Low Energy Nuclear Reaction: An Examination of the Relationship between Observation and Explanation by Edmund Storms. Concord, NH: Infinite Energy Press, 2014. 323 pp. + xxvii. ISBN: 978-1-892925-10-7.

Edmund Storms' new book is entitled *The Explanation of Low Energy Nuclear Reaction*, though, since it is far from clear that an acceptable explanation has been given in the book, a more accurate title might be "Attempting to Explain Low Energy Nuclear Reactions" (commonly known as cold fusion, and abbreviated by the acronym LENR). Storms' strategy involves exhaustive study of the many experiments that appear to validate claims for the existence of this phenomenon, arguing on the basis of these experiments that many possibilities are excluded by the data: Hence, very few possibilities remain for consideration.



Any explanation for the phenomenon has to take into account three aspects: the place where the reactions occur, how the Coulomb repulsive barrier that normally prevents fusion taking place at ordinary temperatures is overcome, and how the energy released is dissipated without significant production of high-energy particles. Storms argues that some assembly

of atoms must be involved, and that the only place where such an assembly can be located in is in a crack-like structure. He rejects the explanations that have previously been proposed for overcoming the Coulomb barrier and releasing the energy that is generated, and instead proposes that a metallic chain of hydrogen atoms called a hydroton is involved. By some mechanism that is unclear this entity starts to vibrate, making it somehow possible to overcome the Coulomb barrier. Then the fact that this happens slowly makes it possible for the excess energy to be carried away in small units, rather than all at once.

It is unclear how much this can be considered an explanation. It is an

explanation in some senses of the word, but details are absent. Here perhaps we have a culture clash. Storms is a chemist, and perhaps chemists are less troubled by lack of detail than are physicists, who tend to want a clear account of what entities are involved in a process and a precise description of the processes involved. This Storms does not supply. Nevertheless, the picture that he proposes may provide a useful stimulus to further analysis and experimental investigation.

The book goes in great detail into the experiments that have been performed and the theories that have been proposed, and on these grounds alone will be of considerable value to those interested in these matters.

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BOOK REVIEW

The Map of Heaven: How Science, Religion, and Ordinary People Are Proving the Afterlife by Eben Alexander, M.D., with Ptolemy Tompkins. Simon and Schuster, 2014. 209 pp. \$16.99. ISBN 978-1476766409.

The rapid onset of gram-negative meningitis in 2008 precipitated an extraordinary near-death experience for Eben Alexander. Uniquely, Alexander had been a neurosurgeon for more than twenty-five years and thus had extensive knowledge of brain functioning. Despite the fact that he had been in a coma for a week, he had recollections of activities, which should not have occurred. The state of his brain during that period simply would not have facilitated those events, yet they seem to have happened. Inspired by the visions and information received during his life-threatening illness, Alexander wrote *Proof of Heaven: A Neurosurgeon's Journey in the Afterlife*, a best-selling book that catapulted him into fame in October 2012.

The success of the book and various public appearances brought Alexander a vast collection of letters from people who also reported near-death experiences (NDEs). While there have been many books and studies written about NDEs (including some by SSE members), Alexander's professional background clearly set him apart from most of those authors and people sought his expertise and attention.

In *The Map of Heaven* Alexander has conveniently titled each chapter by the gifts he included therein. While his experience is fairly recent, he discusses relevant philosophical positions, such as those of Plato and Aristotle, considered the progenitors of Western thought. He notes that Plato conveyed one of the earliest recorded near-death experiences; that of a critically wounded soldier named Er, who revived consciousness just before his funeral pyre was ignited. Er's description of his trip to a "realm beyond earth" profoundly impacted Plato's thinking and imparts details similar to those Alexander experienced nearly two and a half millennia later.

Alexander also engages the thoughts of former renowned scientists and their consideration of the role of consciousness in the evolution of quantum theories. These include no lesser luminaries than Werner Heisenberg, Erwin Schrodinger, Max Planck, and many others. He quotes Nikola Tesla as stating, "The day science begins to study nonphysical phenomena, it will make more progress in one decade than in all previous centuries of its

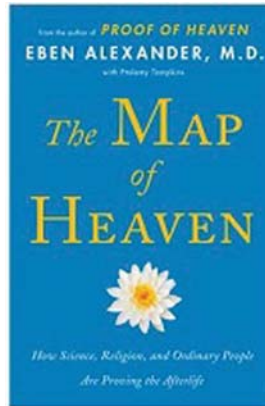
existence.” Later in the book he correctly notes that the problem associated with understanding there is a spiritual component to the physical world is not lack of evidence. Rather, as many SSE members can attest, it is the refusal of mainstream scientists to even look at the data.

Alexander also discusses whether or not matters spiritual can be intrinsically validated or must be relegated to articles of faith. Endorsing the position of many saints, he concludes that belief/faith is an integral part of understanding the phenomena we observe. Without such faith we cannot comprehend these complex events. Quoting St. Anselm of Canterbury, an eleventh-century theologian, he notes “In order to know you must first believe.”

Predicated on the notoriety associated with *Proof of Heaven*, Alexander has become a magnet for near-death experiencers who want to share their stories with him. Some of the germane examples he has interspersed throughout the new book. Not surprisingly, many of these reporters begin by noting they have kept the experience to themselves for years or even decades. After reading his prior book, however, they felt empowered to reach out to someone they understood to be a compassionate expert.

Alexander concludes with an Appendix prefaced by teleological questions, ones with universal appeal. Who are we? Where do we come from? Where are we going? Noting “everything is vibrations,” he pairs ancient acoustic innovations and architecture with modern resonance technology—iMRIs—as he explores the ubiquitous nature of vibrations and their significance for all life. During his NDE Alexander encountered what he calls *the Core*, and he reports hearing the sound of Om, which he describes as “the origin of all existence.” This seems to be a reaffirmation of what ancient mystics performed with the Hindu chanting of that same entrancing chord.

The Map of Heaven is filled with cross-cultural and interdisciplinary examples supporting the premise of a spiritual domain; one which is every bit as real as the physical dimensions of consensus reality. The views of mainstream scientists and existential philosophers, past and present, are eloquently merged with observations of common people who have experienced passage through a portal into realms unseen.



JOHN B. ALEXANDER

Note: There are no family ties to the author of the book.

BOOK REVIEW

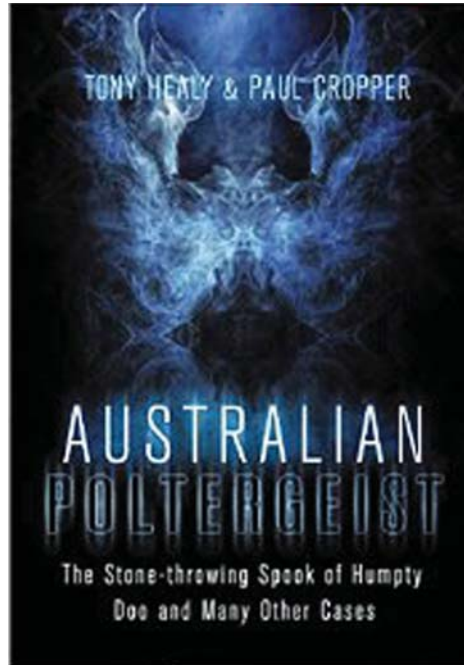
Australian Poltergeist: The Stone-Throwing Spook of Humpty Doo and Many Other Cases by Tony Healy and Paul Cropper. Strange Nation, 2014. 300 pp. ISBN 978-1-921134-34-0 (print), 978-1-921134-35-7 (digital).

No doubt this breezily written and informative volume will fill a gaping lacuna in most *JSE* readers' knowledge of evidence for psychokinesis generally and poltergeist phenomena in particular. It certainly did for me. Healy and Cropper survey 52 different Australian cases, spanning the years 1845–2002. The first eleven chapters cover the authors' 11 strongest cases in considerable detail. Chapter 12 describes the remaining 41 cases more briefly, and catalogues all 52 cases in chronological order. Chapter 13 purports to wrap things up, but it's followed by three appendices introducing additional cases outside Australia and brief discussions of similar or at least potentially relevant physical mysteries—for example, some Asian fire poltergeist cases, ball lightning, UFOs, and reported rains of fishes.

The authors rate their cases on a five-star scale, which they apply judiciously. Ratings begin at zero for apparent or proven hoaxes, and then range from half a star (“for questionable or very poorly documented cases” [p. 7]) to five stars. Healy and Cropper write: “With only two exceptions, we have reserved the four and five-star rating for very well documented cases where we were able to interview the eyewitnesses or in which we had some other personal involvement” (p. 7). The case they consider the strongest—the Mayanup case from 1955–2002—is the only one to earn five stars. Humpty Doo (1998)—possibly the most famous, or notorious—gets four and a half. Several cases earned between three and four stars, and quite a few get either zero stars or half a star.

The two highest-rated cases are genuinely interesting. In the Humpty Doo case, many credible observers witnessed the phenomena under conditions that quite clearly seemed to rule out chicanery, and which conformed to poltergeist reports in other parts of the world. The phenomena included “showers of stones both indoors and out, dangerous objects thrown with great force but without causing injury, objects falling unnaturally slowly yet producing unnaturally loud sounds on impact, objects observed levitating, objects observed materializing in mid-air” (p. 48), the intense heat of apported objects, and more.

The Mayanup poltergeist case was most active during the period 1955–1957, but persisted sporadically thereafter, and as in the Humpty-Doo case the phenomena were witnessed by many people under conditions in which allegations of fraud seem preposterous. And here, too, the phenomena fit many of the classic poltergeist patterns. Stones and other objects seemed to fall out of nowhere, and sometimes so many stones fell at once that appeals to hoaxing can easily be ruled out. One witness described this as “showers of stones falling like hail.” Moreover, although the stones were usually “pea-size to fist-size,” (p. 60), some seem



too large to have been hurled by a hoaxer, including one rock described as pumpkin-sized, which descended “slowly through the air, ‘as if it was being lowered’.” In fact, many of the falling objects didn’t fall normally. Some floated gently to the ground. Some stones, which had been flying rapidly, landed with an unexpected soft thud or “plop,” as if made of cork. And those objects never rolled when they hit the ground; instead, they stopped when they hit, as if they had no momentum. And in this case as well, many of the falling objects were very warm to the touch.

The authors don’t always see eye-to-eye on how to interpret their cases. Paul tends to favor the view that poltergeist phenomena are “caused by psychokinesis generated unwittingly by people at the centre of activity” (p. 260). But Tony “favours the idea that disembodied spirits are often involved” (ibid). In any case, this book is weakest on matters of interpretation and theory. Discussions of those topics tend to be somewhat perfunctory, but to their credit the authors at least do some sensitive probing into the potential underlying psychogenesis of the phenomena (I found the alternative spiritistic conjectures rather more simplistic). But the real value of the book lies in its quite thorough presentation of case detail. In the Humpty Doo case, the authors witnessed some phenomena for themselves, and in some other cases they were at least able to interview witnesses. For the older

cases it seems that the authors were both conscientious and meticulous in their research. And for all cases they seem balanced in their presentation of the evidence, carefully weighing the pros and cons of both normal and paranormal interpretations of the phenomena.

I was disappointed, however, in Healy and Cropper's failure to acknowledge the detailed and often groundbreaking contributions to the poltergeist literature by Alan Gauld, Tony Cornell, Hans Bender, and William Roll, among many others (see, e.g., Bender 1974, Gauld & Cornell 1979, Roll 2004). Although they frequently (and quite properly) mention the work of Colin Wilson, Guy Playfair, and D. Scott Rogo, it may be that their neglect of other major figures betrays a lack of real acquaintance with much of the significant work in this area, and perhaps that accounts for some of the superficiality in the authors' efforts to interpret the cases. Similarly, on several occasions, I felt it would have been in their interest to mention connections between the case they were discussing and some other quite important cases, such as that of Eleonore Zugun (see, e.g., Mulacz 1999).

The book is written in a very easy, conversational, and often amusing style, and was enjoyable to read. The Humpty Doo case—the first one covered in the book—even begins “It was a dark and stormy night.” Despite this very light and informal approach, the authors managed to convey a great deal of useful information and valuable detail. I wish, however, that they had been more careful about proofreading, or at least more diligent in enlisting the services of a grammarian. There were too many syntactical abominations of the forms: “the phenomena was witnessed” and “the phenomena is caused.” My word processor (like many) simply balks when I try entering such constructions (as just happened when I wrote those phrases for this review!); so how could the authors have missed these errors?

But despite these relatively minor lapses, I consider *Australian Poltergeist* to be a valuable resource and a worthwhile addition to the empirical poltergeist literature.

STEPHEN E. BRAUDE

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