

Trends That Will Affect Your Future . . .

# The Denier Movements Critique Evolution, Climate Change, and Nonlocal Consciousness

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*The SchwartzReport tracks emerging trends that will affect the world, particularly the United States. For EXPLORE, it focuses on matters of health in the broadest sense of that term, including medical issues, changes in the biosphere, technology, and policy considerations, all of which will shape our culture and our lives.*

In our culture right now we have several “denier” movements actively engaged in trying to impede the free development of science: the creationists, the climate change deniers, and the consciousness deniers—those who cannot, or will not, consider consciousness as anything other than materialist processes. For all their lack of substance, these movements are powerful forces in the culture, with substantial detrimental effects.

Creationism, on its face, seems medieval and absurd, but The Pew Research organization, which has tracked the creationist question for many years, reports that 55% of Americans believe the world was created within the last 10,000 years, with all the species pretty much as they are today.<sup>1</sup> As appalling as that is, I want to point out, in the context of this essay, that it is getting worse. Creationists are winning the hearts and minds of the American public. Consider the 2005 poll by the Harris organization, shown in Table 1.<sup>2</sup>

Climate change deniers have seriously impeded the development of rational policies to deal with what the best science tells us is happening with our climate, a distur-

tion that may prove to have fatal consequences.

Consciousness deniers are materialists who conceive of all aspects of consciousness as entirely a construct of physiological processes, in spite of hundreds of studies demonstrating this conclusion is not justified. This, just as creationists, in the face of hundreds of studies, demand that evolution be considered no more than an unproven theory, or climate deniers see extreme snow storms as proof climate change is a myth. As a result of these denier efforts, research in all three areas has been made more difficult, and this has had both unfortunate scientific and social implications.

The denier disruptions created in evolutionary and climate research are well known. The impact of consciousness deniers is less known or understood. But here is one consideration: progress in understanding the nature of consciousness, particularly that aspect—the nonlocal—that has not been explained by physiology but is addressed by nonlocality and quantum processes, has a very direct social consequence. The nonlocal aspect of consciousness may very well account for the insight of genius, for religious epiphany, as well as for the experiences known as psi. In an age when the acquisition and analysis of information as well as fostering of innovation that produces breakthroughs will be critical determinants of societal success, learning how individuals make intuitive leaps that change the game is no small matter. More profoundly, these studies, the collective product of multiple disciplines, are beginning to describe how

consciousness and matter interact. Collectively they are defining a new paradigm.

The three denier movements—creationists, climate change, and consciousness—all share certain commonalities. Deniers from all these movements always make a point of defining themselves as skeptics, so we should begin by noting that *skeptical* comes from the Greek root *skepsis*, meaning inquiry and doubt. Yet any objective analysis of these movements makes it clear that their hallmarks are a lack of interest in further inquiry, and an absence of doubt concerning their own positions. So if deniers are not skeptics what are they?

I believe they represent examples of classic defense positions concerning a cherished paradigm, slowly moving into crisis, just as described by the physicist and philosopher of science Thomas Kuhn.<sup>3</sup> With creationists, it is the inerrancy of the Bible and the presentation in Genesis of the creation of the world. For climate deniers, it is the conviction that human intervention is not the source of massive climate change. For consciousness deniers, it is a materialist perspective.

In this essay, although I draw comparisons amongst the denier movements, I particularly focus on the consciousness deniers, because their attacks and the disruptive friction they produce have a particularly deleterious effect on many of the lines of research covered in these pages.

If one follows the threads of consciousness-denier criticism over the past century, it is notable that, although in the early years attacks mostly centered on methodology, after an exchange of comments between denier psychologist Ray Hyman

**Table 1.** Do Man and Apes Have Common Ancestry?<sup>a</sup>

Do You Believe Apes and Man Have a Common Ancestry or Not?	July 1996	June 2005
Yes, apes and man do have a common ancestry.	51%	46%
No, apes and man do not have a common ancestry.	43%	47%
Not sure/decline to answer	5%	7%

<sup>a</sup>Taken from *The Harris Poll*.<sup>2</sup> Base: all adults. Percentages may not add up exactly to 100% due to rounding.

and statistician Jessica Utts that line of criticism largely ceased. Why did this happen? In 1995, the United States Congress commissioned the American Institutes for Research (AIR), a Washington, DC-based not-for-profit think tank with a long history of work in human performance and close government ties, to assess the reality of remote viewing in research the US government had previously funded. Remote viewing is a protocol for obtaining objectively verifiable information that can only be obtained through accessing nonlocal awareness, the aspect of consciousness outside of space/time.

To make the assessment, AIR selected nationally recognized statistics professor Jessica Utts of the University of California, Davis, and well-known skeptic, Professor Ray Hyman, a psychology professor on the faculty of the University of Oregon and a fellow of the Committee for the Scientific Investigation of Claims of the Paranormal (now the Committee for Skeptical Inquiry). Both had previously written on this topic and were notably sophisticated in the issues involved. Utts had already addressed the question Congress was asking in a 1991 paper published in the journal *Statistical Science*.<sup>4</sup>

Hyman and Utts were each asked by AIR to produce an independent report by a fixed date. Utts complied and submitted her report by the deadline. Hyman did not. As a result, he was able to see her report before writing his own, and the approach he chose to take, when he did write, was largely a commentary on her analysis. To compensate for this inequity, AIR allowed Utts to write a response that was incorporated into the final document submitted to the Congress. It is in this unplanned form of exchange that the essence of the two positions is revealed. Utts' initial statement is remarkable for its clarity. She wrote:

Using the standards applied to any other area of science, it is concluded

that psychic functioning has been well established. The statistical results of the studies examined are far beyond what is expected by chance. Arguments that these results could be due to methodological flaws in the experiments are soundly refuted. Effects of similar magnitude have been replicated at a number of laboratories across the world. Such consistency cannot be readily explained by claims of flaws or fraud.

The magnitude of psychic functioning exhibited appears to be in the range between what social scientists call a small and medium effect. That means that it is reliable enough to be replicated in properly conducted experiments, with sufficient trials to achieve the long-run statistical results needed for replicability.<sup>5</sup>

Hyman, responding to Utts' report, wrote:

I want to state that we agree on many . . . points. We both agree that the experiments (being assessed) were free of the methodological weaknesses that plagued the early . . . research. We also agree that the . . . experiments appear to be free of the more obvious and better known flaws that can invalidate the results of parapsychological investigations. We agree that the effect sizes reported . . . are too large and consistent to be dismissed as statistical flukes.<sup>6</sup>

**Table 2.** Blind Methodologies Used by Various Disciplines<sup>a</sup>

Area of Science	Number of Papers	Number with Blind Methodologies and as % of Total (0.00%)
Physical science disciplines	237	0
Biological science disciplines	914	7 (0.8%)
Medical science disciplines	227	55 (24.2%)
Psychological and animal behavior disciplines	143	7 (4.9%)
Parapsychology	27	23 (85.2%)

<sup>a</sup>From Sheldrake.<sup>7</sup> Numbers of papers reviewed and the number involving blind or double-blind methodologies in a range of scientific journals. Only papers reporting experimental results were included in this survey; theoretical papers and review articles were excluded. All publications appeared in 1996-8 unless otherwise indicated.

This is important because what Hyman is conceding is that the way in which the kinds of laboratory experiments described in this paper are conducted, and the way in which they are analyzed, is no longer a matter for dispute. Nonlocal perception cannot be explained away as some artifact resulting from how the data were collected or evaluated.

Nor is this research vulnerable to criticisms based on blindness and randomness. No other field of science is so obsessed with the gold standard issues of blindness and randomness.

English biologist Rupert Sheldrake conducted a survey of leading journals published between October 1996 and April 1998 (Table 2). The papers these journals had published were broken into three categories: "(1) not applicable: papers that did not involve experimental investigations, for example, theoretical or review articles; (2) blind or double-blind methodologies used; and (3) blind or double-blind methodologies not used."<sup>7</sup> The reader may find the results surprising. As can be seen in Table 2, parapsychology as a percentage of published papers overwhelmingly utilizes this protocol more than any other discipline.

Five years later, in 2004, Caroline Watt and Marleen Nagtegaal, working at Edinburgh University, restudied the use of the double-blind protocol in the various disciplines of science and reported that in the ensuing years little had changed.<sup>8</sup>

With the Utts/Hyman exchange, and the work by Sheldrake, and Watt and Nagtegaal on record, the deniers have been denied the line of attack that parapsychological methods are typically faulty. Their focus now is centered on replication rates—it works but not as well as we demand it should—and the fact that a

single paradigm-achieving theory has not emerged. To anyone familiar with Kuhn, of course, consciousness research is evolving just as it should, and equally predictably, the deniers are mounting increasingly implausible paradigm defenses just as the Kuhn's model predicts.<sup>3</sup>

What the deniers do not acknowledge is that paradigms do change and that it is theories, and the experiments that test them, that create paradigms. Further, they do not recognize that no one discipline can create a new paradigm, only many disciplines reaching a consensus can do that. This is the process now going on and, in this context, consciousness researchers such as parapsychologists are simply early-adapters as science, in its many manifestations, finally grapples seriously with consciousness and nonlocality—a quest deniers refuse to join.

How ironic it is then that Kuhn, whose mind conceived the paradigm concept in science—and paradigm is the core of all denier arguments—fully, if somewhat uncomfortably, recognized the nonlocal. In his classic book, *The Structure of Scientific Revolutions*, he wrote:

No ordinary sense of the term 'interpretation' fits these flashes of intuition through which a new paradigm is born. *Though such intuitions depend upon the experience, both anomalous and congruent, gained with the old paradigm, they are not logically or piecemeal linked to particular items of that experience as an interpretation would be* [emphasis added].<sup>3</sup>(pp122,123)

Comparing this with the statements made by people upon whom history confers the title genius, prophet, or seer reveals that Kuhn echoes their words almost exactly.

As Einstein explained it, "I feel certain I am right while not knowing the reason."<sup>9</sup> Einstein's assistant Banesh Hoffman, himself a major physicist, observed, "When excited discussions failed to break the deadlock [of a problem], Einstein would quietly say in his quaint English, 'I will have a little tink.'"<sup>10</sup> As Hoffman and Leopold Infeld, Einstein's other major assistant (also a major physicist) looked on in silence, Einstein would pace the room, coiling and uncoiling his signature hair around a finger as he walked, his sockless ankles winking into view as his pants

flapped. "There was a dreamy faraway, yet inward look on his face," Hoffman said, but, "No sign of stress. No outward indication of intense concentration."<sup>10</sup> Neither assistant felt he could say a word. After a few minutes, Einstein would suddenly come back to normal consciousness, "a smile on his face and an answer to the problem on his lips." Hoffman said the ideas "seemed to come from left field, to be quite extraordinary."<sup>10</sup>

Brahms described his moments of creative breakthroughs this way:

. . . in this exalted state I see clearly what is obscure in my ordinary moods; then I feel capable of drawing inspiration from above as Beethoven did . . . . Those vibrations assume the form of distinct mental images . . . . Straightaway the ideas flow in upon me . . . and not only do I see distinct themes in the mind's eye, but they are clothed in the right forms, harmonies, and orchestration. Measure by measure the finished product is revealed to me when I am in those rare inspired moods . . .<sup>11</sup>

Mozart and Copland also seem to have had similar experiences.<sup>11</sup> In Mozart's case, the connection was so clear and strong the pages of his compositions show few alterations; they look like finished transcriptions.

Remote viewers say of their experiences: "I kind of space out," or "It's sort of like focusing my mind at some middle distance." They describe the moment itself by saying, "It came in a flash," or "It was like a hologram . . . . Images are all there . . . as if it were a hologram hanging in my mind."<sup>12</sup>

Poincaré described his work on a mathematical problem in the same vein: "One day, as I was crossing the street, the solution of the difficulty which had brought me to a standstill came to me all at once."<sup>13</sup>

Consider also one of history's most renowned psychics, Edgar Cayce, describing what he was doing. Speaking from his self-induced trance state in 1923, in response to a question about the process and source of his nonlocal ability:

The information as given or obtained from this body is gathered from the sources from which the suggestion may derive its information. In this state the conscious mind becomes subjugated to the subconscious, su-

perconscious or soul mind; and may and does communicate with like minds, and the subconscious or soul force becomes universal. From any subconscious mind information may be obtained, either from this plane or from the impressions as left by the individuals that have gone on before, as we see a mirror reflecting direct that which is before it . . . . Through the forces of the soul, through the mind of others as presented, or that have gone on before; through the subjugation of the physical forces in this manner, the body obtains the information.<sup>14</sup>

How is it that the great geniuses of history in both science and the arts, as well as ordinary remote viewers, and one of history's great clairvoyants have reported similar experiences in the process of attaining insight, and yet consciousness deniers feel this is not an appropriate area for scientific inquiry? Inasmuch as our history is largely defined by the breakthroughs resulting from such insights, surely understanding the processes involved should be of primary importance.

Because they are not data based, all three denier movements have a certain antique quality about them. Each speaks about the field it attempts to debunk from a position far behind the cutting edge of the science being attacked. This antiqueness is a sure sign that denier arguments are based on attitude, not data. Deniers all display what can only be called willful ignorance. In the case of the creationists, this is easy to see since, to maintain it, they basically have to discard geology, paleontology, anthropology, chemistry, astrophysics, astronomy (among other disciplines), and the rest of modern science—except perhaps for medicine—to hold their position.

Climate change deniers simply will not deal with the mass of data collected showing not only that climate change is real, but that human activity—not natural cycles—is the dynamic driving it. This creates severe political problems for the democracies where endless debate becomes a weapon. Nobel Laureate economist Paul Krugman has described the denier's behavior in the debate leading up to the passage by the U.S. Congress of the Waxman-Markey climate-change bill:

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If you watched the debate . . . you didn't see people who've thought hard about a crucial issue, and are trying to do the right thing. What you saw, instead, were people who show no sign of being interested in the truth. They don't like the political and policy implications of climate change, so they've decided not to believe in it—and they'll grab any argument, no matter how disreputable, that feeds their denial.<sup>15</sup>

Notably, corporations which live in the continuing glare of profit and loss, in its way a more stringent standard even than scientific protocol, have no time for such unworldly bias. As I write this essay in January 2010, at the United Nations Investor Summit on Climate Risk, 450 of the world's largest investors have issued a statement calling on the United States and other governments to "act now to catalyze development of a low-carbon economy and to attract the vast amount of private capital necessary for such transformation."<sup>16</sup>

The US, European, and Australian investor groups, who together represent \$13 trillion in assets, have called for "a price on carbon emissions" and "well-designed carbon markets" to provide "a cost-effective way of achieving emissions reductions."<sup>16</sup>

In consciousness deniers, willful ignorance can similarly be seen. They speak about a parapsychology that has not existed in decades, if it ever did, and even more revealingly they ignore all the other areas of research where work is going on that is essentially parapsychological under another name. Therapeutic intention research, such as immunologist Leonard Leibovici's study on remote retroactive intercessory prayer,<sup>17</sup> or the near-death experience studies of cardiologist Pim Van Lommel et al,<sup>18,19</sup> are two examples. One wonders if they are even known to the denier community? This is not really a rhetorical question. At a conference in Vancouver, British Columbia, when asked directly in open session whether he was familiar with the remote viewing literature, I recall well-known psychologist and denier Richard Wiseman, recognizing he was about to be asked a specific question about this line of research, confessed he had not read it, and did not know where it was to be found.<sup>20</sup>

The denier commentaries do not seem to apprehend that some of the largest, most important, and best-funded research studying consciousness and nonlocality have been done in disciplines other than parapsychology—Leibovici and van Lommel being only two examples. Let me cite a few more lines of inquiry to give a sense of how far behind the times the consciousness denier community actually is. And let me point out that all of this could be discovered in half an hour by a college sophomore searching a freely available, recognized index such as *PubMed*.

First, this from a paper by three leading physicists who have explored the issue of consciousness, in the context of physics. Because of its unequivocal clarity, I quote the entire statement:

Neuropsychological research on the neural basis of behavior generally posits that brain mechanisms will ultimately suffice to explain all psychologically described phenomena. This assumption stems from the idea that the brain is made up entirely of material particles and fields, and that all causal mechanisms relevant to neuroscience can therefore be formulated solely in terms of properties of these elements. Thus, terms having intrinsic mentalistic and/or experiential content (eg, 'feeling,' 'knowing' and 'effort') are not included as primary causal factors. *This theoretical restriction is motivated primarily by ideas about the natural world that have been known to be fundamentally incorrect for more than three-quarters of a century* [emphasis added]. Contemporary basic physical theory differs profoundly from classic physics on the important matter of how the consciousness of human agents enters into the structure of empirical phenomena. The new principles contradict the older idea that local mechanical processes alone can account for the structure of all observed empirical data. Contemporary physical theory brings directly and irreducibly into the overall causal structure certain psychologically described choices made by human agents about how they will act. This key development in basic physical theory is applicable to neuroscience, and it provides neuroscientists and psychologists with an alternative conceptual framework for describing neural processes. Indeed, owing to certain structural features of

ion channels critical to synaptic function, contemporary physical theory must in principle be used when analyzing human brain dynamics. The new framework, unlike its classic physics-based predecessor, is erected directly upon, and is compatible with, the prevailing principles of physics. It is able to represent more adequately than classic concepts the neuroplastic mechanisms relevant to the growing number of empirical studies of the capacity of directed attention and mental effort to systematically alter brain function.<sup>21</sup>

Second, let me cite a report by Frecska and Luna of the National Institute for Psychiatry and Neurology in Budapest, in which they present a neuro-ontological interpretation of spiritual experiences:

The prevailing neuroscientific paradigm considers information processing within the central nervous system as occurring through hierarchically organized and interconnected neural networks. The hierarchy of neural networks doesn't end at the neuroaxonal level; it incorporates subcellular mechanisms as well. When the size of the hierarchical components reaches the nanometer range and the number of elements exceeds that of the neuroaxonal system, an interface emerges for a possible transition between neurochemical and quantum physical events. 'Signal nonlocality,' accessed by means of quantum entanglement is an essential feature of the quantum physical domain. The presented interface may imply that some manifestations of altered states of consciousness, unconscious/conscious shifts have quantum origin with significant psychosomatic implications.<sup>22</sup>

Nowhere in any of the denier commentaries is there any recognition of this work. Clearly there is a whole world beyond arguing whether nonlocality is real or a statistical artifact or a magic trick. But one would not know it from reading contemporary parapsychological criticism, just as one would know nothing of modern paleontology reading a creationist tract, or fully comprehend the acidification of the world ocean reading climate change denier literature.

Another hallmark of denier criticism is that nothing ever really changes and, de-

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pending on the audience, issues long settled will emerge from their crypts to distort and confuse once again. Remember the exchange between Hyman and Utts? Well here is an example of what I mean. Almost five years after his exchange with Jessica Utts, Professor Hyman, in July 2002, was interviewed by a reporter from the *Austin American-Statesman*.

Presumably on the assumption that a reporter in Texas was unlikely to know that a government white paper like the AIR report even existed, Hyman said, "The issue is, what kind of evidence do they have? I didn't see any science at all, any evidence they got anything right other than pure guesswork."<sup>23</sup>

Even if remote viewing worked, Hyman stated, it would be too erratic to rely on. "People who believe it admit that only 15% of what Remote Viewers tell you is true, which means 85% is wrong," he remarked, although he did not mention the origin of this statistic, and it directly contradicts the published research, about which since he participated in the AIR evaluation must be undoubted. He concluded, "You don't know which is which, so it's of no practical use." If remote viewing could be demonstrated, "It would overturn almost everything we know in science."<sup>23</sup>

How does one reconcile Hyman's words in 1995 with his interview in 2002? The answer, of course, is one cannot. It is worth noting that the "15% of what Remote Viewers tell you is true" is utterly fanciful, and could not produce the statistical outcomes that are part of the published AIR record. Moreover, it directly contradicts what has been reported in the peer-reviewed literature for almost four decades. I will cite here only one such report—not from one of my papers—showing what the most casual research in the peer-reviewed remote viewing literature will quickly yield.

In their initial 1976 paper on their research at SRI International, physicists Hal Puthoff and Russell Targ reported, "Using Edington's method for combining the probabilities from independent experiments, the probability of observing these six experimental outcomes by chance alone is  $7.8 \times 10^{-9}$ , one tailed."<sup>24</sup>

When one sees comments such as Hyman's, it becomes clear that to deniers a preconceived conclusion is far more im-

portant than actual data. As George Orwell said in his novel *1984*, "And if the facts say otherwise, then the facts must be altered. Thus history is continuously rewritten."<sup>25</sup>

This leads to a final point, a very sad one that only rarely turns up in the scholarly community, where a conscious and purposeful commitment to integrity is a basic part of science. There is a propensity in denier movements, all of whose members ostensibly ground their arguments in science, to behave in ways that are demonstrably unscientific and, even on occasion, of dubious ethicality.

In climate change, where there are vast sums at risk, the frauds are biggest and most complex, carefully filtered through a network of denier institutes and think tanks. One brief account will serve as representative. Mitchell Anderson, a Vancouver-based researcher and writer and former staff scientist at Sierra Legal Defense Fund, describes the backstory behind the climate denier *Skeptic's Handbook* created by the Heartland Institute, which was formed and funded by oil interests, including \$676,000 from ExxonMobil.<sup>26</sup> In a typical denier move to manipulate media and policy, they sent 150,000 copies of the *Handbook* across the United States, including to 850 journalists, 26,000 schools, and 19,000 "leaders and politicians." The *Handbook* coaches "skeptics" to keep from being pinned down by the evidence demonstrating climate change.<sup>26</sup>

Anderson noted, "It is also interesting that this latest product of the denial machine is washing over the nation less than a month after the U.S. government released their Climate Change Literacy brochure—cosigned by 13 federal agencies and 24 educational and scientific partners." Membership in the supposed climate change conspiracy now includes what deniers term "eco-freaks"—which includes such government agencies as the U.S. Department of Defense, the U.S. Department of the Interior and the U.S. Forest Service.<sup>26</sup>

Exactly these same techniques of widespread distribution of false or highly distorted information are employed by the other denier movements. Creationists, using the political power they wield, in 2006 pressured the Bush administration to direct the Grand Canyon National Park that it was not to provide an official estimate of

the geologic age of the canyon. "In order to avoid offending religious fundamentalists, our National Park Service is under orders to suspend its belief in geology," said Public Employees for Environmental Responsibility Executive Director Jeff Ruch. "It is disconcerting that the official position of a national park as to the geologic age of the Grand Canyon is 'no comment' "<sup>27</sup>

Consciousness deniers similarly maintain an active media-influencing program. Because it is both representative and reveals a state of mind, I want to draw attention to one particular example. To do that I rely on the published words of principal players in these events: a nationally prominent astronomer; highly regarded professors of psychology and sociology, and the professor of philosophy and founder of the organized American expression of the consciousness denier movement. This record exists because all but the philosopher became so appalled by what they saw that they not only resigned, they put their views quite deliberately on record in the public press.

Since this story is an integral part of the founding of the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP), now morphed into the Committee for Scientific Inquiry (CSI), and still the principal consciousness-denier group in the United States, it is instructive to consider it. In my opinion it is probably the clearest story in the record illustrating the difference between deniers and genuine skeptics.

The story has an almost Greek tragedy mythopoetic quality, in which a group of scientists, some quite prominent in their fields, are presented with the most fundamental choice a scientist can face: do I go with the data, or with my prejudice? Some rose to the challenge, some did not. It is a cautionary tale that I will go into only to the point of illustrating the relevant denier-skeptic issues. However, I strongly encourage any reader interested in better understanding the psychology of denier movements to go to the Web sites listed in my references, where the original papers are located online, and to pursue what is to be found there.

In brief, here is the narrative. In the September-October 1975 issue of *The Humanist*, as well as a book by philosopher Paul Kurtz' private press, *Prometheus*, a statement, "Ob-

jections to Astrology” was published.<sup>28</sup> The statement was signed by 186 scientists, a group which included 18 Nobel Laureates. One who lent his name was Astronomer Dennis Rawlins, already famous for debunking the claims of polar explorers Richard Byrd and Robert Peary while demonstrating that Ronald Amundsen was the first man to reach both poles.

Also published in the journal was a paper by science writer Lawrence Jerome that included an attack on French psychologist and statistician Michel Gauquelin and his then wife and research partner, Françoise.<sup>28</sup> It was a curious attack; the Gauquelins had their own problems with astrology; indeed, they would go on to dismiss, on the basis of their research data, many claims of Western astrology—a position they would make explicit in Kurtz’ journal *The Humanist*. But, exactly because they were being good scientists, the Gauquelins also reported identifying small but significant relationships between some planetary positions at the time of an individual’s birth and later performance excellence, most notably the position of Mars in a natal chart and later athletic prowess. It wasn’t a big effect but, to the committee, it was intolerable. So, since in many ways they agreed, the committee—in the person of Jerome—chose as the grounds for their attack the Gauquelins’ statistics.<sup>29,30</sup>

It soon became clear that Michel Gauquelin was the better statistician and the denier case collapsed. Undeterred, the group went on for round two. What happened next Rawlins describes as a comedy of incompetence, bombast, and a commitment to denialism so powerful it overturned good sense and ethics, until the deniers were thoroughly tarred by their unscientific disdain for experimental evidence and integrity.<sup>29,30</sup>

After furious public exchanges, Rawlins, a skeptic not a denier, publicly resigned or was expelled from the group, and shortly thereafter he put the entire sorry tale in the record via a paper entitled, “sTARBABY,” a play on Joel Chandler Harris’ late 19th century Uncle Remus stories, where Br’er Rabbit, the Loki-like adventurer character around whom many of the stories are built, attacks a tar baby and, each time he hits him, he becomes more and more mired in the tar.<sup>29,30</sup> He would not be alone, and in the resignations of several others of the committee we have

defined, for us, the difference between skeptics and deniers.

The person who saw this distinction most clearly was the sociologist Marcello Truzzi, who acted on his beliefs by first resigning from the committee and, then, publishing a new journal, *The Zetetic Scholar* (zetetic from the Greek *zētētikos*, from *zēteō*, to seek to proceed by inquiry), in which he decried what he called “pseudo-skeptisms.” Truzzi wrote:

The current evidence strongly indicates that (a) a Mars Correlation was validly found by the Gauquelins, (b) a correlation was found in several replications by the Gauquelins using different samples, (c) a similar correlation was found in replications conducted by Kurtz-Zelen-Abe11 (KZA) (Committee members—SAS) In regard to a) and b) the key question concerns the validity of the Gauquelin’s data. It has repeatedly been incorrectly stated that there is no way to check this data. Not only have the Gauquelins published all their data (so computations can easily be checked), they have kept all original records from the birth registries, and these have been made available to any serious researchers. In fact, the Gauquelins have urged critics to check this data.<sup>31</sup>

Truzzi’s reasons for resigning state clearly the problem with denier movements:

Originally I was invited to be a co-chairman of Committee for the Scientific Investigation of Claims of the Paranormal by Paul Kurtz. I helped to write the bylaws and edited their journal. I found myself attacked by the Committee members and board, who considered me to be too soft on the paranormalists. My position was not to treat protoscientists as adversaries, but to look to the best of them and ask them for their best scientific evidence. I found that the Committee was much more interested in attacking the most publicly visible claimants such as the *National Enquirer*. The major interest of the Committee was not inquiry but to serve as an advocacy body, a public relations group for scientific orthodoxy. The Committee has made many mistakes. My main objection to the Committee, and the reason I

chose to leave it, was that it was taking the public position that it represented the scientific community, serving as gatekeepers on maverick claims, whereas I felt they were simply unqualified to act as judge and jury when they were simply lawyers.<sup>32</sup>

New Zealand psychologist Richard Kammann, the third person to resign, would write in his exegetic essay of the whole Gauquelin affair, “When the whole record is examined over five years, there is almost no instance in which merit wins out over self-serving bias.”<sup>33</sup> The one clear exception was providing Rawlins a carte blanche space in *The Skeptical Inquirer*, and even this was undermined by a flurry of simultaneous misstatements.<sup>28,29</sup> Kammann wrote:

The bottom line is that an apology is owed the Gauquelins for the mistreatment of their data, and the aspersions cast on their authenticity. I don’t wish to convey that I’m a believer, because I also have skeptical reservations about the Mars effect. What makes this claim suspect is the scientific perversity of the proposition that the location of Mars in the sky at the time a person is born has some effect on that person’s athletic performance 30 or 40 years later.<sup>33</sup>

More than a decade later, Suitbert Ertel,<sup>34</sup> a German researcher of the next generation, uninvolved with the bitter fight that had gone before, meticulously went back through this entire chapter of denierism, including a subsequent denier round in Paris, and confirmed by a variety of independent statistical analyses both Kammann’s and Truzzi’s assessment. Perhaps even more important was the graceless acknowledgement of Paul Kurtz who had begun it all: “It is time, to submit, to move to other more productive topics. This controversy is not an isolated event. The “sTarbaby incident” has been followed by numerous subsequent incidents off alleged falsification and distortion amongst consciousness deniers.”<sup>35</sup>

The Gauquelin controversy continues even as further confirmations come in. Fuzeau-Braesch reported data on twins that could be interpreted to support the Gauquelins’ data.<sup>36</sup> Rupert Sheldrake,<sup>37</sup> Roger Nelson,<sup>38</sup> and Jim Lippard,<sup>39</sup> all of

whom have been subjected to denier attacks, have created Web sites listing the relevant documents and transcripts of these and other such events. The reader is invited to go through these archives and reach their own conclusions. Because all three denier movements are essentially political-cultural special interests exercising common strategies they are exploring convergence. New York Times science writer Leslie Kauffman noted: "Critics of the teaching of evolution in the nation's classrooms are gaining ground in some states by linking the issue to global warming, arguing that dissenting views on both scientific subjects should be taught in public schools."

In Kentucky, a bill recently introduced in the Legislature would encourage teachers to discuss 'the advantages and disadvantages of scientific theories,' including "evolution, the origins of life, global warming and human cloning."<sup>40</sup>

Environmental journalist, Bryan Nelson in a piece he entitled, *Creationists Seek To Stop The Teaching Of Global Warming* explained the rationale: "...linking the global warming debate with these other issues, (Creationism) strengthens their legal argument. Courts have ruled that singling out evolution for criticism violates the separation of church and state, so going after global warming gives them a broader agenda and thus opens a legal loophole. Second, by riding the coattails of rising public doubt about climate science, creationists hope to legitimize their stance against the scientific establishment in general."<sup>41</sup>

Exactly where consciousness deniers will come down in this open alignment is not yet clear. In social terms it is the least important. Consciousness denial is the most parochial of these movements, because its field of argument is limited to a part of science. There is no monied constituency or theological infrastructure to back consciousness denial, and the robust sale of popular books on consciousness subjects makes it clear where the populace stands.

All of this matters more than might at first be apparent. Stop and think about this for a moment: the truth about our species and our planet, the processes of our planet's climate, and the nature of our consciousness are the essence of our search to understand who we are and what

it means to be a human being. These three denier movements all, in one way or another, impede the quest for this knowledge. Like pranksters putting up false direction signs, they waste precious resources and time. Worse, they poison the atmosphere of the inquiries. They serve not truth but bias.

## REFERENCES

1. Religion a strength and weakness for both parties. The Pew Research Center for the People the Press. Available at: <http://people-press.org/reports/display.php3?ReportID=254>. Accessed April 14, 2008.
2. Nearly two-thirds of U.S. adults believe human beings were created by God. *The Harris Poll*. July 6, 2005. Available at: [http://www.harrisinteractive.com/harris\\_poll/index.asp?PID=581](http://www.harrisinteractive.com/harris_poll/index.asp?PID=581). Accessed February 14, 2010.
3. Kuhn T. *The Structure of Scientific Revolutions*. Chicago, Ill: University of Chicago Press; 1962.
4. Utts J. Replication and meta-analysis in parapsychology. *Statist Sci*. 1991;6:363-403.
5. Utts J. An assessment of the evidence for psychic functioning. In *An Evaluation of Remote Viewing: Research and Applications*. Mumford MD, Rose AM, Goslin DA, eds. Washington, D.C.: The American Institutes for Research 1995;23-52. Available at: [www.lfr.org/LFR/csl/library/AirReport.pdf](http://www.lfr.org/LFR/csl/library/AirReport.pdf). Accessed: March 10, 2010.
6. Hyman R. Evaluations of programs on "anomalous mental phenomena." In *An evaluation of remote viewing: Research and applications*. Mumford MD, Rose AM and Goslin DA, eds. Washington, D.C.: The American Institute for Research (AIR). 1995;62-96. Available at: [www.lfr.org/LFR/csl/library/AirReport.pdf](http://www.lfr.org/LFR/csl/library/AirReport.pdf). Accessed: March 10, 2010.
7. Sheldrake R. How widely is blind assessment used in scientific research? *Altern Ther*. 1999;5:88-91.
8. Watt C, Nagtegaal M. Reporting of blind methods: an interdisciplinary survey. *J Soc Psych Res*. 2004;68:105-114.
9. Einstein A. Quoted in: MacDonald DKC. *Farady, Maxwell and Kelvin*. Garden City, NJ: Doubleday; 1964.
10. Einstein A. In *The Evolution of Physics*. Infeld L, Isaacson W, eds. New York, NY: Touchstone, 2007; intro.
11. Abell AM. *Talks with the Great Composers*. Garmisch-Partenkirchen, Germany: G.E. Schroeder-Verlag; 1964:19-21.
12. Schwartz S. Applications of anomalous cognition. *Proceedings of the Society for the Anthropology of Consciousness*; 1981.
13. Goldenberg J, Levav A, Mazursky, and Solomon S. *Cracking the Ad Code*. New York: Cambridge University Press, 2009:3.
14. Cayce E. Reading 3744-3, at the Phillips Hotel, Dayton, Ohio, 9 October 1923.
15. Krugman P. Betraying the planet. *The New York Times*. June 29, 2009 Available at: [http://www.nytimes.com/2009/06/29/opinion/29krugman.html?\\_r=1](http://www.nytimes.com/2009/06/29/opinion/29krugman.html?_r=1). Accessed June 29, 2009.
16. Investors representing \$13 trillion call for climate action now. Environmental News Service. Available at: <http://www.ens-newswire.com/ens/jan2010/2010-01-14-01.html>. Accessed January 14, 2010.
17. Leibovici L. Effects of remote, retroactive intercessory prayer on outcomes in patients with bloodstream infection: randomised controlled trial. *BMJ*. 2001;323:1450-1451.
18. van Lommel P, van Wees R, Meyers V, Elferich I. Near-death experience in survivors of cardiac arrest: a prospective study in the Netherlands. *Lancet*. 2001;358:2039-2045.
19. van Lommel P. Near-death experience, consciousness, and the brain. *World Futures*. 2006;62:134-151.
20. Wiseman R. Personal communication. Meeting of Minds Conference; July 14-16, 2007; Vancouver, British Columbia.
21. Schwartz JM, Stapp HP, Beauregard M. Quantum physics in neuroscience and psychology: a neurophysical model of mind-brain interaction. *Philos Trans R Soc Lond B Biol Sci*. 2005;360:1309-1327.
22. Frescka E, Luna LE. Neuro-ontological interpretation of spiritual experiences. *Neuropsychopharmacol Hung*. 2006;8:143-153.
23. Interview with Ray Hyman. *Austin American-Statesman*. July 14, 2002.
24. Puthoff HE, Targ R. A perceptual channel for information transfer over kilometer distances: Historical perspective and recent research. *Proceedings of the IEEE* 64 (1976): 329-354. Available at: <http://www.espresearch.com/espgeneral/IEEE-329B.shtml>. Accessed: March 10, 2010.
25. Orwell G. 1984. New York, NY: New American Library; 1961: 213.
26. Anderson M. The Heartland Institute's skeptic handbook—get out the shovel . . . [desmogblog.com](http://desmogblog.com). March 30, 2009. Available at: <http://desmogblog.com/heartland-institute-skeptics-handbook-get-out-shovel>. Accessed February 10, 2010.
27. How old is the Grand Canyon? Public Employees for Environmental Responsibility. December 28, 2006. Available at: [http://www.peer.org/news/news\\_id.php?row\\_id=801](http://www.peer.org/news/news_id.php?row_id=801). Accessed January 5, 2007.
28. Bok BJ, Jerome L. *Objections to Astrology*. Buffalo, NY: Prometheus Books, 1975.
29. Rawlins D. sTARBABY Fate: Remus extremus. *Skeptical Inquirer*. 1981;34:67-98.

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30. Rawlins D. Remus extremus. *Skeptical Inquirer*. 1981-1982;6:58-63.
31. Truzzi M. Editorial. *Zetetic Scholar* 1982;10:76.
32. Truzzi M. Colloquium presented by Marcello Truzzi, PhD, Professor of Sociology at Eastern Michigan University at Ypsilanti, Michigan, Available at: <http://www.fiu.edu/~mizrachs/truzzi.html>. Accessed: January 15, 2010.
33. Kammann R. The true disbelievers: Mars effect drives skeptics to irrationality. *Zetetic Scholar*. 1982;10:50-65. Available at: <http://www.discord.org/~lippard/kammann.html>. Accessed February 11, 2010.
34. Ertel S. Is there no Mars effect? The CFEP's verdict scrutinized with the assistance of six independent researchers. *Correlation*. 1998;17(2):4-23.
35. Kurtz P, Nienhuys JW, Sandhu R. Is the "Mars effect" genuine? *J Sci Explor*. 1997; 11,38.
36. Fuzeau-Braesch S. *Astrology off the beaten track: A scientific study of planets and personality*. San Antonio, TX: Anomalist Books, 2009.
37. Sheldrake R. Skeptical investigations Web site. Available at: <http://www.skepticalinvestigations.org/New/index.html>. Accessed February 11, 2010.
38. Nelson R. The Global Consciousness Project. Skeptical Concepts. Available at: <http://sites.google.com/site/skepticalconcepts/home>. Accessed March 12, 2010.
39. Lippard J. The True Disbelievers. Available at: <http://www.discord.org/~lippard/kammann.html>. Accessed February 11, 2010.
40. Kauffman L. Darwin Foes Add Warming to Targets. The New York Times. 3 March 2010. Available at: <http://www.nytimes.com/2010/03/04/science/earth/04climate.html?pagewanted=1>. Accessed: March 12 2010.
41. Nelson B. Creationists seek to stop the teaching of global warming. Mother Nature Network. 5 March 2010. Available at: <http://www.mnn.com/family/raising-a-family/stories/creationists-seek-to-stop-the-teaching-of-global-warming>. Accessed: March 5, 2010.

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