

The Antique Roadshow: How Denier Movements Critique Evolution, Climate Change, and Nonlocal Consciousness

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In our culture right now we have several “denier” movements actively engaged in trying to impede the free development of science: the Creationists (e.g., Hornyanszky & Tasi, 2002), the climate change deniers (e.g., Lomborg, 2008), and the consciousness-deniers who cannot, or will not, consider consciousness as anything other than materialistic processes. For all their lack of substance, these movements represent powerful forces in the culture, producing substantial detrimental effects.

Creationism, on its face, seems medieval and absurd. However, the Pew Research Center for the People and the Press (2008), just one of several organizations tracking the Creationist issue for many years, reports that 55 percent of Americans believe the world was created within the last 10,000 years with all the species pretty much as they are today. As appalling as that is, I want to point out in the context of this essay it is getting worse. Creationists are winning the hearts and minds of the American public. Consider, Figure 1, a 2005 poll by the Harris organization.

Figure 1: "Do you believe apes and man have a common ancestry or not?"

Base: All Adults

	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	05	07

Note: Percentages may not add up exactly to 100% due to rounding. (Harris, 2005, online)

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Climate change deniers have seriously impeded the development of rational policies to deal with what the best scientific research tells us is happening with our climate, a distortion 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 that climate deniers see extreme snow storms as proof that climate change is a fallacy. 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 psychic experiences. In an age when the acquisition and analysis of information as well as the 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 deniers, and consciousness-deniers — all share certain commonalities. Deniers from all these movements make a point of defining themselves as skeptics, so we should begin by noting that “skeptic” comes from the Greek root *skepsis* meaning “inquiry and doubt.” Yet any objective analysis of these movements makes it clear that their hallmarks include 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 these movements represent classic examples of defense positions concerning a cherished paradigm slowly moving into crisis, just as described by the physicist and philosopher of science Thomas Kuhn (1962). With Creationists it is the inerrancy of the Bible and the presentation in Genesis of the creation of the world. For climate change deniers it is the conviction that human intervention is not the source of massive climate change. For consciousness-deniers it is a materialistic perspective.

In this essay, I draw comparisons amongst the denier movements and 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 while, in the early years, attacks mostly centered on methodology, after an exchange between psychologist Ray Hyman and statistician Jessica Utts that line of criticism largely ceased (Hyman, 1995; Utts, 1995). 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 U.S. government had previously funded (Utts, 1995). Remote viewing is a protocol for obtaining objectively verifiable information that can only be obtained through accessing nonlocal awareness, that aspect of consciousness presumptively outside of conventional conceptualizations of space/time.

To make the assessment, AIR selected the nationally recognized statistics professor Jessica Utts of the University of California - Davis, and the well-known skeptic 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 (1991) had already addressed the question that Congress was asking in a paper published in the journal *Statistical Science*.

Hyman and Utts were each asked by AIR to produce an independent report by a fixed date (Utts, 1995). 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 Congress (Utts, 1995). 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. (Utts, 1995, Chap. 3, p. 23)

In responding to Utts' report, Hyman (1995) wrote:

I want to state that we agree on many [other] 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. (Hyman, 1995, Chap. 3, p. 63)

This is important because what Hyman is conceding is that the way in which the kinds of laboratory experiments described in the AIR report had been conducted, and the way in which they were analyzed, is no longer a matter for dispute. In other words, 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. In my own opinion, no other field of science is so obsessed with the gold standard issues of blindness and randomness.

English biologist Rupert Sheldrake (1999) conducted a survey of leading journals published between October 1996 and April 1998. 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” (Sheldrake, 1999, p. 90). The reader may find the results surprising. As can be seen in Figure 2, parapsychology overwhelmingly utilizes this third protocol more than does any other discipline.

Figure 2. Blind Methodologies Used by Various Disciplines

Area of Science	Number of Papers	Number with Blind Methodologies Not Used Percent of Total (0.00%)
Physical Science	237	00
Biological Science	914	07 (0.8%)
Medical Science	227	55 (24.2%)
Psychology and Animal Behavior	143	07 (4.9%)
Parapsychology	27	23 (85.2%)

Table Caption: “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 1996-68 unless otherwise indicated” (Sheldrake, 1999, p. 90).

Five years later Caroline Watt and Marleen Nagtegaal (2004), 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.

With the Utts/Hyman (Hyman, 1995; Utts, 1995) exchange, the work by Sheldrake (1999), and Watt and Nagtegaal (2004) on record, the deniers have been denied the line of attack that parapsychological methods are typically faulty.

Their focus now is centered, as the denier commentaries in this book illustrate, 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 (1962), of course, consciousness research is evolving just as it should, and, equally predictably, the deniers are mounting increasingly implausible paradigm defenses just as Kuhn's model predicts.

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, 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. Science, in its many manifestations, is finally grappling seriously with consciousness and nonlocality, but the deniers will not join this quest.

How ironic it is then that Kuhn (1962), whose mind conceived of the paradigm concept in science — and paradigm is the core of all denier arguments — fully, if somewhat uncomfortably, recognized the nonlocal aspect of consciousness. 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. (pp. 122-123)

Comparing this with the statements made by people upon whom history confers the title genius, prophet, or seer, reveals that Kuhn (1962) echoed their words almost exactly. As Einstein (1931) explained it, “I believe in intuition and inspiration; I feel certain I am right while not knowing the reason” (p. 97). 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’” (as cited in Infeld & Isacsson, 2007, para 1). As Hoffman and Leopold Infeld, Einstein's other major assistant (also a renowned 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,” (as cited in Infeld & Isacsson, 2007, para. 1). Hoffman recalled, but “no sign of stress. No outward indication of intense concentration” (as cited in Infeld & Isacsson, 2007, para. 1). Neither assistant felt he could say a word. After a few minutes, Einstein would suddenly come back to ordinary consciousness, “a smile on his face and an answer to the problem on his lips.” Hoffman noted that the ideas “seemed to come from left field, to be quite extraordinary” (as cited in Infeld & Isaacson, 2007, para. 1).

Johannes Brahms described his own 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. (as cited in Abell, 1964, pp. 19-21)

Wolfgang Amadeus Mozart and Aaron Copland also seem to have had similar experiences (in Abell, 1964). In Mozart's case the connection was so clear and strong the pages of his compositions show few alterations; they appear to be 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" (Schwartz, 2007, p. 34). 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" (Schwartz, 2007, p. 34).

Poincare' 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" (Goldenberg, Levav, Mazursky, & Solomon, 2009, p. 3).

Consider also one of history's most renowned psychics, Edgar Cayce, describing what he was doing. Speaking from his self-induced trance, 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, superconscious 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. (Cayce, 1923, reading number 3744-3)

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 all have reported similar experiences in the process of attaining insight -- and yet consciousness-deniers feel this is not an appropriate area for serious 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 antique roadshow 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 their position, they have to discard geology, paleontology, anthropology,

chemistry, astro-physics, astronomy, and the rest of modern science, except perhaps for medicine.

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 democracies where forcing endless debate becomes a weapon. Nobel laureate economist Paul Krugman (2009) 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:

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. (p. A21)

Notably, corporations who 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 unworlly 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” (Environmental News Service Website, 2010, para.1).

The U.S., 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” (Environmental News Service Website, 2010, para. 2).

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 by another name. Therapeutic intention research such as immunologist Leonard Lebovici's (2001) study on remote retroactive intercessory prayer, or the near-death experience studies of cardiologist Pim Van Lommel and his associates (2001, 2006) are two examples. One wonders if these studies 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 denier psychologist Richard Wiseman recognizing he was about to be asked a specific question about this line of research, confessing he had not read it, and did not know where it was to be found (Personal communication, Meeting of the Minds on Anomalous Cognition Conference, 2007).

The denier commentaries do not seem to apprehend that some of the largest, most important, and best-funded research studies on consciousness and nonlocality have been carried out in disciplines other than parapsychology — Lebovici (2001) and van Lommel et al. (2001, 2006) being only two examples. Let me cite a few of 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 I will cite 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 (e.g. “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. (Schwartz, Stapp, & Beauregard, 2005, p. 1)

Second, let me cite a report by Frecska and Luna (2006) 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. (p. 143)

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 by reading a Creationist tract, or fully comprehend the acidification of the world's oceans by reading climate change denier literature.

Another hallmark of denier criticism is that nothing ever really changes and, depending on the audience, issues long settled will emerge from their crypts to distort and confuse once again. Remember the exchange between Hyman (1995) and Utts (1995)? 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. Hyman is reported as saying: "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" (Leblanc, 2002, online). Even if remote viewing worked, Hyman stated, it would be too erratic to rely on. "People who believe it admit that only 15 percent of what remote viewers tell you is true, which means 85 percent is wrong," he remarked, although he did not mention the origin of this statistic, and it directly contradicts the published research. 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" (Leblanc, 2002, online).

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 percent of what remote viewers tell you is true" (Leblanc, 2002, online) is 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 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 Harold 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 7.8×10^{-9} , one-tailed" (Puthoff & Targ, 1976, online). When one sees comments such as Hyman's it becomes clear that to deniers a preconceived conclusion is far more important than actual data. As George Orwell (1962) wrote in his novel *1984*, "And if the facts say otherwise, then the facts must be altered. Thus history is continuously rewritten" (p. 213).

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 the Sierra Legal Defense Fund, describes the back-story behind the climate denier *Skeptic's Handbook*. This manual was compiled by the Heartland Institute, created and funded by oil interests including \$676,000 from ExxonMobil (Anderson, 2009). In a typical denier move to manipulate media and policy, they sent 150,000 copies of the Handbook across the U.S. including 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 (Anderson, 2009, no page number designated).

Anderson (2009) 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" as the U.S. Department of Defense, the U.S. Department of the Interior and the U.S. Forest Service. (Online, no page specified)

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" (Public Employees for Environmental Responsibility Website, 2006, online), 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'" (Public Employees for Environmental Responsibility Website, 2006, online).

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, drawing on the published words of a few of the principal players, a nationally prominent astronomer and two highly regarded professors of psychology and sociology, all of whom 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 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 mytho-poetic 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 complex, 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 websites cited, where references to the original papers are located, and to pursue what is to be found there.

In brief, here is the story: In 1975 astronomer Dennis Rawlins, already famous for debunking the claims of polar explorers Richard Byrd and Robert Peary and demonstrating that Ronald Amundsen was the first man to reach either pole, decided to join a team headed by philosopher Paul Kurtz (the founder of CSICOP) to launch a frontal attack against presumptive “planetary influences” on human behavior reported by the French investigators Michel and his wife (at the time) and research partner Françoise Gauquelin. Earlier, *The Humanist* had published a paper that included an attack on the Gauquelins. It was a curious attack; the Gauquelins had their own reservations about astrology; indeed, they would go on to dismiss, on the basis of their research data, many claims of Western astrology. Ironically, Michel Gauquelin (1979), a psychologist and statistician, later wrote a book debunking traditional Western astrology’s planetary effects that was published by Prometheus Books, which was founded by Kurtz. Gauquelin (1978) also was to write an article critical of astrology for *The Humanist*, a magazine edited by Kurtz. Even so, exactly because they were rigorous scientists, the Gauquelins reported identifying small but statistically significant relationships between some planetary positions at the time of the birth and later outstanding performance, most notably the position of Mars in a natal chart and later athletic prowess (Gauquelin, 1973, 1975; Gauquelin & Gauquelin, 1970-1972). It was not a huge effect but, to many CSICOP members, these reports were intolerable.

The *Humanist* group focused their attack on the Gauquelins’ statistics (Rawlins, 1981) but it soon became clear that Michel Gauquelin was the better statistician and the denier case collapsed. Undeterred, the group went on for round two, which involved an attempted Committee-sponsored replication of the “Mars effect” and a dispute over the interpretation of the data. Rawlins describes what happened next 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 Rawlins (among others) for their unscientific disdain for experimental evidence and integrity.

After furious public exchanges, Rawlins, a skeptic but not a denier, publicly resigned from the group. Shortly thereafter, he put the entire sorry tale in the record via a paper entitled, *sTar baby*, a play on Joel Chandler Harris’ late 19th century Uncle Remus stories, where Br’er Rabbit, the Loki-like adventurer around whom many of the stories are built, attacks a tar baby and, each time he hits it he becomes more and more mired in the tar (Rawlins, 1981). Rawlins would not be alone and his was followed by the resignations of several other members of the Committee. These resignations illustrate the difference between skeptics and deniers.

The person who saw this distinction most clearly was the sociologist Marcello Truzzi (e.g., 1997), 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-skepticism.” Truzzi (1982) 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-Abell (KZA) [in the CSICOP-sponsored research study]. In regard to a) and b) the key question concerns the validity of the Gauquelins' 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. (p. 76)

Truzzi's reasons for resigning from the Committee state clearly the problem with denier movements. He recalled:

Originally I was invited to be a co-chairman of CSICOP 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. (Truzzi, 1989, online)

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" (Kammann, 1982, online). The one clear exception was providing Rawlins a carte blanche space in the CSICOP publication, The Skeptical Inquirer, and even this was undermined by a flurry of simultaneous misstatements (Rawlings, 1981-1982, 1982, pp. 29-30). Kammann (1982) 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. (p. 56)

More than a decade later Suitbert Ertel, 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, France) and confirmed by a variety of statistical analyses, both Kammann's and Truzzi's assessments (Ertel, 1998/1999). 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" (Kurtz, Nienhuys, & Sandhu, 1997, p. 38).

The Gauquelin controversy continues even as further confirmations come in. Fuzeau-Braesch (2009) reported data on twins that could be interpreted to support the Gauquelins' data. And this controversy is not an isolated event. The "sTarbaby incident" has been followed by numerous subsequent incidents of alleged falsification and distortion amongst consciousness-deniers. Both Rupert Sheldrake and Jim Lippard have been subjected to denier attacks; have created websites 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 (Lippard, 2009; Sheldrake, n.d.).

The controversies involving the three denier movements might superficially appear to be "inside baseball" arguments of interest only to the various research communities. However, 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.

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