

EdgeScience

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Current Research and Insights

Las Vegas as a Psychokinesis Laboratory

By Joseph Gallenberger

La Madonna dell'UFO

By Jeffrey Kripal

Human Singularities

By Michael Grosso



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Why EdgeScience? Because, contrary to public perception, scientific knowledge is still full of unknowns. What remains to be discovered—what we don't know—very likely dwarfs what we do know. And what we think we know may not be entirely correct or fully understood. Anomalies, which researchers tend to sweep under the rug, should be actively pursued as clues to potential breakthroughs and new directions in science.

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ASSOCIATE EDITOR: P.D. Moncrief
CONTRIBUTORS: Mel Acheson, Aaron Dabbah, Joseph Gallenberger, Michael Grosso, Jeffrey Kripal, Peter Sturrock
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The Society for Scientific Exploration (SSE) is a professional organization of scientists and scholars who study unusual and unexplained phenomena. The primary goal of the Society is to provide a professional forum for presentations, criticism, and debate concerning topics which are for various reasons ignored or studied inadequately within mainstream science. A secondary goal is to promote improved understanding of those factors that unnecessarily limit the scope of scientific inquiry, such as sociological constraints, restrictive world views, hidden theoretical assumptions, and the temptation to convert prevailing theory into prevailing dogma. Topics under investigation cover a wide spectrum. At one end are apparent anomalies in well established disciplines. At the other, we find paradoxical phenomena that belong to no established discipline and therefore may offer the greatest potential for scientific advance and the expansion of human knowledge. The SSE was founded in 1982 and has approximately 800 members in 45 countries worldwide. The Society also publishes the peer-reviewed *Journal of Scientific Exploration*, and holds annual meetings in the U.S. and biennial meetings in Europe. Associate and student memberships are available to the public. To join the Society, or for more information, visit the website at scientificexploration.org.

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Aaron Dabbah

How to Feel Normal in an Anomalistic Universe

When you are as deeply concerned with strange phenomena as I am, it's hard to get up in the morning feeling normal. It helps if you drink. The chasm between physical reality and our conscious perception thereof opens up with your morning coffee, and as you peruse the newspaper headlines and social media feeds, one has the same unsettling sense that no doubt prompted humorist Dorothy Parker to greet the doorbell each time it rang with the phrase, "What fresh hell can this be?" Let's face it, if you express anything more than a passing interest in UFOs, Bigfoot, ghosts, monsters, or the various and sundry anomalies of the universe, you are generally regarded by your peers with trepidation and a charitable concern for your mental health.

Now this may be "inside baseball," but a curious development has emerged in the world of anomalistics, which we can understand to include those who experience and those who investigate, as well as those self-identified skeptics that nonetheless wade into the muddled marsh of Forteana. Strange phenomena have been decentralized as an object of study, in favor of a psychologization of those who express an interest (either to believe, understand, or debunk).

Thus, we spend an inordinate amount of time talking about the pathological delusions of true believers, the cognitive dissonance of skeptics, and the fear of commitment of those who straddle the line. The focus has shifted from a simple ontological statement that while our valuation of science has an impressive track record of achievement, the universe nonetheless keeps serving up oddities that throw a wrench in our metaphysical project of comprehending the significance of human existence and grasping at the nature of reality.

Therefore, instead of debate, we more often see diagnosis. This is as foolhardy as it is unproductive. The unadulterated truth that is being largely sidelined is that the existence of an anomaly is prerequisite to scientific discovery, and the facts that don't fit are what usher in the paradigmatic shifts that revolutionize our understanding of the universe.

Physicist, historian, and philosopher of science Thomas Kuhn, who coined the term "paradigm shift" in his seminal 1962 work *The Structure of Scientific Revolutions*, offered the anomaly as that which impels our extension of knowledge, observing, "Normal science does not aim at novelties of fact or theory and, when successful, finds none. New and unsuspected phenomena are, however, repeatedly uncovered by scientific research, and radical new theories have again and again been invented by scientists. History even suggests that the scientific enterprise has developed a uniquely powerful technique for producing surprises of this sort. If this characteristic of science is to be reconciled with what has already been said, then research under a paradigm must be a particularly effective way of inducing paradigm change. This is what fundamental

novelties of fact and theory do. Produced inadvertently by a game played under one set of rules, their assimilation requires the elaboration of another set."

When the debate is consistently framed in terms of delusion vs. fundamentalism, we have ceased to engage in intellectual inquiry and turned towards a denigration of the mental faculties of our theoretical opponents (whose interest in our precious anomalistic phenomena truly makes them our colleagues, regardless of those ontological and epistemological presuppositions they bring to the table). This is far from crying, "Can't we all just get along?" Some people are just jerks. It simply reiterates the importance of classical ontological debates of the realists (universals exist, as do particulars) and the nominalists (only particulars exist). Universal truth has this pesky habit of shuffling out just past the boundary of our intellect, the minute we conclude we have understood something.

In the absence of incontestable and enduring physical proof, anomalistics has found its various objects of inquiry ghettoized in the world of "the pseudo-" and understood to be an examination of cultural constructs, human misperceptions, and an expression of metaphysical yearning, turning the experience of the strange into a function of humans gone wild. We *Homo sapiens* do after all demonstrate an acute capacity to get wacky.

When it comes to Forteana (and those who argue that no such animal exists), a far more productive approach is to step back from the incessant demands for "proof," the psychoanalysis of both believers and skeptics, and turn to the question of validation, which says we may never know the ultimate object itself, thus we most fruitfully approach knowledge by confronting interpretations and arbitrating between them as we look for points of agreement, even when agreement is an impossibility, or as Paul Ricoeur said, "The logic of validation allows us to move between the two limits of dogmatism and skepticism."

Maybe the next time frogs inexplicably fall from the sky, the answer is not to call the *Weekly World News*, hand out the psychoactive medication, decry skeptics for their stalwart rejection of that which cannot happen, or talk about the delusional predispositions of those whose assert with supreme confidence that a "frog rain" was extant. Validation is neither acceptance nor rejection, rather it is an open and honest arbitration of possible interpretations. Such discourse is shockingly rare. At least maybe we can validate their parking.

AARON DABBAH has a Masters in Applied Anthropology and has conducted research on the public presentation of historical information, served as head of Integrated Library Systems for the New York Public Library, and currently works in Ontology, Taxonomy, and Natural Language Processing for AOL. His blog, EsoterX.com, is an anthropological look at the nature of monstrosity.

Joseph Gallenberger

Las Vegas as a Psychokinesis Laboratory



The idea of using Las Vegas as my psychokinesis laboratory didn't just pop into my head. I was already familiar with Vegas, having gone there to play about once every two years. Scanning back over those many years, I did have a few very unusual experiences that suggest psi in action.

A dice event that I remember occurred on my birthday. I was staying at the Sahara hotel as I had done many times before and had become known to the crews. I found an empty craps table with the box man Gene sitting in his position at the center of the table. Gene and I exchanged pleasantries. I mentioned

that it was my birthday and he said, "Well, step right up and make yourself a birthday gift!" Gene had watched me play many times and knew that I was capable of good rolls but that I always kept my betting very cautious and conservative.

I began a good roll, making my targets easily. Every few minutes Gene would cajole and encourage me to raise my bets, saying things like, "You are doing great. You are now playing with the casino's money, take a chance, would you?" I went into the zone and just kept rolling. Although I had started at an empty table, it now became packed with other players; the

action was fast and furious. My run continued. Gene brought in two extra basemen to help handle all the action. But I barely noticed this, nor all the chaos and cheering. I just kept being in the zone and raising my bets whenever Gene told me to.

When I finally got tired and seven'ed out by throwing a seven at the wrong time, I had held the dice for over 90 minutes. Since seven comes once in every six rolls by chance, a typical roll lasts about five or ten minutes in the game of craps. The table exploded in cheers, which brought me out of my trance enough to notice the huge pile of chips before me. I was surging with too much adrenaline to even handle my chips easily. The crew stacked them for me. Exchanging smaller denominates for larger ones, and finally giving me the count. I had made well over \$3,800 on my roll after starting with \$5 bets.

“...the question became how and where could I devote the time to pursuing a black belt in PK? The answer was suggested by the initial dice throwing experience—Las Vegas!”

How it all began

But before I go any further about the casino as classroom, I should present the background on how I became interested in psychokinesis. In addition to working as a clinical psychologist, I have been a trainer at The Monroe Institute¹ (TMI) for 26 years and have had many psi experiences there. For example, I was able to repeatedly roll exactly the pattern I envisioned on dice. That psychokinesis experience felt like a wonderful magic space, and I wanted to experience it again and understand it better. Psychokinesis with dice is amenable to research because the statistical properties of rolling dice are well known and follow the laws of probability.

As I started to more formally study psychokinesis (PK)—the ability to affect matter using nonphysical means—it seemed to me that this PK energy was the same as the energy found in miracle healings. And this PK energy could also be used to greatly increase the effectiveness of efforts to create a more abundant reality for one's self, by adding a facilitative energy to the process of intent and visualization employed during manifestation work. Examples of psychokinesis include using just your energy and no physical means to illuminate light bulbs, grow seeds in your hand in just a few minutes, and bend heavy metal² and brittle plastic.

About two decades ago I received a small grant to go to Princeton University's Princeton Engineering Anomalies Research³ (PEAR) laboratory. At PEAR scientists had been studying PK for nearly 30 years under very strict scientific standards. For example, they had done one study with 12.5 million trials and achieved highly significant results, suggesting that PK is real. When I arrived at Princeton, I walked into a very interesting space and was welcomed warmly. Many experiments in the lab included what are called random event generators or REGs. The generators are quantum mechanical devices that basically choose either a one or a zero, thousands of times a second. They do this by referencing random atomic action to “decide” which of the two options to pick. Basically, it is like flipping a coin

thousands of times a second. The results in the coin flip over thousands of flips, if the coin is perfectly balanced, should be very close to 50 percent heads and 50 percent tails. The random event generators do the same process but electronically, and the results also should be roughly 50 percent ones and 50 percent zeros by chance, as each option has an equal chance of occurring.

Random event generators allow a very precise and scientific study of psychokinesis. Each time you flip a coin, the chances are 1 in 2 that it comes up heads. If you start flipping a coin, and the first two times it comes up heads, that will occur once in every four times by chance. If the first five flips all come up heads, this would be unusual but not a miracle because it will occur naturally once in every 32 times you tried to do this. But if the coin comes up heads 10 times in a row, now things are getting pretty spooky because that would occur only once in

1,024 times by chance. Well, imagine you are on a roll and you flip the coin 20 times and it comes up all 20 times as heads. Now we are in miracle territory as this would occur only once in 1,048,576 times by chance.

An understanding of probabilities helps put into perspective my experiences with PK in the casinos. In the Princeton experiments, when they are running thousands of chance determinations per second resulting in millions of events, any strong deviation from chance will be highly noticeable and scientifically significant. This indicates that the events are being influenced by something that is causing the events to deviate from chance. And if the only something that can influence the events is nonphysical energy and intent, then psychokinesis is proven beyond any reasonable scientific doubt.

One random event generator experiment that I did at Princeton was called Art Reg. Here a computer using a random event generator selects pixels from a picture of a pyramid whenever the random event generator picks the number zero. And on the same screen, at the same time, the computer presents pixels from a picture of a cat whenever the random event generator selects the number one. So what you see on the screen is a mush created by combining pixels from the two different pictures. My job was to somehow affect the random event generator so that it selected more ones (cat picture pixels). If I could do so, the picture would more and more clearly become a cat.

I had meditated and raised energy for a few days before coming to the lab. I sat down and relaxed in front of the screen and then willed the picture of the cat to emerge—nothing happened, just what looked like a mushy static on the screen. I then stood up and got all excited, building energy and looking at the screen, putting my hand out in a beckoning motion and saying “Here, Kitty, Kitty.” The cat picture began to slowly emerge from the mush. The clearer the picture got, the more excited I became, and there it was—a clear picture of the cat, with the pyramid completely gone! The experimenters told me that I had achieved results that were 30,000 to one by chance.

My biggest result was with what I called the fountain experiment. The researchers had set up a water fountain in the lab. It shot a narrow column of bubbling water into the air for about two feet. The fountain was behind a pane of glass, so that it could not be affected by direct touch and breezes in the air. They explained that the water in the column changed height by random hydrodynamic law. The up and down dancing of the column height that you see in a fountain changes height randomly if the water remains under steady pressure.

My goal in this experiment was to use only my energy to make the column of water stay high for 10 minutes, then leave it alone for 10 minutes in the control or comparison period, then make it low for 10 minutes. The results were very strongly indicative of PK. Then the computers crashed in the lab. We joked that they may have crashed because of all the energy flying around the lab.

The Princeton lab staff were terrific. They were excellent at reducing any sense of pressure. PK performance does not respond well to pressure. One just has to intend it and then relax and let it happen. This is true of many natural human abilities. We can see this even in something as simple as going to sleep. On a normal night, you feel tired and intend to go to sleep. Then you just settle down, relax, and not think about it, and sleep comes. However, if you have only four hours to sleep before getting up for a trip, what happens? The pressure to go to sleep is too great and sleep does not come. Imagine falling asleep on command on TV with millions of people watching. This is what it would be like to expect someone to perform PK on TV.

My Princeton experience proved to the scientist in me that PK was real and that I could do it. Just to be clear, PEAR did not certify me as psychic. They did not do that for anyone. But the results were very clear to me. I was able, to a statistically significant degree (that would not occur by chance), to change the outcome of what are usually random events, using just my mind and energy. And it appeared from the results of other experiments that many and perhaps most people can do the same thing.

As I began my search to understand psychic phenomena better, I found that other reputable universities and laboratories had confirmed and expanded the PEAR results. The parapsychology lab at Duke University,⁴ which separated from Duke and is now known as the Rhine Research Center,⁵ has studied dice rolling, telepathy, and other psi functions. I met Dean Radin, Ph.D. then at University of Nevada, now at the Institute for Noetic Sciences,⁶ and saw his lab. I read his book *The Conscious Universe*, which is an excellent summary of what had been proven in the psi or psychic fields in terms of PK, telepathy, and clairvoyance.

My Princeton experience indicated that I was not deluding myself about what had happened with dice at TMI. Further, during the experiences at Monroe with dice and at the lab in Princeton, I was given a taste of the type of energy and focus needed to achieve these effects in the physical world. It seemed to occur if you were very relaxed and had a strong, loving, and connected feeling with the world and those around you. Then you set a clear intent, and followed this intent by letting go—trusting the energy to flow toward your intent. It seemed to me

that this same energy could be used to heal myself or another and that would be a miraculous thing to do.

It looked likely that the same set of energy, intention, and focus that was helpful in PK could enhance our ability to manifest in our lives what we really wished for. If energy healing, manifestation, and PK all used the same energy and processes, then becoming better at PK should make one more insightful, consistent, and powerful in all three of these areas. This really ignited my passion! I thought that it would be a wonderful thing to be able to do PK and perhaps teach others to do PK as well.

Back in Vegas

I wondered just how much these skills could be brought under conscious control, developed, and consistently repeated. One thing I knew was that I needed a place to practice under objective conditions. I had to find a place to practice where I knew for certain that the target was random (not influenced by cheating, or physical manipulation). And to find a place where expected chance results were well understood and established statistically, so I could tell if I was able to create unexplained change or patterns. I figured that this study may take years. So the question became how and where could I devote the time to pursuing a black belt in PK? The answer was suggested by the initial dice throwing experience—Las Vegas! There, the dice are guaranteed to be neutral and random, or the casino would be rapidly out of business. There, the laws of probability were very well understood, to the point that one knew exactly what the odds were by chance of any number or series of numbers being thrown. And there, if I were successful at causing the dice to roll in a non-random or patterned way, I could perhaps recoup at least part of my travel and learning costs.



Joe Gallenberger and his wife at a Las Vegas casino

Money and PK: Is there a conflict?

Some respected parapsychologists have asserted that money does not work as a psychokinesis motivator. But in Vegas we have found that small amounts of money are terrific at bringing attention to a heightened state and providing excellent motivation for sustained PK. This is only true, however, if proper preparation is done to create the ideal altered state of consciousness. Others object to combining money with high meditative states as somehow a spiritual distraction. Instead, with proper preparation, we have found that using money helps integrate the spiritual with the physical world. We interview everyone before attending an Inner Vegas Adventure to screen out those who may be wanting to attend out of greed or fear, and include those who are interested in learning about PK energy to express more of their human and spiritual potential.

Besides providing objective “games” or “experiments” with measureable statistical results, Vegas provided something else that I now consider extremely facilitative of strong PK. My own experience and other’s research such as that summarized in *The PK Zone* by Pamela Rae Heath, M.D., Psy.D, suggest that a critical component of the PK state is to achieve an altered state of consciousness (ASC) prior to initiating PK activity. Monroe Institute’s Hemi-Sync™, through its ability to alter brain wave patterns quickly, allows a very rapid acquisition of meditation skills that makes achieving ASC much more accessible to the average person.⁷

In university labs where I had been a subject, I noticed that very little attention was paid to generating ASC in the experimental subjects. The labs tended to be fairly sterile spaces and the scientists were quite neutral in presenting the experimental tasks to the subject. Because of the need to accumulate data, the trials often become boring. For example, more recently I have been working with the wonderful scientists at the University of Virginia, Division of Perceptual Studies.⁸ My assigned PK task there was to apply PK to a grey box that contains sensors. I was asked to do 48 seconds of PK, followed by 48 seconds of rest, alternating for 100 trials, while sitting in a white walled room and wired up to a 128-lead electroencephalogram (EEG). and other physiologic monitoring, looking for neurophysiological correlates of PK. I had to remain perfectly still so as to not have muscle movement throw off the EEG. I stopped at 50 trials, too tired to continue. Yet I did achieve statistical significance in terms of PK, and we did obtain some interesting brain wave readings from the EEG.

In contrast to a science lab, the environment of Vegas casinos are highly stimulating, and the potential to win money keeps excitement and motivation high for hours at a time. I began my PK study in Vegas by going there about once every two months and spending a few days keeping careful notes about results. I also noted what worked in terms of generating strong positive PK (winning), what generated negative PK (losing), and what seemed to result in random non-influence of events. I did this for about five years and accumulated quite a data set, as well as

began to achieve enough consistency that I felt that I could teach this skill to others. I was excited to teach, as the whole process confirmed that PK, energy healing, and manifestation were variants of the same energy and that the process was a highly positive one in terms of psychological and spiritual growth.

At this point I have taught approximately 85 Inner Vegas Adventure™ workshops over the past 18 years using the dice and slots in Vegas as a classroom to teach PK. During this time, I have witnessed amazing feats of PK, energy healing, and manifestation in that environment.

Key factors

These are a few of the things that I have learned.

Personal Verification: In doing and teaching PK on slots and dice in Las Vegas now for over 20 years, I have confirmed sufficiently for myself (and many others through their own personal experience) that PK is real, that it is an effective way to shape reality, and that it is a teachable skill that over time can become more robust, repeatable, and consistent.

The most facilitative dynamics for PK performance: During my five years doing PK individually in Vegas, I found that it never works when I am tired or stressed or in ego or overly in the head. So when I arrived, I would spend the entire first day resting, meditating, and doing good things for my physical body such as swimming or getting a massage. I found that releasing stress and raising energy through meditation was very helpful *if* one also remained grounded and strongly in the present moment. One had to be fully present in one’s body and connected to the physical to be effective. Being spacey did not work. Abstaining from all alcohol, and of course drugs, and moderating caffeine intake helped with this “power of now” state. One of my most significant discoveries was on how to handle ego and fears that naturally arose when in a gaming environment. Until this discovery, fears such as “I am risking failure” and “what will others and the casino think?” would surface regularly, and addressing them individually was like putting out brushfires repeatedly. Once I discovered that it was easier to melt fear with love, rather than meeting fear with courage, things went much more smoothly. In fact, I now use the saying, “Fear is expensive, love is priceless, choose wisely” as a governing principle not just in PK but in life.

Feedback should be immediate and clear. That is another huge advantage that Vegas casinos have over a science lab (and also in life). When we have our Inner Vegas Adventure groups around tables reserved just for us—if we as a group are grounded to the earth, expanded in connection to spirit, open hearted, cheerful and grateful, and able to focus clear intent, then let go and be playful—we are rewarded within seconds with a money win. If a significant portion of the group goes into fear, greed, and ego, we are punished with a loss of money. Much like teaching a dog to sit, this system of reward and mild punishment is a form of classical psychological conditioning, and in the case of PK into a more enlightened way of living that is heart based, spiritually connected, in the present moment, with gratitude for blessings and an awareness of the miracles and abundance that are always available to us.

Vegas teaches us, if we are aware, that our thoughts when coupled with emotion do create our reality. For example, I threw my target of six on the dice well above chance for several hours, then sat at a slot machine to relax: the first pull on the machine came up 4 sixes; in delight I thought to myself, “I am a great king of light,” then with the next pull came 4 kings, followed by kings and sixes for a half hour until the energy faded. Slot machines can be great PK teachers because one can visualize in meditation a particular target such as a royal flush in hearts and then go down and hit this immediately on the machine (160,000 to one by chance). We can put the royal flush in hearts in perspective. When I said that it would occur only once in 160,000 times by chance, it is like flipping a balanced coin 17 times in a row, having the goal that it will come up heads and then coming up heads every time. When my wife and I got identical jackpots on the poker machines side by side (four aces with a four), it was equivalent to flipping a coin and having it come up heads over 20 times in a row. And to make matters even more interesting, slot machines contain random event generators similar to the random event generators in the experiments at Princeton and other parapsychology labs! (Actually, slot machines use what are called pseudo random event generators that use a mathematical formula to randomly select different hands—the cards that will appear on the screen—hundreds of times per second versus the atomic action that drives real random event generators.)

After several years of seeing good PK success in the majority of Inner Vegas Adventure workshops, I used the knowledge gained there to develop a new program at the Monroe Institute called *MC² for Manifestation and Creation Squared*.¹⁰ In this six-day program, participants enjoy the beautiful country setting of TMI, participate in meditation exercises using Hemi-Sync technology, and attempt a variety of PK tasks including dice throwing, illuminating light bulbs, growing seeds, and bending mental. There are also eight healing circles scheduled where energy healing is practiced, often with dramatic results. *MC²* has been going on for more than a decade, and in the last several years researchers from University of Virginia Division of Perceptual Studies have been collecting data at *MC²*, attempting to measure PK effects. Some of the pilot data have come in at a statistically significant level and experimental procedures continue to be refined.

No respect

Given the success I’ve had with PK, one might wonder why this knowledge is not afforded more respect in the science community and not more widely known by the public. Chris Carter wrote a book entitled *Science and Psychic Phenomena: The Fall of the House of Skeptics* that presents clear evidence for psi functioning and then explains in detail the politics behind our current situation where a coalition of debunkers—each with his or her own political motivation spanning from the religious fundamentalists who think this stuff is of the devil to atheists who will brook no non-material forces—cooperate to disseminate distorted information to the government and the press. Some organizations have as part of their charter that

they will do no experiments, yet go on to proclaim that all psi is bunk, all the while refusing to even look at the data produced by parapsychologists.

My discoveries with PK in the university and casino environments have generated multiple paths of training, including books, meditation exercises, and seminars for those interested in incorporating the skill of PK and its benefits into their lives. Even after doing 85 Inner Vegas Adventure workshops, I still feel that I learn something valuable each time I enter the casino with PK in mind. I continue to discover limiting belief systems and emotional patterns that, when understood and cleared, allow increased PK performance and enhanced living toward full potential. I am confident that the next decade will teach us more about our human PK potential both through rigorous science and through practical application.

JOSEPH GALLENBERGER, Ph.D., has 30 years’ experience as a psychologist, is a senior trainer at The Monroe Institute, and is a psychokinesis expert. His discoveries with PK in university and casino environments are detailed in *Inner Vegas: Creating Miracles Abundance and Health*. He put his findings into a practical application in the book *Liquid Luck: The Good Fortune Handbook* and the CD entitled *Liquid Luck*. He developed SyncCreation® a home study course, teaching PK as a way to manifest abundance. His latest book is *Heaven Is for Healing* and companion CD is *The Ocean Heart*. More information at www.SyncCreation.com.



ENDNOTES

- 1 The Monroe Institute advances the exploration of human consciousness and the experience of expanded states of awareness as a path to creating a life of personal freedom, meaning, insight, and happiness. www.monroeinstitute.org.
- 2 For an excellent exploration of the science of metal bending see *The Metal Benders* by John Hasted.
- 3 The Princeton Engineering Anomalies Research (PEAR) program, has completed its experimental agenda of studying the interaction of human consciousness with sensitive physical devices, systems, and processes, and developing complementary theoretical models to enable better understanding of the role of consciousness in the establishment of physical reality. Their results are archived at <http://www.princeton.edu/~pear/>.
- 4 <http://library.duke.edu/rubenstein/findingaids/paralab/>.
- 5 <http://www.rhine.org/>.
- 6 <http://www.noetic.org/>.
- 7 *Using The Whole Brain* by Ronald Russell is an excellent description of the uses of Hemi-Sync
- 8 <https://med.virginia.edu/perceptual-studies/>.
- 9 <http://synccreation.com/inner-vegas/>.
- 10 <https://www.monroeinstitute.org/MC2psychokinesis>.

Michael Grosso

Human Singularities

The point at which an extreme or transcendent change becomes possible is known as a “singularity.” So there are mathematical, gravity, and technological singularities. They all mark break-off points, openings to new dimensions and realities. A black hole is a singularity in a region of space where matter exists in a state of infinite density. Mathematical singularities involve functions where a change in a variable produces a derivative that is infinite.

Perhaps the most popular use of the term is in talk of the coming technological singularity. This usage stands firmly in the tradition of millenarian or sci-fi fantasy. The core idea is that there will come a point in human history (30 or 40 years hence!) when computerized machine “intelligence” reaches a point sufficiently advanced that the machines transcend, revolt against, and somehow take over their human makers. They, not us humans, will carry on the torch of evolution, and they alone will achieve digital immortality. Part of this techno-apocalyptic fantasy entails that computers and computer networks will “wake up,” as science fiction author Vernor Vinge predicts, in short, become conscious. But they will be “trillions” of times smarter than us, as inventor and futurist Ray Kurzweil believes, and so will take over the planet, and have to subjugate or, more efficiently, dispose of us.

Needless to say, I don’t assign much credibility to this latter-day singularity fantasy, but something about the idea draws me on. Keeping it empirical, let’s consider the idea of a *human* singularity. This usage won’t be quite as exact as it is in physics or mathematics, but the sense is clear enough from ordinary English usage. We use *singular* to describe something rare, one of a kind, new, special, exceptional, extraordinary.

History is replete with specimens of human singularity, individuals who have driven the creative advance of the species. We might, for example, think of “world-historical” figures like Jesus, Socrates, and the Buddha, each a deeply important human singularity that continues to reverberate through history. Indeed, every domain of historical evolution has its various singularities. For art, think Picasso, for example; for science, Albert Einstein; and for technology, Steve Jobs.

But the human singularities I have in mind are the type that transcend the common limits of mind and body. Specifically, my interest is in psychophysical singularities, kindled as it was by my research on levitation, as reported in my book *The Man Who Could Fly*, a study of St. Joseph of Copertino.



Cienpies/iStock

Almost every feature of Joseph’s life was wrapped in singularity, most famously in his 35-year-long performance in public as an involuntary ecstatic levitator.

Psychophysical singularities suggest the emergence of something post- or super-human. The following cameo should illustrate.

Ze Arigo, the Brazilian healer, died in an auto accident in 1971 at the age of 49. An overwhelming mass of facts suggests that this man may be described as a *human singularity*.

Arigo was a poor working man of peasant origins who began to have headaches for no apparent reason. Something was trying to get through to him, and he was unconsciously resisting it, hence the headaches. Eventually, it was learned that it was “Dr. Fritz,” the spirit of a German Doctor said to have died in 1918, calling on Arigo.

Dr. Fritz took possession of Arigo’s body and spoke with a guttural German accent. Arigo ultimately came to regard Dr. Fritz as Christ consciousness. Whatever “Fritz” was, it had one task, which was to use Arigo’s body to heal the sick. And this is exactly what occurred for the remainder of his life.

Take the event that led to Arigo’s immediate rise to fame. A distinguished Senator, Lucio Bittencourt, had stopped in a hotel in Congonhas do Campo to meet a representative for the local farmers; that person happened to be Arigo, who lived in Congonhas do Campo. Bittencourt was so taken with Arigo that he invited him to take a room in his hotel, so they could carry on their talks. When he retired, Bittencourt was unable to sleep; he had in fact recently been informed that he had lung cancer.

Dozing restlessly, suddenly a man broke into the Senator’s room, turned on the light, brandished a razor, and announced that an operation needed to be performed. It was Arigo, eyes glazed and speaking with a German accent. The Senator felt no fear but blacked out. When he woke up, he found blood on his pajamas and a healed incision on his back. He rose and staggered toward Arigo’s room, looking for an explanation. Arigo was just as surprised as the Senator. He had no idea that he had just operated on the Senator’s lung cancer. But, entranced, he evidently did. It was in the newspapers the following day, and Arigo was suddenly known all over Brazil.

This was the beginning of a public career of 20 years made famous for his healings. His office consisted of a few tables and chairs in some shacks with long lines of indigent, as well as distinguished, patients, all waiting their turn. Arigo treated about



Portrait of Arigo by Michael Grosso

300 patients a day, and most of the treatments lasted about three minutes. He treated all kinds of conditions, from cataracts to cancer. He deployed two kinds of treatment—operations and prescriptions.

The prescriptions were preceded by diagnoses achieved almost instantly with a glance. And with a glance, Arigo gave exact blood pressure readings of his patients. The prescriptions were written with lightning speed, and in the suitably scientific pharmaceutical lingo. They were completely original and strange, mixtures and quantities of drugs that no physician would even conceive no less dare to prescribe; nevertheless, *they worked*.

Arigo had no medical knowledge, training, or experience *whatsoever*. And he had no recollection of writing them. This process of diagnosis and prescription writing was performed

and observed thousands of times. For all the weirdness of the prescriptions, they never caused any harm or ill effects. And they brought positive help and cures, often of fatal diseases. Clearly, these are impossible performances, in manner and effect, unless we posit some extra mode or dimension of intelligent reality operative but transcending present science.

Surgical operation was the second type of treatment. Playwright, documentary film producer, and author John Fuller called Arigo “the surgeon of the rusty knife.” His operations were positively surreal. Nothing could be more wrong, indeed, horrific, as to *how* he performed surgery on his patients. To begin with, septically: Arigo would take his penknife, or any handy blade lying around, however filthy, and roughly plunge it into the flesh of his patients, rapidly excising diseased tissues.

Patients never felt pain (although they sometimes *appeared*

uncomfortable) and, incredibly, were never infected. Bleeding was minimal and Arigo could stop the bleeding with a command. The wounds healed rapidly, without stitches.

Once the operation was over, the gruff martinet “Dr. Fritz” became the amiable, easy-going Arigo with his pious wife and brood of handsome children. How all the rules of reality can be broken while producing such healing marvels is a mystery—signs of a human singularity.

Arigo was singular in his purity of purpose. He never took money or gifts for his healings. He had no choice in the matter; the force compelling him was beyond his control. To profit from his gift would be sacrilege; during his whole career, he worked at menial jobs to support his large family.

Arigo gained a vast following, a grateful populace, and a no less grateful class of distinguished acolytes. He restored the sight of the son of the famous singer, Roberto Carlos. He cured a kidney disorder of the daughter of the President of Brazil, Juscelino Kubitschek, who was himself a surgeon. The condition that Arigo cured in her had stymied doctors in Europe and America.

But aside from friends and admirers, Arigo also acquired enemies, powerful ones, too; the State, the medical profession, and the Catholic Church were all against him. The State would try and jail him twice because he was patently guilty of breaking the law, which forbade “the practice of illegal medicine.” He had no degrees, diplomas, or certificates; he just repeatedly did the impossible.

The medical profession was against Arigo for legal reasons, and for reasons of incredulity, jealousy, and perhaps fear, when in fact a little curiosity would have been an appropriate response. Fortunately, many physicians did eventually come to observe him on the job.

The Church decided that only *bona fide* Catholics are allowed to perform miracles. If you’re, say, a Kardec-style Spiritualist (popular in Brazil), or keen on some other spiritual discipline, miracles could get you into serious trouble. The Church attacked Arigo and accused him of witchcraft and profiteering, both lies.

Arigo always asked his friends to pray for his enemies, and he served them and strangers for free and with love. Arigo actually behaved like a saint, displaying the Church’s “heroic virtue,” without calling it that. Judged and jailed twice, his better friends prevailed, and he was back playing the part assigned to him by the mysterious Dr. Fritz. The tide of opinion turned. Plans and appropriations were in place to expand his facilities and bring in a team of scientists to study Arigo, who welcomed the idea. He, in fact, welcomed scientists observing him, and many did.

But at this point fate took a sinister turn. It was early January 1971, and President Kubitschek and Arigo had a meeting. Arigo explained, as he had to others, that for the past weeks he’d been dreaming of a “black crucifix” and that this was their last meeting. He predicted he would soon die a violent death. On January 11, his car skidded on a rainy road into a truck that killed him.

But the story of Dr. Fritz continued and got stranger. He apparently needed to keep on working as healer for the poor and needy, and had taken possession, reportedly, of at least

three other men to carry on his posthumous crusade of supernatural healing. Two of those also predicted their own deaths and died violently. A third is alive today, performing Arigo-like marvels, but also awaiting his predicted violent end. “Dr. Fritz” (whatever that stands for) apparently operates from *outside* our reality-system. The persons it seems to use to do its work are then disposed of.¹

What’s behind the singular career of someone like Arigo is a mystery. The phenomena observed in broad daylight for 20 years cannot be explained, even with remote plausibility, by established science. Its singularity is of the type that suggests a higher order of human function that revolves around astonishing healing powers.

Various sorts of human singularity range from historical to recent times and from individuals to group events. So, in the 20th century, we have Padre Pio’s 50 years bleeding stigmata, never infected, and exuding unexplained fragrances. At the moment of his death, the last flake fell from his stigmatized hands, leaving no scar on his body, after being an open wound for 50 years. Leaving no scar was inexplicable, according to dermatologist John Sweeney of Columbia University Hospital, whom I questioned about this.

Many other candidates could join the roster of human singularities. Again, in the 20th century we have banker, journalist, and physical medium of amazing versatility, Franek Kluski (1873–1943) producing sounds, violent psychokinesis, apports, levitation in the form of objects changing their weight, all sorts of photic phenomena, inexplicable odors, materializations of birds and other uncanny forms, apparitions of known deceased people, and so on.²

The fact is that all sorts of human singularities are part of the historical landscape. They need to be teased out of oblivion and appreciated for their broad significance. A more detailed taxonomy of human singularities might help us imagine the possible direction of human evolution.

ENDNOTES

- 1 The book to read is John Fuller’s *Arigo: Surgeon of the Rusty Knife*. Also, Google Arigo and Henry Puharich, to observe some of the operations and Puharich’s stunning talk on Arigo.
- 2 Zofia Weaver (2015) *Other Realities? The Enigma of Franek Kluski’s Mediumship*.

MICHAEL GROSSO, an independent scholar, studied classics and received his Ph.D. in philosophy at Columbia University. He was a contributor to *Beyond Physicalism: Toward the Reconciliation of Science and Spirituality*, edited by Kelly, Crabtree, and Marshall. His most recent book is *The Man Who Could Fly: St. Joseph of Copertino and the Mystery of Levitation* (Rowman & Littlefield). Visit his blog at <https://consciousnessunbound.blogspot.com>.



Jeffrey J. Kripal

La Madonna dell'UFO

We are part of a symbiotic relationship with something which disguises itself as an extraterrestrial invasion so as not to alarm us.

— TERENCE McKENNA

On Sunday, December 14, 2014, I stood in the Hercules Room of the Palazzo Vecchio, or the Medici Superhero Room, as I prefer to call it.¹ Well, that is what it is. I was not there to look at the Greek hero and his superhuman labors brightly illustrated, like some Renaissance graphic novel, on the ceiling for the Florentine rich and famous. I was there to view a minor early sixteenth-century painting entitled simply “Natività” (1510–20). The painting appears to depict a “UFO” hovering in the sky.² A man and his dog stand on a hill, both staring up at the sky, the man’s hand shielding his eyes, apparently puzzling over the same object that the viewer of the painting is. In the foreground, the Virgin, with her back to the thing in the sky, smiles reverently at the two holy cousins: baby John, who will become the Baptist, and the infant Jesus, who will become the Christ.

It is hardly a major piece of art. I had to ask two museum guards to locate it in the palace and could find no reproduction of it in the bookstore. One of the female museum guards described it to me, with a big smile, as the “la Madonna dell’UFO.” She seemed delighted with the modern renaming of the painting and the new, if quirky, appreciation that this new designation signals. Another museum guard, this one male, said, with a gentle arrogance, “Well, of course, you know it’s not a UFO. It’s a standard Renaissance representation of the Holy Spirit.”

“Really?” I answered silently in my head. I didn’t have the courage to ask him what the Holy Spirit was doing in a scene that had nothing to do with the Annunciation, or why a man and his dog are staring at the thing hovering in the sky, whereas the Virgin seems completely unaware of it. I never knew the Holy Spirit was an object that could be seen by any passerby (or pet), but not by the Virgin. Dogs, by the way, feature prominently in contemporary UFO encounters—they commonly see the things, too, and react with the same astonishment and fear that human hairless primates do.

Still, the male guard had a point. It is true that the Holy Spirit is sometimes depicted in similar ways in paintings of the Annunciation and, more rarely, of the Nativity. It is also true that the shepherd shielding his eyes from the “glory of God” can be found in other pieces as well. Still, there is something about *this* Holy Spirit or glory of God that is different. The



JoJan/Wikimedia Commons

The Palazzo Vecchio in Florence, Italy

glowing object is just too similar to what is described today in the ufological literature. The comparison is eerie.

One skeptical commentator, Filomena D’Amico, describes the object as an ellipsoidal or “lead-colored disk that is tilted to the left and that has a kind of turret dome very similar to descriptions given by traditional science fiction to extraterrestrial spacecraft.”³ That is fair and generous. D’Amico nevertheless thinks that the artist intended to portray an angel in the form of a luminous cloud—an extremely rare artistic choice, but again not entirely unknown. Another online art critic, Diego Cuogi, agrees, observing that artists of the time consulted the apocryphal *Protogospel of James*, which contains a reference to a cloud of light. This material reference apparently proves for Cuogi that it is not a UFO, that it is “only art.”⁴

I understand the art-historical precedents, of course, but

I doubt that they really explain the Madonna of the UFO. My reasons are textual and historical. After all, one hardly needs an obscure apocryphal text to find a textual reference to the luminous cloud of the painting. The cloud filled with light or lightning is very biblical. The “glory of God” is described in similar terms, for example, at key moments in Exodus (16.10 and 24.16). Much more damning for Cuogi’s reading, however, is the fact that the same motif appears in the first lines of Ezekiel, where the prophet describes a vision of a bizarre something that looks and sounds remarkably like a modern UFO encounter. The biblical text even describes weird “wheels,” how the thing floats, roars, and gleams like some kind of electric metal,⁵ and how the prophet was “abducted” or lifted up by the spirit of God and taken to another physical place (Ezekiel 1.1–3.15). David Halperin, the historian of ancient Judaism, author of a psychoanalytic study of Ezekiel, and easily one of the most astute interpreters of the modern UFO phenomenon, has observed the obvious: the vision looks genuine (that is, based on an actual phenomenological event), and, yes, it looks like a modern UFO.

Halperin goes on to comment on the typical move that biblical scholars make, which is the same typical move that art historians make, that is: restrict the phenomenon in question to a very particular time and place and so create an existential firewall between it and us. That simply does not work here:

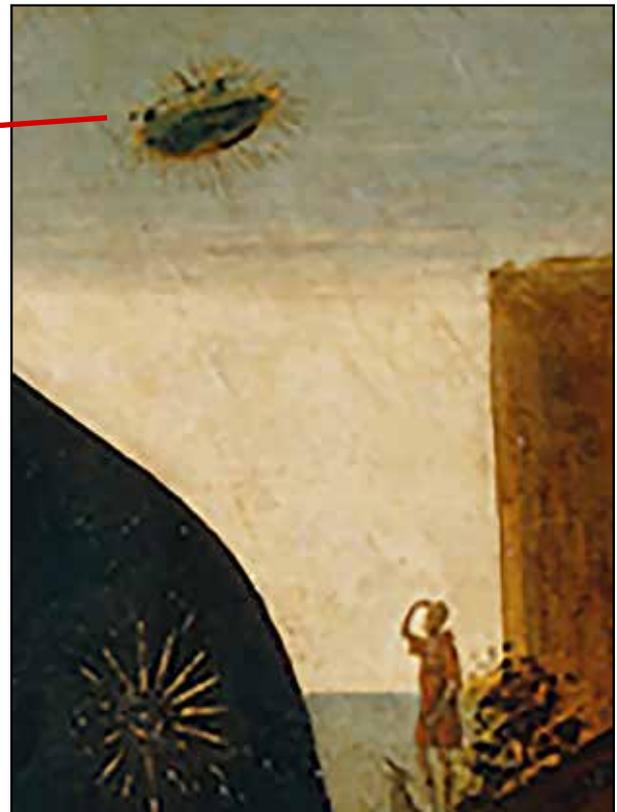
Bible scholars pooh-pooh such notions, insisting that what Ezekiel saw must be interpreted in terms of Ezekiel’s own time and culture (early sixth century BCE). But the traditional tools of exegesis get us only so far in understanding the Bible’s strangest, most numinous text. There’s a sense in which Ezekiel really did see a UFO: something unidentified, beyond Ezekiel’s categories and our own, capable of being culturally pigeonholed as “visions of God” (Ezekiel) or as a spaceship. The truth transcends both.⁶

The conclusion here is as simple as it is important: Cuogi’s reductive historicizing attempt to explain away the luminous cloud by citing a textual precedence backfires, *since the texts themselves may well have been expressions of actual sightings and encounters*. The classical text of Ezekiel is a powerful case in point.

But I am finally skeptical of the skeptics for another simpler reason, namely, that modern UFOs are also commonly reported as hiding in or appearing as luminous clouds that look, well, like the object hovering, as if out of place and out of time, in the Renaissance painting.⁷ Michael Lieb calls those who witness (and ride) such things the “children of Ezekiel” and the “new riders of the chariot.” “They are moderns, the prophets of the New Age. Theirs is the religion of the New Age, the religion of the modern through which earlier forms of devotion, archaic modes of worship, discover a new outlet.”⁸



Madonna and Child with the Infant Saint John the Baptist, attributed to the “Maestro del Tondo Miller,” late fifteenth century. Palazzo Vecchio, Florence. Courtesy of De Agostini Picture Library.



These resonances between the Renaissance art and the modern ufological literature, moreover, quickly multiply, if one knows where to look. Numerous contactees, for example, have experienced the “alien” as a kind of technological “angel.” So the art-historical explanation that “It is a representation of an angel” only digs the hole deeper. It does not get us out of it.

“Simply because the artist dressed his own experience or a reported vision in the codes of his own local religious culture... does not mean that the object’s nature was significantly different from that of those encountered today.”

And this is before we get to the really weird stuff, like the point-by-point identities between the history of modern Marian apparitions and the ufological materials, down to tiny, utterly bizarre details: like the falling of “angel hair” (a strange weblike substance that falls from the sky around Marian and ufological apparitions, often only to dissolve or disappear before the stuff hits the ground) and the “falling-leaf” pattern of the descending flying saucer and the silver spinning “sun” or disk that thousands of people reportedly witnessed falling from the sky in the most famous Marian event of all time, the “Miracle of the Sun” of October 13, 1917, in Fatima, Portugal—predicted with perfect precision, by the way, by three shepherd children *months* before it happened. A fantastic and utterly impossible Marian ufology could be developed here for hundreds of pages—the Madonna of the UFO, indeed.

This broader historical and comparative context is what makes me so uncomfortable with *both* the art-historical response (“It’s a common Renaissance representation of the Holy Spirit”) and the UFO enthusiast (“It’s an extraterrestrial spaceship”). Halperin had it just right, it seems to me: “The truth transcends both.”

Why, after all, privilege one relative historical moment and cultural framework over another? Perhaps the artist did intend the object as a representation of the Holy Spirit or an angel, but so what? Modern contactees commonly describe their encounters in remarkably similar religious terms. I see no

reason why sixteenth-century Italians could not have seen the same damned things that twenty-first Americans (or Italians, or Belgians, or Brazilians, or Japanese) see every other week. Nor can I imagine a single good reason why some Italian artist (or the author of the *Protogospel of James*, for that matter) would not have taken these “things seen in the sky” as appropriate figures through which to depict the Holy Spirit or an angel.

Perhaps the artist saw one himself. Obviously, he did not intend to represent a “UFO” in his painting. Such language and the modern scientific cosmology, along with the Big Bang, galaxies and space travel that it encodes, were simply not available to an early sixteenth-century Florentine artist. And that’s a gross understatement. Another Italian, the Dominican Giordano Bruno, would be burned in a Roman public square a few decades later, partly for claiming the existence of other planets or “worlds” within an infinite universe with no center. Simply because the artist dressed his own experience or a reported vision in the codes of his own local religious culture, then, does not mean that the object’s nature was significantly different from that of those encountered today. It simply means that these were the cosmological codes available to him. What else *could* he have intended?

In the end, of course, we must admit that there is no way to come to a firm conclusion, a rock-bottom experience or singular event behind these art-historical processes. If there was one (or, much more likely, a thousand), these are now lost to us in the centuries and their silences. Or are they? I suppose this is the other point I want to make. Why *not* use the modern luminous clouds, to which we have some fairly direct (if never completely direct) access via the contemporary UFO witnesses, in order to tentatively read the Renaissance luminous cloud, to which we have no reliable access?

What I think we have to interrogate here is what is at stake in the art-historical denials of this popular comparative practice. I think the reason the art historian is so troubled by the ufological comparison is the same reason that the conventional scholar of religion is so troubled: both the art historian and the scholar of religion are ideologically committed to a purely materialist history in which there can only be political, institutional, textual, and material influences but never, ever, interventions out of space and out of time. It is “only art.” Or it is “only power and politics.” Or it is “only the texts.” Or it is “only in the scholar’s imagination.” So let’s go find an obscure text that can explain (away) what we otherwise see in the painting. Let’s do *anything*, other than entertain the simple idea that sixteenth-century Italians may have been like us and may have responded religiously to what tens of thousands of contemporary people see today and narrativize in very different mythological and cosmological codes.

The comparativist, on the other hand, can see clearly that both the art historian and the modern UFO enthusiast are falling into some remarkably unsophisticated readings—one stuck in Renaissance Catholic culture (or positivist historicism), the other in twentieth-century sci-fi culture. I think they are both wrong. I think we need an entirely new language and imaginary, a new way of seeing the history of religions that is neither bound to the symbolisms and theologies of the religious

past nor hypnotized by our present technologies and military violences. In terms of the latter, the “UFO” is an early 1950s military acronym designed to turn an anomaly in the sky into an enemy on radar. I doubt very much that these paranoid Cold War origins of the UFO—and the whole history of the US military and intelligence communities’ involvement in shaping, suppressing and distorting the public representations of the UFO—have much of anything to do with what these apparitions are really about.⁹

“Really about.” Those are strong words, and completely inappropriate ones in our present intellectual climate. But that climate will pass, as all academic orthodoxies eventually do. And, yes, I think these presences possess their own intentions and agencies, which we are in no position to understand or essentialize at this point in our cultural evolution. This same exact point has recently been made by the atheist and feminist social critic Barbara Ehrenreich, struggling with her own mystical experience, which she can no longer deny and whose cultural impossibility and intellectual embarrassment she compares to an alien abduction experience.¹⁰

None of this, of course, has much to do with what one sees as one walks around Florence today. This city and its religion were once dominated by the immense wealth and power of the Medici family and the public theology, art, and architecture of Roman Catholicism, whose churches literally tower above the cityscape. Such public religions of power, politics, and men have been one of the primary objects of the professional study of religion. As well they should be. I have nothing against this project.

But must we all only do this? Why not build something new on these historical-critical foundations? Or must we just keep digging the basement, deeper and deeper into the dirt? Why not build on these foundations a more radical project still? This would be a new comparative project that focuses on the paranormal present in order to better understand the magical and miraculous past; that does not assume the “only” of “It is only art” or “It is only power and politics” or “It is only in our scholarly imagination”; a project, finally, that is as skeptical of our own present materialist and subjectivist ideologies as it is of the religious and institutional ideologies of the past. For the sake of a conversation, let us call this the new comparativism. Until we can begin such a project, the Madonna of the UFO will continue to mock us.

As well she should.

In the end, we have no answer for her. I think we should just say that and stop pretending that we do. Much better to begin reimagining the history of religions as a long and complicated series of real (as in “really experienced”) contact events, followed by a countless number of personal mystical communions and public communications (including artistic ones), all disciplined, filtered, and shaped by material history, all the way down to our neurology and biology. *Of course*, everything about “religion” is constructed, but everything is constructed upon something—something really seen, really experienced, and something still unidentified.

Perhaps, as J. Z. Smith has famously argued, “religion” is indeed a construct of our scholarly imaginations, but—I am

very sorry—these sorts of experiences/events are not. They are not just scholarly constructions. They are not just texts. They are not just power plays. They are not just subjective illusions. They happen, often in striking empirical and publicly perceivable ways. And we cannot explain them with our social-scientific and historicist methods, or just ignore their obvious ontological provocations, as Smith does in an essay on the modern UFO phenomenon.¹¹ That is much too convenient, and frankly suspicious.

“Both the art historian and the scholar of religion are ideologically committed to a purely materialist history in which there can only be political, institutional, textual, and material influences but never, ever, interventions out of space and out of time.”

Perhaps, you will say, this is a much too grand a proposal to build on such a dubious case study. Maybe you are right. Maybe the Madonna of the UFO is no such thing. Perhaps the object-out-of-place in the sky was intended and viewed as a simple symbolic convention. I doubt it, but okay.

But do we really need such a painting for the new comparativism I am imagining? Similar “new” comparative observations could be made around Brent Landau’s work on *The Revelation of the Magi*, a third-century Christian text that, as Landau has honestly observed, contains strikingly modern “ufological” themes, including the famous “star” or intelligent ball of light that leads the magi to the nativity scene, distorts the sense of time for the magi (exactly as contemporary UFO encounters often do), and then morphs into a small luminous humanoid, that is, into the infant Jesus, who is never named as such in the first-person section of the text. The same anonymous “star,” by the way, also utters mystical teachings that are indistinguishable from modern perennialist and New Age convictions. In Landau’s own terms, the text presents us with “a sentient ball of light who can take the form of a little humanoid and who tells his witnesses that he has appeared to many other

individuals throughout human history.”¹² Nor would this be the last such story. Stars and balls of light turn into angels and humanoids throughout Western history up to and including the present day.¹³

The art historian or textual critic, of course, could note that the traveling star theme is reliant on an earlier textual source, the Gospel of Matthew, and, of course, that is correct. But, again, so what? Note how little this explanation explains. The star from the East in the gospel story does not distort time or morph into a small humanoid, nor does it preach a clear form of perennialism, in the third century no less. We are in the same situation here as we are with the Renaissance painting in Florence. Yes, we have precedents and symbolic conventions, but they explain very little in the end. Something is “out of place” and “out of time” here.

If an unmarried Jewish teenager ever scandalously conceived a god-man with the help of a spirit or an angel (or a luminous cloud), it no longer matters so much, at least as some singular historical event. The same conscious spheres of light and transphysical beings are engaging women and men from the depths of human sexuality (and so from the depths of human genetics and evolution) by the thousands now, and probably have always been doing so.

In the meantime, there is the Madonna of the UFO, eerily uniting the religious cultures of the European pasts and the emergent mythologies of the American present. How this resonance is possible at all is the real question. But who is asking it? Who is ready to re-vision the history of religions as a material history haunted by real contact? Who is ready to affirm both the all-too-human and the nonhuman (or the transhuman) within a new comparativism? Who is ready to smile, like my female museum guide, instead of sneer, like my male museum guide? Who is ready for “la Madonna dell’UFO”?

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ENDNOTES

- 1 I am grateful to David Halperin, Diana Walsh Pasulka, Brent Landau and Troy Tice for their help with this essay.
- 2 We do not know who painted it. Art historians attribute it to Sebastiano Mainardi, Jacopo del Sellaio or Filippo Lippi. The original provenance was a convent of Sant’ Orsola in the district of San Lorenzo in Florence. I am relying on D’Amico below.
- 3 See <http://www.florenceinferno.com/madonna-of-ufo-painting-palazzo-vecchio/>
- 4 See http://www.sprezzatura.it/Arte/Arte_UFO_5_eng.htm
- 5 The Hebrew word here is *hashmal*. Considered to textualize the highest and most dangerous holy mystery by the ancient rabbis and Jewish mystics, the word was translated into the Greek as *elektron*, into the Latin as *electrum*, and is now the basis of modern Hebrew words for “electricity.” It only

appears three times in the Bible, all in Ezekiel. See Michael Lieb, *Children of Ezekiel: Aliens, UFOs, the Crisis of Race, and the Advent of End Time* (Durham: Duke University Press, 1998).

- 6 David Halperin, email communication, 19 October 2015.
- 7 The same phenomenon is claimed in the biblical book of Exodus, of course, where a column or pillar of cloud and lightning is described guiding the Israelites through the desert, but this would take us too far afield.
- 8 Lieb, *Children of Ezekiel*, 17.
- 9 I am indebted to Diana Walsh Pasulka for this language and insight.
- 10 Barbara Ehrenreich, *Living with a Wild God: A Non-believer’s Search for the Truth about Everything* (New York: Twelve, 2014), xii–xiii.
- 11 J. Z. Smith, “Close Encounters of Diverse Kinds,” in *Relating Religion: Essays in the Study of Religion* (Chicago: University of Chicago Press, 2004).
- 12 Brent Landau, “The Coming of the Star-Child: The Reception of the Revelation of the Magi in New Age Religious Thought and Ufology,” *Gnosis* 1:1 (2016); and Landau, *Revelation of the Magi: The Lost Tale of the Wise Men’s Journey to Bethlehem* (New York: HarperCollins, 2010), 90–91.
- 13 For a modern account, see American evangelist William Marrion Branham’s vision of a ball of light or “great star” that transforms into an angelic messenger in David Edwin Harrell, Jr., *All Things are Possible: The Healing and Charismatic Revivals in Modern America* (Bloomington: Indiana University Press, 1975), 27–28. My thanks to Dale Allison for pointing out this consistent motif and this particular text.

JEFFREY J. KRIPAL holds the J. Newton Rayzor Chair in Philosophy and Religious Thought at Rice University. He is the author of numerous books, including *Authors of the Impossible: The Paranormal and the Sacred* (Chicago, 2010) and his most recent *Secret Body: Erotic and Esoteric Currents in the History of Religions* (Chicago, 2017). He specializes in the comparative study and analysis of extreme religious states from the ancient world to today. His full body of work can be seen at <http://kripal.rice.edu>.



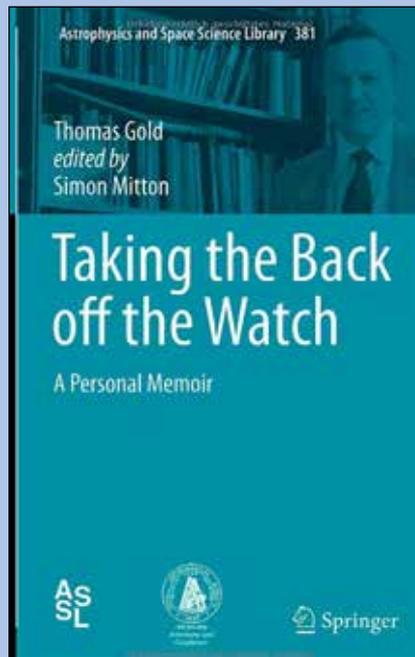
Book review by Peter Sturrock

In Honor of a True Scientist

Early in my career at Stanford University, in the course of a conversation with Leonard Schiff (then the Department Chair of the Physics Department), I asked him what he considered to be the most important characteristic of a successful scientist. He replied “strength of character.” Thomas Gold (always known as Tommy) had that characteristic in spades. He was not a physicist, nor a biologist, nor a geologist, nor a space scientist, nor an astrophysicist, nor a cosmologist—he was all of the above.

My first encounter with Tommy was in 1953, at a conference on “Gas Dynamics of Cosmic Clouds” in Cambridge, UK. There was discussion about geomagnetic storms, and their various components—the Sudden Commencement, the Main Phase, etc. No one was offering any convincing theoretical interpretation of these phases, when up spoke someone with a clear and confident voice. He argued that the only way to understand how the “sudden commencement,” with a timescale of minutes, could be initiated by a solar flare that had occurred perhaps a day earlier, was to attribute the sudden commencement to a shock wave that had traveled ahead of the material ejected by the flare (material that would subsequently initiate the main phase). He then went on to point out that it could not be a conventional hydrodynamic shock, because the mean-free path of the atoms, electrons, and ions was far too long to lead to a shock wave duration of just minutes. It had to involve the interaction of the electrically conducting gas with a magnetic field. Once stated, the interpretation was obvious! But it took someone with the intelligence, curiosity—and strength of character—of Tommy Gold to see it.

Some years later I was at a conference at the Villa Monastero at Varenna, Italy, on Lake Como. I had by then heard of Tommy’s athleticism (he was a formidable skier), but I was still taken aback by what I saw. There was a stone staircase leading down to an underground vault, and of course there were railings around the staircase. I saw a crazy man, who obviously had no concern for his life or limb, calmly walking on top of the railings starting where the steps began, and walking to the other end, where there would have been a ten foot drop to the stone steps below! That was Tommy—fearless as always.



Taking the Back off the Watch: A Personal Memoir by Thomas Gold, edited by Simon Mitton. Springer, 2012.

As a boy, I once asked permission to take an old alarm clock to pieces. Permission was granted, and I successfully took the clock apart and then reassembled it. Tommy, as a boy, achieved the far more impressive feat of opening up a Swiss watch, taking it to pieces, and then putting it back together! Hence the title of this memoir, *Taking the Back off the Watch*, which Tommy never completed in his lifetime (1920 to 2004) but which has been prepared for publication by Simon Mitton, who was himself once a young astrophysicist at Cambridge University. The life of Tommy Gold is a fascinating story, and we owe a great debt to Mitton for bringing it to publication.

Early Years

Gold was born in Vienna in 1920 and lived there until 1930, when his family moved to Berlin. Tommy did not do well in the Berlin school, and the teachers suggested to his parents that Tommy might be mentally retarded! However, he excelled in gymnastics and learned to defend himself against the “ruffians and young thugs” a Jewish boy would encounter in Berlin in those days. In 1933, Tommy was sent to a school in Switzerland which—after Berlin—was a heavenly experience.

“Tommy was never afraid of controversy...”

Tommy left Switzerland in 1938 to rejoin his parents, who had by then emigrated to England. He was admitted to Trinity College, Cambridge University, in 1939, but in May 1940 all persons in England with German or Austrian passports were interned. With other internees, Tommy was moved to an internment camp in Canada, where he had the great fortune of meeting Hermann Bondi, who would become a lifelong friend

and collaborator. Tommy recounts an unpleasant experience at the hands of the commandant of an internment camp, and then advises us “Beware of humans when they are put in charge of other humans.”

Tommy was returned to England in 1941, and was able to resume his studies (in Mechanical Engineering!) at Cambridge. Once he had completed his studies, Tommy was sent to the Admiralty radar establishment in Surrey to become part of the theory section where he rejoined Bondi, and where he met Fred Hoyle who was in charge of that section. It was in this way that the famous trio of Bondi, Gold, and Hoyle came together.

When World War II ended, Tommy was temporarily given the illustrious rank of Wing Commander and sent to Germany with a small delegation to inspect and report on various scientific and technological centers in Germany. One night in Berlin, he and a companion were accosted by an American soldier who demanded that they take him to an address in Berlin. Somehow the interaction became hostile and the soldier produced a knife and began to attack Tommy. Tommy had as a boy learned how to fight, and he was able to break the soldier’s wrist and so survive a very dangerous situation.

I met Tommy—well after the War had ended—at the conference on “Gas Dynamics of Cosmic Clouds” mentioned earlier. However, my principal contact with Tommy occurred (probably in 1969) after the discovery of pulsars by Jocelyn Bell and Tony Hewish in 1968 at the Mullard Radio Observatory at Cambridge. My first thought was that pulsars had to be pulsating white dwarfs, and I developed a theory along those lines. Tommy’s immediate interpretation was that they had to be rotating neutron stars. When he first asked for time at an astrophysical conference to present this idea, the conference chairman refused, saying “If I give you time for that, Tommy, I’ll have people asking to present all kinds of crazy ideas.” Undeterred, Tommy gave his speech from the floor! Tommy got the basic idea correctly, but he did not go on to develop that idea into a theory, which is a problem I took on in 1970.

“Tommy could be years ahead of the establishment!”

Hits and Misses

As one must expect of any creative scientist, Tommy had both hits and misses. The sudden-commencement model and his pulsar model were two of his hits. Another was his concept of the “magnetosphere” for the region far from the Earth’s surface where the plasma “atmosphere” is dominated by the Earth’s magnetic field. Another remarkable intellectual achievement was Tommy’s theory that the ear is not a passive receiver of sound waves, but is a receiver that connects with an active transducer. Tommy proposed that theory in 1948, but it was not accepted by the biological community until 1998. Tommy could be years ahead of the establishment!



Thomas Gold (1920–2004) in his office at Cornell University

One theory that Tommy would have to abandon was his idea that the surface of the Moon would be covered by dust two or three feet thick. Most astrophysicists would also claim that he (and Hermann Bondi and Fred Hoyle) were off base in advocating the “Steady State” model of cosmology. Fred Hoyle had used the term “Big Bang” to denigrate the alternative idea of a sudden beginning of the universe, but the name has stuck!

Tommy took an active and creative interest in many other problems. One was the nature of radio sources being discovered by radio observatories, including the Mullard Radio Observatory under the direction of Martin Ryle in Cambridge in the 1960s. The distribution of sources appeared to be almost isotropic, so they had to be either very close by (inside our galaxy) or extragalactic. Ryle initially went for the first option and Tommy for the second—which proved to be the correct choice.

Tommy took an interest in the intriguing problem of finding a mechanism that can explain the polarization of starlight—now believed to be due to asymmetric interstellar grains that are aligned either by magnetic field or by flow-fields in the interstellar gas.

Tommy was never afraid of controversy, once saying “For a theory to be useful, it should be wrong” (intended meaning debatable of course). One of Tommy’s theories (which almost all scientists would consider to be wrong) is that oil has a geological origin, not a biochemical origin. He was successful in getting a Swedish oil company to drill through 500 meters of rock, an experiment that produced oil, but only a very small amount. That test argues against Tommy’s theory, but it does not absolutely disprove it.

If I could bring back to Earth one of my erstwhile colleagues to talk over my current research (the influence of neutrinos on beta decays), it would be Tommy. It is unlikely that he would immediately accept the reality of the phenomenon—still less immediately accept my theory—but he would certainly bring to the discussion an open and inquiring mind—which is all one can ask of a true scientist.

PETER STURROCK has spent most of his life as a conventional scientist, working on accelerator physics, electron physics, plasma physics, solar physics, astrophysics, and statistics at Stanford University. He is one of the founders of the Society for Scientific Exploration, and the author *Late Night Thought About Science* (Exoscience, 2015).

Mel Acheson

Keyhole Epistemology

We peer at the universe through keyholes.

We sense half a dozen colors, variations of rough and smooth, flavors that are sometimes familiar, a few octaves of pressure oscillations in air. What are we missing? The colors of microwaves and x-rays, the sounds of electric currents, the smells of magnetic fields, the sensations for which we have no names or even imagination.

All we get from these keyholes are cascades of tiny sparks between nerve cells. We arrange these sparks into patterns, which we call perceptions and conceptions and facts. We give them names, and the names relate one with another, and these relationships imply points of view. The name we give to the viewpoint that’s peering through the keyhole, to the metaphorical eye that sees what there is to see, is the I of ego who understands that it sees.

When this eye looks back on itself, when the I understands that it understands, it becomes conscious. This consciousness has an inherent bias. Because we’re not conscious of what’s unconscious, we assume what’s conscious is all there is. Consciousness is like a spotlight in a dark room: Because all we see is what’s within the circle of illumination—the wallpaper, the picture, a chair and its shadow—we think that’s all there is to see.

We can overcome this bias if we pay attention not to the objects illuminated but to our activity of seeing them. Memory helps: The circle of illumination moves; we see other objects; we remember what we no longer see. Libraries help: We can discover what others have seen. This prompts us to realize there’s more to the universe than we’ve seen, experienced, understood.

But it’s not just the circle of illumination that can move. The source also can move. The spotlight can shine on the same objects from different locations. The nervous sparks from which we form the patterns that imply a viewpoint can be rearranged to form a different pattern, and the different pattern will imply a different viewpoint. We call this learning. It prompts us to realize there can be more than one way to see things, there can be more than one theory to explain things.

From a different viewpoint, familiar objects—“the facts”—look different: We see the wallpaper, the picture, and two chairs. Curiosity goads us to invent ways of generating additional sparks that might allow us to judge whether the pattern of one chair and its shadow or the pattern of two chairs is the “real” one. We call this experimentation, verification, and speculation. Again, if we pay attention not to the objects illuminated but to our activity of seeing them, we realize that “reality” is not what we start with but what we end up with. It’s the picture that results from

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arranging patterns, generating patterns, modifying patterns, and associating patterns until we have a coherent composition.

With a large movement of viewpoint, the patterns of nervous sparks we call “fundamentals” can change. This is a paradigm shift. What once was a dark room with light shining through pinholes in the wallpaper becomes a four-dimensional manifold of emptiness interrupted with transient specks of thermonuclear explosions. It produces a different picture of a different reality. Seeing the universe from more than one paradigm provides a kind of cognitive parallax that gives a sense of depth and historicity to consciousness.

The awareness of different objects and different viewpoints and different realities

can lead to an awareness of limits: Each perspective will have its domain of validity. These domains are the basis for what we call the provisionality of theories in science. The nature of cognitive knowledge—that common human trait which is simply applied methodically by science—is not suited to staking claims to The Truth. Provisionality is more limited...and more useful. It’s flexible, adaptable; a tool, not a Procrustean bed. The “I” who thinks of itself as the center of a viewpoint can be liberated from its attachment to particular viewpoints. It can see itself as an explorer of viewpoints, a creator of viewpoints, an artisan of cognitive composition.

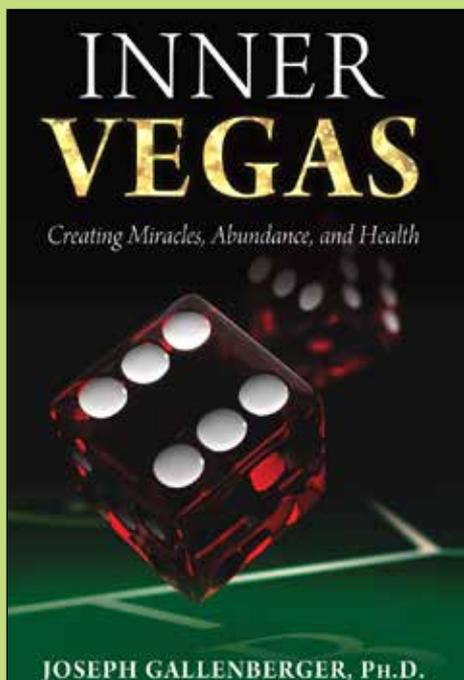
This makes of science an art instead of a religion, an invention instead of a ritual. Science is not so much a search for THE TRUTH as it is the generation of truthfulness. This is the distinction between justificationism and critical rationality. Cognitive knowledge is not something that’s justified by being founded on some incorrigible ground. Rather, it’s a mutable metaphor in which every theory and every proposition is open to critical reexamination.

This is what makes peeking through the keyhole so exciting. Everyone’s carving a different sculpture or composing a different tune or painting a different picture of the universe. Some of those efforts turn out to be quite useful and pleasing. I’ve collected a few; I plan to collect more. If you’ve only got one hanging on your wall, I urge you to make room for a second.

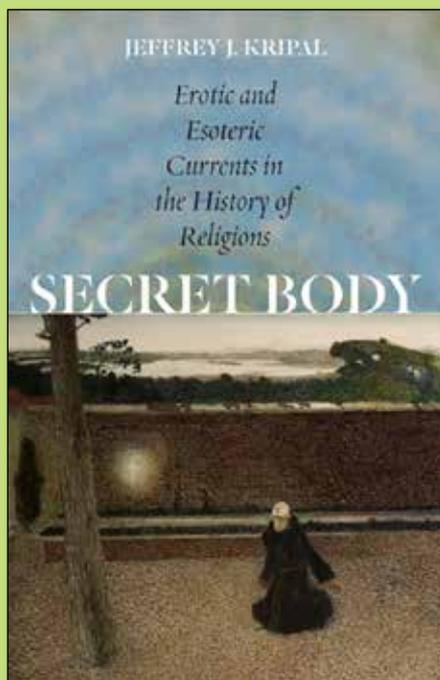
MEL ACHESON majored in astronomy but was so disappointed and dismayed by the institutional corruption he encountered during his college years (1961-1965) that he started a remodeling business instead. Years later, he began thinking about how revolutions in scientific theories are possible: How do people “compose” theories? What processes and criteria do they use to judge truthfulness? How do these theories, processes, and criteria change with their mutual interactions? He’s still working on it. Article reprinted courtesy The Thunderbolts Project.

Noteworthy Books

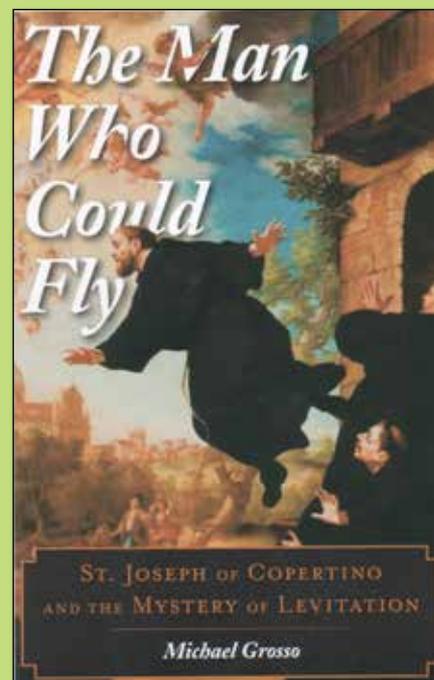
Available from Amazon and Barnes & Noble



Inner Vegas: Creating Miracles, Abundance, and Health
By Joseph Gallenberger
(Rainbow Ridge Books, Feb. 2013)



Secret Body: Erotic and Esoteric Currents in the History of Religions
By Jeffrey Kripal
(University of Chicago Press, Nov. 2017)



The Man Who Could Fly: St. Joseph of Copertino and the Mystery of Levitation
By Michael Grosso
(Rowman & Littlefield Publishers, Dec. 2015)

On June 6–10, 2018

The SOCIETY FOR SCIENTIFIC EXPLORATION will join with the INTERNATIONAL REMOTE VIEWING ASSOCIATION in hosting their annual meeting at South Point in Las Vegas.

The theme of the conference will be *Applications of Edge Science*.
Details coming soon.

