

Scientists Discover their Sixth Sense

By Peter Fotis Kapnistos (2008)

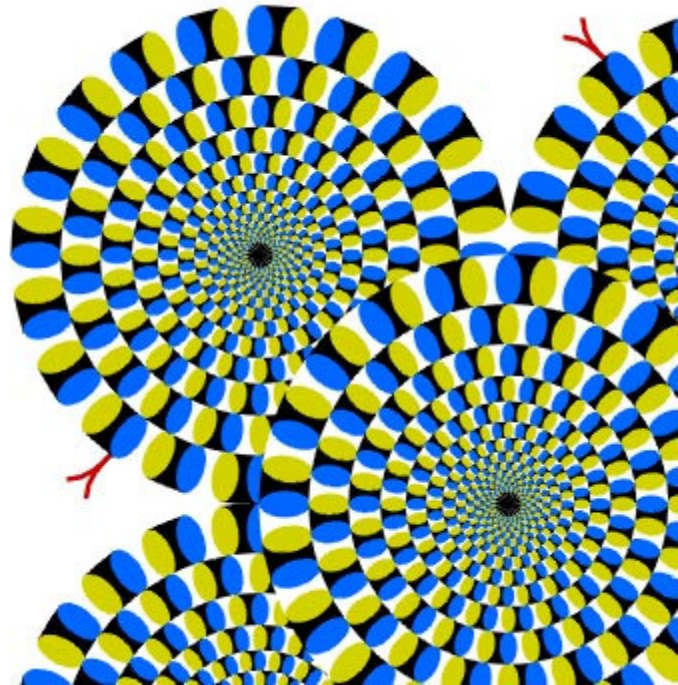
Psychic powers and extra-sensory perception (ESP) are among the most important unexplained phenomena today because belief in them is so prevalent. Scientists have examined people who claim to have psychic powers, but results under controlled laboratory conditions have until now remained unclear. In the meantime, countless UFO advocates wait for a coming “disclosure” of flying saucer evidence from world governments — not simply to confirm that we are not alone in the universe, but to also bring in “alien technology” that may help us to use our minds and bodies to their full potential. A recent *Newsweek* magazine feature article candidly reported:

For if you have never had a paranormal experience such as these, and believe in none of the things that science says do not exist except as tricks played on the gullible or—as neuroscientists are now beginning to see—by the normal workings of the mind carried to an extreme, well, then you are in a lonely minority. According to periodic surveys by Gallup and other pollsters, fully 90 percent of Americans say they have experienced such things or believe they exist. ¹

“If you take the word ‘normal’ as characteristic of the norm or majority, then it is the superstitious and those who believe in ESP, ghosts and psychic phenomena who are normal.” Most scientists and skeptics argue, “Belief in anything for which there is no empirical evidence is a sign of mental pathology and not normalcy.” But can skeptics really classify 90 percent of a nation’s entire population as schizophrenics without appearing to be patently anti-democratic or irrational themselves? Less than 10 percent of the U.S. population is firmly skeptical. Most of the cynical observers are in some way connected to large university grants and to the powerful military-industrial complex that President Dwight Eisenhower warned us about in his 1961 farewell speech: *“In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex.”*

Eminent skeptics are often associated with producing scientific weaponry or technical and biological systems for greedy economies based on perpetual conflicts. At one time or another, almost every great modern physicist has imagined becoming the next “father of the bomb.” This tiny group of skeptics has no real concern for the value of life or the human spirit, yet it manipulates enough control over the media and the financial markets of the world to present itself as the normal mentality or “standard” of intellect. *“One such compensation, it is fair to say, is a feeling of intellectual superiority. It is rewarding to look at the vast hordes of believers, conclude that they are idiots and delight in the fact that you aren’t.”* But ironically, among the bigheaded achievements of this small elitist group of scientific skeptics are global warming and economic meltdown — massive failures in very plain terms.

Some 40 percent of Americans believe it's possible that aliens have abducted some of us, polls show, compared with 25 percent in the 1980s.



¹ “Why We Believe,” Sharon Begley, *NEWSWEEK*, Nov 3, 2008.

Faced with such daunting rising numbers, the skeptics have shifted their debunking strategies. They can no longer go on accusing “believers everywhere” of being mentally challenged. For, there are simply too many of them to represent a statistical eccentricity. Instead, the skeptics’ new game plan is to label such intuitive ideas as “normal workings of the mind” taken to a maximum value. They’re being nice about it nowadays, or more politically correct. But in that willowy gap, we can also catch a glimpse of some amazing discoveries that were cautiously kept out of the mainstream media until now. For example, the belief that animals have a sixth sense for danger is an ancient one. That theory is likely to gain acceptance as a result of what happened during the 2004 Indian Ocean tsunami:

Wild animals seem to have escaped the Indian Ocean tsunami, adding weight to notions they possess a “sixth sense” for disasters, experts said. Sri Lankan wildlife officials have said the giant waves that killed over 24,000 people along the Indian Ocean island's coast seemingly missed wild beasts, with no dead animals found.

“No elephants are dead, not even a dead hare or rabbit. I think animals can sense disaster. They have a sixth sense. They know when things are happening,” H.D. Ratnayake, deputy director of Sri Lanka’s Wildlife Department, said.²

It was recently discovered that the same genes that give sharks their sixth sense and allow them to detect electrical signals are also responsible for the development of head and facial features in humans, according to a new study from the University of Louisiana. “The finding supports the idea that the early sea creatures that eventually evolved into humans could also sense electricity before they emerged onto land.”

Sharks have a network of special cells that can detect electricity, called *electroreceptors*, in their heads. They use them for hunting and navigation. This sense is so developed that sharks can find fish hiding under sand by honing in on the weak electrical signals emitted by their twitching muscles.³

Since 2001, Eric Stroud and Michael Herrmann have been working on a chemical shark repellent. According to Herrmann, he and Stroud were playing around with powerful rare-earth magnets in 2005, when he dropped one next to their shark research tank in Oak Ridge, New Jersey. The lemon and nurse sharks inside instantly darted to the opposite wall. “In testing at the Bimini Biological Research Station shark lab in the Bahamas, Stroud and Herrmann found that sharks dramatically avoid magnets made from neodymium, iron and boron. The magnets even rouse sharks from tonic immobility, a coma-like state induced by turning them upside down.”⁴

Biologist Rupert Sheldrake, author of “*Dogs That Know When Their Owner is Coming Home*,” believes that animals have perceptive abilities of telepathy and premonitions. Veterinarian and author Dr. Allan Schoen says in his book, “*Kindred Spirits*,” that people and animals are intimately connected. Pets whom we feel especially close to seem to understand our needs, read our moods, and even communicate with us on a level that transcends words or body language.

Physician and author Dr. Larry Dossey says there is a connection between all species, which is not limited by locality. He refers to it as a “nonlocal mind.” Consciousness is not restricted to the brain or the body, or time or place. Therefore, people and animals can have an effect on each other, even when miles apart.⁵

Can pets be so linked and in step with their owners when they are far apart, even when there is no possible way they could be using their sense of smell or hearing? An awareness of death is certainly not restricted to humans. The huge attention generated by the case of the intuitive American cat, “Oscar,” points to the interest psychic pet behavior holds:

Oscar lives in a nursing home and has an uncanny ability to sense when a resident is about to die. When a patient is near death, Oscar nearly always appears and hops on the bed. The staff have come to recognize and respect Oscar's instincts, and send for the relatives of any patient he has chosen to curl up beside. But they have no explanation for it. Oscar shows no interest in patients who are simply in poor shape, or who still have a few days to live.

Oscar, a hospice cat has an uncanny knack for predicting when nursing home patients are going to die. One theory says a cat's acute sensitivity to smell might enable it to detect some subtle change in metabolism around the time of death, but no one has been able to explain why any moggy should show an interest in the approach of the Grim Reaper.⁶

² “Tsunami Adds to Belief in Animals’ Sixth Sense,” Ed Stoddard, *Reuters*, Dec 30, 2004.

³ “Sharks’ Electrical Sense Related to Human Genes,” Ker Than, *Associated Press*, Feb. 08, 2006.

⁴ “Geeky Rare-Earth Magnets Repel Sharks,” Genevieve Rajewski, *WIRED*. May 15, 2007.

⁵ “Do animals have telepathy?” *heraldnewsonline.com*, April 2, 2007.

⁶ “The weird world of mystic mogs and death-sensing dogs,” *Daily Mail*, July 2, 2008.

Have you ever noticed that herds of grazing animals all face the same way? Images from “Google Earth” have confirmed that cattle tend to align their bodies in a north-south direction. Wild deer also display this behavior — a phenomenon that has apparently gone unnoticed by herdsman and hunters for thousands of years. In the *Proceedings for the National Academy of Sciences*, scientists said the Earth’s magnetic fields may influence the behavior of these animals. The Earth can be viewed as a huge magnet, with magnetic north and south situated close to the geographical poles. Many species — including birds and salmon — are known to use the Earth’s magnetic fields in migration, rather like a natural GPS. A few studies have shown that some mammals — including bats — also use a “magnetic compass” to help their sense of direction.

Dr Sabine Begall, from the University of Duisburg-Essen, Germany, and colleagues surveyed Google Earth images of 8,510 grazing and resting cattle in 308 pasture plains across the globe. “Sometimes it took hours and hours to find some pictures with good resolution,” said Dr Begall. The scientists were unable to distinguish between the head and rear of the cattle, but could tell that the animals tended to face either north or south.⁷ The scientists noted that it’s amazing that “this ubiquitous phenomenon does not seem to have been noticed by herdsman, ranchers, or hunters.”

Willy Miller — a Scottish cattle farmer — remarked: “I’ve never noticed that my cows all face the same way.”

Another German research team made the equally surprising discovery that magpies have a sense of self-recognition when looking in a mirror. Until now, this characteristic “human” capability has been seen clearly only in apes, though also, as the team noted, “at least suggestively in dolphins and elephants.” It also noted that the magpie findings “suggest that essential components of human self-recognition have evolved independently in different vertebrate classes with a separate evolutionary history.”

Discovery of a magnetic “sixth sense” in deer and cattle has a broad implication. Many life forms as diverse as birds and bacteria have it. They use it primarily for navigation.

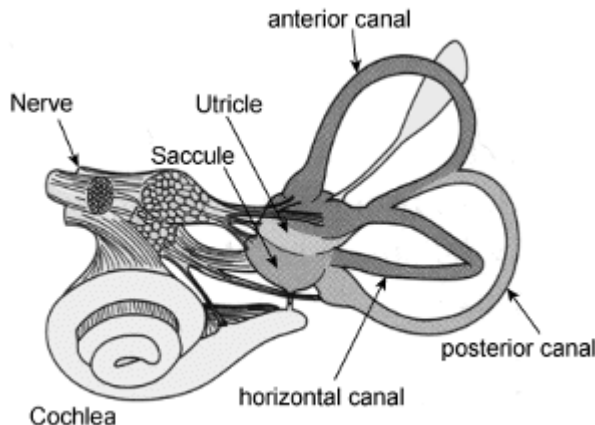
But it is surprising to find it in pastoral cattle and foraging deer that do not appear to need such a navigational aid. The researchers said that the findings challenge neuroscientists and biophysicists to explain how this magnetic “sixth sense” works.⁸

The human sixth sense has been, by far, the most ridiculed and debunked individual ability throughout all the ages. But now, a sixth sense is finally being discovered, revealed, and even revered by some modern scientists — without much anathema — as our natural “sense of balance.” An up to date *New York Times*, *International Herald Tribune* newspaper story plainly reported:

Essential to a fully embodied sense of self is the vestibular system, a paired set of tiny sensory organs tucked deep into the temporal bone on either side of the head, right near the cochlea of the inner ear. The vestibular system isn’t a high-profile, elitist sense like the famed five of vision, hearing, touch, taste and smell. It’s more of a Joe Sixth-Sense, laboring in anonymity and frequently misunderstood.⁹

“Three of the organs are designed to detect twisting movements of the head, by sensing the discrepancy between the angular momentum of the membranes, which are attached to the bone, and that of the free-floating fluid, which lags slightly behind. The other two organs have tiny stones of calcium carbonate, which rise and fall like flakes in a snowglobe and so detect the effects of gravity and of linear head motions, if you’re walking forward, for example, or up stairs.”

Despite its meek status, the vestibular system has lately won fans among neuroscientists, who marvel at its sophistication and sensitivity, and how it tells us where we are and what we’re doing. It is not only crucial for perceptual stability, but it is also required to produce neural representations of the environment in order to accurately guide our behavior. Loss of function



⁷ “Cattle shown to align north-south,” Elizabeth Mitchell, *BBC News*, Aug. 25, 2008.

⁸ “Strange Discoveries: Cow Magnetism and Magpie Self-Identity,” Robert C. Cowen, *ABC News*, Sept. 20, 2008.

⁹ “The unsung system that makes walking possible,” Natalie Angier, *International Herald Tribune*, October 29, 2008.

can produce an imbalance, which manifests as a dramatic, sudden onset of vertigo. “They praise the machine-tool precision of its parts, the way the vestibular system discovered the laws of Newtonian mechanics some 400 million years before Newton and then put those principles to use to provision the head with little organic gyroscopes and linear accelerometers.”

As evidence of the organ’s rising prestige, the first edition of the highly regarded U.S. college textbook “*Sensation and Perception*” (Sinauer, 2005) barely mentioned the vestibular system, but in the new edition that appeared in 2008, a standalone chapter on the subject closes the book. “I don’t want to sound ungrateful,” said Daniel Merfeld, director of the vestibular physiology lab at Massachusetts Eye and Ear Infirmary and associate professor at Harvard Medical School, who wrote the chapter. “I’m just glad to be included now.”

But if “balance” is indeed our sixth sense, what’s so psychic about it? In 1991, Martin Lenhardt of the University of Virginia discovered that people could hear ultrasonic speech, using the vestibular system as a hearing organ. Ultrasound is sound with a frequency greater than the upper limit of human hearing. In other words, a new technology bypasses the normal audio mechanisms used by the body to hear sounds and provides a direct neural stimulation to the brain.

So outlandish is the concept that humans can have the hearing range of specialized mammals, such as bats and toothed whales, that ultrasonic hearing has generally been relegated to the realm of parlor tricks rather than being considered the subject of scientific inquiry.¹⁰

The mental experience of “hearing voices” could consequently prove to be more than just hallucinations. The validity of ultrasonic hearing has already been clearly demonstrated by “playing opera” to a deaf subject. In one of the earliest reports, the experimental work of Dr. Roger Maass performed in 1946 was cited. “Maass, never credited again for his original discovery, made all the essential observations in regard to ultrasonic hearing phenomenology.” In 1962, Pat Flanagan was the subject of a *Life* magazine profile that described the teenage inventor as a “unique, mature and inquisitive scientist.”

At 15, Flanagan had already begun to demonstrate the invention that would change his life: the neurophone. Built in his home laboratory from wire and brillo pads, the device transmitted audio signals from a stereo directly into the brain, bypassing the ears entirely. Although he knew that the sound was somehow being picked up by the wearer’s skin and bone, the exact mechanism would evade the inventor for 33 years.¹¹

Martin Lenhardt finally recreated Flanagan’s findings in 1991 using ultrasonic signals. He discovered that the saccule, a pea-sized organ in the inner ear usually associated with balance, is also sensitive to ultrasonic sound, at last explaining how Flanagan’s invention worked. But there’s even more to the sixth sense than meets the eye. Some researchers now equate it with stress, relaxation, and various psychic abilities.

In 1975, Dr. Herbert Benson, argued in “*The Relaxation Response*” that prayer and meditation can play a significant role in reducing stress and hypertension. We now know that the vestibular system plays a critical role in stabilizing the visual axis (gaze) and maintaining head and body posture during meditation.



The thought of having a third eye or being sealed in the forehead is a familiar religious idea, sometimes associated with neurons in the thalamus, amygdala, and cortex of the brain. But it is essentially the vestibular system of the inner ear that allows us to “balance” the two hemispheres of our brain and in due course trigger the relaxation response. “*Who hath ears to hear, let him hear.*” (*Matthew 13:9*). Dysfunctions in the vestibular system can cause stress, anxiety, panic attacks, nausea, and motion sickness. It is a well known fact that prayer and meditation can produce a “trance” or altered state of consciousness related to curative powers, religious ecstasy, and increased visual imagery — leading to relaxation and tranquillity.

Yet, it is a common oversight of modern western society to assume that trance or altered states of consciousness depend exclusively on the characteristics of primitive culture. Just about every adult in the world experiences a trance in the form of sexual orgasm. But some psychologists have not yet overcome the taboo of repression to openly describe the human orgasm as an authentic trance state. As a result of today’s gross commercialization of sex, many people go through their adult existence creating an “unbalanced” trance response. Rather than aesthetic or emotional feelings, they are conditioned by boorish

¹⁰ “Ultrasonic Hearing in Humans: Applications for Tinnitus Treatment,” Martin L. Lenhardt, *International Tinnitus Journal*, Vol. 9, No. 2, 2003.

¹¹ “Heard instinct,” Mark Pilkington, *The Guardian*, April 21, 2005.

media and gluttonous peer pressure to put up with offensive vulgarity, tending to deprave and corrupt, which only increases the body's stress response. By harmonizing the brain's hemispheres, prayer and meditation can stimulate the vestibular system to create a healthy, balanced trance state. Hundreds of studies have been published over the past three decades on the potential health effects of prayer and meditation. Dr. Vernon Barnes, a research scientist in pediatrics found that men and women who meditate are 30 percent less likely to die of cardiovascular disease over the next eight years compared to their peers. Their risk of dying from any cause was 23 percent lower.

Barnes pointed to recent studies that have found a number of effects that could protect against heart disease and stroke; besides lowering blood pressure, meditation may reduce cholesterol, improve the functioning of blood vessel walls, and possibly reduce atherosclerosis — the buildup of plaques in the arteries that can lead to heart attack and stroke.¹²

Dr. Robert H. Schneider of Fairfield, Iowa, says the findings, coupled with previous studies, “give strong evidence” that meditation is a heart-healthy habit. Meditation works better than other practices like muscle relaxation, he asserts, because it may awaken the body's innate ability to “self-repair.” Meditation, both Schneider and Barnes say, is physiologically different from resting or sleeping because practitioners become still mentally and physically, but remain awake and aware.

Dr Toby Collins, of the Oxford Centre for the Science of the Mind, told the *BBC News* website: “Meditation is a way of tapping into a process of manipulating brain activity.” He said the idea that meditation trained the brain to attend to just one thing at a time fitted in with previous research. He added: “How that's done, we don't yet know. But studies using fMRI (functional magnetic resonance imaging) can show what's happening in the brain.”¹³



About 58 percent of Americans have tried prayer to relieve their pain, according to a joint study by *ABC News*, *USA Today* and Stanford University Medical Center. That's about the same as the number of people who have taken prescription drugs for pain, the study reports. And of those who've tried prayer, half say it has worked very well for them in terms of pain relief, tying it with prescription drugs as the most effective pain reliever. The experience of pain is not purely physical, said Dr. Harold Koenig, co-director of Duke University's Center for Spirituality, Theology and Health.

“There is a lot of anxiety associated with pain, there is depression associated with it, there is a loss of hope, there is alienation and loneliness, there is anger associated with pain,” Koenig said. “Religion helps with all of those factors that ultimately magnify the pain and bring it into such great focus for those who experience pain.”

While detractors may argue that prayer functions as a placebo, Dr. William Brose believes otherwise:

"I think there are probably a lot of nonspecific effects that happen with prayer. Some of them may be characterized as a placebo, some of them may be related to relaxation, but I also believe there is a significant spiritual piece that we just simply don't understand," he said. "But the absence of proof isn't the proof of absence. People have faith because they believe in something even when there is no proof."¹⁴

The National Institutes of Health appointed a team of doctors, including Dr. Lynda Powell, to analyze nearly 250 secular-based studies connecting religion and health. Researchers found people who attend religious services weekly, if not more, have a lower rate of mortality by nearly 25 percent. That is, they live longer. But is God the reason worshipers may be living longer? Powell says it could be simpler than that.

“People who are stressed tend to struggle. Struggle triggers stress hormones and that, in effect, shortens their lives,” reports Powell. “People who go to church or religious services regularly are more effective at coping with stress.”

More effective, she says, perhaps because they take what they learn – prayer or meditation - and use it in their everyday lives. This appears to stave off stress hormones and promote more beneficial ones.¹⁵

Nowhere has that idea received a more intriguing going-over than in the recently published book *“The God Gene: How Faith Is Hardwired into Our Genes,”* by molecular biologist Dean Hamer. Chief of gene structure at the U.S. National Cancer Institute, Hamer not only claims that human spirituality is an adaptive

¹² “Meditation good for the heart, study finds,” Amy Norton, *MSNBC*, May 21, 2005.

¹³ “Meditation 'brain training' clues,” *BBC News*, June 13, 2005.

¹⁴ “Many Turn to Prayer, Not Prescriptions,” Jessica Steyers, *ABC News*, May 12, 2005.

¹⁵ “Worshiping may do wonders for health,” Monica Novotny, *MSNBC*, Aug. 2, 2005.

trait, but he also says he has located one of the genes responsible, a gene that just happens to also code for production of the neurotransmitters that regulate our moods. Other researchers have taken the science in a different direction, looking not for the genes that code for spirituality but for how that spirituality plays out in the brain. Neuroscientist Andrew Newberg of the University of Pennsylvania School of Medicine has used several types of imaging systems to watch the brains of subjects as they meditate or pray. By measuring blood flow, he determines which regions are responsible for the feelings the volunteers experience. The deeper that people descend into meditation or prayer, Newberg found, the more active the frontal lobe and the limbic system become.

The frontal lobe is the seat of concentration and attention; the limbic system is where powerful feelings, including rapture, are processed. More revealing is the fact that at the same time these regions flash to life, another important region—the parietal lobe at the back of the brain—goes dim. It's this lobe that orients the individual in time and space. Take it off-line, and the boundaries of the self fall away, creating the feeling of being at one with the universe. Combine that with what's going on in the other two lobes, and you can put together a profound religious experience.¹⁶

“Far from being an evolutionary luxury then, the need for God may be a crucial trait stamped deeper and deeper into our genome with every passing generation.” The relationship between psychics and the powerful has always been close. In the Bible, Joseph found favor with Pharaoh by uncannily interpreting the Egyptian leader's dreams. Centuries later, the supposed forecasting abilities of Nostradamus and the “mad monk” Rasputin endeared both men to the upper classes. In America, according to Catherine Albanese, a historian at the University of California, Santa Barbara, belief in metaphysical powers dates back to the country's founding and shows “every sign of flourishing into any future that can be foreseen.” That's especially true during times of great change or distress—war and recession—when people are looking to make sense of the uncertainty, Albanese says. Surveys show that two out of three Americans believe in the value of psychic insight, according to Michael Shermer, author of “*Why People Believe Weird Things*.”¹⁷

Perhaps the greatest link between the sixth sense and the vestibular system of the inner ear lies in the schema of string theory. No experiment has yet directly detected the Higgs boson, which supposedly gives mass to all particles. In physics, the “graviton” is a hypothetical elementary particle that mediates the force of gravity in the framework of quantum field theory. Experiments to detect gravitational waves might provide information about certain properties of the graviton.¹⁸ The Large Hadron Collider (LHC) at CERN came on line in 2008. But since we already know that the inner ear responds to linear accelerations of motion, including *the constant influence of gravity*, perhaps the existence of the graviton will be confirmed or rejected by studying the “gravity receptors” of the vestibular system. If all this sounds a bit like alien technology to you, don't forget that our small elitist group of scientific skeptics is being rather nice about how it discredits its spirit rivals nowadays. Do they perchance have a clandestine motive? You bet. A recent report by the U.S. Department of Defense plainly describes the new areas of focus.

Mind reading: The development of psychological models and neurological imaging has made it possible to see what people are thinking and whether they're lying. The science is, however, still in its infancy: Challenges remain in accounting for variations between individual brains, and the tendency of our brains to change over time.

One important application is lie detection -- though one hopes that the lesson of traditional lie detectors, predicated on the now-disproven idea that the physiological basis of lying can be separated from processes such as anxiety, has been learned. Mind readers could be used to interrogate captured enemies, as well as “terrorist suspects” passing through customs. But does this mean, for example, that travelers placed on the bloated, mistake-laden watch list would have their minds scanned, just as their computers will be? The report notes that “In situations where it is important to win the hearts and minds of the local populace, it would be useful to know if they understand the information being given them.”¹⁹



¹⁶ “Is God in Our Genes?” Jeffrey Kluger *TIME Magazine*, Oct. 25, 2004.

¹⁷ “The \$10,000-a-Month Psychic,” Tony Dokoupil, *NEWSWEEK*, June 21, 2008.

¹⁸ “Can Gravitons be Detected?” Rothman, Tony; and Stephen Boughn, *Foundations of Physics* 36 (12), November 2006.

¹⁹ “Uncle Sam Wants Your Brain,” Brandon Keim, *WIRED*, Aug. 13, 2008.

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