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## Ley Lines: Investigating on Site

**M**ystical forces are as plentiful and diverse as the imaginations that create them. They include crystal healing, hauntings, and pyramid power—along with countless others. Among them are “earth energies”—supposed mysterious powers often associated with megaliths and other sacred or magical places—and (the focus of this study) the “ley lines” or “leys” that supposedly connect the sites.

### What Are Ley Lines?

Originally, ley lines were supposed to be ancient—even prehistoric—paths that connected sacred places. The term was coined by Alfred Watkins (1855–1935), an English brewer’s representative turned photographer and amateur antiquarian. Others had discovered alignments of ancient sites, but in 1921—while looking at a map of the Herefordshire countryside—Watkins noted that several ancient sites seemed aligned on an imaginary straight course that also crossed over some prominent hilltops.

He immediately intuited that such alignments were part of a Neolithic system of straight lines. He presented his ideas in two books, first sketched out in *Early British Trackways* (1922) and then developed in *The Old Straight Track* (1925). He argued that the alignments

were devised so that Neolithic people could walk more easily from place to place, navigating by line of sight. He adopted the word *ley*—from *lea*, *leigh*, *ley*, etc.—meaning an enclosed field (Watkins 1925, 158), although there were no pastures in Neolithic times. While it is reasonable that some align-

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ments might well have occurred as Watkins thought, it is also true that the vast number of ancient features—both natural and man-made—meant that many appropriate alignments would be expected to occur by chance.

No doubt far overstating the case, Watkins still never lapsed into mystical nonsense, as began to happen in the 1960s and 1970s with the rise of the New Age movement. In 1958 Aimé

Michel, in his *Flying Saucers and the Straight Line Mystery*, postulated that sightings of UFOs tended to form alignments, and an early alien abductee claimed that extraterrestrials used lines of magnetic force to power their spacecraft. UFO believer Tony Wedd combined these two saucer concepts with Watkins’s ley lines (Sullivan 2000, 2). Others were drawn to leys, and in 1969 paranormalist John Michell conceived of leys as invisible lines of an unknown natural “energy.”

A “lifelong marijuana smoker,” Michell (1933–2009) promoted all manner of pseudoscientific and pseudohistorical claims, including UFOs, crop circles, and other Fortean and New Age concepts. In his *The View Over Atlantis* (1969), he began to develop ideas that led to the “Earth mysteries” movement (“John Michell” 2016). He adopted Watkins’s “ley lines” and linked them with Chinese *feng shui* (“wind-water”), which advocates the seeking of harmony with Earth’s universal life principle, called *chi*. Chi is an imagined “energy” that supposedly flows through Earth and everything upon it and is affected by contours and changes of the landscape (Michell 1969, 46–54).

Michell regarded dowsing (the use of divining rods or pendulums) and clairsentience (psychic sensing) as

means of locating and verifying leys as “indeed lines of the earth current” (1969, 195). He wrote:

The dowser’s rod twitches as he crosses the spot where once an old stone marked the corner of a subterranean rift. The sensitive person feels the magnetic surge within the stone ring [e.g., Stonehenge]. For such places still bear the invisible marks of some feat of natural magic, performed by the adepts of the former world, space and time travellers, masters of revelation, to whom the earth was but another living creature, responding like a man to certain shapes, sounds and poetic correspondences, the keys to universal enlightenment. (Michell 1969, 192–193)

Michell not only held that there was a network of mystical lines of energy covering Britain but also, implicitly, such a network across the surface of the Earth. These ley lines linked prehistoric “sacred centres” as well as more recent holy sites and, it would soon be apparent, mysterious formations such as crop circles (Michell 1990).

### Crop Circles

I first seriously encountered true believers in ley lines when I examined crop circles in southern English fields (guided by skeptics Chris Nash and John Eastmond) in June 1994. In the picturesque Wiltshire countryside, I came upon such ancient sites—all linked to ley line claims—as Silbury Hill (the tallest Neolithic man-made mound in Europe, see Figure 1), West Kennet Long Barrow (one of Britain’s largest Neolithic chambered tombs), and Avebury (Europe’s largest Neolithic henge monument, much larger than Stonehenge).

In our “field research,” we examined two of the handful of crop circles and pictograms we discovered. The second of these had a crescent-and-circle design and was introduced to visitors by a crude sign placed by the angry farmer: “The Circle—it’s a Hoax.” Nevertheless, a group of local dowsers who preceded us there pronounced the pictogram genuine. One of them, applying his wand, claimed its reaction proved the formation was not a hoax but was formed by earth spirits (Figure 2). He

observed that the design was on a ley line that linked nearby sites—running from West Kennet Long Barrow through Silbury Hill and on to another ancient site. He also helpfully took dowsing measurements of Chris’s and my invisible “auras.” At his request we meditated a few moments, whereupon the sweeping rods supposedly indicated our energy fields had expanded from a few inches to several feet (Nickell 2001, 70–82). (Elsewhere, I have reported on my investigation that found auras to be nonexistent [Nickell 2001, 142–149].)

Unfortunately, many of the leading cereologists—such as Terrence Meaden, Pat Delgado, and Richard

Andrews—were dowsers or those who depended on dowsing by others to supposedly authenticate crop circles, often with their association with ley lines. Yet time and again, the circle designs were discovered to have been hoaxed (Schnabel 1994, 51–55, 100, 164–169, 152–169, 152–277). I helped analyze crop circle data that pointed to hoaxing as the most likely explanation for the phenomenon: the designs were more prominent in southern England, had proliferated in the wake of media reports, were increasing in complexity each season, and exhibited a “shyness” effect (i.e., the mechanism was never seen in operation). Subsequently, two retired artists, Doug Bower and Dave Chorley, admitted they had begun making the circles and then were imitated by others (Nickell 2001, 70–82).

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### ‘Druids Grove’

An investigative tour I made of Germany in the fall of 2002 included three sites in northern Bavaria associated with the legendary Celtic priesthood, the Druids. This expedition (which included the intrepid Martin Mahner and several members of the Bamberg Skeptics Guild) was led by geologist Michael



Figure 1. John Eastmond (left), Chris Nash, and Joe Nickell (taking photo) examine a crop-circle pictogram in Wiltshire, with Silbury Hill in the background.





Figure 2. A dowser claims his rod's reaction proves a crop pictogram is not a hoax but the genuine work of earth spirits. [Photo by Joe Nickell.]

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Link of the Paleontological Institute of the University of Erlangen. The area, some fifty kilometers southeast of Bamberg, is known as “Franconian Switzerland” due to its mountains and caves, castle ruins, and other scenic features. It was once inhabited by the Celts, a tribe that extended into central Europe in about 1200 BCE.

The first of the three sites was a remote wooded hill called Ringwall (“circular rampart”). Added to the natural limestone outcroppings were earthworks (now covered with moss and trees), creating what had actually

been an ancient Celtic fortress. This identification was confirmed by excavations that revealed iron implements and pottery dating to circa 500 BCE. The second site (only about a kilometer and a half away) was a limestone cavern named Espershöhle. (It brought back memories of my avid spelunking adventures in the 1960s.) A passageway led to a fifteen-meter-deep pit where excavated artifacts and skeletal remains had proved it to be another Celtic site (Link 2002).

In contrast to these two scientifically validated sites is a pseudoscientifically claimed one known as Druidenhain or “Druid’s Grove,” which we also visited. Arrangements of giant rocks litter the wooded area, interspersed with passageways so as to create a labyrinthine effect and inspiring popular belief that it is an ancient Celtic site—indeed, as some have called it, the “University of the Druids.” The megaliths—supposedly formed by the Celts by heating and cooling to produce fracturing—have been given such imaginative names as “Christening Stone,” “Bowl Stone,” and “Entrance to the Underworld.” One is named “Sacrificial Stone,” after an idea (dating from 1863), that the place was used for human offerings to deities.

Eventually, the site attracted dowsers who, in 1983, for example, concluded that the “Altar Stone” marked the intersection of two powerful “earth-ray” lines—that is, leys. In addition to identifying and tracking supposed ley lines at Druidenhain, dowsers have also employed their witching wands and pendulums to determine the supposedly true nature of a certain megalith they therefore call “The Grave” (Link 2002).

However, science has intervened to discredit all of the Celtic claims made for the site. There are no potsherds, skeletal remains, or other evidence of human habitation, nor any evidence that the site is Celtic or even man-made. To the contrary, the array of monoliths is actually a *natural formation*—the product of geologic forces and erosion. (During formation of the mountain, pressure fractured the rock, producing numerous cracks crisscrossing each other. These were then at-

tacked preferentially by seeping water, the erosion eventually resulting in a multitude of rocks aligned in rows. [Link 2002].) Thus, Druidenhain is revealed as yet another folly of dowsers and ley-line seekers.

### Nazca Lines

Heralded as “the example which really caught the public imagination” about leys (Heselson 1999, 59) and as representing “real physical evidence for the old straight track” in South America (Sullivan 2000, 10) are the mysterious Nazca lines in Peru. They consist of myriad lines and swaths that run ruler-straight for miles, together with great trapezoids and giant stylized birds and other figures that can be properly viewed only from the air. They were made by the pre-Incan Nazca culture that flourished in the area from 2000 BCE to about 600 CE. Their graves and settlement ruins lie nearby. In 2006, I was able to visit the area I had long studied from afar and to fly over what looked like a giant drawing board (Nickell 2007b, 151–158).



Because the figures are so large they can be properly viewed only from the air, they have prompted crank notions of “ancient astronauts” as hyped in *Chariots of the Gods?* by Erich von Däniken in 1970. These have been soundly discredited. Also the popular idea that the lines have astronomical purpose has been questioned, notably by Nazca expert Anthony F. Aveni and his team of archaeologists and surveyors. Instead, in over ten years of on-the-ground study, Aveni (distinguished archaeo-

astronomer and friend) discovered that the straight lines converge at “ray centers,” which are positioned on hilltops or mounds. He suggests these lines and those of the figures were used as mystical walking paths—“labyrinths”—during irrigation rituals (Aveni 2000, 144, 212–222).

Having myself constructed two full-size replicas of the Nazca geoglyphs—the giant condor and spider (the latter for National Geographic Television’s *Is It Real?*)—I took a new look at the labyrinth possibility. The figures’ lines not only look like paths (formed by being cleared of the dark desert gravel and often have decidedly *winding* elements), but each is drawn with a continuous line and typically has an extraneous pair of lines that serve as entrance and exit. I am therefore convinced that the figures were indeed ceremonial paths (Nickell 2007a, 151–158; 2007b).

New Agers, beginning with John Michell (1969, 26), have rushed to include the Nazca figures and effigies on their long lists of ley lines–related sites. However, Nazca is atypical to say the least, and the ley folk’s rules of inclusion are so variable as to belie use of the word *rule* at all. Whatever the Nazcas thought about the lines they so remarkably made, these offer no proof of the existence of an earth energy that is detectable by psychic methods such as dowsing.

### Assessment

As these examples show, the “discovering” of ley lines is largely the province of persons predisposed to believe in mythical forces and often armed with dowsing devices. Books on leys invariably have sections touting dowsing (e.g., Michell’s *The View Over Atlantis*, 1969; Heselton’s *Ley Lines: A Beginner’s Guide*, 1999; Danny Sullivan’s *Leys*, 2000; and David Cowan and Chris Arnold’s *Ley Lines and Earth Energies*, 2003).

Dowsing—including that used in so-called psychic archaeology (Nickell 2007a, 48–58)—has not been validated by science. Dowsing is simply “the unwitting translation of thoughts into muscular action”—the same force (the ideomotor effect) responsible for

various other phenomena such as table tipping, automatic writing, and the movement of a Ouija board’s planchette (Gardner 1957, 109; Randi 1995, 169–170). Dowsters have fared poorly in properly controlled tests of their abilities, as has been repeatedly demonstrated by psychic investigator James Randi (1982, 307–325; 1991, 31–50). I have also had similar results in testing dowsters (Nickell 1988, 89–102).

## The more points that are “identified,” the more lines may be drawn to connect them.

As to ley lines, there are several additional problems. Almost anything could serve as a point to connect not only megalithic sites but castles and churches, a tree or clump of trees, fiords, rock outcrops of peculiar shape, wells, ponds, boundary stones, and so on and on (Watkins 1925). Moreover, “almost *any* structure or random location . . . can be shown to lie at the intersection of at least a pair of ley lines” (Randi 1995, 189), and given sufficient random potential points, chance will inevitably allow straight lines to connect some of them—a fact that even Watkins himself tacitly understood (1925, 134, 203), as did Michell (1969, 11–12). The more points that are “identified,” the more lines may be drawn to connect them.

Additionally, most claimed lines are not actually straight in precise terms (Randi 1995, 189). And later ley seekers discovered that by drawing concentric circles centered on certain sites, still more points could be connected (Michell 1969, 20)!

Over my career, I have visited scores of ley line–associated sites around the world—including the Tower of London, Budapest’s subterranean labyrinth at Castle Hill, Istanbul’s Hagia Sophia, Marakech’s Koutoubia Mosque, Ohio’s Serpent Mound, and the temple ruins

of Pachacamac in Lima, as well as numerous sites in Germany where similar alignments are known as *Heilige Linien* (“holy lines”) and China, including the Great Wall, where they are anciently termed *lung-mei* (“dragon paths”) (Sullivan 2000, 8, 16; Michell 1969, 25). I had a poet’s impressions at these sites, which can—I attest—inspire all manner of thoughts and feelings.

However, susceptible persons may imagine the supposed “hidden energy” that they then may “locate” by dowsing at various “ancient sacred sites” (Sullivan 2000, 2)—or indeed almost anywhere—and let the animated wands lead them further into fantasy. It is really just a matter of connecting the dots. ■

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