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## Geek Trivia: The map in the moon

March 20, 2007

### Takeaway:

Which ancient drawings are the oldest known maps of the moon?

These days, Leonardo da Vinci gets a great deal of (historically inaccurate) publicity for his (fictional) involvement in a secret quasi-religious, art-encoding, multi-millennial conspiracy. However, before Dan Brown rewrote the history of the original Renaissance Man, da Vinci did have at least one real-world major accomplishment that few people give him credit for—lunar cartography.

In fact, astronomers and historians recognize da Vinci as the world's first truly scientific lunar cartographer. This is a remarkable accomplishment when you consider that the first telescope patent application didn't surface until roughly 90 years after da Vinci's death, meaning that da Vinci made his lunar observations by crude homemade optics at best—or the naked eye.

His subsequent scientific theories about the moon—including its landscape—were the product of deductive reasoning and supposition. The detail of da Vinci's lunar sketches is impressive—even if some of his guesses about the moon's topographical nature were wildly inaccurate.

To his credit, da Vinci rejected the Ptolemaic theory that the moon was a perfect, featureless sphere that emitted its own natural light—a conjecture many of his contemporaries were unwilling to give up. Instead, da Vinci surmised that the moon merely reflected ambient light.

More impressive, he postulated that the sunlight reflected by the Earth's oceans and clouds in turn shone on the moon and reflected back—giving the dark portions of a less-than-full moon distinctive features, particularly when the moon was near the horizon. Today, we call this phenomenon *Earthshine* or—perhaps more appropriately—the *Da Vinci Glow*.

To prove both the reflective angles among the celestial bodies as well as the progression of features visible "outside" the illuminated portion of the moon, da Vinci drew complex diagrams of the Earth, sun, and moon in various relative positions in addition to detailed sketches of the moon itself. These sketches are among the most notable and insightful entries in da Vinci's famous Codex Leicester portfolio.

Of course, da Vinci didn't get it completely right, as he attributed many of his depicted lunar features to giant waves formed in vast lunar oceans—rather than craters in a barren lunar landscape. Still, his lunar maps were a staggering achievement for their period—even if they weren't the first moon maps known to history.

In fact, the oldest lunar maps measure ages not in centuries, but in millennia.

### WHICH ANCIENT DRAWINGS ARE THE OLDEST KNOWN MAPS OF THE MOON?

Which ancient drawings are the oldest known maps of the moon's surface features, drawings that predate Leonardo da Vinci's complex lunar diagrams by millennia?

Astronomers and archaeologists theorize that 4,800-year-old Neolithic stone engravings found near Knowth, Ireland could possibly represent the earliest attempts at lunar cartography in human history.

Located in County Meath, Knowth boasts a group of ancient burial mounds renowned for their megalithic art and structures. One Knowth carving, catalogued as *Orthostat 47*, was for years considered a rather obscure artifact until asteroid cartographer Dr. Philip Stooke came across a depiction of the engraving during his research of possibly ancient lunar maps.

At first, Orthostat 47's features appear simply to be a grouping of barely concentric curves and points. However, when comparing the carving's arcs and dots with a simplified drawing of the full moon, one can see that they correspond with prominent lunar features, including the Mare Humorum and the Mare Crisium. While other Neolithic carvings could also represent lunar surface depictions, Stooke has demonstrated that Orthostat 47 is perhaps the leading candidate for the world's oldest lunar map.

Although Orthostat 47's true nature was something of a surprise, scientists already believed that the ancient builders of the Knowth burial mound had a sophisticated knowledge of astronomical progressions. At certain times during the year, moonlight bathed the eastern passage of the Orthostat-47 tomb—these days, trees block the entrance—and similar features within the burial mound shone moonlight on the lunar map carving. These features add to the ongoing debate as to whether the stone circles found throughout the British Isles correspond to the rising and setting of the sun or moon.

Stooke, at least, considers the Knowth "moonstone" to be evidence that humans artistically immortalized the moon's features well before Leonardo da Vinci did so in the early 1500s. That's not just celestial archaeology—that's downright loony Geek Trivia.

## Get ready for the Geekend

The **Trivia Geek**'s blog has been reborn as [the Geekend](#), an online archive of all things obscure, obtuse, and irrelevant—unless you're a hardcore geek with a penchant for science fiction, technology, and snark. Get a daily dose of subcultural illumination by joining the seven-day Geekend.

## The Quibble of the Week

If you uncover a questionable fact or debatable aspect of this week's Geek Trivia, just post it in the discussion area of the article. Every week, yours truly will choose the best post from the assembled masses and discuss it in a future of Geek Trivia.

This week's quibble comes from the March 7 edition of Geek Trivia, "[The cheat goes on.](#)" TechRepublic member **GSteve** thought I incorrectly stated the Nintendo controller button sequence—up-up-down-down-left-right-left-right-B-A-Start—of the infamous Contra Code.

"Isn't it . . . B+A+B+A+Select+Start? Dunno, it's been a few years (shamefully) since I played *Contra*—lots of good memories killing bad guys with my buddies back in the day."

But member **Hacksaw** had my back.

"It's only 1 B+A, and Select enabled two-player mode and both players to have 30 lives."

I've seen the B+A+B+A+Select+Start notion tossed around more than a few places. In most cases, the extra key inputs didn't ruin the code—they were just unnecessary. Thanks for the memories, though, and keep those quibbles coming!

## Falling behind on your weekly Geek fix?

Check out the [Geek Trivia Archive](#), and catch up on the most recent editions of Geek Trivia.

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*The Trivia Geek, also known as Jay Garmon, is a former advertising copywriter and Web developer who's duped TechRepublic into underwriting his affinity for movies, sci-fi, comic books, technology, and all things geekish or subcultural.*

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