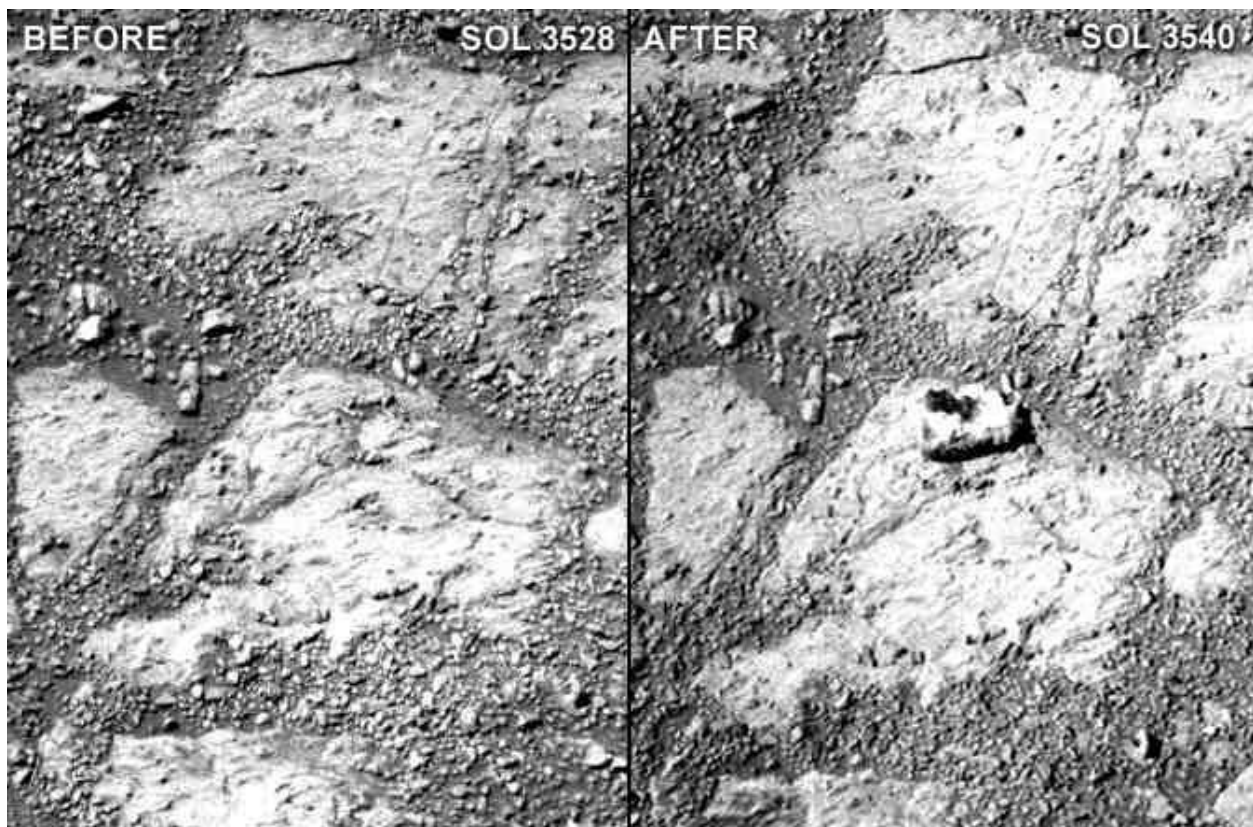


## THE ROCK THAT WALKED IN

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One fine day on Mars, Opportunity, a robotic mobile space probe from Planet Earth—from a nation called America--was taking images of the surrounding rocks, controlled at it was by geologists. So far, nothing seems unusual, since geologists like rocks and want to take pictures of them. However, it appears one of the rocks previously omitted seems to have wanted to get in on the photo. Hold on. This is going to shock you.



The geologists at JPL have called the rock Pinnacle Island, but it looks like a jelly donut and is about the same size. Opportunity, which has some analysis capability, determined it is a very unusual rock indeed; the center “jelly” is made of sulfur, magnesium and manganese and a whole bunch of other things of that sort, reminding me of the manganese nodules at the bottom of the oceans of Planet Earth. Yet it is different from them also.

But what *really* got everyone going is how it got there, being that it clearly was NOT there 12 Martian days before. Geologists are used to rocks not moving around, and it surprises them when one does.

"It's about the size of a jelly doughnut," Exploration Team leader Steven Squyres said in a talk reported by Ian O'Neill of Discovery News. "It was a total surprise, we were like 'wait a second, that wasn't there before, it can't be right. Oh my God! It wasn't there before!' We were absolutely startled." He continued, "I don't know what any of this means. We're completely confused, everybody on the team is arguing and fighting. We're having a wonderful time!"

Geologists on Squyres' group have come up with three explanations.

1. The rock was kicked up by Opportunity's wheels.  
Call this "The Kick a Can Theory"  
This is the most likely prosaic explanation. But two factors argue against this. First, it should be relatively easy to find the rock MISSING on images taken elsewhere. In other words, a rock kicked a fraction of a meter ought to have been seen at its origin before it moved due to the robotic rover's wheel action. NO such missing rock has been identified. In addition, Opportunity did not pass over the area in question where the rock is.
2. The rock was ejected from a volcano.  
Call this "The Opportunity is Pompeii" theory.  
A distant smoking volcano might well hurl a rock many kilometers to fortuitously land right in front of Opportunity. Arguing against this is that the orbiting Martian reconnaissance probes can find no such volcano, and no other such hurled rocks are there.
3. The rock is meteorite crater ejecta from a meteor impact.  
Call this "The Splash Theory."  
It well could happen; it would be a strange improbable event, but, as Charlie Chan in "Charlie Chan in Panama" said, "Strange events often permit themselves the luxury of having occurred." In this scenario, a giant meteor hit on Mars in those twelve days, and ejecta—Martian rocks blown out of the crater that the meteor formed—can get tossed all over the Red Planet. One of them landed right in front of Opportunity.  
The argument against this is that no such impact crater was seen or detected by other Mars probes orbiting the planet. But it could have been missed.

Of course, outside of Squyres' team, additional explanations abound:

4. It is a living thing that ambulated into the picture.  
Call this the "It's Alive! It's Alive! It's Alive!" Theory.  
Big downside to this. The living thing would have to have a rocky exterior to match the Opportunity analysis. Well, some living things on Earth do; the stolen shell of a Hermit Crab is a sea mollusk's shell made of what is essentially limestone. I am reminded of the meteorites in an original Outer Limits episode called "Corpus Earthling" that turned out to be malevolent space creatures. And who knows what Martian life would be like! But the biggest disadvantage to this theory is that the rock has not moved again. Are we to suppose the hypothetical creature sauntered in and just then die? Listen, if this rock moves again, I'll believe it is a creature. Otherwise, whatever it is, it's dead, Jim.

5. It's a bacterial colony growth *in situ* carried by an improperly sterilized Opportunity probe.  
Call it The "Party With me. I'm a Fungi" theory.  
This is DOA. Not possible. If there was only the visual data, this would be just plausible; but the mineralogical analysis rules it out.
  
6. It is an accidental image that proves NASA is doctoring images.  
The "Caught You in a Lie" Theory.  
Ridiculous! This means that thousands of scientists, including myself, are either part of the conspiracy or duped by master geniuses who create phony data, and have been doing so for decades. It means that the geologists at JPL are like the criminal confronted with the smoking gun in his possession, who says "I don't know how it got there!" There have been in history big conspiracies involving secretive governmental organizations. In press pictures from North Korea, we see Kim Jong Un's disloyal uncle *missing* from the picture in which he was present before. But rest assured this is not one of those conspiracies. The rock is real.

And so which of these theories is correct? Are any of them? I am reminded of Olaf Stapledon's words in "Last Men in London":

Theories, theories, myriads upon myriads of them, streamed over me like wind-borne leaves, like the contents of some titanic paper-factory flung aloft by the storm, like dust-clouds in the hurricane advance of the mind.

In the 1960s, there was a debate whether to use terms like selenology, areology, zenology, for the study of the Moon, Mars, Jupiter, or simply terms like Lunar geology; Mars geology, etc. The latter idea won out. But in some way each planet remains a separate discipline. Perhaps we are like Aunt Harriet visiting Bruce Wayne and Dick Grayson in Stately Wayne Manor; there is much familiar, much we can understand, but there is a whole big thing going on we just won't understand right away. And so our mystery Pinnacle Island rock continues to astound and baffle, showing us that after all is said and done, we must remember, Mars is **another planet**.