

Offered Title: Astronomical Memes

This word, meme, has become popular so I thought it might be interesting to apply it to astronomy and see what I get.

Evolutionary biologist Richard Dawkins coined the word meme, using it as a way to show how genes move through the evolutionary process. In his context, Dawkins' meme is a cultural unit of information that is either accepted and passed on or rejected and does not survive. So, a meme can be an idea, concept, expression, style, behavior that gets replicated (imitated) and continues, or not, via social communication. Dawkins' meme concept is interesting but not without controversy regarding its corollary with genes.

Though not strictly astronomical, Pink Floyd's "Dark Side of the Moon" concept album conjures the idea that there is a lunar 'dark side'. This idea was passed on a lot and survived for decades, maybe still does in some quarters. Of course, any side of the Moon that is not lit is the current dark side, but this is constantly changing. The misconception was equating the dark side with the far side of the Moon, which always faces away from us. The Moon's far side was a genuine mystery until Soviet and US satellites captured images.

Going back in time, I think of Giovanni Schiaparelli's "canali" on Mars, which drove interest in astronomy to great heights in the 19th century. The thought of intelligent life on Mars, building canals for irrigation became a topic of interest throughout Europe and the US. This seemed logical at a time of canal building on our own planet. Our own Percival Lowell continued the meme by publishing his drawings of these "canals", even while resistance to this idea was mounting among astronomers. Better telescopes, and then the Mariner spacecraft's photos of Mars put a lid on this wildly popular meme. No canals, end of the line.

An example of a meme that was wiped out, then reestablished and has persisted, and appears likely to continue is the Sun centered (heliocentric) solar system as first proposed by Aristarchus of Samos. Aristarchus proposed a Sun centered solar system around 3 BC but his work was not given a lot of attention. A year later Claudius Ptolemaeus (Ptolemy) came up with his epicycle idea for an Earth centered (geocentric) solar system. The geocentric version became accepted widely...of course, We had to be at the center of it all. This meme persisted until Nicolaus Copernicus provided sufficient evidence in 1543 to support the heliocentric idea. It was not without challenge however as the church and fellow astronomer Tyco Brahe continued to pursue a geocentric version. Then, in the 17th century, Kepler and Newton added evidence and the heliocentric model became accepted. This meme seems destined to continue.

What's in the Sky?

June 27 – Looking west. A waxing crescent Moon is less than one degree from the bright star Regulus in the constellation Leo. Look for the backward question mark.