

The return of the Martian canal-builders

PART
ONE
BY
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In July of 1976, the Viking Orbiter photographed a feature on Mars roughly one mile across that resembles a human face.^{1,2} The Viking project's planetary scientists quickly pointed out that the feature is undoubtedly a natural formation, and that any resemblance to a human face is merely an effect of light and shadow.

One year later, electrical engineer Vincent DiPietro "rediscovered" the "face." After he and computer scientist Gregory Molenaar used image enhancement to explore details of the feature, they concluded that it probably was of artificial origin. They wrote to Conway Snyder, Viking Orbiter scientist, to ask what he and other project scientists thought about the Mars "face," and discovered that there was no support in the scientific community for the artificial origin hypothesis.³ Thus, they published their findings independently, without peer review from planetary scientists.⁴

The human brain has an astonishing ability to find familiar patterns embedded in chaotic backgrounds. After all, clouds sometimes take on the appearance of faces. Gardner⁵ relates that the Canadian one-dollar bill had to be re-engraved because the face of a demon accidentally turned

up in the Queen's hair just behind her left ear. The surface of Mars gives us two more examples: Mars has an impact crater that seems to have a "smiling mouth" and "eyes," apparently fractures caused on impact. This five-mile-wide feature has been dubbed the "Happy Face."⁵ Elsewhere on the Martian surface is a lava flow with a small impact crater that looks like Kermit the Frog.⁶ Neither of these are of artificial origin. Why then should one assume that the Mars "face" is more than just a rock formation? We should not make such an assumption unless there is strong evidence that the "face" is not an isolated feature.

Hence, other investigators have tried to demonstrate that the "face" is aligned with a collection of pyramid-like objects to the southwest, referred to suggestively as "the city."⁷ Supposedly, there is a five-sided "pyramid" and a trapezoidal object referred to as the "fortress."⁸ Yet any similarity to a fortress is purely subjective. To most geologists, this formation appears to be natural. The so-called "pyramid" is cruder than dozens of pyramids found as natural rock formations in Arizona.⁵

Subjective analysis tells us very little. A proper analysis must be carried out within the context of other Martian geology and surface features. Planetary scientists have done this and they conclude that the "pyramid" has been sculpted by wind erosion. No artificial origin hypothesis is necessary. There is no *special* interest among American and Russian scientists to visit Mars and investigate the "face" close-up, since it is already apparent to them that it is a natural feature.³

The so-called "alignments" are a blatant case of circular reasoning, as Muller has pointed out.⁹ Deliberate alignment is assumed at the outset. The direction of the Sun at summer solstice would correspond to this alignment every million years or so if the planet's equatorial plane were tilted at 17.3° with respect to its orbital plane. (According to Kaufmann,¹⁰ its present tilt is 25.2°.) Since it is claimed that such a tilt would be sufficient to alter the Martian climate to more Earth-like conditions that might be more likely to support life, the "alignment" is considered meaningful.

However, the alignment argument is invalid. First, the "face" investigators could have chosen any number of such alignments to demonstrate their theory in this way, since any two points can be connected with a straight line. Second, they could have chosen any number of tilts. There is nothing special about 17.3°. Why not 18.0° or 16.6°? A range of possible tilts must be specified if the concept is to have any significance. Third, what is meaningful about an alignment every few million years? Surely some sort of random solar alignment will occur periodically. This does not necessarily imply intelligent design. The direction, the planetary tilt, and the periodicity of the alignment have all been chosen so as to fit the artificial origin hypothesis. This

begs the question that the alignment has any significance to begin with.

Unnatural images?

A recent article in *Applied Optics*⁸ presented 3-D digital imaging analysis of the Mars "face," from which imaging specialist Mark Carlotto concluded that the feature may not be natural. Carlotto (Ref. 8, Fig. 2) carried out digital image enhancements of two high-resolution NASA photos of the "face"—35A72 and 70A13 (e.g., 35A72 refers to the 72nd image taken in the 35th orbit by the A spacecraft)—both of which were illuminated from the west. Carlotto (Ref. 8, Fig. 3) claimed that shading enhancement of subtle features on the unilluminated side of the "face" brings out a second "eye-socket" and the extension of the "mouth." This is simply wishful thinking; in fact, this image bears less resemblance to a face than the registered images in Carlotto's Figure 2. The perception of the "face" is entirely subjective; no sweeping conclusions can be drawn in this way.

Carlotto also claimed (Ref. 8, Figs. 6-8) that facial features evident in the Viking photos persist over a wide range of viewing and lighting conditions. He stated that "such is not the case in more familiar terrestrial analogs such as New Hampshire's Old Man of the Mountain, for example." Yet no analysis of the latter image was shown in the paper. How then can anyone assess whether the image perspective technique is useful or not in this regard? The perspective technique is not convincing because if one looks at the "face" upside down, it looks like a mountain ridge with a large depression or crater. As to the synthetic images generated under different lighting conditions when the contrast is increased (Ref. 8, Fig. 7), the features wash out and little can be discerned. In fact, there are no features whatsoever in the images when shown in simulated morning light!

Furthermore, Carlotto undertook no analysis of the key NASA image 753A33, which shows the "face" feature illuminated from the east. Apparently, this was because only the other two images had sufficient resolution for the analysis. However, this is a crucial argument that cannot be glossed over so lightly. Muller⁹ made the point that there was a considerable amount of confusion during the Mars Face Conference¹¹ as to which feature really was the "face" when viewed in morning light. In particular, Muller stated that 753A33 does not have symmetry along the "nose" line, but rather on a diagonal across the feature, strongly suggesting that it is a ridge like other formations in the area. If there really is a "face" there, one would expect it to be symmetric along a "nose" line. One can hardly claim that the "face" is real if there is no clearly-defined symmetry.

Carlotto's conclusions are unwarranted because there is no convincing evidence for facial features on the unilluminated side of the formation. His methodology is

very reminiscent of the Jackson-Jumper projection analysis that purported to show that the image of Christ on the Shroud of Turin, now known to be a clever forgery, possesses three-dimensional information consistent only with a "supernatural" radiation-scorch origin.^{12,13} In both cases, circular reasoning is employed to support the hypothesis. In both cases, the sophisticated imaging analysis is not relevant because to conclude that the feature may not be natural still requires a so-called "leap of faith."

Intelligent life on other planets?

There is no evidence that there has been any intelligent extraterrestrial life in the solar system in its 4.6 billion-year history. On the other hand, perhaps the "face" is a sign directed to us from some other advanced alien (possibly non-humanoid) civilization. Yet this hypothesis does not stand up to careful scrutiny. Why did these aliens not choose some more direct means of signalling us? Why carve a primitive "face" into a mountain on a nearby planet, using crude engineering techniques, when it can only be detected from a Mars-orbiting spacecraft? Why should an advanced civilization capable of interstellar flight expend enormous quantities of energy and travel perhaps hundreds or thousands of light years across space just to carve a human "face" into a rock? Why not leave an unambiguous geometric shape or a message in some mathematical code inscribed on the surface?

Better yet, why not come to Earth and contact us directly? How would they even know what a human "face" looks like if they have never visited our planet? These questions must be addressed if the "unnatural" origin for the "face" is to be a legitimate scientific hypothesis.

It is wise to remember the lessons of history. It would seem that the Mars "face" investigators have forgotten about the Martian "canals" that turn-of-the-century philanthropist Percival Lowell believed to be an enormous irrigation network, constructed on the planet by a dying alien civilization to transport water from melting polar caps to dry regions near the equator. Alas, Lowell's canals were an

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optical illusion.¹⁴ Is the Mars "face" just another example of the human brain's extraordinary capacity to make sense out of random patterns and to fill in details with the aid of imagination and fantasy? Planetary scientist and Mars expert Harold Masursky gives the best answer to this question.¹ Quipped Masursky of the Mars "face": "This is the guy that built all of Lowell's canals."

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The "Face on Mars": Summary of Image processing results

The "Face on Mars" has been the subject of a small and unusual debate for over 10 years. Initially dismissed by NASA as a trick of light and shadow when it was imaged by a Viking Orbiter in 1976, the "face" was rediscovered by DiPietro and Molenaar¹ several years later. A series of independent investigations^{2,3,4} followed, which have prompted curious reactions from the planetary science community. The accompanying article by Crowe⁵ states a view expressed by many in that community that the "face," along with several other nearby objects, are naturally occurring geological formations. This view is based on one or more of the following arguments:

- The human mind can see faces in just about anything, so one should not be surprised to find one on Mars;
- The development of a technological civilization capable of creating such objects is inconsistent with current theories about Mars, so they should not be there, or alternatively, consideration of an extraterrestrial origin is pure speculation;
- The "experts" have already examined the data and concluded the objects are completely natural.

PART
TWO
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