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The 1998 Face on Mars*
by George J. Haas
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MARS GLOBAL SURVEYOR

In 1996 NASA launched the long awaited Mars Global Surveyor (MGS) spacecraft that included the Mars Orbiter Camera (MOC) with the projects lead scientist, Dr. Michael C. Malin at the camera's helm. The public was told that the mission would thoroughly map the whole planet, including the Cydonia area, with the most detailed images ever taken of the Martian surface. This "state of the art" camera, produced by Dr. Malin, was capable of providing images with a resolution of 1.41 meters per pixel at a nominal altitude of 380 km with an expected resolution of better than 1.5 meters per pixel during the course of the mission.[1] The Mars Orbiter Camera (MOC) began imaging the Red Planet in September of 1997.

On April 5, 1998 the Mars Orbital Camera (MOC) aboard the Surveyor was slated to re-image the "Face" and put an end to this twenty year controversy that the "Face" was nothing more than a "trick of light and shadow." The

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*Portions of this report were published in *The Cydonia Codex: Reflections from Mars*, (Berkeley: Frog Lid, 2005), by George J. Haas and William R. Saunders.

MOC image SPI-220031 was taken in the spring, during the mid-morning hours.

It was acquired with a resolution of 4.29 pixels per meter, a much lower resolution than expected, and a skewed view with a highly slanted emission angle of 44.68° off nadir.[2] Which means that instead of acquiring an image from directly over the target, NASA chose to take an image from an extreme side angle view, distorting its topographical.

With the new image in hand, on April 6, 1998 Dr. Malin immediately released the raw, unprocessed image, on his web site. The image was a distorted, low contrast image that was to be perceived by the public, as just "a pile of rocks" (Figure 1). The international press received a slightly better image, but it was also heavily distorted (Figure 1). Notice the elongated oval shape of the crater on the left side of the image. This "crater" should be round and was deleted from most press releases. So where was our high resolution picture?

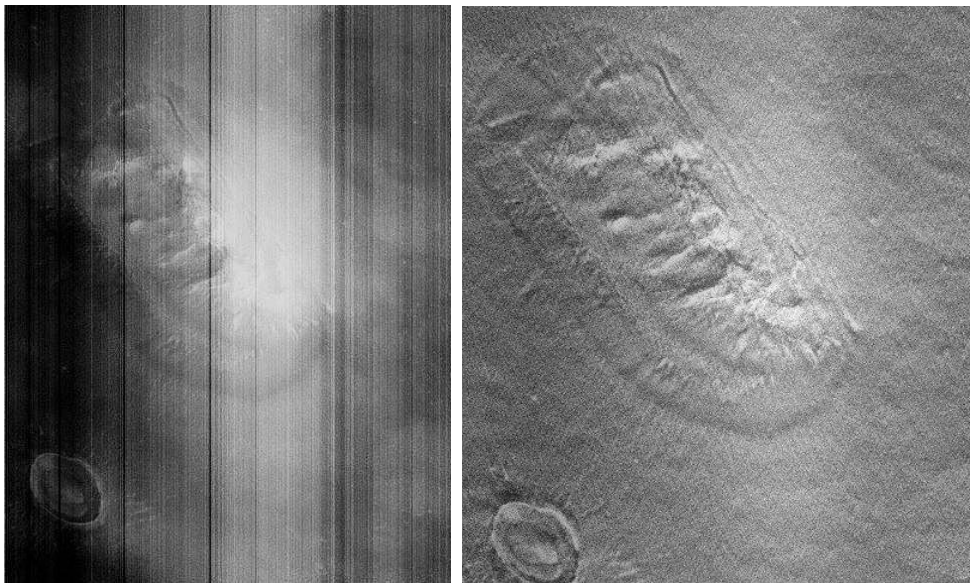

Figure 1 The Cydonia Face, Detail MOC image SPI-22003 (1998).
Left: Detail of raw release (1998). Right: Press release - termed the "Cat-Box"'

This quickly released raw image of the Cydonia Face was so distorted and so stretched out that the *New York Times* immediately reported that it looked more like a "sandal print or a stuffed chili pepper" than a face (Figure 2). Their comparison of the new MGS image with an insert of the earlier Viking image, showing its un-face-like appearance is very powerful. In the same article, the leader of the original Viking Orbiter imaging team, Dr. Michael Carr said; 'It's a natural formation...I hope this has scotched this thing for good.''[3]

A substantial amount of concerned researchers speculated that the original Viking picture of the Cydonia Face was of much better quality. The new MOC image was so strange that some advocates even suggested that Dr. Malin had taken a picture of the wrong mesa! Many critics soon referred to the new image of the Cydonia Face as the "cat box" image.[4] It quickly became clear that something was very, very wrong with this new image of the "Face". When the quality of the "Cat Box" image is compared to the archives of the many fine MOC images taken of the Martian geography, which had been imaged just a few months earlier, charges of another NASA cover up soon followed.


Some people see a face in the inset photograph of Mars taken by the Viking spacecraft in 1976. A photo beamed back yesterday looks like a sandal print or a chili pepper to some, but not a face.

New Mars Photos Cast Doubt On Speculation on a 'Face'

Figure 2 News story. New York Times, April 1998
Notice the elongated oval shaped crater in the lower left hand corner has been cropped out.

The Mars Global Surveyor camera is equipped with a dynamic range of 2048 x 4800 pixels per image, which is exceptional. With the capabilities of this new, high resolution, camera, which was able to provide images with a resolution of 1.41 meters per pixel, we should have received a spectacular portrait of the "Face". Earlier in the year NASA took a multitude of clear, high-resolution photographs of distinct regions of Mars, however, when it came to the "Face" the quality was comparatively poor. So what happened?

It seems that the powers that be at NASA decided to extend the down-track capabilities of the camera, at the expense of the cross-track and image resolution, in order to ensure capturing the "Face" mesa. Thus the resolution was reduced to from 4.3 meters per pixel to 2.1. However according to other experts the problem in capturing the "Face" mesa was not in the down-track capabilities, but in the cross-track, evidenced by the fact the mesa was in the center of the down-track range. On top of it all, according to JPL's own image log, before the MGS image was released to the public it was processed through a "high-pass filter". This process basically suppresses detail and is normally utilized with line drawings and high contrast black and white pictures. The decision to use such a filter has never been successfully offered by NASA or JPL however, their results are evident. The new image was found to have only 42 shades of gray while a normal MOC image was capable of 256.[5] So where were the high-resolution images of the "Face" we were promised?

How could any NASA scientist make a fair and accurate decision about the nature of the new MGS "Face" within just six hours after viewing a raw, unprocessed image? This would be like taking a dark and distorted picture of Mount Rushmore and stating to the world that there are no faces carved into the sides of this desolate cliff, it's only "shadows and rock". This rush to judgment and 'shoot from the hip' analysis is disturbing and at most poor science. Where is the careful and proper analysis of this fresh data? The

distortions of the raw MOC image can be confirmed by simply examining the elongated oval shape of the crater, just below and to the lower left of the "Face" mesa. In the original 1976 Viking image[6] of the "Face" it is clear that this crater is perfectly round (Figure 3).

Just as NASA thought the debate surrounding the Face on Mars was over, additional condemnation of its handling of the "cat-box" release came from one of their own. Independent engineer and NASA subcontractor Lan Fleming.[7] He performed his own analysis of the new MOC image and published a scathing report titled; "The Politics of Science and JPL's "cat-box" *Enhancement of the Face on Mars."* As a result of his findings Fleming becomes totally convinced that the entire event was a calculated, public-relations stunt designed to squelch any further interest in the Face on Mars.[8]

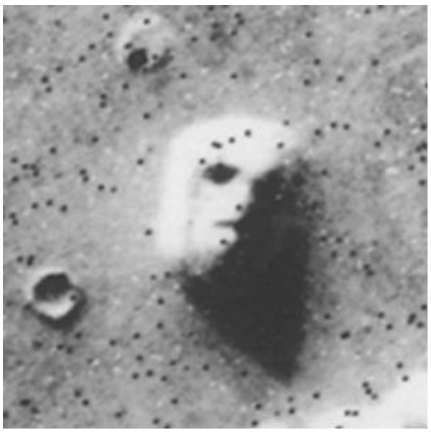

Figure 3 The Cydonia Face
Detail of early Viking image 035A72 (1976)
Notice the round crater on the left.

Over the next few years Fleming's research into the "cat-box" incident continued and as a result he published another critical examination of the official NASA data in his groundbreaking report "How to make a Cat-box". The following is a quote from his in-depth report:

"*The Catbox is not a "poor" enhancement, as it is often called; it is a crude but very effective fraud perpetrated by employees or contractors to the United States government. Even if the Face is proven to be completely*

natural, this is inexcusable misconduct and a gross abuse of power. If the Face ultimately is proven to be artificial, the Catbox will certainly come to be regarded as the greatest, most malicious and most destructive scientific hoax since the Piltdown Man, and perhaps of all time."[9]

A NEW FACE

A few hours after releasing the highly distorted, low contrast, raw image, widely known as the "cat box" to the international media on April 6th 1998, someone at NASA quietly posted a very different image of the MOC "Face" (SP1-22003) on their official web site (Figure 4). This new image had the distortion corrected and the contrast and tonality enhanced. In the newly rectified image of the Cydonia Face the most startling feature besides the distinguishable eyes, nose, and mouth was the presence of an elaborately styled headdress.

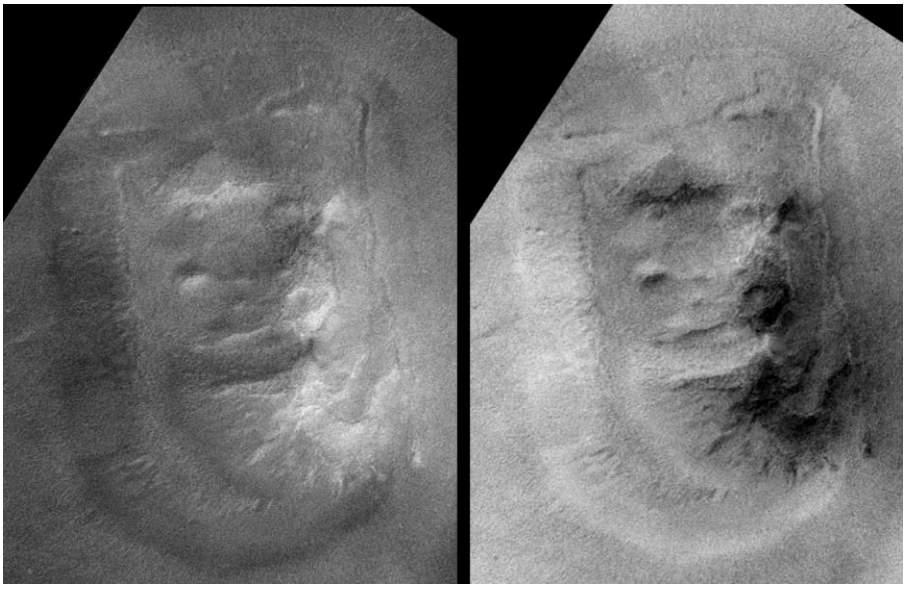

Figure 4 The Cydoina Face. Detail of MGS SP122003 (1998)
Left: NASA/JPL enhanced image.
Right: The Cydonia Institute's contrast reversal image.

When the new image of the "Face" is split in two halves along a central demarcation line and duplicated, Hoagland's anticipated sphinx-like attributes of the Martian "Face" become startlingly evident (Figure 5).

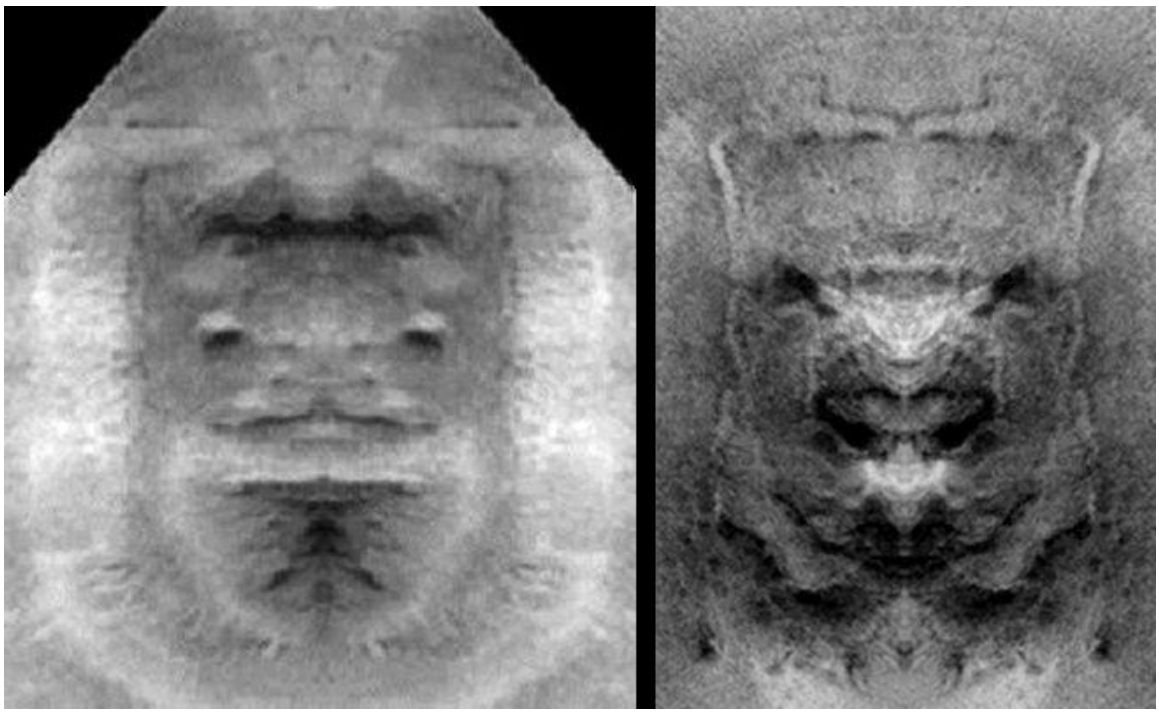

Figure 5 The Cydonia Face. Detail MGS Face SP1-22003 (1998).
Left: Humanoid Face - Left side duplicated (contrast reversal).
Right: Feline Face - Right side duplicated (contrast reversal).

Notice the flanged headdress, eyes, nose, and mouth including what appear to be two front teeth on the Humanoid side of the Face (Figure 5). The flanged headdress also features a "W" shaped tri-leaf emblem. Although the Feline side is foreshortened and condensed, due to the extreme angle of the camera, you can still see it has squinting eyes, a muzzle, fangs, mane, and a decorative crest on the forehead (Figure 5).

THE FIRST TEMPLE AT CERROS

After coming across the book *A Forest of Kings* by renowned Mayanist Linda Schele, I became aware of a temple in Cerros Mexico that had a direct coloration to the pair of faces observed within the Cydonia Face on Mars. Set within the facade of an ancient Maya two-tiered pyramid at Cerros Mexico (50 B.C.), are a set of fascinating sculptural masks (Figure 6). The pair of masks at the top display human features that represent the planet Venus as the morning star on the east and the evening star on the west (Labeled A in figure 6). The lower pair of masks represents the Jaguar Sun God as the rising sun on the east and the setting sun on the west[10] (Labeled B in figure 6).

Figure 6 The First Temple at Cerros, eastern side. Notated A and B.

The similarities shared between the morning star mask observed on the First Temple at Cerros and the Humanoid side of the Cydonia Face is quite remarkable (Figure 7). Both images present a W-shaped, triad crown emblem on the forehead and similar facial ornaments in the nose and chin area.

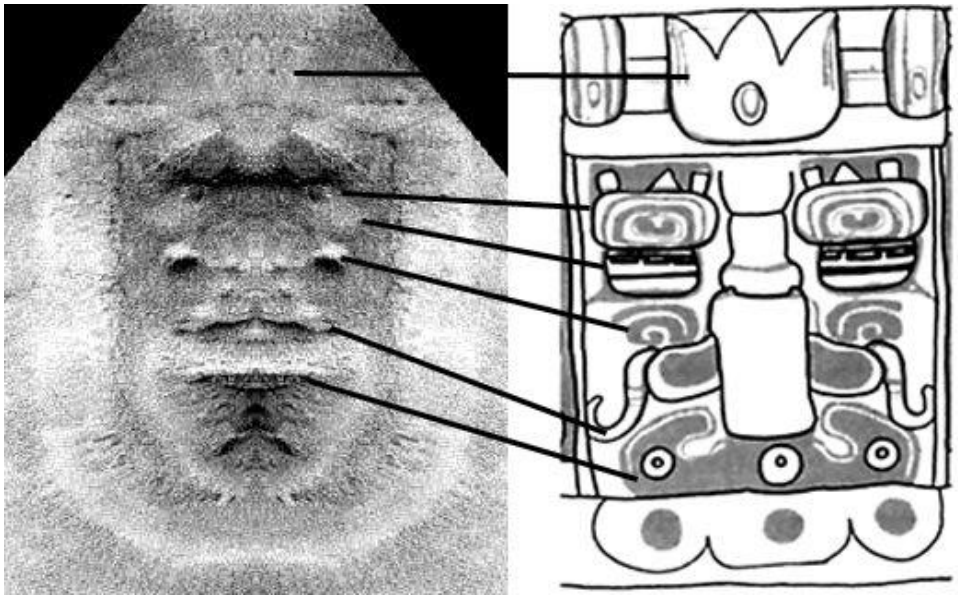

Figure 7 Temple mask, humanoid comparison.
Left: Duplicated Humanoid side of Face on Mars (1998).
Right: Morningstar Venus mask on temple panel at Cerros Mexico. (Image source: A Forest of Kings by Schele & Freidel)

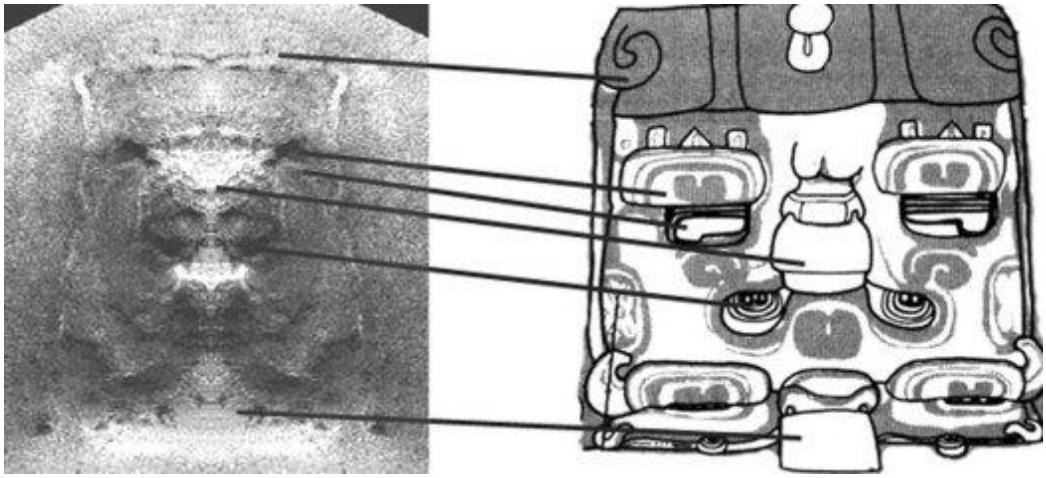

Figure 8 Temple mask, feline comparison.
Left: Mirrored Feline side of the Face on Mars (1998).
Right: Jaguar Sun mask on temple panel at Cerros Mexico. (Image source: A Forest of Kings by Linda Schele & David Freidel)

Looking at the Feline side of the Cydonia Face and the Jaguar Sun God mask at Cerros, notice that they both have the same square-shaped face with a snarling aspect and exhibit a crest-like crown (Figure 8).

These two celestial masks have a striking resemblance to the bifurcated mask observed within the Cydonia Face. Considering the amazing resemblance between these two masks at Cerros with a "trick of light and shadow" on Mars I found it very interesting that Linda Schele was invited to speak at NASA in 1995 at a seminar entitled; "The Universe: Now and Beyond."[11] Considering her knowledge of these masks at Cerros, what did NASA discover, and how long have they known it?

THE HUMANOID SIDE

The most prominent feature on the left side of the Face is the elaborate headdress, which has attracted a lot of attention among concerned researchers. The evidence of a Mars version of a sphinx and the apparent pyramidal structures in the surrounding area has some researchers, suggesting that this headdress feature may be another Egyptian link. This interpretation is fostered by the "lateral stripes" or "furrows" that run perpendicular to the gradual slope of the base, off the left side of the Face.

The combined effect of the headdress and these faint "stripes" that run to the ground in an orderly fashion, have been interpreted by researcher Mike Bara[12] as resembling an Egyptian death mask, much like the one worn by King Tutankhamen (Figure 9).

Figure 9 Egyptian Death Mask (King Tutankhamen). Drawing by the author (Image Source: History Unearth by Woolley).

Surprisingly, this lateral striped effect is commonly known amongst archaeologists that study Mesoamerican cultures and believe it to be a typical imprint of royalty. The Olmec, Maya and Aztec produced similar, flanged headdress which are provided in Figure 10.

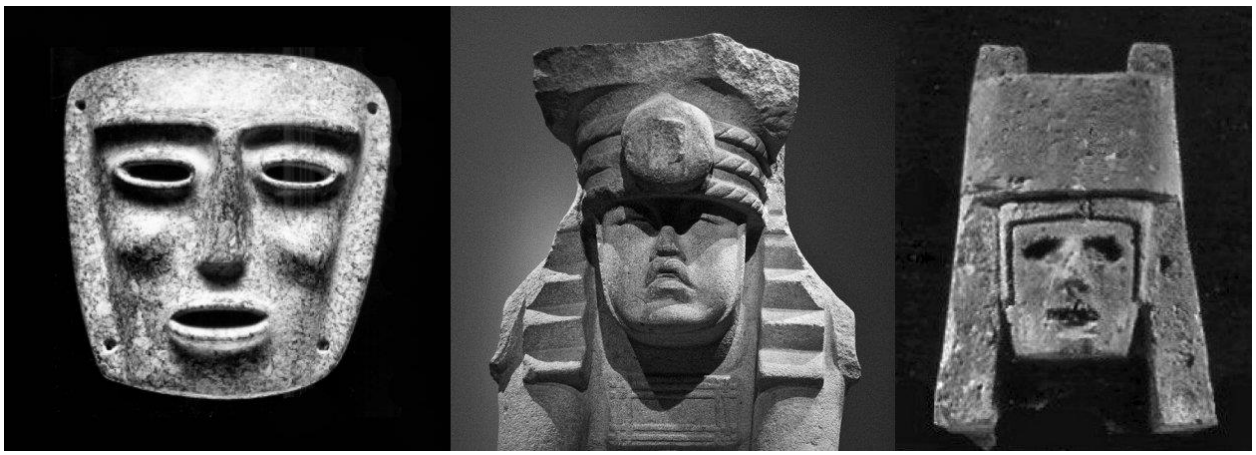

Figure 10 Mesoamerican Flanged Headdress.
Left: Maya, Chontal. Center: Olmec. Veracruz. Right: Aztec, Teotenango.

Possibly, both the Egyptian and Mesoamerican cultures received their inspiration for a flanged headdress design form the original prototype resting on the surface of Mars.

The appearance of a second Egyptian motif was also alluded to on the forehead of the Cydonia Face by Mike Bara on his web site. An outlined object was detected at the center of the headdress that he and other researchers thought looked "faintly" like a protruding cobra. When this object or marking is viewed in the mirrored version of the Face, a very geometric "W" shaped mark appears right in the center of the forehead (Figure 5). In the half image of the Humanoid side of the Face this "W" appears in a V-shape. If this V-shaped object were intended to portray a profiled cobra, then it would have been represented as only one half of the Egyptian serpent and not a full cobra head. So perhaps this headdress design did not have a direct Egyptian connection after all.

After conducting a little research into this "W" shaped emblem with various styles of cultural headdress, a match was soon discovered. Unexpectedly this Martian insignia was found to be reminiscent of the three-point leaf configuration that the ancient Maya displayed on their headdress. As evident in this greenstone mask of the first century B.C., the Maya exhibited a three-pointed leaf emblem on their headbands to signify the "crown" of early kings (Figure 11). This basic triad crown emblem was adopted by the Maya from an earlier "Mother Culture" of Mesoamerica called the Olmec.[13] The origins of the glyph was based on a corn sprout that denotes the transformational properties of corn[14] (Figure 11).

Figure 11 Tri-leaf Crown Emblems
Left: Young Lord, mask (Maya)
Center: Were Jaguar (Olmec)
Right: Corn glyph (Olmec)

One of the most interesting attributes of Mesoamerican culture that is incorporated in the Cydonia Face is the use of elaborate facial ornaments. Many factions of the ancient Mesoamerican people produced elaborate facial adornments out of gold and other materials. These nose ornaments depicted mythological creatures and various geometric forms (Figure 12). Sometimes, many of these facial ornaments were so large that they covered the entire nose.

The First example is an abstract depiction of a butterfly, produced by the Aztec. A second example is found on a small four-inch tall Tairona pendant. It features a segmented bar-shaped ornament across the nose bridge and an oval chin adornment. Another example can be seen within a sculpted clay head produced in Veracruz that has an attached beard and a large flower-shaped ornament covering the nose (Figure 12).

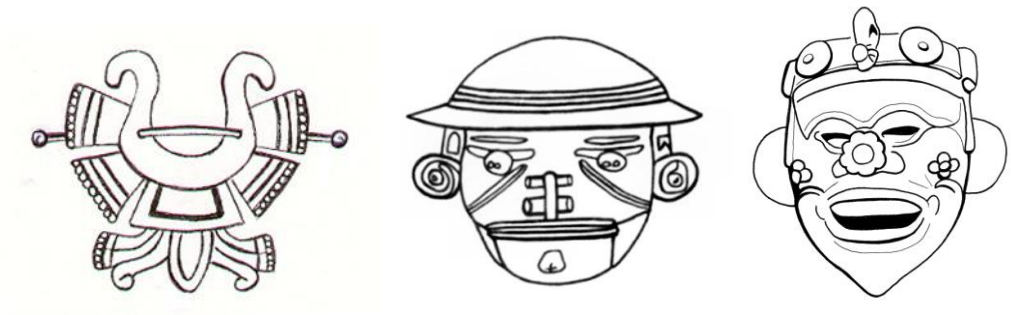

Figure 12 Nose Ornaments
Left: Stylized butterfly, gold (Aztec).
Center: Segmented bars, gold pendant. Detail Tairona warrior.
Right: Flower. Sculpted head, clay (Veracruz).
Drawings by the author.

Richard C. Hoagland and other researchers have been concerned about the absence of a distinct nose formation in the new MOC image. They have speculated that the nose was blown off sometime in the past by a meteorite (or by the acts of some ancient Martian war). The debris or fallout of this "major hit" distorted the nose and left an odd feature that Hoagland called the "teardrop" resting on the cheek of the Face. Interestingly this remnant of the nose, later called the "Teardrop" fell within such a precise placement on the cheek that it is aligned with the center of the "City Square" in the Cydonia complex. The precise alignment and measurement of the "Teardrop" feature would lead one to conclude that it was actually not a dislodged fragment, but part of its intentional design.[15]

The nose is obscured on the Cydonia Face because, what we are actually seeing is a large ceremonial nose ornament. The "Teardrop" feature is just one part of a larger facial ornament that covers the entire nose area. This type of ornamentation over the nose is typical of the ones used throughout Mesoamerica.

Next, if we look at the mouth area of the Humanoid side of the Face we may see another example of a Mesoamerican ceremonial feature (Figure 13). After producing an analytical drawing of the duplicated Humanoid side of the Face, I noticed two objects that suggest teeth, seen directly below the nose ornament in the mouth area. In the center of each these frontal teeth is a dot, possibly representing a dental gemstone. This dot feature is similar in design to the Mesoamerican practice of decorating the front teeth with gemstones and elaborate gold dental caps.

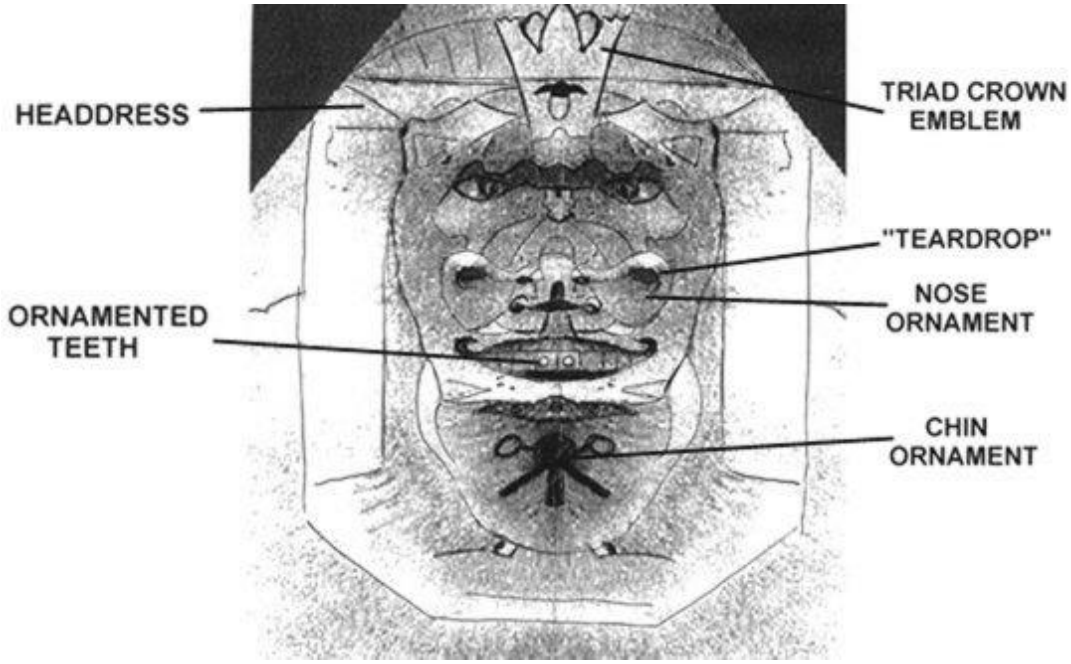

Figure 13 Humanoid side of Cydonia Face, duplicated and notated. Analytical drawing by the author.

The Maya produced elaborate beads of jade, obsidian, or iron pyrite that were fashioned into decorative fillings that were imbedded into the front teeth.[16] Take note of the deliberate mutilation and decoration of the upper incisors in this drawing of Mesoamerican dentistry from Uaxactun Mexico (Figure 14).

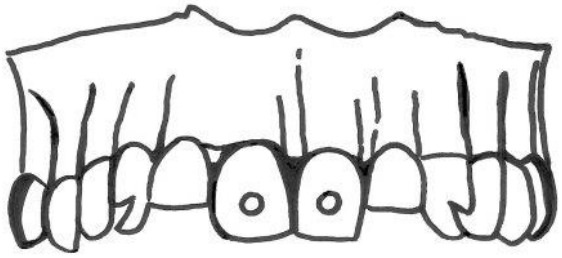

Figure 14 Dental implants (Uaxactum, Mexico, Late Classic Maya)
Note the "dot" shaped gemstone on the two front teeth. Drawing by the author
(Image source: The Gods and Symbols of Ancient Mexico and the Maya an illustrated dictionary of Mesoamerican by Mill & Taube)

The teeth on either side of the central incisors have been filed down enabling the two front teeth to appear more prominent. Amazingly, this is the same effect that appears to be displayed on the Humanoid side of the Face.

THE FELINE SIDE

Since Hoagland first did his famous mirroring split of the "Face on Mars", the feline side has always been considered to be a male African lion (Figure 15). With the new 1998 MOC image of the Cydonia Face the feline characteristics are even more apparent (Figure 16). The features of the feline "Face" when duplicated are composed of a square shaped head with a crowned headdress, a mane, squinting eyes, an ornamented nose feature, a muzzle, and a snarling mouth with fangs.

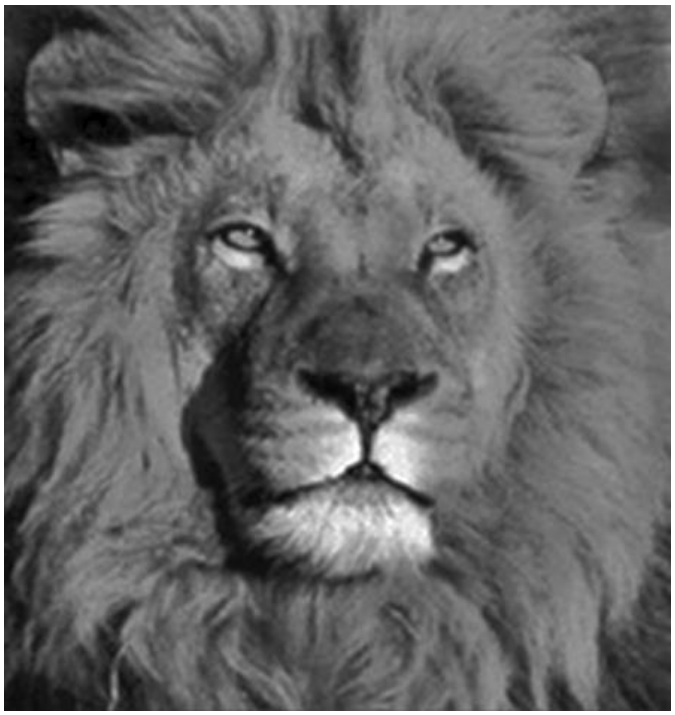

Figure 15 African Lion

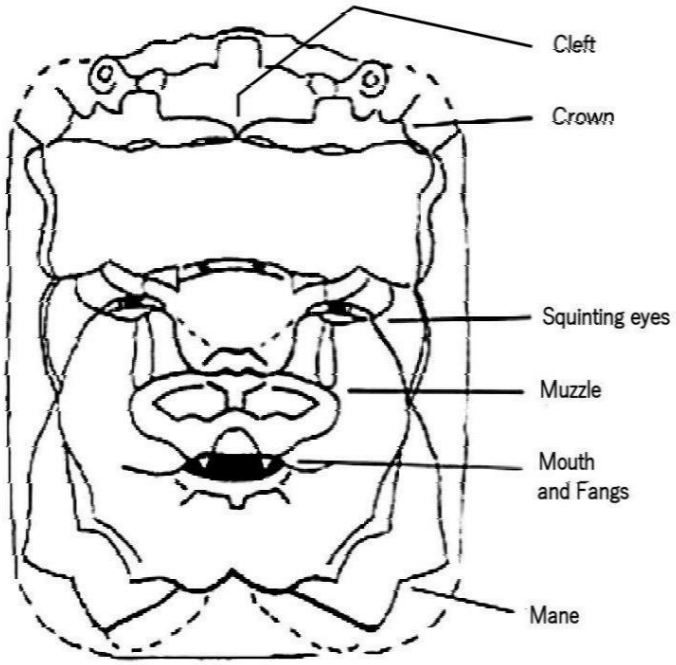

Figure 16 Feline side of the Cydonia Face, duplicated and notated. Analytical drawing by the author.

THE CROWN AND V-SHAPED CLEFT

The Feline's forehead is large and it features a squared-off geometric crowed headdress that extends across the top of the head. The crown also has a lot of faint decorative qualities within and around its crest that are difficult to substantiate at this point (Figure 17). The "crown" feature on the feline side of the Cydonia Face was also spotted by Dr. Tom Van Flandern and referred to as the "crest" in his in-depth analysis of the Face.[17]

Figure 17 V-Shaped Cleft
Left: Feline side of the Cydonia Face (duplicated with arrow). Detail MGS image SP1-22003, 1998.
Right: Snarling Jaguar, Olmec sculpture.

Looking at the center of the crowned headdress on the Feline side of the Cydonia Face, notice the small indented feature (Figure 17). This V-shaped feature can be compared to a similar indented "cleft" features that can be found on Olmec transformational figurines and masks that depict the head of a snarling, were-jaguar (Figure 17). Notice the Olmec sculpture of the snarling jaguar has a large flat forehead, as does the Feline side of the Cydonia Face,

and the V-shaped cleft at the top of its headdress, as does the Feline side of the Cydonia Face.

The deep, V-shaped cleft seen on Olmec and Maya artifacts is symbolic of a split corn husk[18] cut into the head of the maze god. It is from this cleft that fresh corn sprout emerges.[19] This same reference to corn can be seen on the Humanoid side of the Cydonia Face with the identification of the tri-leaf emblem on its forehead.

THE BEARDED JAGUAR

In the National Museum of Anthropology in Mexico City there is a large Aztec reliquary that is carved in the shape of a full jaguar (Figure 18). This amazing sculpture, which weighs over six tons, was unearthed at Templo Mayor in Mexico City way back in 1790.[20]

Figure 18 Bearded Jaguar Reliquary (Aztec)
Left: Side view. Drawing by the author (Image source: Myths of the World; Gods of the Inca, Aztec and Maya by Timothy R. Roberts).
Right: Front view. Drawing by the author (Image source: The Mighty Aztecs, by Stuart & Godfrey).

The most intriguing characteristics of this so-called jaguar reliquary are that it has no spots, which a jaguar does, and it has a mane, which a jaguar does

not. Notice that the partial mane on this reliquary is similar in size and shape to the mane feature found on the Feline side of the Cydonia Face.

So, one could easily conclude that the Feline side of the Cydonia Face represents a Mesoamerican vision of a bearded, snarling jaguar and not an African lion.

After reviewing all of the evidence, despite all the flaws and its disappointing resolution, this poor 1998 MOC image of the Cydonia Face does support a human-feline visage that was observed in the earlier 1976 Viking image. Despite NASA's efforts to nullify any interest in this facial anomaly and move on, the debate is not over. This two-faced geoglyphic structure on Mars deserves further study and hopefully NASA acquire additional MOC images, with higher resolution acquired, under various times and seasonal changes from directly overhead. Hopefully we won't have to wait another twenty years.

When I first saw the two-faced aspects of the Face on Mars as revealed by Richard C. Hoagland in the early Viking images and now this new MOC image, I knew nothing about this idea of conjoining human and feline faces into a bifurcated mask and I didn't know of any cultures that produced such artwork. However, after taking a deep dive into this bifurcated technique I found this idea was common in many cultures around the world. The following chapter will reveal many New World cultures such as the Olmec, Maya, Aztec and American Indians produced sculptures and masks with half, and two-faced motifs and sometimes with very complex, composite designs.

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Notes

1. MSSS, All Projects, The Mars Global Surveyor (MGS) *Mars Orbiter Camera MOC*, msss.com.

2. Mars Viewer, MOC SP122003, *Mesa and Butte in Cydonia Mensae*, Dated April 5, 1998.

3. "New Mars Photos Cast Doubt on Speculation on a 'Face,' New York Times, April 1998, A24.

4. The term "cat box" was coined by radio host Art Bell ("Coast to Coast") on April 6, 1998 and adopted by many analysts, after a caller's comparison of the MGS Face image to a cat's litter box.

5. See; Richard C. Hoagland, "Honey I Shrunk the Face," The Enterprise Mission, 14 April 1998. http://www.enterprisemission.com/

6. Mars Viewer, Viking 035A72, July 7, 1976.

7. Society for Planetary SETI Research, http://spsr.utsi.edu/members/lanfleming.html.

8. Lan Fleming, "The Politics of Science and JPL's "Catbox" Enhancement of the Face on Mars", VGL, October 18, 1998. http://www.vgl.org/webfiles/mars/face/catbox.htm

9. Lan Fleming, "How To Make A Catbox", VGL, September 30, 2000. http://www.vgl.org/webfiles/mars/face/catbox2.htm

10. Linda Schele and David Freidel, *A Forest of Kings: The Untold Story of the Ancient Maya* (New York: Quill, 1990), 109-113.

11. "NASA Administrator's Third Seminar Series Scheduled," NASA News 13 March 1995. http://www.aero.com/news/nasa_press/n950308d.txt. A video of Linda Schele's NASA presentation "The Universe: Now and Beyond" was acquired by George Haas from Gillett Griffin of Princeton University in the spring of 2002.

12. Mike Bara, "New Mars Face Image Analysis and Comment, Part III," The Lunar Anomalies, 1999. http://www.lunaranomalies.com.

13. Linda Schele and David Freidel, *A Forest of Kings: The Untold Story of the Ancient Maya* (New York: Quill, 1990), 115.

14. Linda Schele, David Freidel and Joy Parker, *Maya Cosmos: Three Thousand Years on the Shaman's Path* (New York: Quill, 1993), 431.

15. Richard C. Hoagland, *The Monuments of Mars: A City on the Edge of Forever*, 4th ed. (Berkeley: North Atlantic, 1992), 22.

16. J. Eric S. Thompson, *The Rise and Fall of Maya Civilization*, (Norman, OK: University of Oklahoma, 1966), 214.

17. Tom Van Flandern, *On Improbable Claims*, Meta Research, 1998.

18. Richard A. Diehl, *The Olmec America's First Civilization*, (London, Thames & Hudson, 2004), 79.

19. Karl A. Taube, *Olmec Art at Dumbarton Oaks*, Issue 2 of Pre-Columbian art at Dumbarton Oaks, (Dumbarton Oaks, 2004), 26.

20. Timothy R. Roberts, *Myths of the World: Gods of the Maya, Aztec and Incas*, (New York: Metro Books, 1996), 67.