LAST WORD SOCIETY

Joseph E. Borkowski[1] *D.D.S.*

Mona Lisa: The Enigma of the Smile

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ABSTRACT: The Mona Lisa, painted by Leonardo Da Vinci, 1503, pictures a smile that has been long the subject of conjecture. It is believed, however, that the Mona Lisa does not smile; she wears an expression common to people who have lost their front teeth. A close-up of the lip area shows a scar that is not unlike that left by the application of blunt force. The changes evident in the perioral area are such that occur when the anterior teeth are lost. The scar under the lower lip of the Mona Lisa is similar to that created, when, as a result of force, the incisal edges of the teeth have pierced the face with a penetrating wound.

KEYWORDS: Last Word Society, Mona Lisa, dentition

Ever since the painting of the Mona Lisa has been known to the public, conjecture has existed as to the basis of her smile. What mystery lay behind that smile? Leonardo often wondered. Perhaps it was the affectation of a silly, empty headed woman of fashion. Leonardo, for all of his worldliness, knew something of the foibles and frivolities of the day; the etiquette which prescribed how a gentlewoman should walk and stand and pluck her eyebrows; never laugh outright, but only smile secretively from the corner of her mouth. The concession of the sly smile may not be essentially so, her corners of the mouth are not drawn backward and upward by the risorius and zygomaticus major muscles.

One example of a theory for the smile follows; using a piece of paper, cover up the left side of the face down the middle of her nose. On the right side is seen a young woman with a quiet smile. Her face is youthful and soft. One sees a woman in the springtime of her life. Cover up the right side of the face with a piece of paper also bisecting the nose and the mouth. The expression of the eye is sad, tired, and weary. Focusing on the lip, one can perhaps detect a bare smile. The theory is open to the fact that few people are born with total symmetry of the face. Bisecting the face with a line and producing a mirror image of each half usually produces two different faces.

Leonardo Da Vinci used an isosceles triangle with the golden proportions (advocated by Leonardo Fibonaci) to organize the Mona Lisa. He placed his subject's face at the upper vertex of the triangle (Fig. 1). Leonardo's supreme artistic intuition aside, just the

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[1]Formerly Clinical Professor, Operative Dentistry Georgetown University School of Dentistry, Washington, D.C., currently: Fellow, Art Restoration; St. Mary's College, St. Mary's City, Maryland.

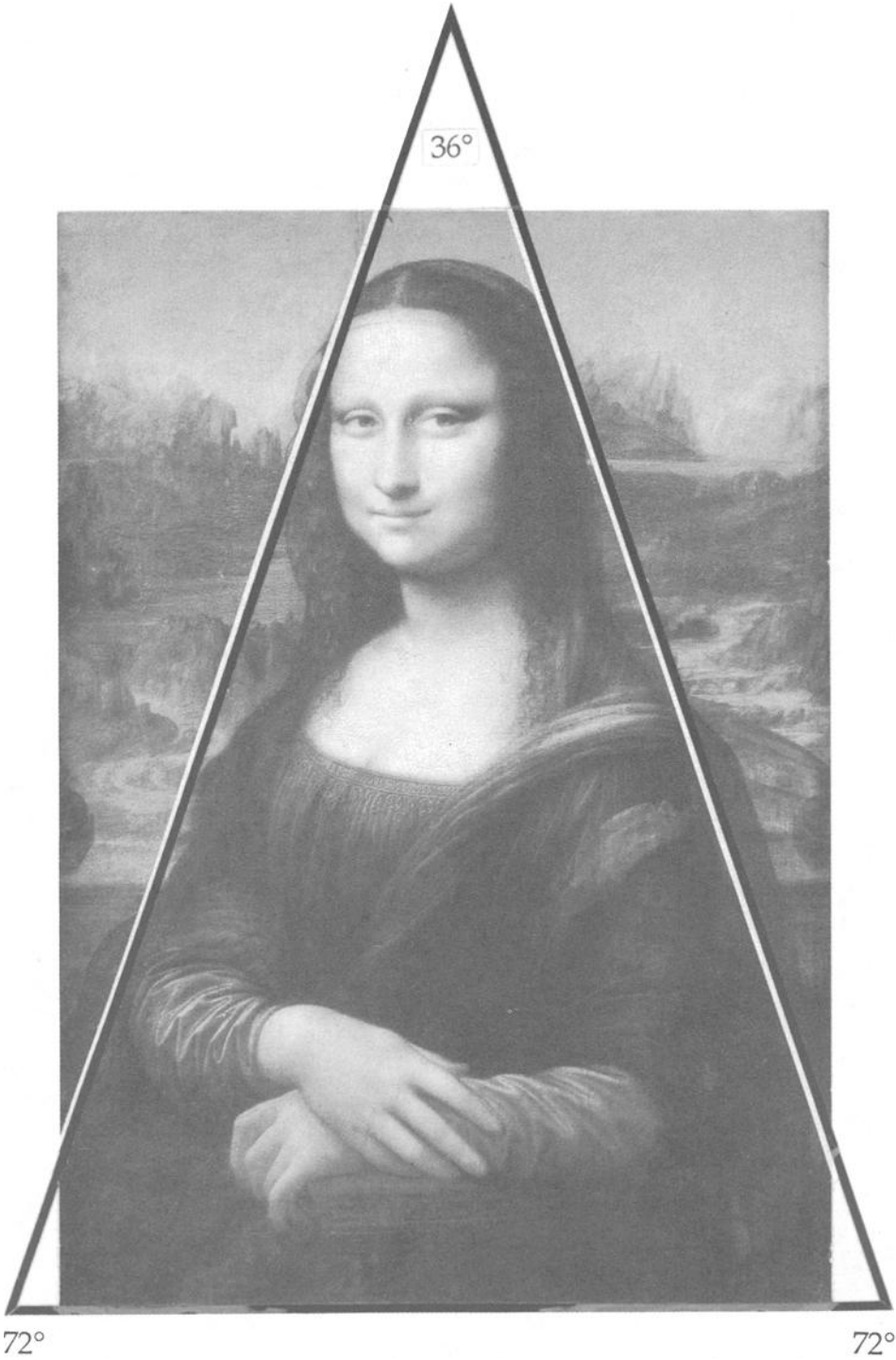

FIG. 1—*The use of the golden triangle to organize the Mona Lisa.*

fact that he had recently helped illustrate a book on the golden section suggests, in most likelihood, that he consciously imbued his work with this formal construct. Part of the charm of the painting may be attributed to the geometric aspect of the proportions as well as the magnetic smile [*1*].

Facial changes can originate from the effects of wrinkling of aging; changes can also occur from the loss of teeth. The loss of the anterior teeth produces an alteration of the contour of the mouth that is characteristic. In types where the lips are thin and require support from the teeth, the alteration is striking and reasonably predictable. The changes consist of alterations in the contours of the lips and their relations. The lips fall inward instead of inclining outward as they do when supported by the teeth. The line of separation between the lips, which may be an element of great beauty in a mouth, becomes changed from a graceful curve to a standard straight line (Ref 2, page 73). The corners of the mouth, which are supported by the canine teeth, droop and an expression is imparted to the face. The bone laying over the root of the upper canines produces a vertical ridge, the canine eminence. The tissue over this eminence gives rise to a bulge and it is this bulge which gives rise to the appearance of the face beneath and outward under the alae of the nose. If the canine is lost, the overlying bone over the root is lost and the overlying tissue of the face flattens out since it has lost its bony support. The crown of the canine ceases to support the upper lip at the corners of the mouth. The total of facial changes due to the loss of the anterior teeth can be more readily seen with a lateral or profile view of the face. There will be seen a flattening of the mouth; in more severe cases, there will be a falling in of the lips. Normally, the upper lip is supported by the anterior teeth and projects slightly forward to the lower lip. With the loss of the anterior teeth, this forward projection is lost. Changes in facial expression due to the loss of the front teeth are usually more striking than effects due to aging. Once one is aware of the effects

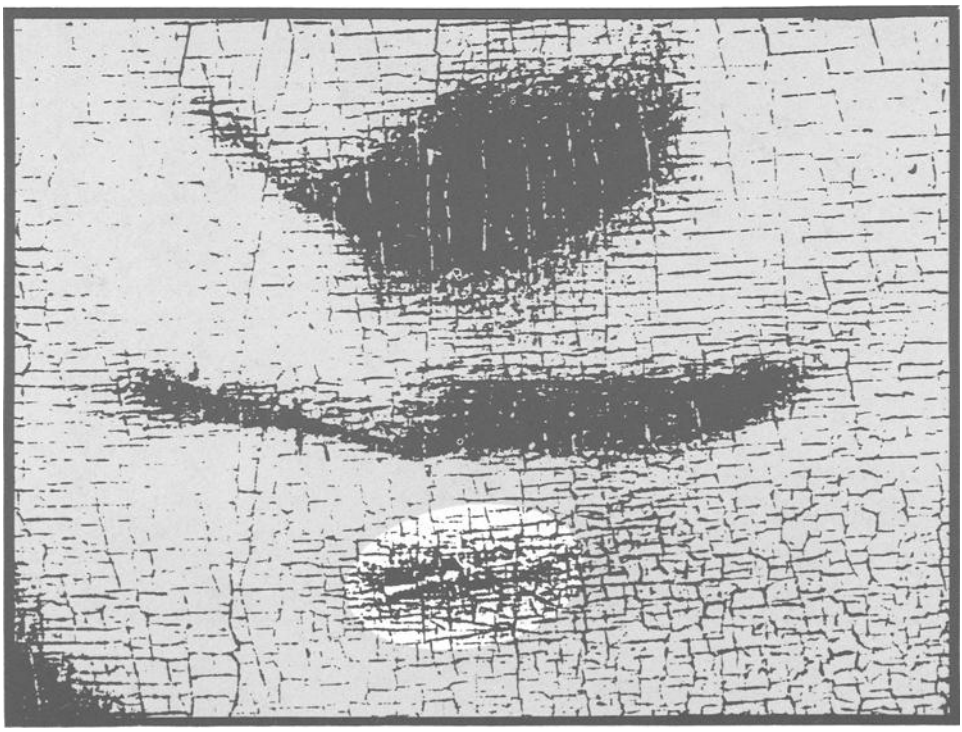

FIG. 2—*Enlargement of peri-oral area to show scar under lower lip.*

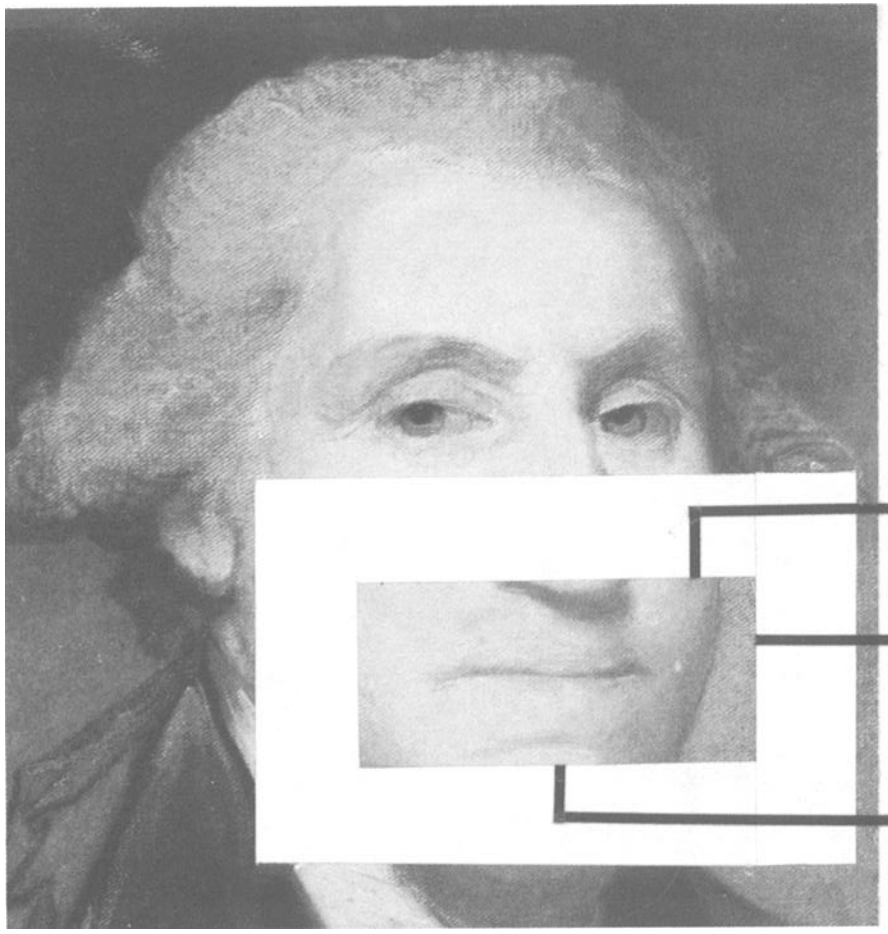

FIG. 3— George Washington-*Stuart*

Canine eminence is lost;
Corners of mouth sink in.

Forward projection of upper lip
over lower lip is lost

Lips fall inward instead of outward.
Lower lip seems to jut forward.

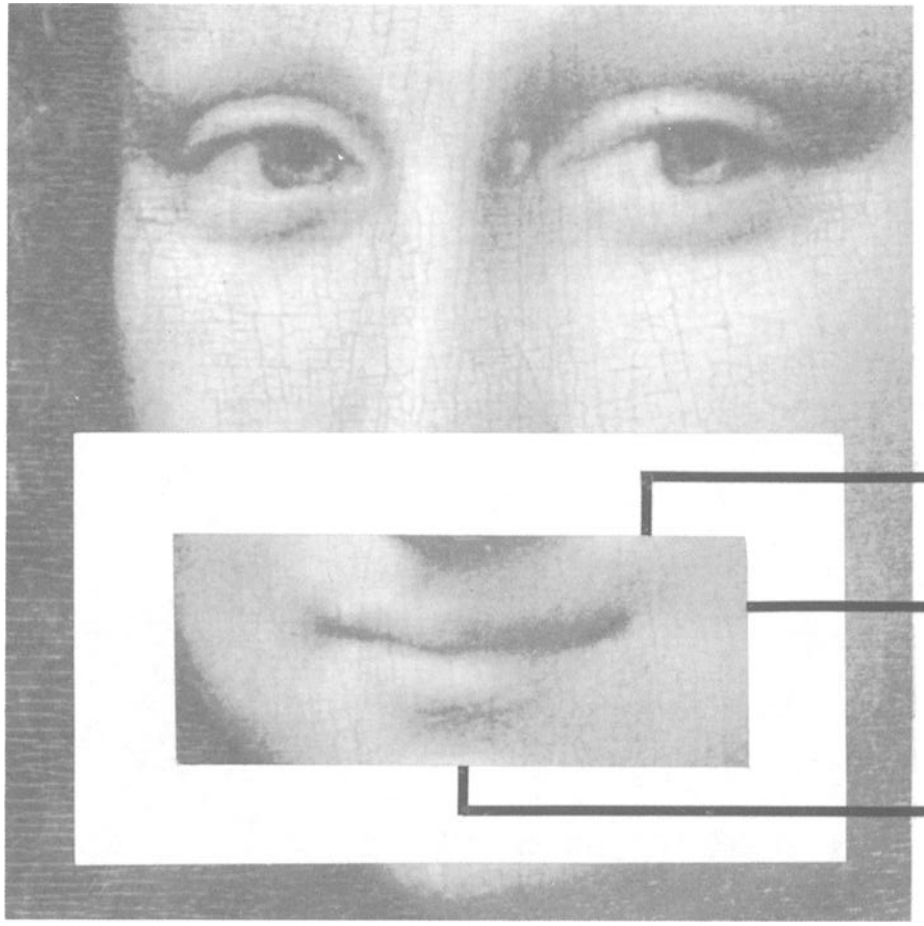

FIG. 4.—Mona Lisa-*Leonardo da Vinci*

of unreplaced anterior teeth, a person can look at a painting and accurately conclude the absence of anterior teeth.

Traumatic tooth loss applies to the effects of injury to the mouth due to a fall or a blow. In the event of past facial trauma, a scar may indicate the history of a traumatic episode. Leonardo Da Vinci was reputed to be very precise in his painting. An examination of the perioral area of the Mona Lisa, enlarged, reveals the presence of a scar (Fig. 2). This scar is not unlike that which prevails when there has been traumatic injury to the mouth. The biting edges of the teeth can pierce the tissue. Depending on the force, the episode can create a penetrating wound from inside the mouth to the outside of the face. The same trauma can easily produce the loss of either the upper or lower anterior teeth, or both. George Washington, historically conceded to be edentulous, can be compared to the Mona Lisa. Covering the face so that the mouth is highlighted, it is seen that they show strikingly similar expressions (Figs. 3 and 4).

It is concluded that the Mona Lisa does not smile but wears an expression resulting from the loss of her anterior teeth. From the presence of the scar, the loss may be said to have been produced by a blunt, traumatic injury to her mouth.

References

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Address requests for reprints or additional information to
Joseph E. Borkowski, D.D.S.
Route 2 Box 39L
Leonardtown, MD 20650