

# **ENCODED**

## **The Face of the Man of the Shroud of Turin Is Encoded Within the Sistine Chapel Frescoes**

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**One Sentence Summary:** The Sistine Chapel frescoes contain the encoded facial image of the Man of the Shroud of Turin, the traditional burial cloth of Jesus Christ.

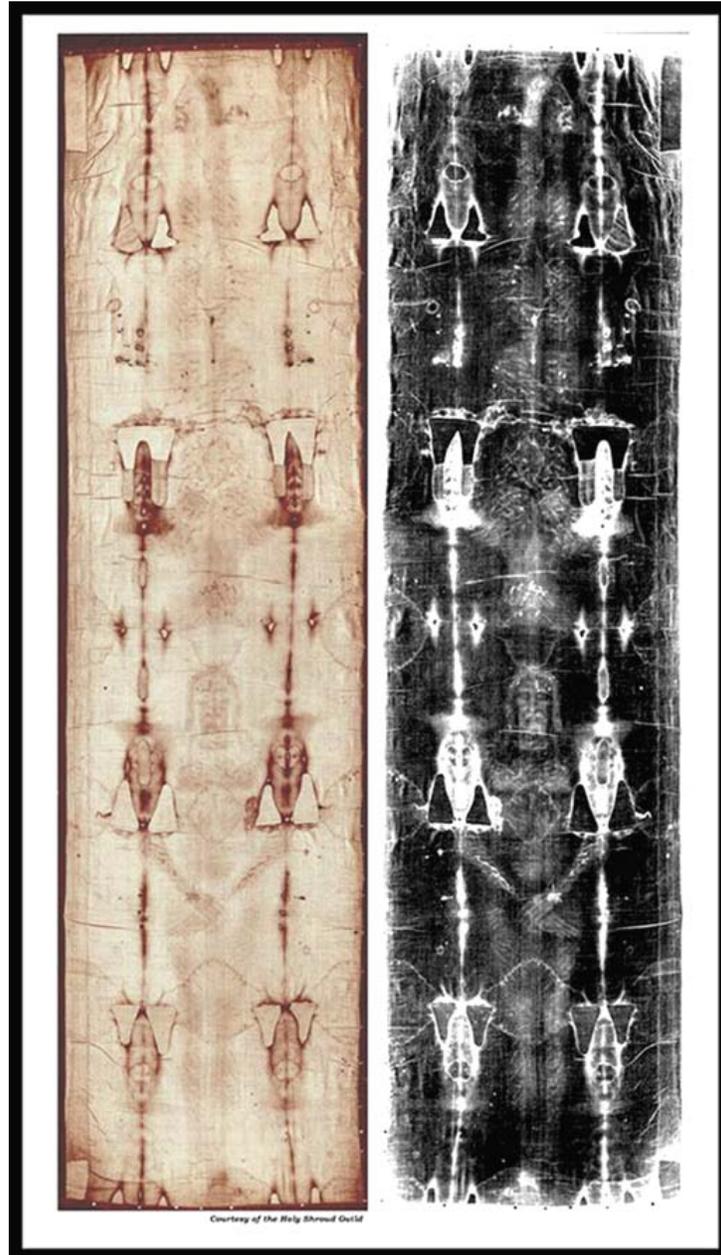
**Abstract:** The *Last Judgment* fresco and a portion of the *Ceiling* fresco by Michelangelo in the Sistine Chapel contain the encoded, and “hidden in plain view”, image of the face of the Man of the Shroud of Turin, the traditional burial cloth of Jesus Christ. Using preferred forensic methodologies for facial review and identification, this conclusion is based on distinctive pattern recognition, the determination of individual characteristics, and a superimposed progressive overlay comparison of both images. It is also concluded, based on forensic circumstantial, documentary and physical evidence, and coupled with logic and reason, that Michelangelo unknowingly painted the encoded image within the Sistine Chapel. However, exactly *how* it was done remains unknown.

**Keywords:** Turin Shroud, Sistine Chapel, Michelangelo, Encoded Image, *Gestalt*, Progressive Overlay Comparison—POC, Scientific Working Groups—SWG.

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**Main Text:**

**1. INTRODUCTION**



*Fig. 1-A*

*Fig. 1-B*

**The Shroud of Turin—Positive and Negative Images  
(Courtesy of the Holy Shroud Guild—G. Enrie Photo)**

The objective of this research article is to present a new intriguing, encoded image of the face of the Man of the Shroud within the frescoes of the Sistine Chapel. Its discovery leaves only two viable options about its origination; i.e., was the encoded image produced via deliberate efforts by Michelangelo, *or*, was it somehow produced via a manner totally unbeknownst to him? The only plausible answer to this question follows hereafter.

## **2. SCOPE OF STUDY**

The scope of this research is limited to extant artwork in the Sistine Chapel (i.e., a portion of the *Ceiling* and *Last Judgment* by Michelangelo) and the facial image of the Shroud of Turin. Artistic styles and perspective are discussed generally and support the conclusions. The photographic comparisons utilize the preferred methodology of forensic facial review and identification. Only accepted scientific principles have been utilized throughout this research.

### **2.1. The Shroud of Turin**

*Is the Shroud of Turin real?* Is it the *actual* fine linen cloth, as mentioned in Matthew 27:59, (*Holy Bible*, NIV) that was once used to envelope the body of Jesus for burial in the tomb, and which now may contain his blood and image? (**Fig. 1-A**) Or, is it a counterfeit masterminded by an ingenious forger? The cloth contains a faint image which bears the characteristics of a photographic “negative”; meaning the visible lights and darks are inexplicably reversed from normal. (**Fig. 1-B**) The faint image on the Shroud “is that of a real human form of a scourged, crucified man. The blood stains are composed of hemoglobin and also give a positive test for serum albumin.”(1) The mystery has continued for centuries; and more recently, yielding to scientific and scholarly debate and research, making it arguably the most intensely single-studied object in history. (See supplementary online text.)

### **2.2. Sistine Chapel**

The ineffable artwork contained within the Sistine Chapel in Vatican City is perhaps some of the most beautiful and important artwork ever produced by man. The more famous frescoes, the *Ceiling* (SCC) and the *Last Judgment* (SCLJ), were painted by Michelangelo Buonarroti, who contended to Pope Julius II when asked to paint the ceiling that “he was a sculptor, not a painter.” The Pope’s wishes overrode the artist’s contention, reportedly with the threat of imprisonment. The *Ceiling* illustrates the thematic Book of Genesis—the Creation and Fall of Man; and the *Last Judgment* on the Altar Wall illustrates from the Book of Revelation—the Redemption of Mankind. However, as important as all the visible artwork is, there is yet another Image, “hidden in plain view”, and concealed from the eyes of pilgrims for centuries...that is, *until now*.

The Sistine Chapel was dedicated in 1483 by its namesake, Pope Sixtus IV. This private Papal Chapel is located on the northern side of St. Peter’s Basilica in Vatican City. Pope Julius II was amazed at the beauty of Michelangelo’s *Pieta* and wanted the same resulting beauty for his ceiling. Michelangelo agreed to paint the ceiling on the condition that he would choose the theme and have complete autonomy over what was painted. The *Ceiling* frescoes were begun in 1508 and completed in 1512. The *Last Judgment* fresco was begun in 1535 and completed in 1541. (See supplementary online text.)

### 2.3. Artists and Unique Styles

Artists are known by their individual and unique styles. Dutch post-Impressionist Van Gogh is easily distinguishable from the Cubist Picasso, and the French Impressionist Monet from the Baroque artist, Caravaggio. The Mannerist Michelangelo is distinctly different from the Impressionist Rembrandt. Michelangelo utilized *terribilitá*, or imposing power and expression, in addition to his *contrapposto*, a counter-posed look which gave the impression of movement and “weight-shift.” Each artist developed and continued his own personal style, and it was through his style that others could quickly identify him. “Every artist...is identifiable by his style, which is as characteristic of him as his signature or thumbprint.”(2)

Once mastered by Michelangelo, *contrapposto* was reflected throughout each of his famous masterpieces. What is most exceptional about the encoded image is that it is a “direct full-face, frontal portrait” of a man—a style which was *never* used by Michelangelo in *any* of his paintings or sculptures! This observation alone is strong circumstantial evidence that the encoded image in the Chapel was *unknowingly* painted by Michelangelo. However, other abundant historical, circumstantial, documentary and physical evidence also preclude and prohibit the possibility of his knowingly having painted the encoded image. Further, it was common practice during the Renaissance for an artist to cleverly insert a self-portrait into the work of art. Michelangelo, Leonardo da Vinci, Raphael, Albrecht Dürer, *et al*, were known for their inclusion of self-portraits. As God “is the first author of beauty”,-Apocryphal Book of Wisdom, 13:3,(3) He, too, apparently inserted His “Self-Portrait” into these beautiful frescoes.



Fig.2

The CDD Shroud Face  
Continuous Directional Derivative (CDD)  
(Courtesy-Alan D. Whanger)

#### **2.4. Continuous Directional Derivative, CDD**

In 1991, Dr. Alan D. Whanger, Professor Emeritus, Duke University Medical Center, and Chairman of the Council for Study of the Shroud of Turin, CSST, produced the “CDD image” of the Shroud face. (*Fig.2*) This was achieved by overlaying the positive image and a reversed negative image of the Shroud face (G. Enrie photo, taken in 1931), and then moving one slightly out of register. The resulting image exemplifies “a legitimate edge enhancement technique” which illustrates depth via light/dark/shadow differentials, and was later confirmed by Dr. James M. Coggins, former Associate Chairman of the Academics and Computer Science Department of the University of North Carolina at Chapel Hill. Coggins further described it as a “Continuous Directional Derivative in the Y-vector”,(4) or simply, “CDD.” In Dayvault’s opinion, the CDD image offers the most two-dimensional detail visible on the Shroud face.

#### **2.5. The Discovery**

In January 2003, Dayvault scrutinized numerous books on the Vatican, Rome, Christianity and art history for any reference to the Shroud in artwork located in the very heart of historical Christianity...Rome. He used a high-contrast transparency of the image of the CDD Shroud face for a cursory comparison with various paintings. One of these comparisons yielded a surprising discovery.

As seen from ground level, the *Last Judgment* and *Ceiling* appear simply as monumental frescoes. However, using a Sistine Chapel photograph to simulate viewing from a greater height and distance, one can readily discern the basic features of a human face, i.e., eyes, nose, mouth, chin, etc. Thus, broadly speaking, the encoded image remains hidden and incomprehensible, until it is seen from a distinctive and proper perspective. As the great American poet, Robert Frost, once said regarding sight, “There is no power to see in the eye itself. We cannot see anything until we are possessed with the idea of it, take it into our own heads—and then we can hardly see anything else.”(5) Having studied the Shroud since 1973, and with the facial image indelibly etched in his memory, Dayvault recognized the unique “wound features” and landmark group patterns present in the frescoes and *immediately* identified the distinct Shroud face.

#### **2.6. Image Analysis Experience**

Dayvault is a graduate of the University of North Carolina at Chapel Hill and formerly served for approximately eight years as both a Special Agent and Physical Science Technician with the Federal Bureau of Investigation, FBI. In the FBI Laboratory, he specialized in pattern and impression evidence comparison analysis; namely, in the Firearms/Toolmarks Identification Unit. Considering laboratory, SA field investigations, research group service, and independent investigative research; cumulatively, he has over twenty-five years of experience in various aspects of forensic comparative image analysis. *In all cases*, Dayvault fully utilized accepted forensic scientific principles and protocols, and preferred comparison methodology.

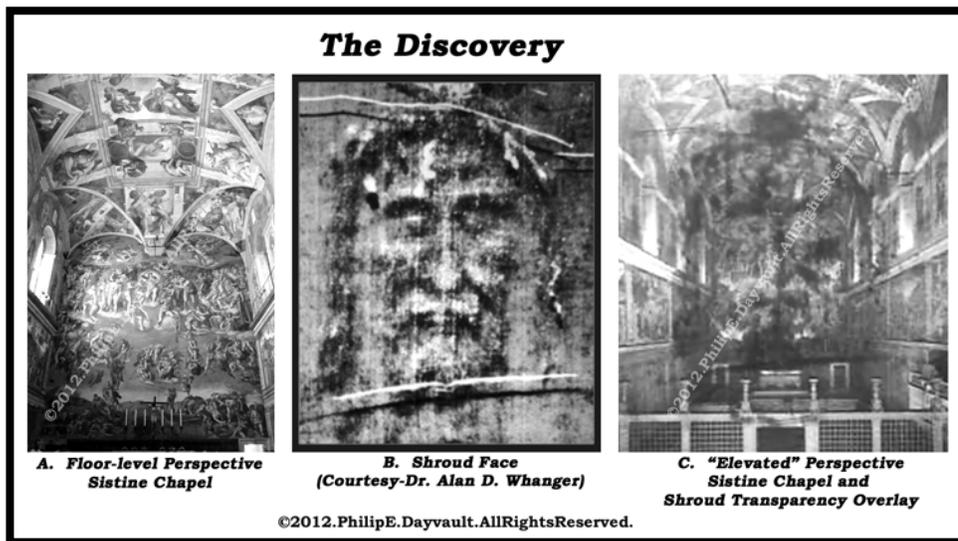
### 3. MATERIALS AND METHODS

#### 3.1. Facial Identification

Facial identification is possible through the brain's discernment of collective *unique features* of each individual. In addition to the presence of basic human features, such as eyes, ears, nose, mouth, chin, all arranged in the human template, or context; oftentimes, other features are very obvious, such as wounds, scars, marks and/or tattoos or sometimes, very subtle, such as hair style and color, an eye condition or a nervous twitch. These unique features permit the *individual* identification of each of us, versus our neighbor. "To identify a face, (one) must locate and encode the information that makes the face unique or different from all other faces (one has) seen before and from all other unknown faces."(6) Our unique facial features make us all distinctive individuals, as unique as the individual characteristics of a fingerprint.

#### 3.2. Photograph Preparation

Actual scaling measurements for these two *particular* images (Shroud Face and *Last Judgment*, see *Fig.6*) required a horizontal differential of the cropped CDD Shroud Face photo of approximately 21.60% and a vertical differential of approximately -2.47%. This scaling is required to compensate for variances in the photographs due to their particular lens focal length, camera angle, elevation, etc. Slight rotation of one image was also utilized for optimal correspondence. Through graduated scaling and repeated incremental opacity changes, the correlation of unique features is observable; thus, making facial identification possible. Scaling of the referenced photograph was conducted via Adobe Photoshop Elements 2 and 5. In an attempt to disprove the hypothesis, comparison tests were also conducted on scaled images of other individuals, all to no avail. The single Shroud photograph available to date which most accurately and forensically corresponds to the unique landmark features of the frescoes is the highly-detailed CDD Shroud face image.



Sistine Chapel-Last Judgment/Ceiling

Fig.3

### **3.3. Central and Elevated Viewpoint**

When viewed only from ground level, one is able to see exactly what Michelangelo intended ...the various sections of the *Last Judgment*, including the one with the beardless Christ centered. (**Fig.3-A.**) However, when viewed from the proper height, distance and angle, the facial features are cognitively recognized, which then permits discernment of the larger facial image. The encoded image is only perceived when the CDD Shroud Face (**Fig.3-B.**) is compared with an “elevated” image of the Sistine Chapel frescoes taken from a centrally elevated and perpendicular perspective, i.e., at the proper eye level or horizon line, located approximately 18-25 feet above ground level, and from *at least* halfway back in the Chapel. A high-contrast transparency of the Shroud face overlaid upon an “elevated” image of the Sistine Chapel frescoes illustrates this overall facial image. (**Fig.3-C.**) This height-distance requirement then permits contextual facial recognition.

### **3.4. Michelangelo’s Documented Life**

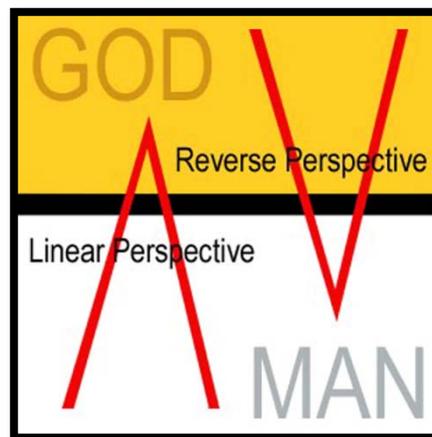
It is *important* to note that Michelangelo was one of the world’s most documented individuals, replete with *two* contemporary biographers. Due to his extraordinary talent as an artist, he was in constant demand, always being pushed and pulled to complete whatever he was doing, only to be commissioned for something else. He had no free time at all. The records of the two biographers, and Michelangelo’s personal letters, indicate no mention of his ever viewing the Shroud. During Michelangelo’s lifetime, the Shroud was exhibited and/or carried for security reasons in northern Italy only in Turin, Milan, Vercelli and Nice, beginning in 1535 and for the next several years,(7) and there is no record of his ever viewing it. *Even if he had seen* the Shroud, the image is not even discernible within 10 feet and contains no details. However, a current Shroud scholar and notable Michelangelo expert for almost 50 years, Ian Wilson, of Brisbane, Australia, wrote me and said, “...and in all his (Michelangelo’s) drawings and writings, there's not a hint that I have ever come across of his interest in, or awareness of, the Shroud.”(8)

### **3.5. Perspective Drawing**

“Perspective Drawing is a technique used to represent three-dimensional images on a two-dimensional picture plane. Perspective was developed in the 15th century by the architects, Leon Battista Alberti (1404-72) and Filippo Brunelleschi (1377-1446).”(9) “By lowering the viewpoint, you emphasize the height and power of objects in the foreground. This has the effect of making the viewer feel small.”(10) This is exactly the perspective visitors experience when they visit the Sistine Chapel and view the *Last Judgment*. However, by viewing the frescoes photographed from an “elevated” vantage point, and overlaid with the Shroud face, “the common (central) eye level forms a spatial link between you and the other figures and psychologically you feel that you are part of the scene. ...It is like taking a look through a window in time.”(11) By viewing the encoded image in this manner, one is able to see His image, almost as if, “face-to-face.”

### **3.6. Reverse Perspective**

“Reverse perspective” accurately describes the unique characteristics of the Sistine Chapel frescoes and the encoded image. This ancient concept was also called “inverted perspective” or “Byzantine perspective”, because of its broad use in Byzantine and Russian Orthodox iconography. It was preferred by the purist iconographers in that they felt it was more spiritual in nature versus tainted by the usage of “linear perspective”, a method of painting from a single point of perspective where the orthogonal lines converge at a distant vanishing point. Additionally, linear perspective was considered by iconographers to be man’s imperfect attempt to portray realism. “Therefore, they reproduced the world not as they saw it but as it really is.”(12) Moreover, “in the linear perspective the vanishing point is in the horizon. In religious art this keeps God far away from the viewer, it is the viewer who peers at God.”(13) However, “in reverse perspective the vanishing point is the viewer himself. In icons this gives the impression of God who peers at the man.”(14) Shown below (**Fig.4**) is a depiction of the concept of reverse perspective, also unknowingly and accurately depicting the situation at hand!



**Fig.4**

**Linear and Reverse Perspective**  
(Courtesy-Emily Harju)

Yet, there is an even greater implication and explanation of the frescoes. When one enters the Sistine Chapel and stands in front of the massive *Last Judgment* fresco, and according to tour guide interpretations, by looking upward, one can see the individual figures in “rotatory” movements, proceeding from the left side of the fresco as the resurrected souls are being lifted upward to face Jesus Christ, as Judge, in the center of the fresco. The unjust are doomed to hell and are dragged downward by demons on the right side. But...there is more than meets the eye.

### **3.7. Gestalt**

When viewed from a distance and at central eye level, as via an “elevated” photograph versus ground level, the entire image takes on a new dimension. The masterpiece bears the apparent characteristics of a *Gestalt* image (Old German, pr.-“gə‘SHtält”, meaning, “the essence or shape of an entity’s complete form”[15], whereby “a gestalt entity is something that is greater than the

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sum of its parts”[16]); thus, synergistically forming the larger encoded image. This is possible, in part, due to our brain’s capacity to decode and understand complex data in recognizable forms. Six concepts of *Gestalt* are utilized holistically by our brains and we are able to “see”, or perceive, the encoded image. These six concepts are:

- Simplicity -the mind wants to find the simplest solution to any visual problem
- Closure -the mind supplies the missing pieces in a composition
- Continuance -the eye continues in the direction it is going
- Similarity -what an item looks like and how that affects gestalt
- Proximity -where items are in relationship to each other and how that affects gestalt
- Alignment -lining up objects to organize and form groups”(17)

Once viewed in its proper perspective, the encoded facial image is easily recognizable. Prior to photography, all people saw was the distorted ground-level view of the *Last Judgment*. Dayvault contends that the encoded image has gone unnoticed for centuries in that sufficient data points were simply not available for image visualization. For example, in the popular television game show, “Wheel of Fortune”, the puzzle pieces are gradually uncovered, one at a time, until at which time, when *just one more* letter is uncovered, one experiences the “moment of discovery”, the “*Eureka*” moment, or the “Aha...I got it” moment. Dayvault also experienced a similar emotion when he first perceived the encoded image via the transparency overlay. That apparently was the first time ever that the Sistine Chapel frescoes had been compared to a photographic Shroud image, and *vice versa*. From then to now, Dayvault subsequently used “reverse engineering” to research art history, Michelangelo, fresco painting, and painstakingly refine the encoded image through numerous iterations. Now, he attempts to explain *what* exactly had occurred. *How* it occurred is still unknown.

Most importantly, the encoded image is unlike other examples of *Gestalt* entities, whereby a generic object, an animal or a *non-specific* person may be visualized. Sometimes an image may even be recognized through *resemblance* to a celebrity or famous person, such as Marilyn Monroe or President Abraham Lincoln. The encoded image, however, differs greatly in that it has been forensically *identified*, via individual characteristics and unique features, to *the Man of the Shroud*, a very *specific* individual.

### **3.8. Summary of Methods Utilized for Comparison**

- Collection of photographs, CDD Shroud Face and Sistine Chapel *Last Judgment*.
- Convert both photographs to grayscale.
- Crop both photographs to similar size.
- Utilize grid for alignment and observation of individual features.
- Invert photographs to remove brain’s discernment of “facial” image.

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- In an attempt to disprove the hypothesis, overlay the Chapel fresco with a similarly-scaled photo of another person. Try your best to align them.
- Superimpose both images of the scaled CDD Shroud Face and the Sistine Chapel *Last Judgment* and conduct various opacity changes for comparison of both photographs. This Progressive Overlay Comparison, POC, requires *numerous* iterations, with scaling and slight rotational adjustments. With patience, correspondence can be achieved.

## 4. RESULTS

### 4.1. Class versus Individual Characteristics

“Class Characteristics are characteristics common to many individuals (e.g., the overall shape of the nose, eyes, or mouth). Individual Characteristics (are those) allowing one to differentiate between individuals having the same class characteristics (e.g., freckles, moles, and scars).”(18) Using a computer and various digital photographs of the Sistine Chapel and depictions of the Man of the Shroud, one can detect, assess and compare unique features present in both images. Specifically, discriminating “individual characteristics”, known as *identifying markings*, such as wounds, “scars, marks, or tattoos” and other unique markings, are also present in both images. Observable repeatable and identifying markings, or individual unique features, of the frescoes and Shroud Face were “mapped”, or assessed and compiled, and several are depicted in the photograph below. (*Fig.5*) (See supplementary text.)

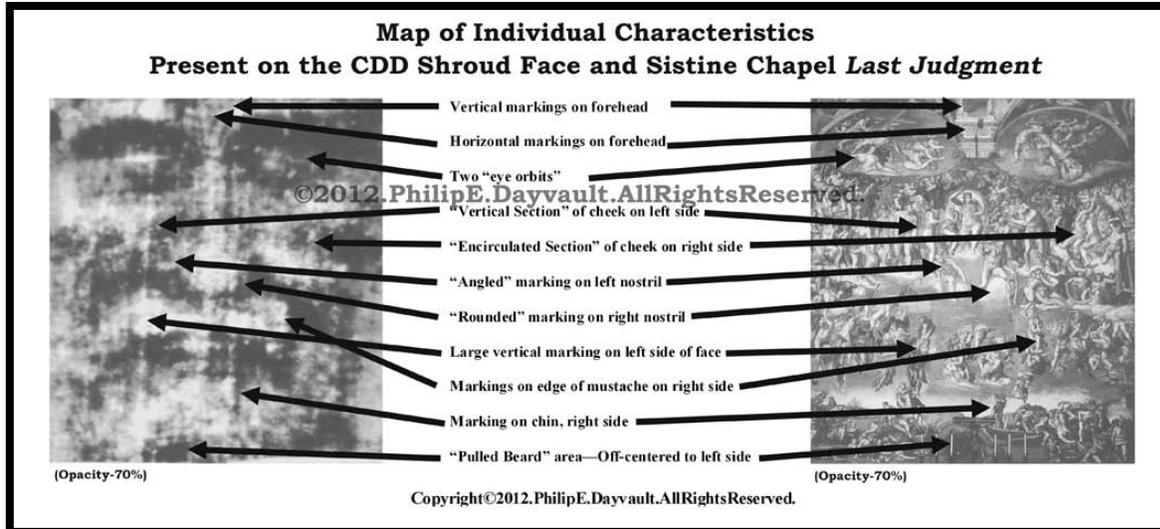


Fig.5

### 4.2. Progressive Overlay Comparison

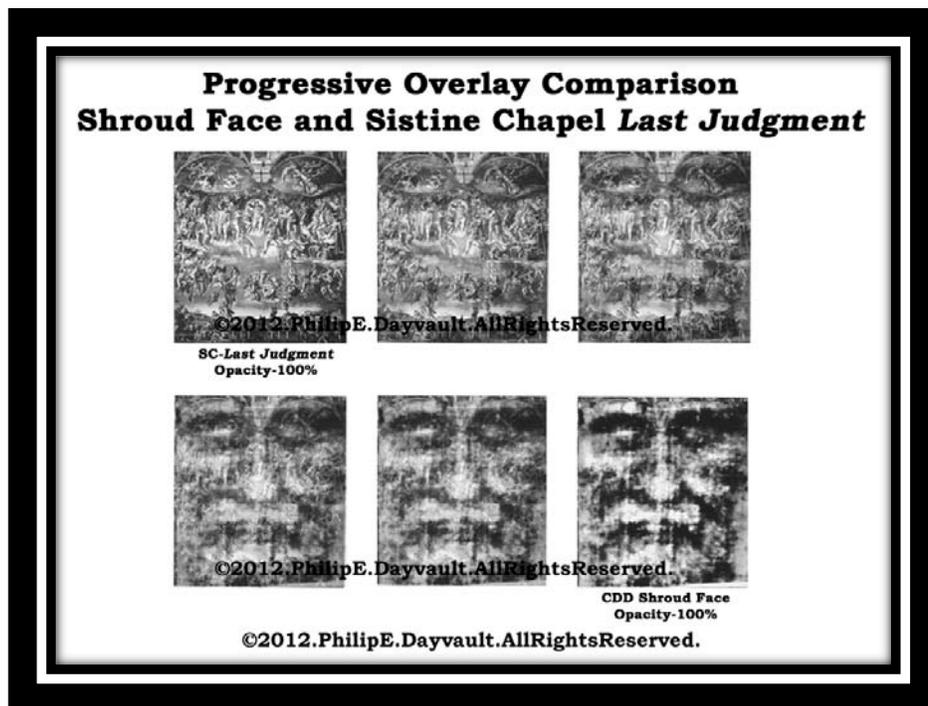
The single, fully encoded image is only realized after a visual overlay of a scaled CDD Shroud face photograph over a single, static “elevated” photograph which depicts both the *Last Judgment* and a portion of the *Ceiling* frescoes. Initially and unexpectedly, this occurred with a transparency overlay. A “flip chart” was made with the two printed photographs stapled in one corner and flipped quickly back and forth to ascertain the presence of similar and/or discordant

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features. The comparison of “individual characteristics” was initially conducted by assessing and examining a single printed or digitized image. Next, side-by-side comparisons of the two images were conducted and examined for notable similarities and differences. Finally, they were prepared for digital comparison. A grid view was used to assist in the alignment and observation of features. Once the presence of various individual characteristics was detected and analyzed, the two images were superimposed, or overlaid in layers in the Photoshop editor, in order to conduct a more accurate comparative examination. When using different photographs, slight scaling and/or rotation adjustments of the images may be required. (See supplementary figures.)

This Progressive Overlay Comparison, POC, permits the discernment of a single image by depicting unique individual features present in both the frescoes and the scaled Shroud photograph. Once full registration is obtained between the two superimposed images, changing the opacity of either overlaid image permits the determination of a visible correspondence of the similar features. It also allows one to view through the diffuse image and witness the encoded image. The use of this “fade” transition of image comparison is acceptable and common in forensic image comparisons. In addition to the “fade” method, “wipe” and “toggle” are other accepted comparison transitions. “In general, wipes and fades promote the appearance of similarities whereas toggling between images promotes the appearance of differences.”(19) Once completed, a series of graduated, incremental opacity changes can be graphically observed in a “slideshow” video capacity.

The resulting images from the Progressive Overlay Comparison depict the encoded, and apparently *Gestaltic*, image of the Man of the Shroud superimposed over the features of the Sistine Chapel *Last Judgment* fresco. (**Fig.6**) (To view in detail, simply enlarge entire Word document.)



*Fig.6*

## **5. DISCUSSION**

### **5.1. The Encoded Image—Shroud Face and the Sistine Chapel Frescoes**

The *Ceiling* fresco (not illustrated in this particular Sistine Chapel photo) was begun in 1508 and completed in 1512. It extends down to the top of the lunettes, or what appear to be the curved “eyebrows.” The *Ceiling* fresco also depicts Jonah, shown in the center of the “forehead”, where his silhouette next to the Pillars corresponds remarkably well to the “*Epsilon*-shaped” (“reversed-three”) bloodstain. Most importantly, the *Last Judgment* fresco, shown to include what appear to be the “eye orbits, cheeks, nose, mouth and chin”, was begun in 1535 and completed in 1541. The 23-year interim included three different pontiffs, each of whom could have commissioned any artist he wanted to paint the Altar Wall. As fate dictated, Michelangelo reluctantly acquiesced when ordered by Pope Clement VII in 1535, as he would have much preferred working with his true passion, sculpture.

### **5.2. Scientific Working Groups, SWGs**

Scientific Working Groups (SWGs) have collaborated with various American and International forensic science laboratories and professionals since the early 1990’s. In the late 1990’s, the FBI Laboratory conducted a strategic assessment of all SWGs. The mission of SWGs is to develop consensus standards and improve discipline practices and protocols. Several examples of current SWGs include the following:

- FISWG – Facial Identification Scientific Working Group
- SWGIT – Imaging Technologies
- SWGGUN – Firearms and Toolmarks
- SWGDE – Digital Evidence

### **5.3. Facial Identification Scientific Working Group, FISWG**

Dayvault fully utilized comparative image analysis from his training in the Bureau and subsequent experiences. The methodologies used are the preferred and recommended standards of FISWG. The Facial Identification Scientific Working Group, FISWG, consists of leading practitioners in forensic laboratories, governments and academia, throughout the world and seeks to establish best practices and established procedures and protocols for determining facial identification. Several listed member agencies and institutions include the following: US FBI, DHS Customs and Border Protection, New York City Police Department, Los Angeles Sheriff’s Department, US Department of State, US Army Criminal Investigation Laboratory, the Australian Federal Police, the Israeli National Police, and the International Association for Identification, *et al.*(20)

“Morphological analysis as a comparison method is based on the assessment of correspondence of the shape, appearance, presence and/or location of facial features. These features can be *global* (corresponding to the overall face), *local* (including anatomical structures such as nose or mouth and their components, e.g., nose bridge, nostrils, ear lobes) or *discriminating*

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characteristic facial marks such as scars or moles.”(21) (*Emphasis-mine*). The morphological approach to facial comparison and identification is *the recommended primary method* of FISWG, in assessing and determining if two facial images represent the same person.(22) (*Emphasis-mine*). Further, “FISWG recommends that superimposition only be used in conjunction with morphological analysis.”(23) One distinct advantage is that “superimposition can enhance morphological analysis when comparing the spatial distribution and shapes of features depicted.”(24) Valid facial identifications are based on the collective interpretation and verification of class and individual characteristics and spatial distribution of unique features.

## **6. CONCLUSIONS**

In January 2003, an encoded image was discovered when Dayvault used a high-contrast transparency sheet depicting individual unique features of the Shroud face for cursory comparisons with various artwork, scenes and images from books about Rome and the Vatican. The unique features of the Shroud face corresponded with various landmark groupings of figures in the Sistine Chapel frescoes. After lengthy and rigorous examinations, the CDD Shroud face photograph was properly scaled with the Sistine Chapel frescoes and revealed the ENCODED IMAGE of the FACE of the MAN of the SHROUD.

Michelangelo painted the *Ceiling* fresco from the rear of the Sistine Chapel to the front, slowly progressing towards the Altar Wall using elaborate scaffolding to reach the vaulted ceiling. Inasmuch as he painted as he progressed forward, he *never* saw this encoded image. Once he completed the *Last Judgment* fresco in 1541, he seldom returned to the Chapel in his remaining years. With over 300 figures on the *Ceiling* and over 400 figures within the *Last Judgment*, plus considering all of his other paintings and sculptures, one can easily realize that a *direct, full-face frontal depiction* of his figures was simply NOT his artistic style...and artists are known by their unique styles.

While not needed for the determination of these findings, additional helpful data could possibly be obtained via an on-site, non-invasive examination of the Sistine Chapel frescoes. Precise measurements and various photographs at different heights and distances might provide answers to several questions; namely, what is the significance, if any, of the optimum height/distance for viewing the encoded image? Also, why does the CDD Shroud face image require such scaling it does in the horizontal x-axis? Other questions might also provide additional information, further bolstering an already-strong evidentiary position. Understanding the significance of these findings and the need for conducting on-site research to answer additional questions, it is hoped that Church and Vatican Museum officials will grant an exception to allow this work to proceed.

The brain’s discernment of “unique features” illustrates their crucial importance in facial identification. The encoded image must be viewed from a central eye level elevation and/or direct viewpoint to even be discerned. When one stands in front of the *Last Judgment*, one does not perceive the image because the encoded facial features are distorted from ground level. The

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proper static viewing perspective only became possible with the advent of photography... in the early 1800's! Further, *any* comparison with the Shroud was only possible with the first photograph of the Shroud, taken by Seconda Pia in 1898. However, the highly-detailed CDD Shroud Face photograph used in these specific comparisons was produced in 1991 by Dr. Whanger. Thus, the potential "window" for comparing *this specific encoded image* was only from 1991 to present!

This discovery would indeed still be remarkable *even if* Michelangelo had somehow knowingly incorporated the features of the Shroud face onto the frescoes of the Sistine Chapel. Artists have for centuries used the Face of Christ as a model for the subjects. The modern art world today, though, would certainly be stunned to realize that Michelangelo had somehow "pulled the wool over their eyes" for five centuries. However, the abundant evidence simply does not support this improbable scenario.

Further, forensic examination of the unique encoded image also leads to only one conclusion; albeit, with no evidence of what it *is*, but rather, of what it *is not*. This research concludes the encoded image *is not* (was not) deliberately manmade by Michelangelo. Based upon accepted scientific principles and Dayvault's forensic training and experience, it is his opinion that by considering available forensic circumstantial, documentary and physical evidence, and coupled with logic and reason, that Michelangelo *unknowingly* painted the encoded image within the Sistine Chapel.

As indicated at the outset of this article, the Shroud is either *authentic*...or not. By using accepted scientific principles, coupled with years of forensic training and experience, Dayvault determined that individual characteristics of the face of the Man of the Shroud have somehow been encoded within the frescoes of the Sistine Chapel, strongly corroborating the authenticity of the Shroud.

*IF*, according to its alternative, the Shroud were somehow "forged", then by logical extension, one would also have to say that the fresco elements containing individual characteristics were also "forged." The cogent words of the late Episcopal priest and Shroud advocate, Rev. Albert "Kim" Driesbach, are most applicable at this logical juncture; namely, "*I DON'T THINK SO!*"

The evidence is clear and compelling. Study the text and the photographs. There is only *one clear choice* regarding its authenticity. And yet, there is more to ponder...as remarkable as the *detection* of the encoded image really is; even more astonishing is the consideration of its enigmatic *origin* and *ramifications!*

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For other aspects of Dayvault's research, including the 2002 discovery of an historical mosaic which served as the model for numerous ancient depictions of Jesus Christ, please visit: [www.datument.com](http://www.datument.com).

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## Supplementary Materials for *ENCODED*

### Supplementary Text

#### *Class and Individual Characteristics*

In forensic science, two descriptors are used to categorize evidence, i.e., Class and Individual Characteristics.

Regarding facial examinations, “Class Characteristics are characteristics common to many individuals (e.g., the overall shape of the nose, eyes or mouth).” “Individual Characteristics (are those) allowing one to differentiate between individuals having the same class characteristics (e.g., freckles, moles and scars).”

The presence of distinctive and identifying landmark groupings and/or unique markings on two or more images permits the highest probability for identification. The assessment and determination of individual characteristics allow for this potentiality.

The presence and correspondence of individual characteristics is considered more discriminating and definitive than just the presence of class characteristics. “Both class and individual evidence have value; however, it typically takes considerably more class evidence...to have the same weight and significance as a single item of individual evidence.”

Individual characteristics of the face are based on temporary *and* permanent features which are *unintentional, random, unique and distinctive*. They may be caused by aging, accident, random events or injuries, or may be deliberate, such as tattooing or makeup.

“Landmark groupings”, or different size and shape configurations and/or spatial distributions of unique features located throughout the image, are assessed for individualization.

Quoting the “Principle of Individualization”, “The individualization of an item of evidence is established by finding agreement of corresponding individual characteristics of such number and significance as to preclude the possibility (or probability) of their having occurred by mere coincidence, and establishing that there are no inexplicable differences. (*Adapted from Tuthill, 1994*).”(27)

According to general law enforcement standards, fingerprint identification requires at least 8-14 “points of correspondence.” Fingerprint patterns are a type of individual characteristics.

(According to Shroud researcher, Dr. Alan Whanger, approximately 45-60 “points of congruence”, POCs, are required to effect a facial identification. His “points of congruence” methodology utilizes the numerical tabulation of congruent markings between two images.)

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However, according to FISWG (Facial Identification Scientific Working Group) standards, *no specific number of individual characteristics is required for facial identification*. Rather, identification determination is based on “the totality of the circumstances”, the degree and quality of feature correspondence and individualization, the training and experience of the examiner, coupled with other known data. (Incidentally, the unique ENCODED Image facial comparison contains at least 67 POCs, to date, and at least 21 individual unique features.)

Once an identification is effected, *it is both reproducible and repeatable...and with the same results*. (This principle is required for scientific validation.) This is a particular requirement with the *Acheiropoietos* image—“not-made-with-human-hands Image”, i.e., the Shroud face.

As with most forensic comparisons, the higher degree, quality and quantity of associated and corresponding identifying unique features *exponentially* increase the significance and probative value of that specific forensic image comparison.

Additionally, another facial comparison methodology, photo-anthropometry, or “the measurement of dimensions and angles of anthropologic landmarks and other facial features in order to quantify characteristics and proportions”, is not recommended. “FISWG recommends that photo-anthropometry NOT be used for facial comparison at this time. ...This technique should neither be used as an independent comparison method nor in conjunction with another method for positive identification or exclusion.”(28)

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### ***“Michelangelo Didn't Know What He Was Doing!”***

Most certainly, Michelangelo, *Il Divino*, knew *exactly* what he was painting with the thematic scenes from the Book of Genesis on the *Ceiling* of the Sistine Chapel. He also painted the incredible thematic *Last Judgment*, on the Altar Wall, from the Book of Revelation. However, unknownst to Michelangelo, the Good Lord was also at work simultaneously; and, as "the first Author of Beauty" (Apocryphal Book of Wisdom, 13:3), actually *encoded His own Image within both paintings*. Michelangelo knew nothing about the encoded image. It was as if Michelangelo were being used as "God's paintbrush."

The Face of the Man of the Shroud of Turin was somehow encoded within the *Last Judgment* and a portion of the *Ceiling* of the Sistine Chapel frescoes. Circumstantial, documentary and physical evidence, coupled with logic and reason, strongly preclude and prohibit the possibility of Michelangelo's forethought and knowledge of or participation with the encoding of the above-described image. Exactly *how* the encoded image was made is still unknown.

Several of the *numerous* reasons which support this claim are listed below:

- Michelangelo, "the artist who did not want to paint", had been coerced into painting the Sistine Chapel frescoes.
- The Shroud image is not discernible within 10 feet. Faint image only—no detail.

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- Michelangelo was one of *most documented* individuals ever, with not one, but two, contemporary biographers. There is no record of his ever viewing the Shroud, nor even having an interest in it. Further, the Shroud has never been to Rome.
- Between the completion of the *Ceiling* in 1512, and the beginning of the *Last Judgment*, 1535, there was a 23-year interim, with three different popes. Each one could have commissioned any one of numerous artists to paint the Altar Wall in the Chapel.
- An estimated 1/2 billion visitors have viewed the Sistine Chapel, but none have before "seen" this encoded image.
- The encoded image must be viewed from a centrally elevated and distant viewpoint, only possible with photography. Michelangelo progressed from the entrance *towards* the Altar Wall...he never saw this image.
- The image comparison and observation were not even possible until the advent of photography in the early-1800's; and specifically, not until the first photograph of the Shroud in 1898. (However, this particular comparison was not possible until the highly-detailed CDD Shroud image was developed in 1991!)

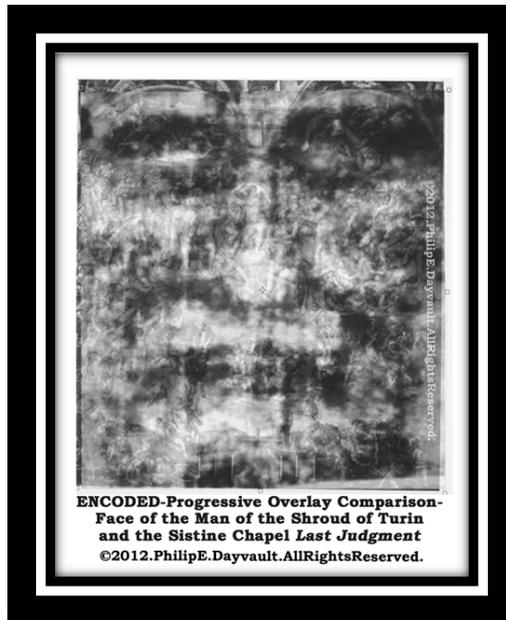
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Suggested Online General Reference Websites:

- [www.shroud.com](http://www.shroud.com)
- [www.en.wikipedia.org/wiki/Michelangelo](http://www.en.wikipedia.org/wiki/Michelangelo)
- [www.en.wikipedia.org/wiki/Sistine\\_Chapel](http://www.en.wikipedia.org/wiki/Sistine_Chapel)
- [www.vatican.va/various/capelle/sistina\\_vr/index.htm](http://www.vatican.va/various/capelle/sistina_vr/index.htm)
- [www.datument.com](http://www.datument.com) (DATUM ENTERPRISE website)

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Supplementary Figures - (For detailed viewing of photographs, simply enlarge entire Word document)



**Fig.S1**

Fig.S2

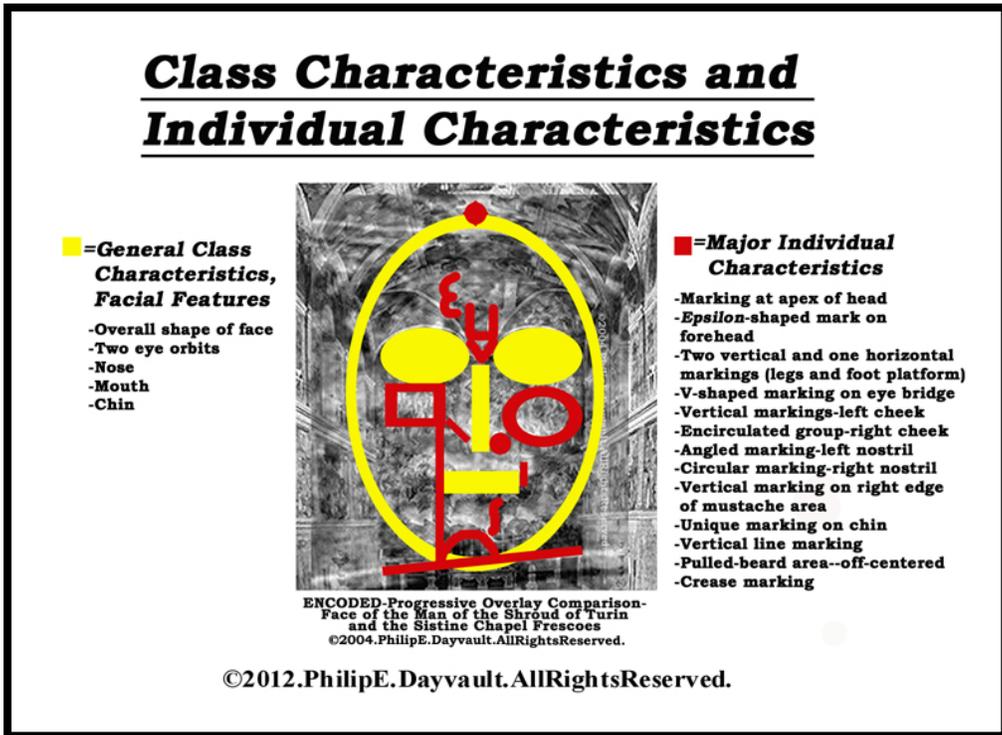
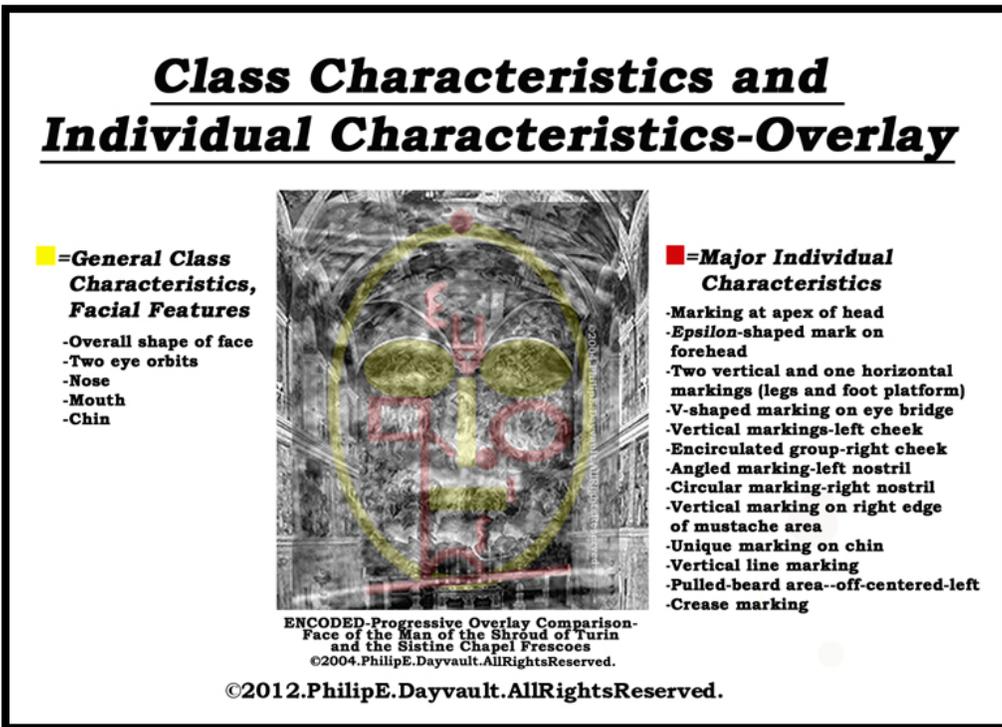


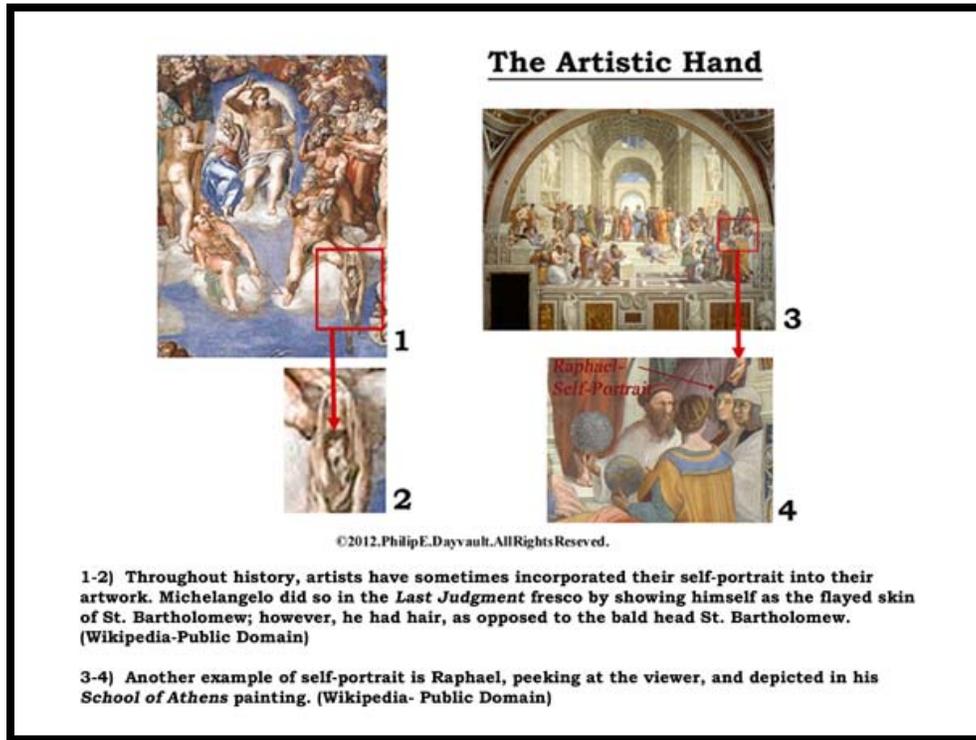
Diagram of Class Characteristics and Individual Characteristics Over the CDD Shroud Face/Ceiling/Last Judgment.

Fig.S3



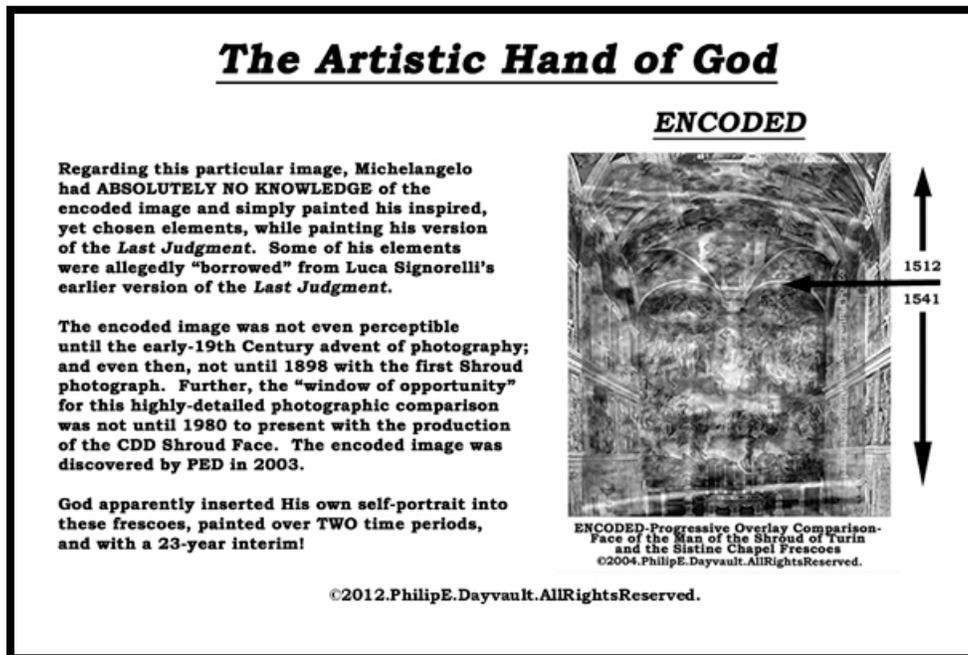
Overlay with CDD Shroud Face-80% Opacity

Fig.S4



The Artistic Hand and Self-Portraits

Fig.S5



The Artistic Hand of God

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