Front Cover and Figure 1. Studies for the Sistine Chapel Ceiling: The Nude Figure next to the Prophet Daniel. Black and red chalk, 34.3 x 24.3 cm. Michelangelo Buonarroti, Caprese (Casentino) 1475-Rome 1564. Gift in memory of Henry G. Dalton by his nephews George S. Kendrick and Harry D. Kendrick. CMA 40.465. Corpus 147 recto.

Back cover: Verso of Figure 1, see Figure 3.
In 1987 a group of drawings in the Museum collection was examined with infrared reflectography on an experimental basis. Little used on drawings, this technique is commonly employed in examining paintings to study the lower layers of paint and to discover any underdrawing. An object, whether painting or drawing, is illuminated by a light source rich in infrared rays (for example, the sun or incandescent light) and viewed with a device that filters out all frequencies of light below the infrared—in this case, a specially equipped video camera and monitor. The drawings were chosen on the probability of their having concealed underdrawing or subsequent reworking. Ironically, although some of the most obvious examples yielded no new information, other less likely candidates provided surprising results. Michelangelo’s study for the ceiling fresco in the Sistine Chapel, chosen because one scholar thought that it had been reworked by a restorer, proved to be one of the most interesting cases, especially for the light it throws on the artist’s use of various media.

The recto of this double-sided drawing (Figure 1)\(^1\) depicts the torso of the nude youth to the right of the prophet Daniel on the Sistine ceiling (Figure 2) as well as a loose sketch of a turbaned head. The verso (Figure 3) bears various studies of figures including the foot of the figure on the recto.\(^2\) The torso on the recto was executed in red chalk over a black chalk underdrawing, while the other studies are in red chalk with, on the verso, white heightening, which is today virtually invisible. Although its presence has been noted before, the black chalk is neither mentioned by Charles De Tolnay in his Corpus of Michelangelo’s drawings, nor is it visible in his “facsimile” reproduction.\(^3\) Using infrared reflectography, however, it has been possible to obtain a clear view of the entire underdrawing (see Figures 5, 6). The white heightening of the verso has not previously been noted. Furthermore, analysis with energy dispersive x-ray florescence has shown that white lead was applied generally to the surface of both recto and verso.\(^4\) These observations are more fully described and interpreted below, in the context of Michelangelo’s working method (see also Bruce Miller’s following Technical Note). Understanding the function of the materials in relation to the artist’s goals sheds light on the authenticity of the Cleveland drawing as well as on its place within Buonarroti’s planning and execution of the vast ceiling.
The recently published findings acquired during the cleaning of the Sistine vault offer a radically clearer understanding of Michelangelo’s methods over the course of the four-year project. His diverse solutions to the complex problems posed by the task attest to his resourcefulness in carrying out his preparatory studies. While the technical data obtained during the restoration of the Sistine ceiling illuminate the attribution and the function of the Cleveland drawing, the astonishing visual results of the cleaning further stimulate us to seeing the sheet—one of Michelangelo’s most impressive—afresh.
The attribution of the Cleveland drawing has been rather less controversial than that of many other drawings given to Michelangelo. Although it is generally accepted today, it has occasionally been questioned, so it is perhaps prudent to rehearse the attribution of the sheet.6

After the Mariette sales in 1775 and 1776, the Cleveland drawing passed into obscurity. It reappeared in the collection of Dr. Alexander von Frey of Timisoara when sold at auction in Paris in 1933.7 This gave the drawing the controversial aura of a rediscovery. Bernard Berenson, in the second edition of his Drawings of the Florentine Painters (1938), readily accepted it on the basis of its stylistic similarity to the study for the Libyan Sibyl in the Metropolitan Museum (see Figure 11).8 The first to doubt the Cleveland drawing in print was De Tolnay in his 1945 volume on the Sistine ceiling.9 He considered it to be a copy after the nude on the ceiling by the same hand as a group of drawings in the Teylers Museum in Haarlem. The rejection of these drawings as being by Michelangelo goes back to Albert Erich Brinckmann,10 who based his opinion not only on their style but also on his suspicions about the collection of Queen Christina of Sweden, which formed the core of the Teyler holdings. De Tolnay later changed his mind and included all the doubted drawings in the first volume of his 1975 Corpus as autograph works.11

Frederick Hartt also questioned the drawing but later modified his opinion.12 From the evidence of a photograph he had concluded that parts of the torso on the recto had been worked over by a restorer. He especially noted “meticulous, engraver-like crosshatching, particularly in the torso and the left leg.” In the recent technical examination, however, observation with a microscope showed the red chalk in these areas to be consistent in the color, size, and texture of the particles. No evidence of retouching by a second hand was found.

Edmund Pillsbury in 1971 took his point of departure from De Tolnay’s early doubts. Since the drawing shows no significant differences from the fresco and even reproduces the exact fall of the light on the figure, he believed it was likely to be a copy after the fresco. Furthermore he put a name to the copyist who executed the Cleveland and the Teyler ignudi, that of Alessandro Allori (Florence 1535-Florence 1607), on the basis of their similarity to two black chalk male nudes in the Uffizi (Figure 4).13
Although Allori has captured the spirit and the manner of Michelangelo quite successfully in these drawings, the mode of observing and constructing the figure is fundamentally different from the Cleveland sheet. Michelangelo observed each contour and each limb as a separate entity and connected them (or constructed them) into a unified whole. This is characteristic of the classical style as it had developed in the first decade of the sixteenth century. Allori’s contours flow into each other with an ornamental rhythm, cadenced by occasional exaggerations of anatomical detail. Although his observation of the figure is almost clinically precise, his linearism shows the *maniera* of the latter part of the sixteenth century. The modeling in the Cleveland drawing is achieved primarily with the disciplined parallel and crossed hatching that Michelangelo learned in the workshop of Domenico Ghirlandaio. Allori employs a less assertive, more supple modeling with splayed strokes that follow the contour of the form, as if they were providing the accompaniment for the rhythmic contour line. Michelangelo’s interplay and occasional conflict of line and surface are absent in Allori’s drawings, which ultimately lack the tension and spiritual energy that give Michelangelo’s work its unique power.

Allori’s drawings also differ from Buonarroti’s in method and purpose. Allori, in the spirit of his generation, which came to maturity in the 1560s, was an assiduous copyist and imitator of Michelangelo, but carried out his emulations as exercises aimed at a self-conscious perfection of his personal *maniera*. Whether he copied a work of Michelangelo or drew from life in imitation of him the intention was clearly different from that of his model: while in these studies for the Sistine Chapel Michelangelo was working out a concept that was to be directly applied in the finished work, the Allori nudes are removed from such a use. He was concerned rather with accurate observation of human form, the study of anatomy, and the assimilation of Michelangelo’s style. If one compares Allori’s figure studies with his compositional studies, or his studies from life executed for a painting, the difference of purpose and method becomes obvious. The academic methods of Allori and his contemporaries were in fact founded on Buonarroti’s, but they had been systematized through the process of deliberate imitation.

The issues of style, quality, and function all support the general opinion that the Cleveland drawing and those in Haarlem and New York are autograph preparatory studies for the Sistine ceiling and not copies after the frescoes or of lost drawings by Michelangelo.
The most important result of the technical examination is the clear image obtained by infrared reflectography of Michelangelo’s black chalk underdrawing (Figure 5), which is visible to the naked eye only as a slight trace here and there, mostly hidden by the red-chalk outlines. This red chalk becomes almost entirely invisible in the reflectograms, and the underdrawing is exposed for study virtually as if it were an independent drawing (Figure 5).
Figure 6. Infrared reflectograms of details of Figure 1 showing how each significant contour is drawn with a continuous line that begins and ends at the structurally correct point of the anatomy (CMA 40.465).
The underdrawing encloses the entire figure, an indication that the image was put on the paper as a complete entity. The continuity of the individual strokes indicates that the underdrawing was completed in a single, probably brief, session. It did not “grow on the page” with many additions and alterations in the manner of preliminary sketches, which are intended to record inventions from the artist’s imagination or of immediate studies from life. The line is assured and shows no trace of pentimenti. Each significant contour is drawn with a continuous line that begins and ends at the structurally correct point of the anatomy (Figure 6). This reflects an analytical method of rendering the figure, based on a scientific study of anatomy.17 The construction of the figure on the sheet is additive, produced through the aggregation of the individual lines, but the resulting image is a unified concept of the form.

The clarity and decisiveness of the underdrawing show that it is based on a preliminary study, a sketch probably like the two sheets in the Casa Buonarroti containing studies for ignudi (Figures 7, 8). Because the black chalk line is quite consistent in texture and in thickness (1 mm) and because of the lack of pentimenti, it is there-

Figure 7. *Studies for a Cornice and for Nude Figure on the Sistine Chapel Ceiling.* Black chalk (except for figure left of center which is in “carboncino nero”) and pen and ink (some passages). 41.4 x 27.1 cm. Michelangelo Buonarroti. Florence, Casa Buonarroti 75 F recto. Corpus 145 recto.

Figure 8. *Study for Two Nude Figures on the Sistine Chapel Ceiling.* “Carboncino nero” (figure seated on block), and black chalk (figure below and to the left). 30.1 x 21.2 cm. Michelangelo Buonarroti. Florence, Casa Buonarroti 33 F recto. Corpus 146 recto.
Figure 9. Infrared reflectogram showing consistency of texture and thickness of the line (CMA 40.465).

fore likely to have been traced (Figure 9). The precision and subtlety of the modeling, on the other hand, suggest that the surface was drawn from a clay or wax model, a device Michelangelo and other artists used frequently for paintings as well as sculpture. Michelangelo in fact carried their use further than any of his predecessors, and it is clear that such bozzetti would have proven especially useful to him in working out the varied and difficult poses of the Sistine ignudi. In the present case, then, Michelangelo hypothetically proceeded as follows:

1. He invented the attitude and gesture of the figure in quick sketches in pen and ink or black chalk.
2. He developed the idea further in free drawings, most likely in black chalk, using a living model, in order to establish more precisely the structure of the figure and the force of its gesture. In this way he produced his finished study, which was presumably squared for transfer and enlarged to the cartoon.

3. He prepared a bozzetto in terracotta or wax in order to study the surface modeling.

4. He returned to his finished drawing and traced it with black chalk, in order to preserve its exact proportions. Then he drew the bozzetto in red chalk over his black chalk tracing. In this way he produced a fully developed rendering of the surface of the figure that he could copy directly on to the plaster. It is unlikely that his full-size cartoon, which in the ignudi he transferred by means of pouncing, was fully modeled. This function of the drawing is therefore analogous to the so-called “auxiliary cartoons” that Raphael (1483-1520) used in the very final stage of preparation.20

In the Cleveland drawing Michelangelo has focused his attention on the attitude of the torso and the main limbs. The extremities—the head, the hands, the feet, and the right calf—are either only vaguely indicated or not at all. The left foot is worked out in detail on the verso in red chalk with white heightening. From the tension of the muscles, it appears that the foot was drawn from life, like the other studies on the verso. The coarser handling of the chalk and the presence of pentimenti support this. The directness and lively expression of the figure at the lower right can only have been observed from life. The torso, then, and the extremities were studied separately, and with a quite different method: one from a series of preliminary drawings and a bozzetto, the other from life.21 This composite method enabled him to produce a figure that was both precisely structured and modeled as well as spontaneous in gesture.

One of the most notable features of the Cleveland drawing is the skill with which Michelangelo manipulated the primary medium, red chalk. On the verso the outlines of red chalk alone have a plastic value achieved through the variation of the thickness and density of the stroke. Overlapping strokes and pentimenti express this quality even further. This is entirely in the spirit of his rapid sketches of first ideas and figures from life like those on the verso of a sheet in the Teylers Museum (Figure 10). By contrast, the recto of the Cleveland drawing shows a more uniform and precise outline. Its modeling function is subdued in favor of the rich shading of the surface by a network of parallel and diagonally crossed hatching. Here the color and luminosity of the medium are more expressive than in the sketches on the verso.22 Michelangelo accented the structurally most

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Figure 10. Sketches of Figures for the "Spiritelli" around God the Father in the "Creation of Adam"; Right Hand of God the Father; Right Knee of the Nude Figure above the Persian Sibyl, Small Sketches Probably for Nude Figures. Stylus, "carboncino nero," and red chalk, 26.5 x 19.8 cm. Michelangelo Buonarroti. Haarlem, Teylers Museum A 20 verso. Corpus 135 verso.
important concavities by moistening the chalk to produce a denser and more saturated tone—a technique he exploited even more fully in his Preparatory Studies for the Libyan Sibyl in the Metropolitan Museum of Art (Figure 11).\textsuperscript{23} If one compares this method of hatching to the actual brushwork on the ceiling, now visible after the restoration, it is clear that they are identical, as if Michelangelo used this red chalk technique as a rehearsal for his rushed performance on the wet plaster. The preparation that Michelangelo imposed on himself as revealed by drawings like those in New York and Cleveland explains his extraordinary skill in painting in fresco in spite of his lack of previous experience.

The use of red chalk in the Cleveland drawing, seen in the context of his development before the age of thirty-five, appears to be essentially an adaptation of the pen and ink technique he had learned as a pupil in Domenico Ghirlandaio’s workshop.\textsuperscript{24} It bears little relation to his own earlier work in red chalk and none to the more painterly technique of contemporary Florentine artists who favored the medium, like Andrea del Sarto (1486-1530), Sodoma (1477-1549), or Fra Bartolommeo (ca. 1474-ca. 1517).\textsuperscript{25} It is entirely remote from the oldest tradition in the medium, the sfumato technique invented by Leonardo and continued by his followers in Milan.\textsuperscript{26}
It is generally agreed that Buonarroti first began to use red chalk extensively while he was at work on the Sistine vault. He may have used it earlier, but the drawings that have been thought to represent this early activity are uncertain in their attribution. Even if all of them were genuine, no consistent pattern emerges. On his very early pen studies the red chalk sketches of body fragments are only tentative experiments (Figure 12). More extensive are the copies after Giotto (1266-1337) and Masaccio (1401?-1428) that, although not certain, are most probably his work. On a sheet in the Casa Buonarroti he used red chalk over a stylus underdrawing. Both there and in his copy of figures in Giotto’s frescoes in the Bardi Chapel, his use of red chalk as a linear medium shows considerable awkwardness. The use of short parallel strokes to represent surface texture and the action of light and shade is more successful than in his earlier efforts, but much less precise than his work in pen and ink. The copy of Masaccio’s Expulsion of Adam and Eve (Figure 13), attributed to Michelangelo by Konrad Oberhuber and accepted by De Tolnay, shows a more advanced style: the male nudes in red chalk on the verso relate to the studies for the Battle of Cascina of

![Figure 12. Copy of St. Peter in the “Tribute Money” of Masaccio: Two Studies of an Arm. Pen and two shades of brown ink, red chalk (the arm studies), and gray wash added later, 31.5 x 19.7 cm. Michelangelo Buonarroti. Munich, Graphische Sammlung. Inv. no. 2191 recto. Corpus 4 recto.](image1)

![Figure 13. Copy after Masaccio’s “Expulsion of Adam and Eve from Paradise.” Red chalk, possibly heightened with white, 32.5 x 18.5 cm. Michelangelo Buonarroti. Paris, Louvre, Inv. no. 3897 recto. Corpus 68 recto.](image2)
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As in the earlier drawing he has relied on parallel
hatching and stumping for surface values. The contour lines are more
assured and plastic than in earlier drawings, but they show many
pentimenti and are considerably less exact in their rendering than
the drawings he executed in other media during this period. Exacti-
tude both in outline and modeling are in fact the primary character-
istics of his early draftsmanship in pen and ink, and it is clear that
before the second phase of his work on the Sistine Chapel ceiling,
Michelangelo had no idea of the potential utility of red chalk for
achieving these ends.31

The disciplined pen technique that was current in Domenico
Ghirlandaio’s workshop became the foundation for Michelangelo’s
draftsmanship (Figure 14-15).32 During the first phase of his career, it
was by far his most prevalent medium. Precise contours were laid in
with penstrokes of varying length, which often corresponded to
structurally significant segments of the form. Then, a firmly con-
trolled system of parallel and crossed hatching described the surface
and the action of light on it. Michelangelo rarely used wash, and
white heightening only sparingly.33 In these pen drawings in which

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Figure 14. Study of the Muse Calliope from Hadrian’s Villa. Pen and brown
and gray ink, 22.9 x 12.8 cm. Italian (?), early 16th century. Gift of Robert Hays
Gries. CMA 39.653.

Figure 15. The Funeral of St. Stephen after Fra Filippo Lippi. Pen and brown
ink, 25.1 x 19.4 cm. Domenico Ghirlandaio, Florence 1449-Florence 1494, or his
workshop. John L. Severance Fund. CMA 47.70
pentimenti are almost totally avoided, an underdrawing with a stylus, black chalk, or charcoal was often used as a preliminary sketch. Since chalk and charcoal were easily erased with a feather or a piece of bread, they have almost totally disappeared from many sheets. Indeed, microscopic examination of the Cleveland drawing showed sparse particles of black chalk scattered generally among the fibers of the recto—an indication of this sort of erasure. The underdrawing is still visible in a male nude in the Louvre (Figure 16), which illustrates how the pen corrected and refined the chalk drawing, which has many pentimenti.

Black chalk alone was effective for producing a plastic rendering of the structure of a form. On a sheet of studies of the musculature of
an arm in the Albertina (Figure 17), Michelangelo provided himself with a clear map of the overall structure of the arm in black chalk. Using pen and ink, he then studied the appearance of the muscles under the skin. In these the precise Ghirlandaiiesque hatching gives an exact and detailed representation of the surface contours.

Michelangelo continued this practice during his work on the Sistine ceiling, first with pen and ink, then, after the hiatus of 1510-1511, with red chalk. In the Cleveland drawing Michelangelo’s use of the medium is derived more from his pen style than from the few sporadic early efforts in red chalk. The fine crosshatching functions in the same way in red chalk as in ink. In this drawing and in the
others related to it, Michelangelo learned to represent musculature and flesh in red chalk with the same accuracy and control he had long mastered in pen and ink.

This is evident when one compares the Cleveland drawing with the studies of nude male figures for the *Battle of Cascina*. In his design of the *Battle of Cascina* (1504-1505) Buonarroti had only just begun to use black chalk as a medium for figure studies. A sheet in the British Museum (Figure 18) shows how effective he found black chalk for providing a rapid initial indication of the contours, structure, movement, and deliberation. The more fully developed nudes in the Teylers Museum (Figures 19, 20), to which the Cleveland drawing has been compared, show how he exploited its plastic qualities to create pregnant contour lines which in themselves give the figure solidity and roundness. He then indicated the surface, predominantly with parallel hatching combined with some cross-hatching and stumping. The effect is powerful, but less refined than his later work in red chalk. At this point in his development he still needed pen and ink to render anatomical details with the accuracy he required, as in the black chalk study worked over with pen and
brown ink in the Ashmolean Museum (Figure 21) or the more elaborate figure, heightened with white, in the British Museum.34 This progression from a first idea and intermediary stages in black chalk to a finished study of surface qualities in pen and ink is basically the method Michelangelo took with him to Rome when he began work on the Sistine Chapel ceiling. On a sheet in the British Museum (Figure 22) he used pen and ink over a rough study in black chalk to delineate the drapery of the Erythraean Sibyl. Relying on the old workshop tradition of studying drapery folds by drawing artfully arranged draperies soaked in gesso, Michelangelo used his meticulous pen technique to render the folds and the light and shade on their surface with confident precision.

The most important factor in the relationship between Michelangelo’s fulsome work in red chalk and its spare, but eloquent underdrawing in black chalk is the fact that this underdrawing is most likely a tracing. Several examples of tracing exist among his early drawings. While the Cleveland recto was traced from another sheet, other surviving drawings were traced from the recto of the same sheet—a common method for reversing a figure, as an artist...
worked out his design. Thus, a sheet in the Louvre, dated by De Tolnay to 1504-1505, has on its recto two pen drawings of antique sculptures. On the verso Michelangelo traced the principal figure in black chalk. The quality of the line resembles exactly the underdrawing of the Cleveland nude as it appears in the infrared reflectogram (Figure 5). The line is notably more regular in density and thickness than in Michelangelo’s freehand chalk drawings but is nonetheless energetic and expressive. Note how in both drawings the lines indicating the shoulder muscles imply the roundness of the neck and head. Their directional force leads the eye around the form and creates the illusion of a figure in the round with space behind it.
and not only between the viewer and the image plane. This mode of perceiving mass and space—typical of Tuscan artists and especially of the sculptor Michelangelo—asserts itself even in a tracing. In the Louvre drawing discussed above (Figure 16) the nude male figure executed on the recto with pen and brown ink over a black chalk underdrawing, has been traced on the verso in red chalk (Figure 23).36 Finally, the drawing in the British Museum for one of the bathers in the Battle of Cascina37 has also been traced to the verso in black chalk (Figures 24, 25).38 As in the Cleveland drawing Michelangelo has omitted the support on which the figure sits, as well as the indication of background shadow. These are also likely indications of tracing. Tracing provided an efficient means by which Michelangelo could progress from one stage of his conceptual work to another, using a wax or terracotta bozzetto, while retaining the outline of the earlier idea as a foundation.

In his working drawings Michelangelo always focused on the solution of a specific problem at hand. This accounts for the diversity among his preparatory sheets for the Sistine ceiling. As he progressed through the project, we see not only a stylistic evolution parallel to that visible in the ceiling itself, but also radical changes in his methods of seeing and representing what he has seen or invented. The most striking of these is his sudden heavy reliance on red chalk during the last phase of the project.
As already mentioned, Michelangelo used red chalk very little and rather clumsily during the early part of his career, including the first two years of his work in the Sistine Chapel, which brought him approximately halfway through the project, excluding the lunettes. Sometime during the interruption of work, from August 1510 to an uncertain date in 1511, during which he visited Florence and Bologna, he gained his mastery of red chalk. The most logical explanation is that he acquired a supply of especially suitable material that was less friable than the chalk he had previously used. When he returned to his work on the ceiling, it virtually replaced pen and ink as a medium for figure studies.

Briefly reviewing the chronology of the ceiling and the development of Michelangelo’s methods as the work progressed aids in understanding the effect this medium had on his style. Pope Julius II first expressed an interest in having Buonarroti paint the ceiling of the Sistine Chapel as early as May 1506. At the end of that year the artist began work on a bronze statue of the Pope at Bologna, which was finished in February of 1508. Soon afterward Julius called Michelangelo to Rome to begin the ceiling; they signed a contract in May. During June and July the necessary scaffolding was constructed. By September five assistants were hired and the pigments had arrived from Florence, although it is generally thought that Michelangelo did not begin to paint until January 1509. In August 1510 the scaffolding for the first half of the ceiling was removed and the work so far accomplished was viewed for the first time. The pope promptly set
out for Bologna, where he immersed himself in military operations, leaving Michelangelo without money or instructions. During the ensuing months Michelangelo made a series of trips to Bologna in the hope of obtaining funds.

It is generally agreed that work had progressed as far as the Creation of Eve (Figure 26). This is confirmed by the radical change in style appearing in the next narrative panel, the Creation of Adam (Figure 27). In the second half of the ceiling the thirty-five-year-old Michelangelo began to paint larger scale and more massively proportioned human forms. The construction of compositional space also changed. The left-to-right movement that integrated the earlier
narratives gave way to a more frontal observation of the figures: the more solid forms penetrate more tangibly the space surrounding them. Also, the figures acquire greater erectness within their space and a stronger presence as individual entities. The Cleveland drawing provides a characteristic example of Michelangelo’s new vision. On the finished ceiling the contrast between his earlier and later styles is made clear in a comparison of the Fall of Man with the Creation of the Sun, Moon, and Planets.

Michelangelo’s use of drawings likewise changed during the course of the work, most radically during the hiatus of 1510-1511. In the earliest studies for the ceiling he used pen and ink to carry out
Figure 30. Sketch for Adam in the "Expulsion from Paradise." "Carboncino nero," 26.2 x approximately 19.2 cm. Michelangelo Buonarroti. Florence, Casa Buonarroti 45 F. recto. Corpus 131 recto.

Figure 31. Sketch for Adam in the "Expulsion from Paradise." Black chalk, approx. 39.6 x 25 cm. Michelangelo Buonarroti. Florence, Casa Buonarroti 64 F. recto. Corpus 132 recto.
his ideas for the general decorative scheme as well as for the composition of individual scenes (Figures 28, 29). He also used the familiar Ghirlandaiesque hatching to study surfaces and light, as he had done since his youth. This was necessary because the black chalk Michelangelo used for figure studies did not lend itself to the fine rendition of surface detail. In his black chalk drawings he almost exclusively relied on coarse parallel hatching and dense accumulations of material to render light and shade. The energetic, multiple contour lines lead the eye forcefully around the form and suggest its solidity and roundness, but the surface remains summary. The studies for the figure of Adam in the Fall of Man (Figures 30, 31), completed before the interruption of work in 1510, show primarily an interest in structure, gesture, and movement, although the study in the middle of Figure 30 shows a more refined rendering of surface with faint parallel strokes. From the early phase of the ceiling the pose of entire figures was established in pen and ink, while black chalk was used either for quick preliminary sketches or for studies of figural details.

Only with the red chalk study for the Creation of Adam (Figure 32) do we find a fully plastic realization of the body’s surface. Here Michelangelo was able to use a combination of parallel and crossed hatching, stumping, and moistening to achieve a richly varied image of the action of light on flesh and the underlying muscle. The structure of the body appears through the surface rather than being
indicated in the more literal, schematic manner of the earlier drawings in black chalk. He developed the figure outward from the center of the torso, generally not leaving room on the page for extremities.43

This shows a radical change in Michelangelo’s method of conceiving the human figure. The great red chalk studies for the ignudi surrounding the Congregation of the Waters in the Teylers Museum (Figure 33), the Albertina (Figure 34), and Cleveland (Figures 1, 3) are absolutely consistent with the British Museum Study for Adam (Figure 32) and with one another. These four drawings are primary documents of the major transition in Michelangelo’s style that occurred during the course of 1510-1511. A comparison of any of these drawings with the British Museum pen study for the Erythraean Sibyl demonstrates the vast change in his methods and well as his sense of form and space.

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1. CMA 40.465 Recto: Studies for the Sistine Chapel Ceiling: The Nude Figure next to the Prophet Daniel, black and red chalk; verso: Figure Studies, red chalk with traces of white heightening, 34.3 x 24.3 cm. Michelangelo Buonarroti, Caprese (Casentino) 1475-Rome 1564. Gift in memory of Henry G. Dalton by his nephews George S. Kendrick and Harry D. Kendrick. Provenance: Pierre-Jean Mariette, Paris (Lugt 1852); Dr. Alexander von Frey, Timisoara, Romania; Henry G. Dalton, Cleveland, Ohio.


2. The figure at the top right has been related to the bearer to the left of Christ in Michelangelo’s Entombment in the National Gallery in London, but differences in the position of the arms and head make this questionable. Given the di sotto in su perspective of the head, it is more likely that that figure and the one below it were ideas for ignudi that Michelangelo chose not to use in the finished work.

3. Corpus, p. 112, no. 147. The black chalk, however, was noted by Hartt (pp. 86 f., no. 104). It has not been possible to inspect personally all the drawings discussed here. In these cases I have given the designation used in the collection catalogues, except in the case of the Casa Buonarroti, for which none exists. This is especially problematic in the case of what Michelangelo calls “carboncino nero,” which may prove to be either charcoal or a soft black chalk on closer inspection. To emphasize this I use the term carboncino nero rather than its English equivalent, charcoal.

4. Joseph Meder, The Mastery of Drawing, trans. and rev. Winslow Ames, 2 vols. (New York, 1978), 1: 433: “Where the support was not light enough for the desired effect, or where a mistake was made, white lead was a corrective.” White lead was an indispensable ingredient in prepared grounds, but the present sheet shows no sign of such a preparation. Either the binding medium is too sparse to be easily detectible, or Michelangelo rubbed the lead directly onto the sheet. The latter procedure is perfectly plausible, but I have had no success in locating documentation for it or an unambiguous parallel instance of its use.


7. Sale: Paris, Galerie Charpentier, June 13-14, 1933, lot 7, repr. pl. II.

8. Berenson, 1938, 3: 213, no. 1599A.

9. De Tolnay, 1945, 2: 211, no. 20A, fig. 245.
10. Albert Erich Brinckmann, *Michelangelo Zeichnungen* (Munich, 1925), pp. 59 f., 63, nos. 84, 85, 94.


12. Frederick Hartt, letter to Louise S. Richards, April 15, 1964, curatorial files, Cleveland; see also Hartt, 1972, pp. 86 f., no. 104


16. Ibid., nos. 39, 56, 66, 76, 79, 82.


18. The partial erasure of the black chalk may have contributed to this. With the microscope, particles of black chalk were observed all over the sheet, as if they had been spread with a feather or a lump of bread, the most common erasers available to Michelangelo.


21. Michelangelo also resorted to this method in some studies for the *Battle of Cascina* (for example, *Corpus* 50r, Teylers Museum A 19r) of 1501-1505, but in a less systematic and developed manner. Brinckmann (1925) considered it to be one of the grounds for rejecting the Teyler drawings, as a sign that the clumsy copyist, to whom he attributes the drawings, could not fit the entire figure on his sheet!
22. The plastic contour lines typical of the verso appear on the recto only under the proper right arm of the figure.

23. The drawing (Corpus 15r; MMA 24.197.2), while similar to the Cleveland drawing in appearance and function, shows no signs of an underdrawing in black chalk or styli.

24. Note Condivi’s well-known anecdote about the twenty-one-year-old Michelangelo in Rome. A nobleman asked Michelangelo for a sample of his draftsmanship: “Ma egli non avendo che mostrare, prese una penna (perciocchè in quel tempo [1496] il lapis non era in uso) e con tal leggiadra gli dipinse una mano che ne restò stupefatto.” Ascanio Condivi, Vita di Michelangiolo (Florence, 1944), p. 25. Meder interprets the term lapis as “lapis amatita,” or red chalk, since black chalk was already in use at that time. Joseph Meder, Die Handzeichnung: Ihre Technik und Entwicklung, 2d ed. (Vienna, 1923), pp. 12 f. Condivi’s belief that red chalk was not in use in 1496 must be qualified by the fact that drawings in red chalk by Leonardo exist from as early as 1489. Red chalk was in any case uncommon before the end of the first decade of the sixteenth century.


27. Corpus 3r, Louvre, Inv. no. 706r, and Corpus 4r, Munich, Graphische Sammlung, Inv. no. 2191 (see Figure 12).

28. Corpus 1v, Casa Buonarroti 36 F.


30. Corpus 158, Casa Buonarroti 1 Fr.

31. While the idea for the head of Jonah, one of the latest figures on the Sistine ceiling, was clearly derived from the Doni Tondo, the exact positions of the head and the open mouth in a red chalk drawing, Study of a Head in the Position of the doni Madonna Used for Jonah on the Sistine Chapel Ceiling (Florence, Casa Buonarroti 1 FG recto, Corpus 158 recto), are directly related to Jonah. The head in the drawing is in the same position as the Madonna, the reverse of Jonah, but as De Toulnay pointed out Michelangelo studied Jonah with his head facing both to the right and to the left on a sheet in the Oxford sketchbook (Corpus 170r, Oxford, Ashmolean Museum, Parker 303r; cf. Corpus, pp. 117 f., entry on no. 158). Therefore the red chalk drawing could relate to Michelangelo’s earlier conception of Jonah, with his head still in the position of that of the Doni Madonna.

32. Cf. Martha Dunkelman, “Michelangelo’s Earliest Drawing Style,” Drawing 1, 6 (March-April 1980): 121-127, in which she rightly refutes the established cliché that Michelangelo’s drawing style was derived from the marks of a toothed chisel on marble.

33. Corpus 2 and 52 are virtually unique examples of the latter among Michelangelo’s early drawings. Cleveland possesses two examples of the Ghirlandaio workshop pen technique. One is a study of the Muse Calliope discovered at Hadrian’s Villa between 1493 and 1503. Its style is related to that of an album of Roman antiquities known as the Codex Escurialensis (CMA 39.653 Study of the Muse Calliope from Hadrian’s Villa, pen and brown and gray ink, 22.9 x 12.8 cm. Italian (?), early 16th century. Gift of Robert Hays Gries. See Figure 14). The other is a copy of an earlier composition by Filippo Lippi (CMA 47.70 The Funeral of St. Stephen after Fra Filippo Lippi, pen and brown ink, 25.1 x 19.4 cm. Domenico Ghirlandaio [Florence 1449-Florence 1494] or his workshop. John L. Severance Fund. See Figure 15). This sheet has been attributed to Filippo himself by Pouncey, but the pen
technique and the calligraphic handling of the drapery is more characteristic of Domenico Ghirlandaio and his followers. See Henry S. Francis, "A Fifteenth Century Italian Drawing," *CMA Bulletin* 35 (January 1948): 15 ff., where the drawing is in fact attributed to the workshop of Ghirlandaio. It could well have been executed by Domenico himself, as a comparison with his study for *St. Francis’ Apparition at Arles* (Rome, Gabinetto Nazionale delle Stampe, no. FC 130495r) suggests. An outline copy of the same figures from the Carmine drawn by Michelangelo in *Corpus* 1r is also linked stylistically to the Cleveland Ghirlandaio sheet (Folkestone Public Library, reproduced by Tolnay, *Corpus* 1, p. 21). A copy of a quattrocento composition dated by Wilde to 1520 (*Corpus* 97v; Johannes Wilde, *Michelangelo and His Studio: Italian Drawings in the Department of Prints and Drawings in the British Museum* [London, 1975; orig. publ. 1953], no. 29v; hereafter cited as Wilde) is likewise related to Ghirlandaiesque style and technique.

34. *Corpus* 52r, British Museum, Inv. no. 1887-5-2-116r (Wilde 6r). Compare *Corpus* 49r, Firenze, Casa Buonarroti 73Fr.

35. *Corpus* 20, Paris, Louvre, Inv. no. 688v.

36. Michelangelo also traced the recto using pen and ink on the back of a letter dated November 26, 1510 (Florence, Archivio Buonarroti, vol. 9, fol. 506v; *Corpus* 43v).

37. *Corpus* 52r.

38. The red chalk drawings on the verso (British Museum, Inv. no. 1887-5-2-116 verso [Wilde 6 v], *Corpus* 52v) are problematic. Berenson and De Tolnay considered them to be the work of a pupil, but Wilde accepted them and dated them to 1508-1509, the period when Buonarroti began working on the Sistine ceiling. The concept of the seated figure with the trunk turned in extreme contrapposto is directly related to that of the ignudi. It is logical that Michelangelo would turn back to this bather in the *Battle of Cascina* as the foundation for his nudes in the early phases of his design of the ceiling. This would explain the presence of studies for the ceiling on the verso. The comparative weakness of these studies may reflect Michelangelo’s tentative management of the less familiar material. Wilde points out that a comparison of the extended leg at the left with a study for the *Crucifixion of Haman* (*Corpus* 163r, Wilde 13r), one of the latest scenes on the ceiling, shows Michelangelo’s progress during the project. The legs are in fact so close that one must conclude that Haman’s left leg is actually derived from the study on *Corpus* 52v (see Figure 25).


41. Buonarroti began his work at the end wall opposite the altar and therefore began with the end of the narrative and worked toward the beginning.

42. Cf. *Corpus* 119r, 120, 121, Rotterdam, Museum Boymans-Van Beuningen, Inv. no. I, 513, and 122r, Casa Buonarroti, 8F.

43. This is a valid inference, even though this, like many of the sheets related to the Sistine ceiling, has been trimmed by later owners.