

brandt often consulted Lastman's paintings for his own works.¹¹ Respect for Raphael's inventions may be traced almost throughout Rembrandt's career.¹² In Rembrandt's *Bathsheba*, he has uniquely fused an overall composition from Lastman and a figural borrowing from Raphael.

In 1681, Andries Pels wrote that Rembrandt "chose no Greek Venus as his model" but turned instead toward nature.¹³ It is precisely such works as the *Bathsheba* which prompted this oft-quoted remark. Descended from a Renaissance interpretation of a classical beauty, *Bathsheba* reveals Rembrandt's predilection for the specific rather than the ideal, and his transformation of one "Greek Venus" through observation of the particular in nature.

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¹¹ The relationship between Rembrandt and Lastman has been most thoroughly explored by B. P. J. Broos, "Rembrandt and Lastman's 'Coriolanus': The History Piece in Seventeenth-Century Theory and Practice," *Simiolus*, VIII, 1975-76, and by Stechow (as in n. 4).

¹² By the late 1620's, Rembrandt had based the overall design of a painting, his *Presentation of Jesus in the Temple* (Hamburg, Kunsthalle), upon Raphael's *Holy Family* engraved by Marcantonio (Bartsch xiv.70.63); see J. L.A.A.M. van Rijckevorsel, *Rembrandt en de Traditie*, Rotterdam, 1932, 75-76, and K. Clark, *Rembrandt and the Italian Renaissance*, New York, 1966, 44-46. In *Diana and Actaeon with Callisto and Nymphs* (Anholt, Collection Prince Salm-Salm) of 1635, he relied upon one of the three graces by Raphael from a lunette of the Farnesina, also engraved by Marcantonio (Bartsch xiv.257.344); this was observed by Rijckevorsel, 117-21. Two drawings, copied from prints by Marcantonio, seem to have been made as physiognomic studies in order to vary Raphael's expressiveness; see C. Campbell, "Raphael door Rembrandts pen herschappen," *De Kroniek van het Rembrandthuis*, xxvii, 1975, 20-32. He drew Raphael's *Castiglione* (Paris, Louvre) at an auction in Amsterdam in 1639, but it was not until many years later that its pose appeared in his 1669 *Self-portrait* (London, National Gallery); for the drawing, see Benesch (as in n. 7), Cat. No. 415. In the drawing *Homer Preaching* of 1652, Rembrandt improvised upon Raphael's *Parnassus*, known through Marcantonio's engraving (Bartsch xiv.200.247); for Rembrandt's drawing, see Benesch, Cat. No. 913. Finally, the 1656 inventory of Rembrandt's possessions includes four portfolios of prints after Raphael, of which one contained proof impressions; C. Hofstede de Groot, *Die Urkunden über Rembrandt*, The Hague, 1906, No. 166, items 196, 205, 206, and 214. Rembrandt's knowledge of the graphics produced after Raphael's designs was expert, but his familiarity with the Italian master's works was not limited to prints. Two paintings by Raphael, a portrait and a *Madonna and Child*, also appear in the 1656 inventory, as items 67 and 114.

¹³ A. Pels, *Gebruik en misbruik des tooneels*, Amsterdam, 1681, 31-36; Hofstede de Groot (as in n. 12), No. 352. See further S. Slive, *Rembrandt and His Critics 1630-1730*, The Hague, 1953, 102-03 and Appendix E.

A New Interpretation of Bingham's *Fur Traders Descending the Missouri*

Henry Adams

Since it was acquired by the Metropolitan Museum in 1932, George Caleb Bingham's *Fur Traders Descending the Missouri* has become one of the landmarks of American art, and arguably Bingham's most famous and popular painting (Fig. 2). Extensively discussed, the work has been admired for the classic sim-

licity of its design, for its "luminist" treatment of light, and as a historical document that evokes the spirit of Western expansion. It appears, however, that an important piece of evidence has been overlooked which sheds light both on the iconography of the picture and on its visual form. This is the relation of *Fur Traders Descending the Missouri* to another painting Bingham executed in the same year.

In 1845, Bingham sent four paintings to the American Art Union, the first time he had submitted his work to that institution. Two of these were landscapes which, although sold separately, were evidently intended as a pair.¹ The other two were *Fur Traders Descending the Missouri*, which Bingham sent under the title "French Trader and Half-Breed Son," and a representation of an Osage Indian titled *Indian Figure - Concealed Enemy* (Fig. 1).² I would like to propose that these last two paintings were also conceived as pendants. They are precisely identical in size, were painted at the same time, were sent for sale in New York together, and, with the exception of one painting which is now lost, were Bingham's first representations of Western scenes.³ Their subjects form a contrast, opposing the Indian to the frontiersman.

Pendants are found, of course, in all schools of Western painting from the Middle Ages on, although there seem never to have been rules that dictated their precise format. Generally, they have been hung symmetrically on a wall, or on opposite walls, and designed to be similar in size and framing. They often have contrasted, however, in composition, lighting, and theme.⁴ Such pairs were not uncommon in nineteenth-century American art. Thomas Cole, for example, painted *Past and Present*, while Asher Durand painted *The Morning of Life* and *The Evening of Life*.⁵

Closely allied to pendants in concept were paintings in a narrative series, such as Thomas Cole's *The Voyage of Life*, which in fact was planned as two pairs of pendants. Planned for the drawing room of the New York lawyer Samuel Ward, the series included *Childhood* and *Youth*, in lighter and fresher tones, which were to hang near the window, and *Manhood* and *Old Age*, darker and more shadowed, which were to hang in the less well-lighted section of the room.⁶ Rather than being unified, the styles of paintings in such a series were often different, to be

¹ John Francis McDermott, *George Caleb Bingham, River Portraitist*, Norman, Okla., 1959, 50; Maurice Bloch, *George Caleb Bingham, The Evolution of an Artist*, Berkeley, 1967, I, 177-79, II, 54. One of these landscapes, *Cottage Scenery*, is now in the Corcoran Gallery of Art, Washington, D.C.; the other is now lost.

² McDermott, 50.

³ Bloch, I, 71. Bloch reports that *Concealed Enemy* is 1.9cm less high and 1.9cm less wide than *Fur Traders Descending the Missouri*. Actually, however, the two paintings are identical in size, but the present frame of *Concealed Enemy* overlaps the canvas by .95cm on each side. Bingham painted *Western Boatmen Ashore*, now lost, in 1838. On formal grounds, it seems clear that *Concealed Enemy* was intended to be placed to the left of *Fur Traders Descending the Missouri*. This was also the traditional "sinister" side. As the paintings represent different times and spatial settings, it is clear that we are not intended to see them as directly interacting with each other. The Indian, for example, should not be construed as lying in ambush for the fur traders.

⁴ Marcel Röthlisberger, *Claude Lorraine: The Paintings*, New Haven, 1961, I, 27.

⁵ James Callow, *Kindred Spirits: Knickerbocker Writers and American Artists, 1807-1855*, Chapel Hill, N.C., 1967, 157.

⁶ Richard McLanathan, *The American Tradition in the Arts*, New York, 1968, 242-43.



1 George Caleb Bingham, *Concealed Enemy*, 1845, oil on canvas, 74.3 x 92cm. Cambridge, Mass., Harvard University, Peabody Museum

in accord with their varying thematic content. Thomas Cole in his *Course of Empire*, for example, executed *The Savage State* in the mode of Salvator Rosa and *The Arcadian State* in the mode of Claude Lorrain.⁷

Bingham was certainly familiar with the concept of pendants, for on several occasions he made matching paintings of landscape subjects. Indeed, it seems particularly likely that he would have conceived a mate for *Concealed Enemy*, as Bingham's only other known painting of an Indian subject, *Captured by Indians*, has a companion piece, *Belated Wayfarers*.⁸ Moreover, it is documented that Bingham thought about the thematic relationships between his paintings even in cases where they differed in size and composition, and were executed in different years. In a letter to his friend Rollins, for example, Bingham described his canvas of *Stump Speaking* as "my companion" to *The County Election*, although it was larger in dimensions, was very different in its arrangement of figures, and was not completed until two years later.⁹

The comparison implicit in *Concealed Enemy* and *Fur Traders Descending the Missouri*, between Indian "savagery" and emerging American civilization, had been expressed by Bingham, a year before he executed these works, in a group of banners he painted for a Whig convention held at Bonneville, Missouri, in 1844. Two of these banners, now unfortunately known only through newspaper descriptions, contained paintings con-

trasting the developed wilderness with the benefits brought by progress. The first represented Daniel Boone fighting an Indian on one side, a scene "emblematical [sic] of the early state of the west," while on the other was a landscape with grazing cattle, indicative of the "present advancement of civilization." The second depicted an uncultivated prairie with buffalo on one side, while on the other were the benefits of Henry Clay's "American System" — fortresses, factories, railroads, ships, and government buildings.¹⁰ The project is important not only as a precedent for the opposition represented in *Concealed Enemy* and *Fur Traders Descending the Missouri*, but also because it establishes that Bingham's emotional sympathies lay not with the Indians but with the "manifest destiny" of the pioneers.

Concealed Enemy and *Fur Traders Descending the Missouri* form a striking contrast. One depicts the rocky bluffs overlooking the Missouri river, the other the river itself. One, with its Indian in war paint hiding in ambush, suggests the danger of the American wilderness, the other, with its dugout almost swamped by the weight of the furs it is carrying, the abundance that could be won from it. Following a convention often found in American paintings of similar subjects, the Indian is shown at sunset, to suggest the passing of his way of life, while the fur traders are shown at dawn.¹¹

In addition to the general opposition between savagery and civilization expressed in the contrast of the two paintings, *Fur*

⁷ Barbara Novak, *American Painting of the Nineteenth Century*, New York, 1969, 68.

⁸ Bloch (as in n. 1), I, 112.

⁹ *Ibid.*, 157.

¹⁰ *Ibid.*, 75-76.

¹¹ William Cullen Bryant often associated Indians, and the passing of their way of life, with sunset, for example in his poem, "A Walk at Sunset," in which he declares of the "hunter tribes" of Indians: "Now they are gone, gone as thy setting blaze / Goes down the west, while night is

pressing on." In "The Indian Girl's Lament," Bryant warned of the possible extinction of the Indians (William Cullen Bryant, *Poems*, Philadelphia, 1847, 59-61 and 94-97). James Fenimore Cooper, of course, had also dealt with the theme of racial doom in *The Last of the Mohicans*, New York, 1826. John Mix Stanley painted an Indian at sunset titled *The Last of His Race* (Stark Museum, Orange, Texas), and the subject was also treated by Karl Wimar and other Indian painters. Julie Schimmel discussed this theme in a talk on "Civilization and the Doomed Indian," delivered at the Annual Meeting of the College Art Association, February, 1981.



2 George Caleb Bingham, *Fur Traders Descending the Missouri*, 1845, oil on canvas, 74.3 x 92cm. New York, Metropolitan Museum of Art

Traders Descending the Missouri describes different aspects of the progression towards civilization as one scans the composition from left to right.

At the far left in the prow of the boat is a chained bear cub, one of the most savage of wild animals but one whose ferocious instincts have been shackled, and which has been transformed into an appealing pet.

In the center is the trader's half-civilized half-breed son. His Indian blood is suggested by his straight, shiny black hair (which Bingham altered from his preparatory drawing, made from a Caucasian model), by his lack of a hat, by the Indian manufacture of his pouch, and by the similarity of his pose to that of the Indian in ambush in *Concealed Enemy*.¹² His expression, however, is amiable, and he is inclined in pose towards his father. Like the Indian in *Concealed Enemy*, he carries a gun, but this is tucked away and almost hidden, and in any case is clearly used only for killing game, such as the duck beside him, rather than for human slaughter.

¹² The role of hats was continually stressed in 19th-century books of etiquette. The half-breed boy is virtually the only outdoor male (whether adult or child) in a Bingham painting who does not wear a hat. I have noted only two other males in Bingham's *oeuvre* who are similarly uncovered — Leonidas Wetmore, who is posed in his portrait in a manner similar to Weir's likeness of the Indian chief Red Jacket, and a poling figure in *Washington Crossing the Delaware*, who has evidently lost his hat during his exertions.

¹³ Bingham, however, evidently did not intend his fur traders to be exemplars of civilized life, but rather harbingers of it. In "George Caleb Bingham: The Artist as Social Historian," *American Quarterly*, Summer, 1965, 226, 228, John Demos has noted that from Bingham's standpoint fur traders were a "mysterious ... alien group" with "a way of life distinct unto itself." Washington Irving in his *Astoria or Anecdotes of an Enterprise Beyond the Rocky Mountains* (1st ed., Philadelphia, 1836), London, 1851, 22-23 described the costume and manners of these people as "half civilized, half savage." Many racial theorists of this period

At the far right is the grizzled fur trader himself, with his pipe and stocking cap who, as we can tell from the direction of the tree trunks protruding from the water, is paddling the pirogue downriver, in the direction of St. Louis and civilization.

Recent writers invariably have called this canvas *Fur Traders Descending the Missouri*. When the painting is viewed in relation to *Concealed Enemy*, however, the significance of the fur trader's original title, with its stress on the half-breed status of the fur trader's son, becomes apparent. As opposed to the "savage" Indian, who stands for war and dissension, the half-breed, pacified Indian symbolizes harmony and conciliation. Bingham evidently wished to show that even the Indian could be absorbed into the main current of American civilization, if he would abstain from a conflict with the white man that could only bring him to extinction, and engage instead in peaceful intercourse.¹³

Thus, thematically, these paintings form a pair, contrasting the sunset of savagery with the sunrise of civilization. To some

advocated miscegenation as the Indian's best hope for improvement and survival. For example, Dr. Charles Caldwell, a leading American phrenologist, put forth this view in his *Thoughts on the Original Unity of the Human Race*, New York, 1830, in which he maintained that the more white blood an Indian had, the more civilized he was likely to be. Similarly, Josiah C. Nott of Mobile, Alabama, who enjoyed an international reputation for his writings on race, ascribed the high degree of civilization achieved by the Cherokees to interbreeding with whites, as he argued in *Types of Mankind*, London, 1854. Both these men held the common view, based on phrenology and craniology, that the Indian was organically inferior to the white and so doomed to extinction as a separate race. For a modern account of such writers, see Reginald Horsman, *Race and Manifest Destiny*, Cambridge, Mass., 1981, 117-131, and Robert F. Berkhofer, Jr., *The White Man's Indian*, New York, 1978, 58-60. Racial intermarriage on the frontier is discussed in Dawn Glanz, *How the West was Drawn: American Art and the Settling of the Frontier*, Ann Arbor, Mich., 41-43.

degree there are also compositional links between the two works. As already noted, the pose of the half-breed son echoes that of the lurking Indian, and his figure is at about the same height from the bottom of the picture. In addition, if we imagine the paintings placed side by side, as illustrated, it is apparent that the golden light of *Fur Traders Descending the Missouri* would penetrate into the right hand side of *Concealed Enemy*, helping to bind the two pictures into a visual unity.

On the whole, however, the extremeness of the visual contrast between the two works is peculiar in a pair of pendants. What is more, there is a feature of *Fur Traders Descending the Missouri* that has often been recognized as unusual: Bingham's handling of the atmosphere of the distance, with golden-toned morning mist slowly lifting from the river. Even in Bingham's lifetime, critics often criticized his backgrounds for looking flat and uninteresting, and there is no other painting in his *oeuvre* in which he devoted such attention to atmospheric effects — not even the second version of *Fur Traders Descending the Missouri*, which he painted six years later.¹⁴ It is quite possible, of course, that the atmosphere of *Fur Traders Descending the Missouri* was just a lucky accident, and that the painting's lack of formal relation to *Concealed Enemy* was the result of Bingham's ineptitude. But I believe there is another explanation.

Although he sometimes represented rather tough and perhaps even lawless frontier characters, in his conceptions of design Bingham was anything but rebellious towards authority. The artist's biographer Maurice Bloch has demonstrated that many of the figures in Bingham's paintings were directly based on earlier prototypes, and that his compositional arrangements closely follow the recommendations found in instruction books on art by writers such as John Burnet and Samuel Prout.¹⁵ Consequently, it is reasonable to suppose that in devising the contrasting compositions of *Concealed Enemy* and *Fur Traders Descending the Missouri*, Bingham was looking back to some precedent in the work either of his contemporaries or the Old Masters, however imperfectly understood. In fact, I think it likely that Bingham was influenced by the traditional dichotomy in criticism between the works of Claude Lorrain and Salvator Rosa, who in the 1840's were among the most admired and frequently discussed of the Old Masters.¹⁶

The conception of the contrast between "the mild and beaming skies of Claude" and "the rude and tangled precipices of Salvator Rosa" was initially established among English dilettantes, and was quite widespread by the 1730's.¹⁷ Claude was praised for the serenity of his work, for his skill in depicting tranquil bodies of water, and above all for his ability to represent the effects of sunlight, particularly those of early morning or sunset. The most notable single feature of his work was its

golden atmosphere, which often made background objects indistinct, but contributed to the unity of the effect and to the illusion of distance. Salvator, on the other hand, was admired for his stormy and agitated effects, with jagged, irregular forms and abrupt, sharply defined contrasts of light and dark. His landscapes were filled with boulders, grottos, terrifying precipices, shattered tree trunks, and withered branches, and were often inhabited by picturesque bandits.

In spirit, at least, Claude and Salvator had crossed the Atlantic by the end of the eighteenth century. Charles Willson Peale, in a letter of 1772, refers to some drawings that if made into paintings "would do a Claud Lorrain or a Salvator Rosa credit," and Washington Allston fell under their spell in 1798, while still an undergraduate at Harvard.¹⁸ Perhaps even more significant for the future of American painting was the influence of Claude and Salvator on Thomas Cole. In his famous "Essay on American Scenery" of 1836, Cole refers to "the wild Salvator Rosa" and "the aerial Claude Lorrain," his only mention of specific artists in the article; and during his stay in Italy in 1832, Cole lived in a studio that had once belonged to Claude — a move that recalls John Vanderlyn's residence, in 1805, in the studio of Salvator Rosa.¹⁹

Cole's enthusiasm for the work of Claude and Salvator, it should be stressed, was not in any sense unique, but was typical of the period. If his paintings were regularly compared with those of Claude and Salvator, so were those of his contemporary Asher Durand, while Thomas Doughty at one juncture was hailed as "the all-American Claude Lorrain," and the Bostonian artist George Loring Brown, who had once made a copy of a painting by Claude in the Louvre, came to be known by the sobriquet "Claude" Brown.²⁰ Works by Claude and Rosa were favored by American collectors, and as late as 1846, a year after Bingham's *Concealed Enemy* and *Fur Traders Descending the Missouri* were sold, a satirical letter appeared in the magazine *Yankee Doodle* satirizing the taste of wealthy New Yorkers for "Clawds and Sall Vaters."²¹

No doubt the initial popularity of the works of Claude and Salvator was due to the recognizability of their styles, the differences discernible to even the most ill-educated English collectors, particularly when their paintings were hung side by side. The contrast between them, however, took on a new significance after the appearance in 1757 of Edmund Burke's *Philosophical Enquiry Into the Origin of Our Ideas of the Sublime and the Beautiful*. In this influential exposition, Burke argued that aesthetic notions were based on responses developed in daily experience, and that the two most powerful artistic effects were the "beautiful," which evoked pleasurable emotions, and the "sublime," which evoked awe and terror.

¹⁴ Several contemporary critiques of Bingham are cited by McDermott (as in n. 1), 170-71. For the second version of *Fur Traders Descending the Missouri* (which was altered slightly and titled *Trapper's Return*), see Bloch (as in n. 1), I, 83, II, 86.

¹⁵ For example, Bloch, I, 87-89, 94 and 128.

¹⁶ A useful study of the reputations of Claude and Rosa in England is Elizabeth Manwaring's *Italian Landscape in Eighteenth Century England*, New York, 1925, whose second chapter is devoted to "English Opinion of Claude and Rosa." There is no study of the influence of Claude and Rosa in America, but this seems to have followed the same basic pattern as in England. Their popularity reached a peak in the 1840s, but died out in the 1850's, due to the attacks of Ruskin on Rosa, and an increasing emphasis on "truth to nature" rather than on the Old Masters.

¹⁷ Manwaring, 55-58.

¹⁸ Charles Coleman Sellers, *Charles Willson Peale*, Philadelphia, 1947, I, 113; William H. Gerdtz, "A Man of Genius": *The Art of Washington Allston (1779-1843)*, exh. cat., Museum of Fine Arts, Boston, 1979, 18-20.

¹⁹ Thomas Cole, "Essay on American Scenery," *American Monthly Magazine*, January, 1836, 2; Louis Noble, *The Life and Works of Thomas Cole*, Cambridge, 1964, 104; Louise Hunt Averill, "John Vanderlyn, American Painter (1775-1852)," Ph.D. diss., Yale University, 1949, 67 (during this period Vanderlyn was closely associated with Washington Allston).

²⁰ Callow (as in n. 5), 137, 141; John K. Howat, *The Hudson River and Its Painters*, New York, 1972, 32; Jared B. Flagg, *The Life and Letters of Washington Allston*, Boston, 1892, 244-45; and James Thomas Flexner, *That Wilder Image*, New York, 1970, 160.

²¹ Callow, 9.



3 Joshua Shaw, *Reedy River Massacre*, ca. 1838, oil on canvas, 35.6 x 44.5cm. Provo, Utah, Brigham Young University

Burke made no reference to specific painters in his essay, but very soon afterwards the peaceful, light-suffused landscapes of Claude came to be cited regularly as soothing examples of the "beautiful," and the storm-shaken, bandit-haunted rockscapes of Salvator as terror-laden specimens of the "sublime."²² The development was a significant one, for it not only boosted the popularity of Claude and Salvator, but altered it from being a contrast of individuals to one of fundamental aesthetic principles. As artistic theory evolved, Salvator's work also came to be termed "picturesque" and "romantic," but his name continued to be linked with that of Claude.²³

Indeed, the connection soon became remote between the actual paintings by these artists and so-called "Claudian" and "Salvatoran" effects. The Reverend William Gilpin, for example, justified the beauty of withered and shattered trees in nature because of Salvator Rosa's use of them in his landscapes; by extension, any artistic use of broken tree trunks came to be viewed as Rosa-esque.²⁴ Naturally, loose usage of this terminology was particularly prevalent in America, where few painters or critics were truly familiar with actual paintings by these artists. Thus, for example, to the nineteenth-century American critic and dentist Shearjub Spooner, Thomas Cole's entire achievement could be summed up in a comparison with Claude and Salvator. "His morning, evening, and noon-day scenery," Shearjub maintained, "may be compared to that of Claude Lorrain, more subdued but more true, and his storm scenes to those of Salvator Rosa, equally spirited but more highly finished."²⁵

Considering this general interest in the work of Claude and Rosa, and given that Bingham referred to Claude in one of his letters to Rollins, it would have been natural for him to attempt

pictures in the Claudian and Salvatoran modes.²⁶ Certainly there can be little doubt that Bingham's *Concealed Enemy* was conceived in the mode of Salvator Rosa. The rocky landscape functions much like "the rude and tangled precipices" associated with Salvator, while the malevolent Indian plays a role comparable to Salvator's *banditti*.

Maurice Bloch has suggested that Joshua Shaw's *Reedy River Massacre* (Fig. 3) may have served as a prototype for Bingham's picture, and if this was the case it allows us to follow Bingham's procedure fairly closely.²⁷ Indeed, even if Bingham was unaware of Shaw's painting, a comparison of the two works helps identify the principles of Bingham's compositional organization.

Bingham introduced a precipice into the right-hand side of the composition, which is unsettling in effect, and he eliminated the usual horizontal band of foreground, like that found in Shaw's painting, so as to place the viewer in abrupt proximity with the sinister Indian and forbidding rock. Instead of Shaw's picturesque tree, he represented only a few branches of foliage, most of them withered or dead, which project from the boulder in the foreground. He exaggerated the irregularity and jaggedness of forms. Finally, he made the sky stormy and heightened the contrasts of light and dark. The overall result is to accentuate the picture's sense of foreboding. Of course one could find precedents for Bingham's rocky ledges in the early landscapes of Thomas Cole, but significantly, these were works by Cole that contemporary critics considered to be in the Salvatoran mode.²⁸

The implications of this, I think, are evident. If *Concealed Enemy* is in the mode of Salvator Rosa, then *Fur Traders Descending the Missouri* might well be in the mode of Claude Lorrain. Bingham's employment of a restful, predominantly horizontal composition in the latter painting could be interpreted as an effort to achieve a Claudian peacefulness and simplicity, while the yellowish atmospheric haze, which so many writers have commented on, may be interpreted as Bingham's attempt to emulate the softness and haziness in the execution of distances for which Claude was noted, and to find an analogue in his own Missourian experience to "the golden light of Claude."²⁹

Although *Concealed Enemy* does have a very general resemblance to actual paintings by Salvator Rosa, *Fur Traders Descending the Missouri*, to be sure, has virtually no connection with any painting ever executed by Claude Lorrain. But this is not really surprising. Bingham had viewed paintings attributed to Salvator Rosa, and quite possibly by him, in the Pennsylvania Academy of Fine Arts, a few years before painting *Concealed Enemy*.³⁰ But his access to Claudian works seems to have been rather more limited, and consequently he probably relied chiefly on verbal descriptions of his style.³¹

In any case, Bingham surely did not intend to replicate the works of these artists, but to use their general principles and the general contrast of their modes, to underscore the message of his works. What, indeed, could be more appropriate than to use the horrific style of Salvator Rosa to represent the end of American

²² Manwaring (as in n. 16), 54.

²³ *Ibid.*, 50-51. See also Samuel H. Monk, *The Sublime: A Study in Critical Theories in 18th Century England*, Ann Arbor, 1960.

²⁴ Manwaring, 187.

²⁵ Novak, (as in n. 7), 67.

²⁶ Bloch, 1, 173.

²⁷ *Ibid.*, 111.

²⁸ Flexner (as in n. 20), 34.

²⁹ According to this interpretation, Bingham's second representation of

this subjects lacks a strong sense of atmosphere because the second version was no longer intended to be Claudian, as it was no longer paired with a painting in the mode of Rosa. Bingham abandoned Indian paintings probably in part because they brought lower prices than his frontier genre subjects. In 1845, for example, *Fur Traders Descending the Missouri* brought \$75, nearly twice as much as *Concealed Enemy*, which brought only \$40 (Bloch, 11, 53).

³⁰ Bloch, 1, 44.

³¹ Bloch, 1, 45, suggests that Bingham may have known prints after Claude at this time.

savagery, and the "golden" style of Claude to depict the coming of civilization? In short, here, as in many other well-documented instances, Bingham seems to have tried to utilize the principles of high art, as he had learned them from art manuals and other sources, to immortalize the development of the Western frontier.

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Discussion

On the Mathematics of the Perspective of the *Arnolfini Portrait* and Similar Works of Jan van Eyck

John L. Ward

The arguments and evidence presented by David L. Carleton in his note, "A Mathematical Analysis of the Perspective of the *Arnolfini Portrait* and Other Similar Interior Scenes by Jan van Eyck," in the March, 1982, issue are inadequate to support any of what I take to be his major claims. These are as follows:

(1) Van Eyck's paintings, the *Annunciation* of the Ghent Altarpiece, the Dresden Triptych, the Ince Hall *Madonna*, the *Rolin Madonna*, the *Arnolfini Portrait*,¹ the *Madonna of Canon van der Paele*, and the *Lucca Madonna*, employ a perspective with "two vanishing areas centered at the two foci of an ellipse,"² which is therefore referred to by Carleton as elliptical perspective.

(2) The *Arnolfini Portrait* has the basic optical effects of a convex mirror, which were derived from one such as that on the rear wall of the painting.³

(3) "Jan's convex mirror was also present at the time of the execution of his other interior scenes" and its use "led to his

development of a consistent application of a mathematical theory of perspective, best called *elliptical perspective*."⁴

To substantiate his first point, Carleton presents perspective drawings of the seven Van Eyck paintings discussed. Five of these drawings reverse the layout of the paintings without explanation or apparent purpose. On the basis of these drawings, Carleton concludes that each picture has a perspective with two central vanishing areas, that these are both lowered in each subsequent picture, until the last one, the Dresden Triptych, returns to an earlier, less monumental form, and that the two vanishing areas and their sequential lowering "lead to the conclusion that Jan probably did have a mathematical theory of perspective, and that he consistently applied and developed this theory."⁵

Carleton insists on the presence of only two vanishing areas for each of the pictures that he discusses instead of the three mentioned by G. Ten Doesschate or the four mentioned by Panofsky for the *Arnolfini Portrait*.⁶ However, the imprecision of Carleton's drawings and the omission of certain orthogonals greatly exaggerate the consistency of the convergence into two vanishing areas. To be sure, the floor and ceiling converge in two precise vanishing areas in the *Arnolfini Portrait* and in more approximate ones in the *Van der Paele Madonna* and the Dresden Triptych. But the *Rolin Madonna* has two vanishing areas for the floor alone, the upper one of which is slightly higher than the vanishing area for the orthogonals of the upper wall; the Ghent Altarpiece *Annunciation* has only one coherent vanishing area, that of the floor orthogonals,⁷ and the Ince Hall and *Lucca Madonnas* are quite inconsistent in perspective.⁸

The *Lucca Madonna* is perhaps most instructive, since Carleton follows Panofsky in giving it a late date and one might expect it to be one of the clearest examples of a fully developed, mathematically consistent, "elliptical" perspective. My perspective drawing of the *Lucca Madonna* (Fig. 1) shows that the floor does not converge accurately to a single area (if the receding lines of the rug were projected, the disparity would be much greater), in contrast to the floor of the *Arnolfini Portrait* and that of the earliest work analyzed, the Ghent Altarpiece *Annunciation*,

¹ I have retained the familiar title of the painting for convenience, although Peter Schabacker's study of its iconography ("*De matrimonio ad morganaticum contracto: Jan van Eyck's 'Arnolfini' Portrait Reconsidered*," *Art Quarterly*, xxxv, 1972, 375-98) reopens the question of the subjects' identities.

² David L. Carleton, "A Mathematical Analysis of the Perspective of the *Arnolfini Portrait* and Other Similar Interior Scenes by Jan van Eyck," *Art Bulletin*, LXIV, 1982, 119.

³ *Ibid.*, 123-24.

⁴ *Ibid.*, 124.

⁵ *Ibid.*, 121.

⁶ *Ibid.*, 119. See Panofsky, *Early Netherlandish Painting*, Cambridge, Mass., 1953, 1, 203, and G. Ten Doesschate, *Perspective: Fundamentals, Controversials, History*, Nieuwkoop, 1964, 139f.

⁷ Of course the orthogonals of the beams at the juncture of the side walls and ceiling in the two outer panels will cross somewhere. However, in sharp contrast to the consistency with which the floor orthogonals are plotted, the three orthogonals of each beam cross each other well before they meet any of the orthogonals from the opposite beam. A careful analysis clearly shows that the floor projection is constructed deliberately and carefully as a single system. G.J. Kern, whose fundamental studies

on Van Eyck's perspective are not cited by Carleton, observes that, with respect to the two central panels, "von fünfzehn Linien sich nicht weniger als vierzehn genau in einem Punkte schneiden" ("Perspektive und Bildarchitektur bei Jan van Eyck," *Repertorium für Kunstwissenschaft*, xxxv, 1912, 28. For a perspective drawing of the outer left panel, see fig. 19 in my article, "Hidden Symbolism in Jan van Eyck's *Annunciations*," *Art Bulletin*, LVII, 1975, 196-220). By contrast, no attempt whatever was made to join the orthogonals of the two beams in a single vanishing area. Carleton's perspective drawing, on the other hand, seems to imply that Van Eyck organized his space by plotting the convergence, on each side of the picture, of one of the many floor orthogonals with an orthogonal of one of the beams. Such a procedure not only disregards the strict accuracy of the floor convergence, but also implies that the artist would be more concerned over pictorial relationships not evident to a viewer than over those that would be disturbingly evident if the convergence of orthogonals was inaccurate.

⁸ The Ince Hall *Madonna*, presently owned by the National Gallery of Victoria, Melbourne, is now universally recognized by scholars as not by Van Eyck (see U. Hoff and M. Davies, *The National Gallery of Victoria, Melbourne, Les primitifs flamands*, 1, *Corpus de la peinture des anciens Pays-Bas méridionaux au quinzième siècle*, XII, Brussels, 1971, 29-50). Although I believe it to be a good copy after a lost Van Eyck, any conclusions with respect to the perspective must be cautiously made.

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