Light in Italian Renaissance Painting

Background Notes

Dr Michael Douglas-Scott — 30 September 2026



Piero della Francesca, *The Baptism of Christ,*
1437-1445, (The National Gallery, London)

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The standard view of the development of Italian painting from the late thirteenth to the sixteenth centuries is of a shift in the treatment of light from the symbolic to the natural, from divine radiance to realistic representation. Accordingly, gold panel polyptychs with their shimmering gothic pinnacles are replaced by altarpieces which are windows onto a world clearly related to our own. Our eyes are tricked into an illusion of seeing through the frame into the three-dimensional reality represented beyond the flat picture-plane. This, the narrative goes, was largely achieved through the recovery of linear perspective in Florence from Brunelleschi in the early fifteenth century through to Leonardo in the later part of the century. This pictorial method of composition provided a mathematical framework within which visual appearances, whether of anatomy, drapery, animals, inanimate objects, buildings, landscapes, or skies could be depicted; the triumph of science in art, a progressive process of trial-and-error told in Ernst Gombrich's classic, *The Story of Art* (1950).

Piero della Francesca was very instrumental in the introduction of mathematical perspective into Italian painting. Taking on the principles of Brunelleschi and those outlined by the humanist Leon Battista Alberti in his 1430s *Treatise on Painting,* he was to write the most mathematically accomplished treatment on the subject, his *De Prospectiva Pingendi*, dedicated to the enlightened ruler of Urbino, Federico da Montefeltro. He applied these principles to his own work, the most well-known example being the *Flagellation of Christ* **(1)**, housed today in Federico's palace in Urbino. His contribution to what was described as "mathematical humanism" by the great French art historian André Chastel was soon to be forgotten after his death in 1492 and his paintings neglected until the twentieth century. This was in part because a large body of his mathematical oeuvre was claimed by Luca Pacioli, also from Piero's native Borgo San Sepolcro. The lucid clarity of his work has been admired and reclaimed to art history since the 1920s and Piero's rediscovery and rehabilitation within the canon by Roberto Longhi and Kenneth Clark.



(1) Piero della Francesca, *Flagellation of Christ,*
1459-60, (Galleria Nazionale delle Marche, Urbino)

Piero does not discuss the treatment of pictorial light in his written treatises, but it is a central element of his surviving pictures. Indeed, there always was a close relationship between light and perspective from the Middle Ages onwards. The Latin term *prospectiva* meant optics in general and was applied to the theory of vision. This was not just based primarily on classical sources like Euclid and Ptolemy but also on Arabic authors and above all, Alhazen (Ibn al-Haytham), whose book on optics was written in Cairo in the eleventh century. It has been argued by Hans Belting that the recovery of perspective in the Italian Renaissance owed as much or more to him than to ancient writers. Very few paintings by Greek or Roman artists were known before the eighteenth century and the discovery of Herculaneum and Pompeii, so there were no visual examples for painters to follow.

Piero's refined treatment of light will be considered in a number of his pictures, both frescoes and on panel. Like others of his era, he was exposed to the example of Netherlandish painting both in Florence and the northern Italian courts. It was probably in these, and especially at Ferrara, where Piero worked, that the technique of oil painting was introduced into Italy. This allowed for much more subtle effects of texture and above all light, whether of translucency or reflection, and in the depiction of shadows. As with the Netherlandish artists he imitated, it will be shown that light was used in Piero's pictures not merely as a way of depicting the world or "nature", but also as a means for conveying the intervention of the divine and the supernatural within it. This is evident in many of his works, including the *Flagellation* and in his great cycle of frescoes of *The Legend of the True Cross* in Arezzo.

The scientific study of light was taken up by Leonardo in Florence and Milan **(2)**. His copious notebooks provide ample evidence for his interest in optics, light, its diffusion, reflection and refraction, its relationship to shadows and darkness, which he then applied to his pictures. The intellectual input of his achievement was to shape the course of Italian, indeed European, art and helped give rise to what has come to be known in the English-speaking world as the "High" Renaissance. His rival and contemporary Florentine, Michelangelo was to respond to his challenge, and Raphael of Urbino **(3)** was to imitate both of them and create a synthesis of his own. Central to this process of integration was a new treatment of light, in which Leonardo's *chiaroscuro* (light and dark) and *sfumato* (smokiness or indefiniteness) were to triumph, along with Michelangelo's shimmering light effects or *cangiante* (shot) colours on polished marble-like surfaces. Correggio in Parma combined the lessons of the High Renaissance in a uniquely seductive Emilian vision which was to become one of the sources of the Baroque style a century later.



(2) Leonardo da Vinci, *Madonna of the Rocks,*
1491-1508, (The National Gallery, London)

A parallel path towards tonal (taken here to mean the relationship of light and dark) integration was pursued in Venice, firstly in the late Bellini but then crucially through Titian **(4)** and Giorgione **(5).** Here however, unlike in Florence, the composition came not to be worked out in black-and-white first, but rather, coloured paint was applied directly to the canvas. This method of working came to be known as “colorito” (handling of colour) and by the mid-sixteenth century had resulted in a “disegno/colorito” divide between Venetian and central Italian schools of painting. As the former became darker and more chiaroscural under the older Titian and the revolutionary Tintoretto, the latter followed the sophisticated path of mannerism with its polishes surfaces and serpentine figures.



(3) Raphael, *Madonna of Foligno,* 1511-12, (Vatican Museums, Rome)



(4) Titian, *Assumption of the Virgin Mary,* 1515-18, (Sta. Maria Gloriosa dei Frari, Venice)



(5) Giorgione, *Three Philosophers,* 1508-9, (Kunsthistorisches Museum, Vienna)

Throughout this long historical process, however, it will be shown that light did not lose its divine significance, starting with Piero himself. Leonardo clearly studied light from a scientific perspective, but none can deny the mysterious and allusive character of his treatment of it in his few paintings. Michelangelo also viewed light as a divine force, as pictured in God's creation of it on the Sistine Chapel ceiling. The Venetian, Giovanni Bellini always treated natural light as having divine properties, as is manifest in his luminous masterpiece of *St Francis in the Desert* in the Frick Collection in New York **(6)**. Raphael in Rome, Correggio in Parma and Titian in Venice created a new way of representing heavenly light and space around 1510-20, without relying upon the use of gold leaf.



(6) Giovanni Bellini, *St. Francis in the Desert,* c. 1475-80
(Frick Collection, New York)

The rest of the century saw the artificial etherialisation of light in Mannerism, and Tintoretto's bold transformation of chiaroscuro as a way of dramatically depicting God's miraculous intervention in the world though powerful light surges **(7),** a path that takes us on to Caravaggio circa 1600, naturalism in the service of the Counter-Reformation. We will have travelled a long distance from the lucid tranquility of Piero's art, but light has remained the vehicle of the divine throughout.



(7) Jacopo Tintoretto, *Crucifixion,* 1565, (Scuola Grande di S. Rocco, Venice)

Bibliography

M. Barasch: Light and Colour in the Italian Theory of Art, New York University, 1878

H. Belting: Florence and Baghdad: Renaissance Art and Arab Science, Harvard University Press, 2011

P. Hills: The Light of Early Italian Painting, Yale University Press, 1987

M. A. Lavin: Piero della Francesca, Thames & Hudson, 1992

A. M. Smith: From Sight to Light: The Passage from Ancient to Modern Optics, Chicago University Press, 2014

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