

A liquid history

Blood and animation in late medieval art

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Que lui fait tout le sang qui n'est plus son secret?
— Paul Valéry¹

In 1276 Giles of Rome compared sperm's effect on menstrual blood to the work of an artist carving idols from wood.² His modification of a famous argument by Plato, later taken up by Aristotle, is highly original and points to an important junction of theories about human procreation and theories of artistic creation. Aristotle drew analogies between divine, natural, and artisanal creation with the effect of making their apparent differences even more explicit. The Greek philosopher distinguished between God's idea of a bed and a "real" bed given form by a carpenter, that is, made by instruments (*organa*), recalling a divine idea. He uses this analogy in another text, *On the Generation of Animals*, to explain what sperm is. A. P. Bos summarizes his position thus:

The nature which is present in the male (in living creatures of which the males emit sperm) uses this sperm as an instrument (*organon*) and as a vehicle of actual movement, just as instruments are used in products of craftsmanship. For in a certain sense the movement of craftsmanship is present in these. That is to say, Aristotle considers *technè* to be present in the (hands of the craftsman and next in the)

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1. P. Valéry, *La Jeune Parque* (1917), in *Œuvres I*, ed. J. Hytier (Paris, 1957). Valéry used blood as a double metaphor for the animation of his art and his life in this poem, his first after the long silence following his existential crisis in Genoa on the night of October 4, 1892. His first lines after these twenty-five years of silence use blood as a metaphor for the flow of writing, its suspension and drying up, its relation to milk and semen, and its carrying of secrets.

2. Aegidius Romanus, *De formatione humani corporis in utero*, ed. R. Martorelli Vico (Firenze, 2008), X.135–137: "Sanguis enim convertitur in membra virtute membrorum cum animal nutritur et sanguis convertitur in membra virtute spermatis cum animal generatur. [. . .] Actio enim huiusmodi virtutis, sive huius spiritus, assimilatur artificiato et quasi potest dici actio artis et actio intellectus. [. . .] Actio tamen artis et actio intellectus ex una et eadem materia facit quecumque diversa, ut idem artifex ex eodem ligno faciat ydolum equi et ydolum hominis et multa alia varia et diversa."

instruments controlled by the craftsman, which realize the form of the product in matter.³

Like Aristotle, Giles was fascinated by the ability of liquid sperm to turn into wet and dry matter and to differentiate itself into radically distinct materials, appearances, and functions. When he discussed the ability of a liquid to transform itself into bones, nerves, and flesh, Giles not only evoked the Platonic metaphor of the carpenter, who operates between *eidolon*, *eikon*, and *pistis* (idol, image, and persuasion, or that which gives confidence),⁴ but also collapsed the distinction between a carpenter who makes beds and an artist who makes idols. Well-versed in the writings of Aristotle, Galen, Avicenna, and Averroës, the Roman scholar attempted a descriptive metaphor.⁵ His synthesis of existing thoughts on the topic provided a new reading of the enigmatic act of creation. Creation involves imagination and an idea of something that has not yet taken shape, not yet become form and matter in visible reality. Thus reflecting on these premises later (after the act of creation) has an impact on the perception of the act of creation. Furthermore, through his systematic and analytical readings of the medical authorities up to that time, he offered a new account of the genesis of human life.⁶

Italian artists working contemporaneously with Giles of Rome were similarly preoccupied by the visual ontology of life. For artists attempting to represent living beings as alive as possible, representing blood was tricky and posed a somewhat ambivalent challenge. The depiction of blood was (and still is) intrinsically intertwined with theories of

3. A. P. Bos, *The Soul and Its Instrumental Body: A Reinterpretation of Aristotle's Philosophy of Living Nature* (Leiden, 2003), pp. 151–152.

4. Plato, *Republic* 596–599. Aristotle, elaborating on the four causes (material, formal, efficient, and final), uses the metaphor as well: *Physics* II.3.194b24 ff.; *Metaph.* A.3 ff. See also *Part. An.* 639b12ff.

5. G. Pini, "Le lecture dei maestri dei frati agostiniani: Egidio Romano e Giacomo da Viterbo," in *Libri, biblioteche e lecture dei frati mendicanti (secoli XIII–XIV)* (Spoleto, 2005), pp. 79–114.

6. M. A. Hewson, *Giles of Rome and the Medieval Theory of Conception: A Study of the De Formatione Corporis Humani in Utero* (London, 1975).

animation and mimesis. Depicting Christ's holy blood in particular meant addressing the relationship between visible appearances and ideas, as well as creating a confident artistic representation. To modern eyes, at least, this presents an apparent paradox: The more imminent Christ's death appears to be, the more vividly his blood appears to flow. To emphasize the dying of Christ's body, and to visualize the promise of eternal life, these artists made blood flow, made it run out of his five wounds and trace lines across his skin and over the wood of the cross. These runlets are stopped by dry matter, such as the earth or Adam's skull below the suppedaneum of the cross at Golgotha, or liturgical vessels held aloft by angels. Some of the streams of blood pile up, thickening below his wrists and feet on the ground. Somewhat later, around the turn of the fourteenth century, especially in the context of Giotto and his workshop, artists depicted the drying of blood using coagulating drops and dried streaks of (painted) blood.

Giles's discussion of the transformative power of blood sheds light on neglected analogies between scientific explanations of the genesis of life in the last decades of the duecento and the representation of blood by contemporary painters. Representing dying or dead bodies with an exaggerated emphasis on pulsing blood seems paradoxical in a period that is traditionally associated with painters' increased interest in observing nature, in theories of perception, and in the creation of pictorial illusions of space including three-dimensional bodies. For the clarity of the following argument, I am establishing a difference between naturalism (changes in artistic representation based on observations of nature) and illusionism (exaggerating the temporal or spatial effects of drying blood)—the latter being based on the former—although I would not make that claim in general. Painted traces of blood—its flowing, dripping, and drying on dying bodies, even when depicted in an exaggerated, non-naturalistic way—bear witness to the artists' observations in their quest to render a lifelike or animated human body. Painters around 1300 tended to observe with ever greater diligence what happens to blood after leaving the wound, and would use multiple shades of red to indicate its shifts in appearance.⁷

7. Around 1300 the painters' attentiveness to the flow of blood went so far that illustrations in manuscripts of the *Romance of the Saint Graal* show Joseph of Arimathea at the bottom of the cross between Mary and John, collecting the blood in a vessel: See London, BL, Royal Ms. 14 E III, fol. 7. For a color reproduction see D. Jackson, *Marvellous to Behold: Miracles in Illuminated Manuscripts* (London: British Library, 2007), p. 70.

Although the first such attempts were made in Italy, the motif spread quickly all over Europe.⁸ Blood is the essence that keeps a human body alive. Yet its animating power is made visible by painters in the representation of the death of a human body.

A second significant change involving blood in the representation of liveliness—or lifelessness—occurred in the first half of the fifteenth century. In French paintings of around 1400, different stages of coagulating blood were first introduced to the depiction of Christ's dead body, each indicating a different temporal quality of blood, from the still wet to the already dried. The lines of blood are pulled by gravity, drawing pathways over the naked skin, eventually absorbed by the loincloth. When the body is shown after Nicodemus and Joseph of Arimathea have completed their labor on Mount Golgotha—that is, during the deposition of Christ's body or its placement for a short rest on his mourning mother's lap (the *Pietà*)—the dried tracks of blood alert the observer to the body's former vertical position on the cross. Painters from the 1440s through the 1460s continued their "bloody" experiments with other holy bodies, most notably when representing the decapitation of saints. Smears of blood become dry dust tracings around fallen heads; projectiles of blood create pictorial space as the life-sustaining liquid vigorously spurts from listless bodies. Nevertheless, while these shifts concur with the different waves of naturalism and the painter's closer observation of nature,⁹ no attempt has been made to approach these issues as a cultural constellation, or to correlate the dramatic effects of the life-liquids' visual exhibition by flagellants, bloodletters, mystics, executioners, and painters.

Increased attentiveness to blood—the medical and alchemical context

One of the most widely disseminated medical handbooks of the thirteenth century, the *Bartholomäus*, opened with the promise that all the hidden wisdom the

8. Even if the rapid travel of motifs and artistic observations in this period is rarely attested in written sources, we know how well-connected the centers of artistic innovation were at the time. See O. Pächt, "A Giottoesque Episode in English Medieval Art," *Journal of the Warburg and Courtauld Institutes* 6 (1943): 51–70.

9. W. Kemp, *Die Räume der Maler: zur Bilderzählung seit Giotto* (Munich, 1996); D. Summers, *Vision, Reflection and Desire in Western Painting* (Chapel Hill, 2007); M. Kemp, *The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat* (New Haven, 1990); M. Baxandall, *Painting and Experience in Fifteenth Century Italy: A Primer in the Social History of Pictorial Style* (Oxford, 1972).

author would uncover was, in the end, wisdom about blood.¹⁰ Several medical and alchemical tracts attributed a revelatory effect to blood, offering hidden insight and knowledge. According to Galen, it was the liquid responsible for the equilibrium of all the other bodily fluids. He believed that blood was produced in the liver out of food, then cooked and used as it flowed through the body. Its precise functions were, however, the subject of controversy. Practitioners of humoral pathology—which was based on doctrines derived from the Hippocratic corpus—used blood (like other visible secretions, including sperm, urine, and breast milk) to gain insight into and regulate the interior condition of the body, particularly through bloodletting. Humoral pathology gained in popularity once ancient and Arab writings were made available by the school of Salerno, Spanish scholars, and Scholastic thinkers.¹¹ Scholars of medicine, theology, philosophy, and alchemy agreed on blood's essential contribution to the genesis of life, but they disagreed about how it functioned. In the twelfth century blood was considered a “closed” system,¹² but it was not understood as circulatory until William Harvey identified it as such in 1628.¹³

Against this background, it is no surprise that blood was adopted as the prime material in attempts to create artificial organisms. Roger Bacon, in his commentary on the pseudo-Aristotelian *Secretum secretorum*, stated that human blood was the basis for almost any alchemical operation. According to Johannes de Rupescissa the “quintessence” (*quinta essentia*) transforms blood

10. “Bartholomäus,” in *Zwei deutsche Arzneibücher aus dem XII. und XIII. Jahrhundert*, ed. F. Pfeiffer, Sitzungsberichte der österreichischen Akademie der Wissenschaften Wien, Philosophisch-Historische Klasse 42 (Wien, 1863), pp. 20–51. The bases for this compilation were mostly writings and translations of Salernitan origin. See also B. Bildhauer, *Medieval Blood* (Cardiff, 2006), p. 173, and W. L. Wardale, *The High German “Bartholomaeus”* (Dundee, 1993).

11. G. J. Grudzen, *Medical Theory About the Body and the Soul in the Middle Ages: The First Western Medical Curriculum at Monte Cassino* (Lewiston, NY, 2007); J. Vernet, *Die spanisch-arabische Kultur in Orient und Okzident* (Zürich/Munich, 1984); M. R. McVaugh, *Medicine Before the Plague: Practitioners and Their Patients in the Crown of Aragon, 1285–1345* (Cambridge, 1993), pp. 38–40; L. García-Ballester, R. French, J. Arrizabalaga, and A. Cunningham, *Practical Medicine from Salerno to the Black Death* (Cambridge, 1994); N. Siraisi, *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice* (Chicago, 1990).

12. Wilhelm of Conches described it in the *Dragmaticon Philosophiae* as composed from the purest substance of the whole body; see D. Jacquart and C. Thomasset, *Sexualité et savoir médical au moyen âge* (Paris, 1985), pp. 75–78.

13. M. H. Shank, “From Galen’s Ureters to Harvey’s Veins,” *Journal of the History of Biology* 18 (1985): 331–355.

into innocent and healthy flesh. Blood is also the raw material for alchemical and medical elixirs in tracts such as the *De sanguine humano*, attributed to Arnald of Villanova.¹⁴

Throughout the thirteenth century in medieval Europe, bloodletting overtook other medical treatments like cautery and cupping.¹⁵ A practice known since antiquity, bloodletting was meant to regulate the imbalanced relationship between man and the micro- and macrocosmos, by restoring the equilibrium of the bodily fluids.¹⁶ One decided where and when to cut the skin based on the position of the moon and the influence of the zodiac on the parts of the body.¹⁷ Though illustrations of bloodletting or depictions showing the veins and arteries were originally unrelated to diagrammatic depictions of men with the signs of the zodiac, the two forms soon merged.¹⁸

The oldest depictions of bloodletting, dating to the thirteenth century, are similar to illustrations of surgical procedures. The so-called *Aderlassmänner* (bloodletting-men) were not shown within narrative scenes but rather as diagrams included in many encyclopedic and medical manuscripts. These drawings were made either

14. L. DeVun, *Prophecy, Alchemy and the End of Time: John of Rupescissa in the Late Middle Ages* (New York, 2009), p. 119.

15. H. A. Erchenbrecher, *Der Salernitaner Arzt Archimathaeus und ein bis heute unbekannter Aderlasstraktat unter seinem Namen*. *Cod. Berol. lat. 4 No. 375 aus dem Inst. f. Gesch. d. Med. an d. Univ. Leipzig* (Leipzig, 1919); M. Urban, *Zur Geschichte des Aderlasses* (Prague, 1905); D. Krause, *Aderlass und Schröpfen: Instrumente aus der Sammlung des Karl-Sudhoff-Instituts* (Aachen, 2004).

16. *Affaires de Sang*, ed. A. Farge (Paris, 1988); *Blood in History and Blood Histories*, ed. M. Gadebusch Bondio (Florence, 2005); *Le Sang au Moyen Age: Actes du Quatrième Colloque International De Montpellier, Université Paul-Valéry* (Montpellier, 1999); Bildhauer (see note 10); C. W. Bynum, *Wonderful Blood: Theology and Practice in Late Medieval Northern Germany and Beyond* (Philadelphia, 2007).

17. The *Fasciculus medicinae* stresses that bloodletting should never be performed during a full or new moon. Furthermore, the blood should not be let if the moon is standing in the sign that has an influence on that particular part of the body. Preferred periods are the phases when the moon stands in the signs related to air or fire; less ideal are the earth and water signs. See Petrus de Montagnana, *Degnissimo fascicolo de medicina* (Venice, 1493).

18. See K. Sudhoff, *Tradition und Naturbeobachtung in den Illustrationen medizinischer Handschriften und Frühdrucke* (Leipzig, 1907), pp. 30–39. An early example (beginning of the thirteenth century) is the series of illustrations of the months in the Augsburg Psalter; see H. Dormeier, “Bildersprache zwischen Tradition und Originalität. Das Sujet der Monatsbilder im Mittelalter,” in “*Kurzweil viel ohn’ Maß und Ziel.*” *Alltag und Festtag auf den Augsburger Monatsbildern der Renaissance*, ed. H. Boockmann (Munich, 1994), pp. 102–127.

for the instruction of barber-surgeons or as illustrations of tracts collecting, extending, and spreading medical knowledge.¹⁹ The illustrations for barber-surgeons provide information about precisely located spots on the displayed body. They indicate where barber-surgeons are supposed to cut into the flesh, regulating the equilibrium of the bodily liquids by letting the blood flow at specific locations. Some illustrations are combined with instructions on performing surgical operations and applying bandages. Especially in later times the reddish lines were drawn liberally and did not provide very precise information about where to set the knife.²⁰ In these cases, further information is often added regarding star constellations, zodiac signs, and other aspects relevant to the supposed causes of illnesses. Despite their diagrammatic form, they often show wounds with fresh blood that seems to be about to dry or coagulate.²¹ Many examples survive from the fourteenth century on, some of them even bloodstained and so clearly used in surgical practice.²²

The idol metaphor

Giles of Rome, as mentioned, compared the effect of sperm to the power of artistic imagination. According to Giles, sperm carves different components out of the blood, just as the sculptor produces different sculptures

(*ydoli*) out of one and the same chunk of wood.²³ Here, artistic action inspires natural genesis, rather than vice versa: Giles's metaphor of the idol-carver explains and "pictures" the unseen mysteries of life in utero. What does the metaphor of the idol mean in Giles's text? It first crops up in the second chapter, in an elaboration on the ninth book of Aristotle's *Metaphysics*. In this section he elaborates on the primordial mover, a heavily disputed topic in the years before 1277, when the Parisian authorities tried to suppress certain scientific debates. He argues that when making statues (*statua*) from ore or copper the artist needs a figure in his mind or soul (*forma in mente sive anima*) to shape an image out of matter (*forma ydoli in materia*).²⁴ Aristotle uses the term *eidōs*, which was translated by William of Moerbeke (died 1286) as "species," a term that subsequently dominated the discussion about visual perception.²⁵

The difference between Aristotle's and Giles's terminology is significant. It not only provides the key to understanding the differences in how they understood the concept, but also tells us which "Aristotle" Giles actually read. *Ydolum* is used in Averroës's commentary;²⁶ it manifests a truly tricky word choice, because in medieval Latin the term had the connotation of a "false image," although in translations from Greek it may indicate the attempt to emphasize the imaginary nature of the image in the mind (*eidolon*), demarcating it clearly from existing images (*pictura, imago, statua*). Furthermore, while Aristotle only speaks of *techne*, with no explicit reference to an artisan, architect, or artist, the term used by Giles, *statua*, clearly refers to a three-dimensional sculpture, and *artifex* to its maker.

It is evident from this passage that Giles is not only drawing a distinction between the forming of an image in the mind and the shaping of a statue, but also reflecting on the primordial matter required for the making of statues: not earth, but bronze or copper ore. In doing

19. Examples include a surgeon and student performing bloodletting on a man's arm from Rolandus Parmensis, *Chirurgia*, ca. 1300, Rome, Bibl. Casanatense MS. 1382, fol. 20r; a pen drawing of a nude bearded man with parts of the body indicated for bloodletting, *Miscellanea Medica* XVIII, early fourteenth century, Wellcome Library, MS.544, fol. 276; three pages of a manuscript showing a bloodletting figure, *Calendarium*, late fourteenth century, Wellcome Library, WMS 39.

20. K. Sudhoff, *Beiträge zur Chirurgie im Mittelalter. Graphische und textliche Untersuchungen in mittelalterlichen Handschriften*, vol. 1 (Leipzig, 1914), pp. 144–219. For a late, but particularly freely drawn example (1442–1448), see Konrad von Megenberg's *Buch der Natur*, Cod. Pal. germ. 300, fol. 3v (frontispiece).

21. Most prominently: Wundenmann, Pseudo-Galen, *Anatomia*, England, mid-fifteenth century, Wellcome Library MS.290, fol. 53v. The manuscript contains several illustrations focusing on different aspects of veins, arteries, etc.

22. Astronomical calendar, Nicholas of Lynn, after 1387, Bodleian Library, MS. Ashmole 789, fol. 365r. Many medical treatises were accompanied by bloodletting tables to calculate the right time, e.g., Bodleian Library, MS. Ashmole 1434, fol. 19v, second half of fifteenth century. See V. Conticelli, "'Sanguis suavis': das Blut zwischen Mikro- und Makrokosmos," in *Blut: Kunst, Macht, Politik, Pathologie*, ed. J. M. Bradburne (Munich, 2001), pp. 55–64. Not only humans but also animals were treated by bloodletting; see the drawing at the Kuperstichkabinett in Berlin showing a horse whose blood is let at both sides of its throat.

23. Aegidius Romanus (see note 2), X.137.

24. *Ibid.*, p. 61: "Generans ergo ydolum, ut artifex a cuius forma in mente sive in anima fit forma ydoli in materia, si debeat ex terra facere ydolum indigebit motore alio quia indigebit corpore celestis, ut Commentator ibidem declarat. Si enim per artificem ut per facientem statuas debeat fieri ydolum, sive statua ex terra, primo vertus celestis alterabit venas terre et generabit inde [a]les vel cuprum et postea ex illo cupro artifex faciet ydolum."

25. Nicolai Oresme, *Expositio et quaestiones in Aristotelis De Anima*, ed. B. Patar (Louvain/Paris, 1995): ". . . si quidem ab arte, species est que in anima."

26. Averroës Latinus, *Commentarium Magnum in Aristotelis Librum septimum (Vindobensis, lat. 2334)*, ed. H. Schmieja (Paderborn, 2007), 37:13–28.

so, he is including thoughts on the origin of Aristotle's primordial movement (*motor*) and its effect on matter.²⁷ His use of a concrete metaphor (the creation of statues) for the generation of human life seems significant. He refers to the process of making images rather than to an already existing statue of an ancient deity. Nor does he use the term *imago*, which played a key role in theories of divine acts of creation and the creation of the essence of being (*esse essentia*), familiar from the context of Duns Scotus and other commentators of Aristotle.²⁸

Giles begins his investigation into what happens in the uterus by laying out his premises regarding the transformative capacity of matter. In nature, one matter can turn into another matter or into many different matters. The same matter can be hardened or made liquid by the sun, which he compares with clay (*lutum*).²⁹ Clay is hardened by the sun or made liquid and malleable again through the addition of water. He then emphasizes that an artist can create different things out of the same piece of wood, for example, a horse or a human figure; he shapes it by the use of artistry and intellect (*ars et actio intellectus*).³⁰ Spirit and sperm (*spiritus emissus cum spermate*), so Giles argues, have the same creative power and can turn menstrual blood into bones, nerves, and flesh.³¹ This is true, according to Giles, because all works of nature reflect the intellect (*refulget opus intelligentie*). As such, natural acts of creation can be compared with artistic creation or works of art (*quasi opus artis*). Blood functions both as matter and as nurturing agent. The virtue of the father's soul gives the fetus shape and animates it (*inducit animam*).³² Such writings contributed to a larger ongoing debate that combined ancient thinking, new scientific insights, and

theological arguments.

Scholarly writings on the prime mover, the animation of heaven, and the origin of angels among others fueled the battle, leading to the bishop of Paris, Étienne Tempier, condemning 219 theories in 1277.³³ After that Giles left Paris and made his way to Italy, where from 1281 he played an important role in the Augustinian order. In 1285 he was in Tuscany as the vicar of Clement of Osimo, the prior general of the order, and took part in various chapters held in Italy. When Benedict Caetani became Pope Boniface VIII, he appointed Giles archbishop of Bourges. These areas—the territory of the duchy of Berry, Avignon, Tuscany, Umbria, Latium, and the cities of upper Italy, as well as the lands along the routes connecting the kingdom of France to Italy—will be the theater of the next acts in an unfolding liquid history of blood, from this point on based on observations made by painters and on the paintings themselves.

Seeing Christ's blood flow

The Florentine painter Pacino di Bonaguida used a combination of golden rays and dripping blood to represent transformative power. This is the case not only in his famous panel at the Accademia in Florence known to art historians as the Lignum Vitae, (based on the text by Bonaventure³⁴) but also in the somewhat later Chiarito Tabernacle (fig. 1).³⁵ The central panel of this altar was executed in the rarely used technique

33. The list included several ideas related to those expressed by Giles in his writings, e.g. nos. 10, 14, 44, 188. See H. Denifle, *Cartularium Universitatis Parisiensis*, vol. 1 (Paris, 1889), pp. 544–554. For the debates among the Franciscans Bonaventure, Petrus Johannes Olivi, Francis of Marchia, and Richard of Middleton, positioning their ideas between Aristotle and Augustine: N. Schneider, *Die Kosmologie des Franciscus de Marchia. Texte, Quellen und Untersuchungen zur Naturphilosophie des 14. Jahrhunderts* (Leiden, 1991), pp. 162–183; K. Flasch, *Meister Eckhart. Die Geburt der "Deutschen Mystik" aus dem Geist der arabischen Philosophie* (Munich, 2006), pp. 72–73.

34. Bonaventure "was less deeply read in the Aristotelian and Islamic philosophical texts than his Dominican contemporaries, Albert and Thomas," and had left Paris in 1257 before the waves of theological controversy surged high. Giles of Rome was familiar with his writings, and both were indebted in crucial aspects of their thought to Augustinian views. P. Prassel, *Das Theologieverständnis des Ägidius Romanus O.E.S.A. (1243/7–1316)* (Frankfurt, 1983), p. 99. For a discussion of the *Lignum Vitae* by Pacino see B. Fricke, "Illuminating Origins, Representing Effect: Tracing Lines Between Natural and Artificial Life in Late Medieval Painting," in *Images at Work*, ed. H. Baader, A. Jones, I. Weinryb, and G. Wolf, *West 86th* (forthcoming).

35. This triptych was commissioned in Italy around the 1340s by Chiarito del Voglia, a layman who likely wanted the piece for his own

27. Aegidius Romanus (see note 2), p. 61.

28. For example, Henry of Ghent describes God's capacity of full cognition, including his ability to see a being as a thing (*res*) in its essence (*in sua essentia*), and not just what it appears to be (*imago*). Henry of Ghent, *Quodlibet*, IX q. 2, ed. R. Macken, *Opera*, vol. XIII, p. 27. Cf. T. Hoffmann, *Creatura intellecta: Die Ideen und Possibilitäten bei Duns Scotus mit Ausblick auf Franz von Mayronis, Poncius und Mastrius* (Münster, 2002), p. 120.

29. Christian authors since Lactantius carefully differentiated between *limus* and *lutus*. According to Genesis, God made the first man out of mud from earth (*ex limo terrae*), but in mythical (Prometheus) and legendary writing about artists, clay (*de luto*) is used. See Lactantius, *Divinae Institutiones*, cap. XI, PL VI, I, col. 312; and Aegidius Romanus (see note 2), p. 137.

30. Aegidius Romanus (see note 2), p. 137.

31. Albertus emphasized the relationship between *sperma* and *cerebrum*; see *Quaestiones de animalibus*, XV, quaest. 14.

32. Aegidius Romanus (see note 2), p. 138.



Figure 1. Pacino di Bonaguida, *The Chiarito Tabernacle*, 1340s. Gilded gesso and tempera on panel, 101.3 x 113.5 cm. The J. Paul Getty Museum, Los Angeles. Photo: Courtesy of The J. Paul Getty Museum.



Figure 2. Detail of fig. 1. Photo: Courtesy of The J. Paul Getty Museum.

of gilded gesso relief. The composition shows the Apostles receiving Communion from rivulets of blood that emanate from Christ's navel. In a painted scene immediately below the gesso relief, the donor Chiarito

takes part in this Holy Communion, indicated by a rivulet that runs from Christ's navel into his mouth. The left panel displays scenes from the Passion. In the right panel, Chiarito and others listen to a monk preaching. During the sermon, Chiarito sees the blood of Christ flow down from the Trinity as Communion for the gathered crowd (fig. 2). Not only men but also women are experiencing a spiritual conflation of time; they "participate" in the the Crucifixion through a vision, even though more than a thousand years have passed. As Caroline Walker Bynum has described, "Mystics (especially women mystics) who were denied access to the cup at mass repeatedly experienced both the flooding of ecstasy through their limbs and the taste of the wafer in their mouths as blood."³⁶

What is interesting about this work is that the patron is not only depicted in the altar panel as a supplementary figure, but is also shown partaking of the Mass. Active

private chapel. C. Lakey, "The Curious Case of the Chiarito Tabernacle: Observations Toward a New Interpretation," *Getty Research Journal* 4 (2012): 1–12.

36. Bynum (see note 16), p. 4, and idem, *Holy Feast and Holy Fast: The Religious Significance of Food to Medieval Women* (Berkeley, 1988). On the mystic's significance for the production and reception of related works of art, see J. Hamburger, *The Visual and the Visionary: Art and Female Spirituality in Late Medieval Germany* (New York, 1998).

participation replaces the pictorial commonplace of a donor figure simply gazing at the host. The participants are receiving the blood of Christ; Pacino shows them eating and drinking, not just looking. In the center panel the beholder participates in a vision of a Christ without wounds, not yet crucified, emanating golden rays instead of streams of blood. Even as it refers to past events (the Last Supper and Pentecost), this vision, illuminated by the materiality of the gilded gesso, points to the future, to the true nature of Christ. In the side panels, time has resumed: Here we find a depiction of the crucified, a vision of a past event. Thus two temporal modes cross each other in the “reading” of the panel. The spheres of miraculous vision and experienced reality during the Mass are fully merged.

A comparison may illuminate how unusual this fusion of vision and reality was. Artists dealt in this period very carefully with the different realities involved. This is made clear by a miniature in a Mass tract illuminated in the mid-1320s (fig. 3). The visionary sphere is surrounded on two sides by a frame and involves two streams of blood, one aimed at the elevated host and the other at the veiled chalice on the altar. The blood is part of a vision, as the use of the subjunctive in the accompanying text makes clear: “And therefore, when you approach the altar to be communicated, receive his body there truly as if you received it from his side.”³⁷ The split flow of the blood is highlighting the spiritual truth of Christ’s living body. But the blood remains in the visionary sphere, as marked by the frame around the crucifixion on the altar.

In the case of the Mass in the Chiarito triptych, the relationship between time and space is evidently different from what the picture might initially suggest, and this difference is emphasized by the unnatural or supernatural flow of blood (unnatural in terms of realistic representation, supernatural in terms of time). Christ’s blood coming out of a host over a millennium after his death is a miracle and therefore, in a period with a particular interest in representing nature, a peculiarity.

Blood is an especially appropriate material for the representation of different temporal dimensions within the same picture. It stays “alive” and wet for some time after the body’s death before it dries. Miracles involving Christ’s blood were attested in many Italian cities, including Florence. The most famous sites for

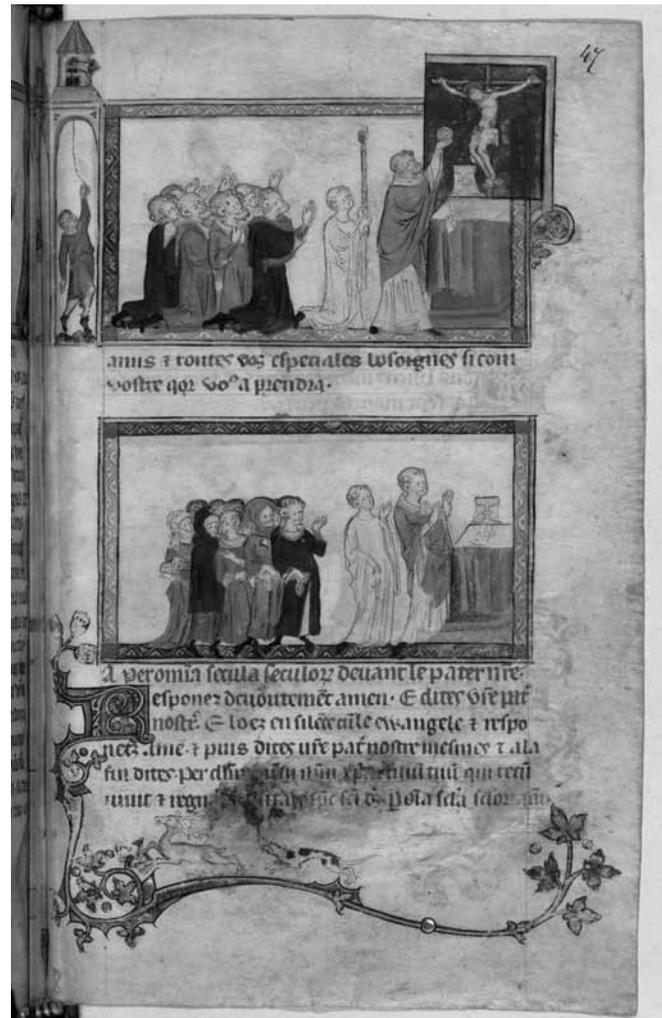


Figure 3. Master of the Queen Mary Psalter, Mass tract, mid-1320s. Manuscript illumination on parchment. Bibliothèque nationale de France, Paris, MS fr. 13342. Photo: Courtesy of the Bibliothèque nationale de France.

the veneration of blood were in Mantua, Naples, and Weingarten. These miracles emphasized the peculiar capacity of the dried blood of Christ for reanimation or reliquification.³⁸ Even blood that was merely like Christ’s

37. M. Camille, *Gothic Art: Glorious Visions* (London, 1996), p. 109; A. Kumler, *Translating Truth: Ambitious Images and Religious Knowledge in Late Medieval France and England* (New Haven/London, 2011), p. 136.

38. See *Festschrift zum Heilig-Blut-Jubiläum am 12. März 1994*, ed. N. Kruse and R. Schaubode (Sigmaringen, 1994), herein: N. Kruse, “Der Weg des Heiligen Bluts von Mantua nach Altdorf-Weingarten,” pp. 57–76, and L. Weichenrieder, “Das Heilige Blut von Mantua,” pp. 331–336; G. Vitale, “Il culto di S. Gennaro a Napoli in età aragonese. Una rilettura delle fonti,” in *Campania Sacra* 20 (1989): 239–267. Giovanni Villani reported a blood miracle at Sant’Ambrogio in Florence on December 30, 1229. Though he described the event as a miracle,

blood seemed to have miraculous power: From the thirteenth century on, flagellants strove for a drastically mimetic relationship to Christ. Crowds of men traversed cities all over Europe with their own blood streaming, “tearing out of their own flesh the suffering and joy of union with Christ.”³⁹ In the context of this increased interest in blood, painters began to represent actual physiological mechanisms. Might these depictions of real phenomena have been understood as something like the physiological reproduction of miracles, allowing viewers to experience blood miracles with their own bodies, their own eyes, as shown in the Chiarito triptych?

To answer this hypothetical question, I will use a twofold approach. First, I will take an example of a vision in which the flow of blood indicates the “reality” of the seen. Second, I will analyze the aforementioned visual paradox, whereby the “naturalistic” depictions of blood clash with the illusion of representation. For the lively flow of blood—fresh lines drawn on a dead body—works against the idea that the picture shows one particular moment. In these pictures, fresh blood still pulses out of the side-wound with fervor, pumping new streams of blood even when the body is already dying or even dead, showing the first signs of rigor mortis. This analysis will address pictures from around 1300 as well as some from the second peak of naturalism in late medieval art, during the first half of the fifteenth century, by Jean Malouel, Henri Bellechose, Bernat Martorell, and Giovanni di Paolo.

An unfinished love poem and five bleeding crucifixes

In 1321/22, Thomas Le Myésier compiled important writings by his teacher, Ramon Llull, and ordered a series of illuminations for the beginning of the manuscript, opening his commentary with a remark about his intentions and why the twelve pictures had been added.⁴⁰ The manuscript also includes statements about

he also explicitly mentioned the elderly priest Ugucione who did not shake the chalice well: G. Villani, *Cronica di Giovanni Villani: a miglior lezione ridotta coll'aiuto de'testi*, ed. I. Moutier and P. Massai, 8 vols. (Florence, 1823; Rome, 1980), vol. 2, pp. 13–14.

39. Bynum (see note 16), p. 4. For a deep and sophisticated elaboration of the flagellant culture, see N. Largier, *Lob der Peitsche. Eine Kulturgeschichte der Erregung* (Munich, 2001).

40. *Breviculum*, Badische Landesbibliothek, Cod. St. Peter perg 92, fol. 1r. English translation in R. Llull, *A Contemporary Life* (Barcelona, 2010), p. 7: “The intention for which I have had the following pictures made was double: the first intention was to make known the origin of this art, as well as of the other arts and books of Ramon. The second purpose was to give solace, because the study of such things



Figure 4. *Breviculum ex artibus Raimundi Lulli electum*, after 1321. Manuscript illumination on parchment, 34.5 x 28 cm (folio). Badische Landesbibliothek, Karlsruhe, St. Peter perg. 92, fol. 1v. Photo: Courtesy of Badische Landesbibliothek.

ongoing quarrels between innovative and conservative Aristotelians. Llull and, even more so, his student Le Myésier, belonged to the latter camp. As conservative Aristotelians they fought against the tower of untruths—like in the battle between Aristotle and Averroës depicted in the manuscript.

The first of the illuminations commissioned by Le Myésier is located at the beginning of Llull’s biography (*Vita coetanea*)—which prefaces the collection of his texts entitled the *Breviculum*. It shows a man, a bed, an unfinished love poem, and five crucifixes (fig. 4). The lovelorn man, who occupies a chair beside his bed, has paused in his writing. He raises his head to face a series of five crucifixes, increasing in size from

inspires the soul to do good things and to do them well.” For the date and localization of the manuscript (and the debate about it), see Hasler, pp. 36–40, with a bibliography: R. Hasler, “Die Miniaturen des *Breviculums*,” in *Electorium parvum seu Breviculum*, vol. 2, *Kommentar zum Faksimile* (Wiesbaden, 1988), pp. 33–88.

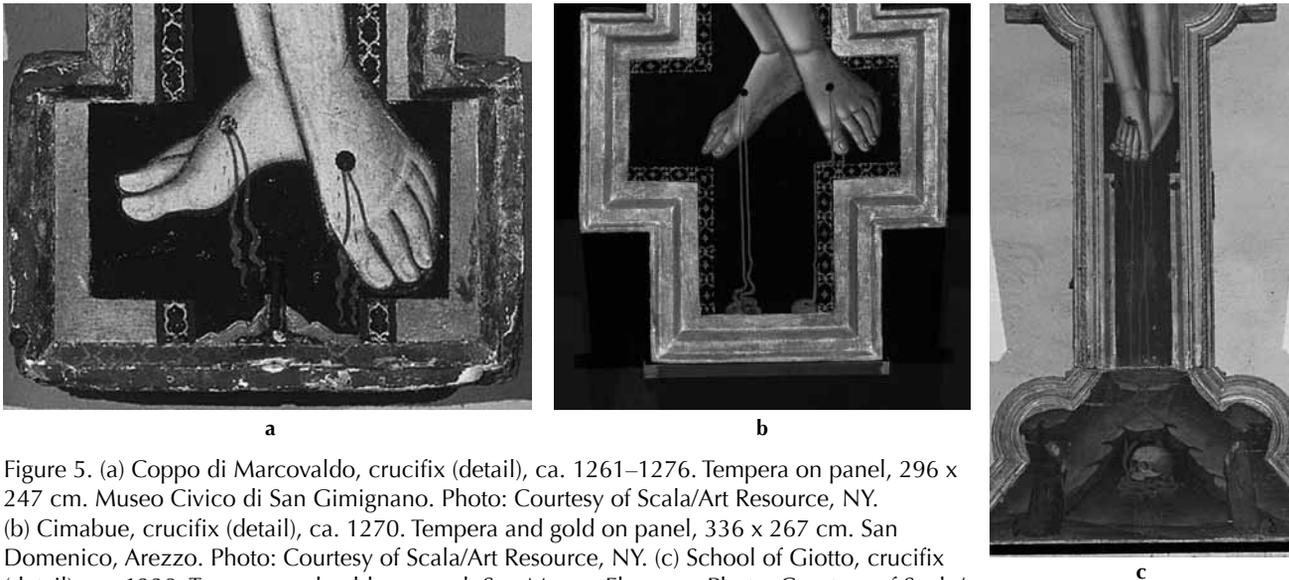


Figure 5. (a) Coppo di Marcovaldo, crucifix (detail), ca. 1261–1276. Tempera on panel, 296 x 247 cm. Museo Civico di San Gimignano. Photo: Courtesy of Scala/Art Resource, NY. (b) Cimabue, crucifix (detail), ca. 1270. Tempera and gold on panel, 336 x 267 cm. San Domenico, Arezzo. Photo: Courtesy of Scala/Art Resource, NY. (c) School of Giotto, crucifix (detail), ca. 1320. Tempera and gold on panel. San Marco, Florence. Photo: Courtesy of Scala/Art Resource, NY.

left to right. It is ambiguous whether the man is seeing five different crosses, or the same cross coming closer and closer. The text clarifies the situation, explaining that Christ appeared larger and larger (in other words, closer) to Llull every night: “Llull, composing his song and looking up at the five [sequential] apparitions of the crucified Christ, says that the figure of Christ on the cross appeared larger, bloodier, and more wounded than before.”⁴¹ But another element in the picture reveals that the sequence of crosses emphasizes not only an increase in scale and proximity, but also a movement in time: The flow of blood intensifies with each crucifix. That on the far left has just a few drops of blood, but as our eyes move to the right, we see that the life fluid pours out from the fountain of the side wound and around the three nails in ever more strongly pulsing streams. The five crucifixes, then, are lined up not spatially but temporally. The beholder is seeing not five repetitions of the same event, but five different stages of Christ dying on the cross, as witnessed by Llull over five consecutive nights. The painter thus adopts a custom widespread in medieval painting: He combines two different modes of representation in one frame. The five crosses emphasize

that Llull, placed in a naturalistic setting, a “real” space, is having an ongoing vision.

Drying blood and the crack in pictorial illusion

The use of blood in the Chiarito triptych and in the opening miniature of Ramon Llull’s *Vita coetanea* is striking. These images rely on blood’s metaphorical references to life, animation, and at the same time to the loss of life. They participate in a larger shift in artistic representation. In Italian crucifixes painted on wood, beginning in the 1270s, we can observe an increase in painters’ interest in the representation of blood. To demonstrate this shift I have juxtaposed a series of painted crucifixes by Coppo di Marcovaldo, Cimabue, and Giotto and his school, dating from 1270 to 1310 (fig. 5a–c).⁴² In each, the crucified Christ loses rivulets of blood from his hands, the wound in his side, and his feet. In numerous paintings over the course of the fourteenth century, these lines undulate across his body. Even if they spurt and drip at first, their flow

41. Llull (see note 40), p. 32 (“maior quam ante et magis sanguinolentus atque magis vulneratus”). See also W. Büchel and T. Pindl-Büchel, “Die Texte innerhalb des Miniaturenzyklus,” in *Electorium parvum seu Breviculum* (see note 40), p. 115.

42. For an overview of the state of research and a bibliography, see K. C. Schüppel, “*Pictae et sculptae*: Tafelkreuze und plastische Kreuzfixe im lokalen liturgischen Kontext; die Städte Lucca, Arezzo und Neapel,” in *Römisches Jahrbuch der Bibliotheca Hertziana* 38 (2010): 77–112; idem, “Von der Toskana nach Sizilien, von der Ikonographie zur Medialität: Aspekte der Tafelkreuzforschung im Jahrhundert nach Evelyn Sandberg-Vavalà,” *ibid.*: 51–52.



Figure 6. Giotto di Bondone, crucifix, ca. 1310. Tempera and gold on panel, 578 x 406 cm. Santa Maria Novella, Florence. Photo: Courtesy of Scala/Art Resource, NY.

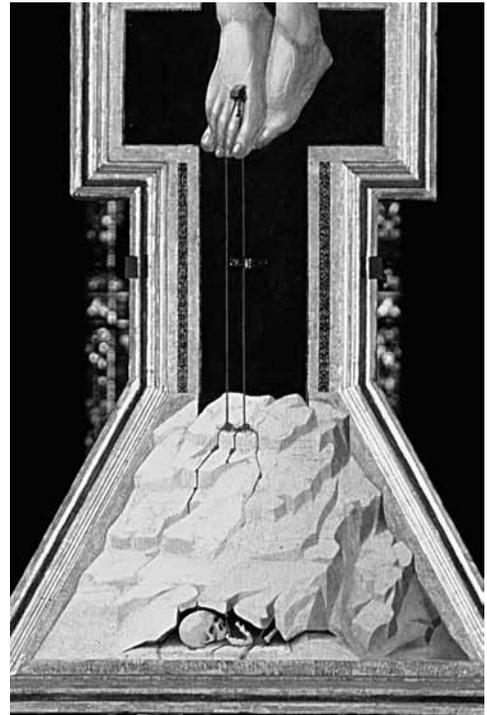


Figure 7. Detail of fig. 6. Photo: Courtesy of Scala/Art Resource, NY.

is represented in curved, downward-running lines. Whereas Cimabue heaps up the trails of blood, the painter of the cross at San Marco in Florence plays with the intertwining runnels, using folds of cloth and stone to make the lines of blood disappear and reappear.⁴³

In Giotto's crucifix at Santa Maria Novella (fig. 6 and fig. 7) the blood is even more strongly emphasized. While the stiff, dead body hangs heavily on the cross, the bowed head lacking the strength to support itself below the heavy disc of the nimbus, the pulsing blood seeks openings to escape the body. Giotto's lifelike depiction of blood exemplifies his employment of illusionism; the bleeding parts are the most animate element in the picture. With the vividness of these red lines, the painter tries to counterbalance the stiffness of the corpse. Two different shades of red are used for illusionistic purposes to emphasize the spatial differentiation between the origin of blood (the wound) and its projection into

the air; the arch of blood tinted with the lighter red distinguishes it from that running along the surface of the body. Here, the two tones of red do not emphasize the different (temporal) moments of blood flowing out of the body, but contribute to the spatial illusion. A thick drop of blood sits on the second toe of his right foot. A massive gush of blood exits the wound in Christ's side, as though Longinus had just then used his lance to see whether Christ was still alive—a hope that his mother and John have already abandoned, for they are wrapped in grief. At the arms of the cross, the rivulets of blood are painted in two different tones of red: Darker paint is used along Christ's arms, while a lighter shade is used for the blood dripping downward. The streams of blood issuing vertically from his hands fall upon the cross's gilded border, just above a thin, red and blue ornamental frieze. If we read Giotto's spatial illusion literally, we find that the blood defies the laws of physics: Since Christ's limbs protrude forward, in front of the dark blue cross, the blood would have to spill not only downward but also backward—further “into” the space of the painting—in order to form these coagulating heaps upon the gilded frame. Giotto plays strongly on the allusion to blood's

43. M. V. Schwarz, “Intensität, Differenz, Authentizität: zwei Florentiner Tafelkreuze im Vergleich,” *Römisches Jahrbuch der Bibliotheca Hertziana* 38 (2010): 140–146.

metaphorical power to overcome death. He animates the stone with fine lines of blood, reading into the rock of Golgotha veins that prefigure the revival to eternal life for all, and not only that of Adam, whose skull has already received several drops of blood on the forehead, next to the jaw, and even in what once was his mouth.

In a crucifixion now in Munich, attributed to Giotto or his workshop (Alte Pinakothek, Inv. Nr. 667), two shades of red are used to indicate not a spatial but a temporal distinction between the phases of Christ's shedding of blood. Over the course of the trecento the use of two shades of red signaling a temporal distinction increased, mostly among Italian artists and in some rare cases also by northern artists. Around the turn of the fifteenth century the play with temporal layers of painted blood was fully established and reached a new level of sophistication. At the very same moment Cennino Cennini dedicated a whole entry to the technique of painting a wounded man or the wound itself, in a section that deals with the depiction of naked skin and dead bodies.⁴⁴ His precise instructions call attention to how closely blood and color are related. Blood as a liquid, viscous substance and paint as an almost phenomenological force: Both substances "regulate" bodily liquids and animate the body—the one in living bodies, the other in painted ones. There is an intuitive parallel for today's eyes between blood (with its red blood cells suspended in plasma) and pigment-based media (particles suspended in oil, tempera, or the juice of young figs). The juice of figs was for Rumohr and Hegel the "secret" of the new era of lighter painting designed to increase the vividness and naturalism of representation (*erhöhere Lebendigkeit und Natürlichkeit*).⁴⁵

44. *The Craftsman's Handbook*: ". . . make another still lighter flesh color from this light one, until you get the major accents of the reliefs up to straight white lead. And mark out all the outlines with dark sinoper and a little black, tempered; and this will be called 'sanguine.' And manage the hair in the same way, but not so that it looks alive, but dead, with several grades of verdaccio. [. . .] To [. . .] paint a wounded man, or rather a wound, take straight vermilion; get it laid in wherever you want to do blood. Then take a little fine lac, well tempered in the usual way, and shade all over this blood, either drops or wounds, or whatever it happens to be." C. Cennini, *The Craftsman's Handbook: The Italian "Il Libro dell'Arte"*, trans. D. V. Thompson (New York, 1933), p. 95.

45. G. W. F. Hegel, *Vorlesungen über die Ästhetik* (Berlin, 1838), pp. 109–110. Dürer merged these lines (the painted veins of marble and the traces of actual paint) literally by painting with "bloody" fingers dipped in red paint; Dürer did this long before Caravaggio playfully merged John the Baptist's spilled blood with his signature. Painting with actual blood, like Hermann Nitsch, is a modern phenomenon. See S.

One might follow these trails of fresh blood well into the second half of the trecento, when the return of the gold ground provided an interesting background for the depiction of blood. But painters on panel and painters on glass (the *verre églomisé*)⁴⁶ not only reanimated the gold ground—they also fell back on dramatic gestures and other features, fusing older artistic elements with more recent ones. They relied heavily on parallel developments in sculpture, such as the dramatic *mise-en-scène* showing blood streaming down Christ's body and coagulating in heaps.⁴⁷ In so doing, they seem to crimp the straightforward timeline of artistic achievement that art historians have often imposed as an overlay on the upheavals of the plague, financial turmoil, internal political crisis, and external wars.

Next to the bleeding feet of Christ we often find the figures of Saint Augustine, Saint Francis, or donors bridging the time gap between the Crucifixion and the viewer.⁴⁸ Especially at the end of the 14th century

Neuner, "Passion des Details. Symptome der Bildandacht und Spuren der Autorschaft in Albrecht Dürers Glimscher Beweinung," in *Was aus dem Bild fällt. Figuren des Details in Kunst und Literatur*, ed. E. Futscher, S. Neuner, R. Ubl, and W. Pichler (Munich, 2007), pp. 165–204.

46. E.g., the crucifixion panel in the Victoria and Albert Museum, probably made in Umbria in the 1370s. See also W.-D. Lühr, "Die Perle im Acker: Francesco di Vannucci's Berliner 'Kreuzigung' und die Eröffnung der Wunden," in *Zeremoniell und Raum in der frühen italienischen Malerei*, ed. S. Weppelmann (Petersberg, 2007), pp. 160–183.

47. For the paradoxical appearance of sculpted blood, its exaggerated representation, and the placement of red liquids in sculptural openings intended to animate the objects, see B. Fricke, *Beautiful Genesis: Creation, Procreation and Mimesis* (forthcoming). The sculpted flow of blood attracted special attention around 1500: "With its vivid rush, he [Benvenuto Cellini] contravened the determined self-containment of his hero's pose and focused his figures into two points of convulsive animation"; M. Cole, "Cellini's Blood," *Art Bulletin* 81 (1999): 215.

48. The only contemporaries of Christ shown in this position are Peter and Mary Magdalene on crosses mostly still made in the duecento. At the bottom of the painted cross at Santa Maria in Arezzo, the Denial of Peter and the risen Christ are shown next to a cock in flaming red (1250–1260). Peter and Mary Magdalene are shown next to Christ's feet on the crucifix at San Pietro in Vinculis (also called San Pierino) in Pisa (second half of the thirteenth century). See L. Carletti, *Cimabue a Pisa* (Pisa, 2005), pp. 178–179. The female figure recalling Mary Magdalene with her position and gesture also evoked a relic associated with St. Bona of Pisa: "Just two days before her death that holy woman had asked to mould her *cingulum ferreum* into an iron cross, which had been blessed by Christ's blood dropping from heaven." *Vita sancte Bone*, ch. XVII, in G. Zaccagnini, *La tradizione agiografica medievale di santa Bona da Pisa* (Pisa, 2004), pp. 126–127; M. Bacci, "Shaping the Sacred: Painted Crosses and Shrines in Thirteenth-Century Pisa," *Römisches Jahrbuch* 38 (2010): 118. A later,

painters aimed to enhance awareness of Christ's blood by including these figures, who gaze at it, reach out to touch it, and in some cases let their own blood relate to and even merge with the sacred blood shed so many centuries earlier.⁴⁹ These traces of blood perform a fictive closure of the temporal gap, as if its borders would liquefy—an astonishing quality of Christ's blood that Augustine had already emphasized.⁵⁰ In the second half of the fourteenth century, artists' continuing interest in blood is made evident by their experimentation with reddish gold glass, gilded glass (*églomisé*) with red paint (added primarily to place visual emphasis on Christ's blood), and the reddish craquelure whose subtle fissures reveal the ground below the gold.⁵¹

more dramatic example is found at Mombaroccio, Santuario del Beato Sante, attr. to Ferrer Bassa; see M. Gaeta, "Tafelkreuze des Trecento im Kontext der Orden und privater Stiftung," in *ibid.*, pp. 161–162.

49. St. Francis reaches out to touch the blood at the painted cross at Spello; in the crucifixion by Francesco di Vannuccio in Paris (1380–1385) he points to his bleeding side-wound; see A. de Marchi, in *Trente-trois primitifs italiens de 1310 à 1500*, ed. G. Sarti (Paris, 1998), p. 78. The blood of St. Augustine's lacerated heart flows together with Christ's blood at the bottom of the painted cross attributed to Nicoletto Semitecolo at Padua, Chiesa degli Eremitani, ca. 1370 (see J. and P. Courcelle, *Iconographie de Saint Augustin* [Paris, 1965], p. 51) and the cross by the Maestro della Croce at Gubbio, ca. 1400. A male donor is shown on the cross by the Maestro del Crocifisso Corsi at the Accademia in Florence, and on the cross attributed to Puccio di Simone at San Marco, Florence (see Gaeta [see note 48], p. 165). A rare case of a pietà below his feet is found on two crosses now in Palermo. One is at the Istituto delle Ancelle del Sacro Cuori di Gesù; see M. Di Natale, *Le croci dipinte in Sicilia: l'area occidentale dal XIV al XVI secolo* (Palermo, 1992), p. 26, and *idem*, "Le croci dipinte in Sicilia: dalla devozione alla musealizzazione," *Römische Jahrbuch* 38 (2010): 181. The second is at Santa Maria di Gesù, Palazzo Abatellis, Galleria Regionale della Sicilia; *ibid.*, pp. 185–186.

50. In the *Confessions*, Augustine described his conversion as a wounding of his heart by divine love: *percussisti cor meum verbo tuo, et amavi te*, 10.6.8; *Sagittaveras tu cor nostrum caritate tua*, 9.2.3. This provided the basis for two iconographic traditions of showing his heart either wounded by arrows or in flames. He emphasizes the meaning of the blood as a gift that gives life, that saturates him, and that transgresses time.

51. See Löhr (see note 47) for a discussion of the Vannucci panel in Berlin with the Crucifixion accompanied by Augustine, Mary, John, and a donor, and its lucid interplay with materiality, the chosen technique, and the painting of blood-traces, to which the inscriptions explicitly refer. He also demonstrates how widely spread the topos of blood as animating power was in the vernacular literature of the trecento, e.g., Giunta Bevegnati's account of the vision of Margherita of Cortona, describing the lance and the flow of blood as sources of inspiration (ca. 1300); the topos of the wounded heart in Bonaventure's *vitis mystica*; and the legend of Fra Giovanni overcoming his disgust of food by dipping it into Christ's blood (recorded ca. 1400 by Filippo degli Agazzari).

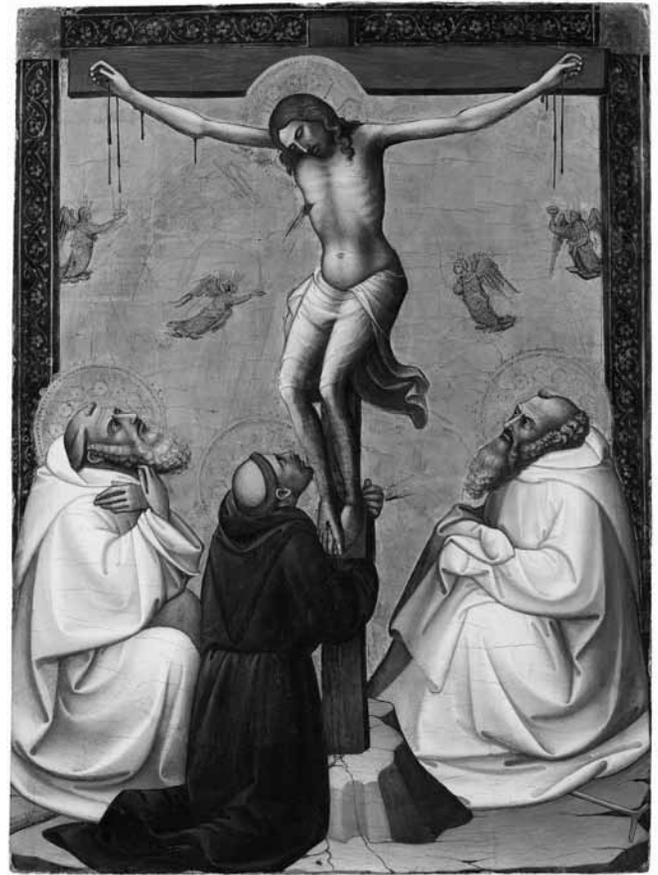


Figure 8. Piero di Giovanni, called Lorenzo Monaco, *Crucifixion with Saints Benedict, Francis, and Romuald*, 1405–1407. Tempera on poplar, 56.5 x 42 cm. Lindenau-Museum, Altenburg. Photo: Courtesy of The Lindenau-Museum.

The aforementioned break in illusion becomes even more evident in what has been described as a second wave of realism a century after the painted crosses just discussed. In his *Crucifixion with Saints Benedict, Francis, and Romuald*, Lorenzo Monaco used thickened, dripping lines of red pigment that seem almost to be three-dimensional beads of color (fig. 8).⁵² The illusion of protruding bulges of blood is created not only by the

52. The white habit of Benedict (instead of a black one) refers to the vestments of the Camaldolese monks, the order founded by St. Romuald. Lorenzo Monaco entered their monastery at Santa Maria degli Angeli in 1390, and uses the white robes to subtly refer to his own order. The painter left the monastery in 1396 and had a workshop at the vicarage of San Bartolo in Corso at Florence. For a bibliography for this work see N. Garnot, *Frühe italienische Malerei: Meisterwerke aus dem Lindenau-Museum Altenburg* (Stuttgart, 2009).



Figure 9. Henri Bellechose, *The Last Communion and Martyrdom of Saint Denis*, commissioned for the Chartreuse de Champmol, Dijon. Oil transferred from wood to canvas, 162 x 211 cm. Musée du Louvre, Paris. Photo: © RMN-Grand Palais/Art Resource, NY.

thickness of the paint, but also through the use of two different shades of red.⁵³ The lighter paint is applied more thickly to represent fresh blood; it resembles vermilion, but it is not actually paint but red lacquer.⁵⁴ It pulses out of the wounds and thickens to a round drip at the end of most of the runlets; the shorter ones are drawn only with the darker shade, while fresh cinnabar blood runs along the contours of the arms up to the elbow. The blood

53. The use of two different shades of red for fresher versus older bleedings can often be found north of the Alps as well as on the central panel of the former high altar of Heilig-Kreuz at Rottweil (ca. 1440) and in the *Grandes Heures de Rohan* (illuminated before 1435). The depictions in this manuscript show the punished and dying or dead body of Christ with fresh blood in only one shade of red (the Crucifixion [fol. 27r] and Pietà [fol. 41r]). Only for the *dead* body, in the Lamentation scene, did the Rohan Master choose different reds (fol. 135v). For a bibliography: E. König, *Die Grandes Heures de Rohan. Eine Hilfe zum Verständnis des Manuscrit latin 9471 der Bibliothèque nationale de France* (Simbach, 2006); for color reproductions: *The Rohan Book of Hours: Bibliothèque Nationale, Paris (MS. latin 9471)* (London, 1973). For the master of Rottweil: A. Fröhlich, "Rottweiler Meister," in *Spätmittelalter am Oberrhein. Maler und Werkstätten 1450–1525* (Stuttgart, 2001), pp. 53–55.

54. Lorenzo Monaco is not the only one switching to a different type of paint to enhance this effect as Cennini advised (see note 44); Giovanni da Milano used tree sap in his Pietà (Accademia, Florence) for the tears of Mary Magdalene.

splatters out of his side-wound as if Longinus had only just opened his side with his lance. Darker strokes of red are only used to distinguish the multitude of streams, not to indicate different temporal stages. Lorenzo Monaco enhances the effect of the spurting blood by scratching lines into the gold ground. The lines, which point to the chalice held by one of the blood-catching angels, are punched into the background, with some highlights in white and light shadowing in black. The scratched gold sketches out the trajectory of the blood. The effect of these lines matches the rays of the nimbi of the four flying angels occupied with collecting the blood. Splashes of blood can even be seen leaving Saint Francis's body through his stigmata, seeping through the cloth that covers his feet and spurting from his left hand. This hand tightly grasps the suppedaneum, on which Christ's fresh blood streams through his toes and is ultimately soaked up by Francis's dark robe.

Henri Bellechose, in his panel painting *The Last Communion and Martyrdom of Saint Denis*, commissioned in 1415 and completed a year later for the Chartreuse de Champmol in Dijon (fig. 9), still used the gold ground. However, his representation of the liquidity of blood went even beyond the thickening flows, showing different stages of coagulation, as his teacher Jean Malouel had done in his Pietà (fig. 10).



Figure 10. Jean Malouel (attr.), *Pietà (La Grande Pietà ronde)*, ca. 1400. Tempera on panel, 64.5 cm diam. Musée du Louvre, Paris. Photo: © RMN-Grand Palais/Art Resource, NY.

Flashing white highlights applied to the traces of blood suggest that Saint Denis had been beheaded only a moment earlier. Bernat Martorell gave even more dramatic emphasis to the different stages of drying blood and the different phases of decapitation. Due to the velocity of the strike, decapitation is an act that is barely perceptible as an event, only by its effects. The Catalan painter shows various traces left by the bouncing of the decapitated head of Saint George (fig. 11). Where the head landed on the earth, the blood is faint and has mixed with dust; but even here it has drizzled and spattered somewhat toward the right. These traces are adjacent to the runlets coming out of the neck wounds originating from the ultimate position of the saint's head. Still, there is a slippage in the temporalities indicated by the blood. While fresh blood still shoots almost horizontally out of the neck, the traces around the executioner's block are already drying, as are those around the detached head.

A similar hairline crack in illusion is reinforced by the fountain-like arc of blood in the martyrdom of John the Baptist by Giovanni di Paolo (fig. 12). The hands of the saint still clench the balustrade of his



Figure 11. Bernat Martorell, *Decapitation of St. George*, ca. 1435. Tempera on panel, 107 x 53 cm. Musée du Louvre, Paris. Photo: © RMN-Grand Palais/Art Resource, NY.

cell window, while one of the henchmen assisting the executioner grabs the tuft of John's head in order to place it on a golden plate. The two lower iron bars have been removed to make the decapitation possible. No

wooden block was necessary for the execution as in Bellechose's Saint Denis: John just had to hold his head out of the window. Below, the strong spurt of blood is still pouring out of the arteries in the neck. Although the neck muscles remain tense, the streams of blood fall vertically onto the ledge, then drip down to the tiled floor. The tiles help create spatial perspective, but the arch of blood makes the illusion of space between the bending henchman and the ledge surrounding the prison even more effective. The executioner pushes his bloody sword back into the sheath. The horizon is indicated by a white band upon which walks a man clothed in blue, just visible in the only opening of the courtyard. This reinforces the almost correct perspectival construction; the upper edge of this white path is placed at the horizontal center of the panel.

Liquid history

Since the early days of art historical scholarship, the age of Giotto has been credited with bringing the representation of the human being closer to nature, producing painted creatures that seem to be alive.⁵⁵ This is the history behind, and the premise for, the topos of the liveliness of an artwork, later an omnipresent criterion in the evaluation of art.⁵⁶ Both of the periods dealt with in this article, the turn of the fourteenth century and the first half of the fifteenth century, have

55. Vasari repeats the story told by Villani and Ghiberti of the famous fly painted by the juvenile Giotto on a face by Cimabue: G. Vasari, *Vite de' più eccellenti architetti, scultori e pittori italiani da Cimabue insino a' tempi nostri*, ed. G. Milanesi (Firenze, 1906), vol. 1, p. 409, and Hegel (see note 45), III, 3b. Based on Rumohr's *Italienische Forschungen*, Hegel describes the artistic changes between the time of Giotto and the fifteenth century, when painters like Masaccio and Fra Angelico turned increasingly to illusionism. For Hegel this achievement was grounded in, firstly, a change in the preparation of paints, and secondly to a change in approach toward individual expression and to liveliness in general, which already in the fifteenth century was recognized as a crucial innovation. See also F. Rintelen, *Giotto und die Giotto-Apokryphen* (Munich/Leipzig, 1912), p. 12.

56. *Transgressionen/Animationen. Das Kunstwerk als Lebewesen*, ed. U. Pfisterer and A. Zimmermann (Berlin, 2005); F. Fehrenbach, "Kohäsion und Transgression. Zur Dialektik des lebendigen Bildes," in *ibid.*, pp. 1–40; F. Fehrenbach, "Calor nativus—Color vitale. Prolegomena zu einer Ästhetik des 'Lebendigen Bildes' in der frühen Neuzeit," in *Visuelle Topoi. Erfindung und tradiertes Wissen in den Künsten der italienischen Renaissance*, ed. U. Pfisterer and M. Seidel (Munich, 2003), pp. 151–170; W.-D. Löhr, "Von Gottes 'I' zu Giottos 'O'. Schöpferhand und Künstlerkörper zwischen Mittelalter und Früher Neuzeit," in *Auge und Hand*, ed. J. Bilstein and G. Reuter (Oberhausen, 2011), pp. 51–76.

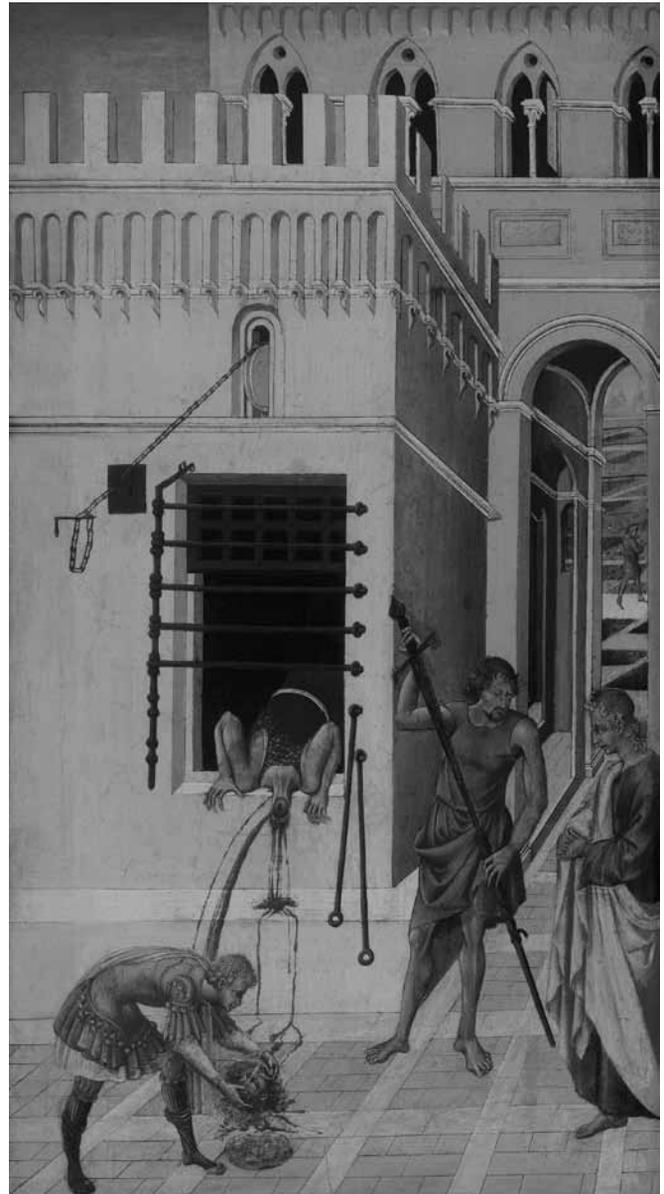


Figure 12. Giovanni di Paolo, *The Beheading of Saint John the Baptist*, 1455/60. Tempera on panel, 68.6 x 39.1 cm. The Art Institute of Chicago, Mr. and Mrs. Martin A. Ryerson Collection, 1933.1014. Photo: Courtesy of The Art Institute of Chicago.

figured prominently in art historians' assessments of the core contributions of the so-called Renaissance. Attempts to draw clear shorelines or boundaries in the flow of time from the Middle Ages to early modernity have failed for many reasons. Important studies have

shown the impact of proto-humanist movements on artistic innovations in the early or proto-Renaissance.⁵⁷ Recent reconsiderations of the Renaissance have pointed out that along with those new concepts there was an equally present counterflow—an active rooting in a self-defined past.⁵⁸ The choice of descriptive and analytic parameters in demarcating a proto-Renaissance from a Renaissance often tells us more about the periods and contexts in which they were formulated than it does about the developments being described. The rejection of Millard Meiss's theory of a break caused by the plague in 1348 has made it clear how complex these periods are, intertwined and repeatedly divided as they are by the crises caused by overpopulation, famines, diseases, and major bankruptcies.⁵⁹ Michael Baxandall has demonstrated how aware artists and scholars of the late fourteenth and fifteenth century were of the innovations made a century earlier by Cimabue, Duccio, and Giotto.⁶⁰ Around 1382, Villani was particularly interested in the scientific aspects of paintings by Giotto and his school. He described Stefano Fiorentino as a painter who optically scrutinized bodies so closely that even physicians (*physicis*) admired his powers of observation.⁶¹

57. A. L. Bolland, "Art and Humanism in Early Renaissance Padua: Cennini, Vergerio and Petrarch on Imitation," *Renaissance Quarterly* 49 (1996): 469–487; M. Kemp, "From 'Mimesis' to 'Fantasia': The Quattrocento Vocabulary of Creation, Inspiration and Genius in the Visual Arts," *Viator* 8 (1977): 384–386; A. Lee, *Petrarch and St. Augustine: Classical Scholarship, Christian Theology and the Origins of the Renaissance in Italy* (Leiden, 2012); V. Capasa and E. Triggiani, *Dante, Petrarca, Giotto, Simone: il cammino obliquo; la svolta del moderno* (Bari, 2006); M. Baxandall, *Giotto and the Orators: Humanist Observers of Painting in Italy and the Discovery of Pictorial Composition, 1350–1450* (Oxford, 1971).

58. A. Nagel and C. Wood, *Anachronic Renaissance* (New York, 2010); C. Wood, *Forgery, Replica, Fiction: Temporalities in German Renaissance Art* (Chicago, 2008). The latter scrutinizes the challenges that the "Northern Renaissance" poses to a concept of the Renaissance based on an Italo-centric view, dismissing many of the premises derived from a Vasarian or Burckhardtian hagiography.

59. D. Blume, "Die Argumentation der Bilder—Zur Entstehung einer städtischen Malerei," in *Malerei und Stadtkultur in der Dantezeit*, ed. H. Belting and D. Blume (Munich, 1989), p. 13; M. Meiss, *Painting in Florence and Siena After the Black Death* (Princeton, 1951); H. W. van Os, "The Black Death and Siennese Painting: A Problem of Interpretation," *Art History* 4 (1981): 237–249.

60. Baxandall (see note 9); E. Panofsky, *Die Renaissance der europäischen Kunst* (Frankfurt, 1979).

61. "Stefanus, nature symia, tanta eius ymitatione [valuit, ut etiam a phisicis] in figuratis per eum corporibus [humanis arterie], vene, nervi queque minutissima [liniamenta proprie colligantur et ita, ut ymaginibus suis sola [aeris atraccio at] que respiratio deficere videatur." F. Villani, "De famosis civibus," in *Il libro di Antonio Billi*, ed. C. Frey (Berlin, 1892), pp. 74–75.

The retrospective gaze of these later scholars and artists has revealed who was forgotten (and who was not) in the temporary amnesia that obscured the earlier period of change, and how profoundly they revised the ideas of their predecessors. At the same time, it underscores how the earlier epochal threshold functioned as an anchor a century later, in times that were experienced as rapid, fluid, constantly reiterating waves of change. As part of Baxandall's argument for what he called the period eye, he analyzed how the values of color pigments changed over the course of the fifteenth century.⁶² Hans Belting has looked for analogies between the two periods, but whereas Baxandall sought them in the perception of the respective beholders, Belting looks for them in the content and style of the art itself. According to Belting, the "new forms of style appearing in painting have hitherto been examined in relation to a new sense of reality (*Wirklichkeitssinn*) or the incipient autonomy of artistic form. Their internal relationship to the content they represented has received little attention so far."⁶³

Tracing the representation of blood backward through time is a kind of liquid history, the flow of which paused and swelled again in different periods. Each of the periods we have been looking at has been described by historiographers as a kind of renaissance, rebirth, or reappearance, while at the same time, using the same characterization, the two periods have been differentiated from each other. However, the history of the representation of blood cannot simply be written as a linear phenomenon linking two distant times.⁶⁴

62. Baxandall (see note 9), p. 84: "[. . .] there was some intellectual and, even more clearly, pictorial distaste for it [discrepancies in pigment quality, such as the use of expensive colors next to "cheap" ones] at the time: the tension is a characteristic part of the period. The distaste expressed itself in an argument for a pure relativity of colour. The most eloquent literary statement came in about 1430 from the humanist Lorenzo Valla, exasperated by a foolish heraldic hierarchy of colours the trecento lawyer Bartolo da Sassoferrato had pompously laid down." See also the first part of J. Keizer, "Michelangelo Out of Focus: Medievalism as Absent Life in Italian Renaissance Art," in *Early Modern Medievalisms: The Interplay between Scholarly Reflection and Artistic Production*, ed. A. C. Montoya and M. B. Bruun (Leiden, 2010), pp. 391–425.

63. H. Belting, "Das Bild als Text. Wandmalerei und Literatur im Zeitalter Dantes," in *Malerei und Stadtkultur in der Dantezeit* (see note 59), p. 23. *Wirklichkeitssinn* is a reference to W. Goetz, "Entwicklung des Wirklichkeitssinnes vom 12. bis ins 14. Jahrhundert," in *Archiv für Kulturgeschichte* 27 (1937): 33–73.

64. For the shifting meanings of blood between sacred and profane contexts in the sixteenth century, see the important study by R. Zorach, *Blood, Milk, Ink, Gold: Abundance and Excess in the French Renaissance* (Chicago, 2005).

Historians have generally considered classical antiquity to be the ur-period for the proto-Renaissance as well as the high Renaissance. Renaissance scholars are already conscious of what such historiographic constructions suppress, how they obfuscate the true sources of the energetic flow of the epoch that has just passed but leaves traces even while ebbing away. By following one chain of changes in the stream of time, an otherwise overlooked minor effect on the general direction of the current becomes manifest, like a stone in the water causing swirls on the surface.⁶⁵ In the cultural context we are examining here, that which is beneath the surface and causing the breaking of waves above becomes visible when one investigates the changes in the artistic representation of blood. The hitherto hidden connections between artistic representation on the one hand and, on the other, scientific reflection on the nature of animation, nature, and life, then becomes visible and legible.

Writings that position themselves at the juncture of art theory and historiography often involve stories about works of art that nurture the illusion of artworks being alive.⁶⁶ As contributors to the project of creating pictorial illusions of living beings, they articulated the thinning line separating nature and life from the various forms of their representation. However, these art-historical interpretations have not considered the extent to which artists and their works were involved in scientific and theological debates about the life elixirs that created, nourished, and kept the body alive.⁶⁷ Despite the fact

65. Fernand Braudel, in the preface to the first edition of *The Mediterranean*, describes his third part as Ereignisgeschichte and argues that larger currents affecting events can only be understood through the knowledge of the big silent currents in the sea's depths: "surface disturbances, crests of foam that the tides of history carry on their strong backs. The historian immersing himself into these waters faces a bizarre world without dimensions. [. . .] A world of strong passions certainly, blind like any other living world, our own included, and unconscious of the deeper realities of history, of the running waters on which our frail barks are tossed like cockle-shells. A dangerous world, but one whose spells and enchantments we shall have exorcised by making sure first to chart those underlying currents, often noiseless, whose direction can only be discerned by watching them over long periods of time." F. Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II*, trans. S. Reynolds (Berkeley, 1995), p. 21 [finished in 1939, published in Paris 1949].

66. Vasari describes Masaccio's self-portrait with emphasis on its vividness: ". . . perché, oltre il vedersi quivi in uno Apostolo che è nello ultimo il ritratto stesso di Masaccio, fatto da lui medesimo a lo specchio, che par vivo vivo, e' vi si conosce lo ardire di San Piero nella dimanda e la attenzione de gli Apostoli nelle varie attitudini intorno a Cristo, aspettando la risoluzione con gesti sí pronti che veramente appariscono vivi," Vasari (see note 55), p. 161.

67. K. Park, *Secrets of Women: Gender, Generation and the Origins of Human Dissection* (New York, 2006); P. Smith, *The Body of*

that liveliness in this period became a topos in the praise of a good artist or a successful work of art, our art theoretical sources dry up immediately when we try to grasp how artists conceived of animation and liveliness.

By pursuing blood back to its source in the living body, the artist demonstrated his knowledge of the nature, function, and effects of this essential life liquid. By tracking the painterly representation of blood back to its origin, it has become evident how this fluid witness of change was consciously used by artists.⁶⁸ The texts we have been analyzing deal principally with theoretical and scientific matters. Perhaps unintentionally, they also present art as a concurrent, even a rival, explanation of how life is generated. They perceive art as a rising power that generates ideas. The making of sculpture served Giles of Rome and others as a metaphor for the generative power of sperm acting in the invisibility of the uterus. Scholars' interest in blood's transformative power emerged in the same European cities where artists were inspired by the observation of blood and its changes as it left dying bodies. Here blood is not sanctified, but rather scrutinized by scholars and artists in the hope that it might reveal insights into the enigmatic force of life. To trace these streams of blood is to catch art in motion, in fragments, as if reflected in moving waters.

the *Artisan: Art and Experience in the Scientific Revolution* (Chicago, 2004).

68. By following painted traces of blood, I hope to catch some reminiscences of lost reflections in the sloshing waves at the edge of time. In a similar attempt to investigate the topology of artificial beings in the late Middle Ages (in the context of sorting out fantastic creatures from the shrines of encyclopedic knowledge), Albrecht Dürer placed clearly fantastic creatures at the frontiers where the elements meet—that is, at the shores of lakes, rivers, and the sea. See B. Fricke, "Schaumgeburten. Zur Topologie der creatio ex nihilo bei Albrecht Dürer und ihre Vorgeschichte," in *Das Meer, der Tausch und die Grenzen der Repräsentation*, ed. H. Baader and G. Wolf (Berlin/Zürich, 2009), pp. 33–58.