G
"o"vert Bidloo's *Anatomia Humani Corporis*, published in Amsterdam in 1685 and reissued in Dutch in 1690
as *Ontleding des menschelyken lichaams*, may not be the most accurate of the anatomical treatises produced
during the Age of Observation, but it is surely the most artistically powerful.1 The product of Bidloo's collabor-
ation with Gerard de Lairesse (1640–1711), the most celebrated Amsterdam artist of the late seventeenth century,
this handsome volume leads the reader through 241 pages of images and text. The first dissection illustration in the
volume is a page illustrating the anatomy of the skin, which is followed by multiple views of the intricate internal
structures within the head, chest, and abdomen, the male and female reproductive organs (including stages of fetal
development), the fabric and organization of the muscles, and finally the body's innermost core: the skeletal bones of
adults and children.

Bidloo (1649–1713), who had earned his medical degree in 1682 from the University of Franeker after studying
with the great Amsterdam anatomist Frederick Ruysch, was also a playwright and poet. In 1688 he would become
a lecturer in anatomy in The Hague and in the next year personal physician to the Dutch stadholder William III of
Orange, a post he continued to hold after William became king of England in 1689. Lairesse, dubbed the "Dutch
Poussin" for his classicizing treatment of antique subjects, also had close ties to the theater as illustrator of the plays
of Andries Pels, founder of an elite Amsterdam society of artists and intellectuals.2 Bidloo was responsible for the
dissections, the book's introduction, and its explanatory verbal texts, but the 105 prints designed by Lairesse are by
far the volume's dominant focus and the reason for its enduring fame.

*Anatomia*’s title page specifies that Lairesse’s drawings were made directly “ad vivum delineatis,” rather than being
borrowed from earlier images, and also names the artist, indicating that Bidloo refused to entrust any of the work to
other draftsmen despite the magnitude of the project.3 Bidloo’s instructions to his illustrator must have been crucial
to the formation of these images, but later readers would complain about both the brevity of his texts and the fact
that the superb artistic quality of the engravings is not matched by consistent scientific accuracy. As Lyckle de Vries
has pointed out, Lairesse was quite aware of his own anatomical simplifications, for in his *Grondlegginge ter Teek-
konst*, published in Amsterdam in 1701, he advised fellow painters to consult prints in an earlier, shorter treatise,
published in The Hague in 1634 by Jacob van de Gracht, which had been written for both artists and doctors.4 If the
scope of the later project encouraged these busy, successful men to work quickly, any tendency on the artist’s part to
summarize the profusion of detail in the many specimens before him clearly pushed him to think creatively beyond
the limits of merely recording them.5

 Indeed, these images linger in eye and mind because Lairesse—a dramatist and history painter accustomed to
courting audience involvement—reached far beyond the functional didactic purpose of a scientific treatise. Anatom-
ical images tended to be static and diagrammatic until the early sixteenth century, when developments in empirical
science and the spread of printed images inspired a livelier and more directly observational approach. Seeking new
ways to engage viewers in a subject likely to be distasteful to almost anyone but an anatomist, Lairesse explored how all parts of a mortal’s human remains, even the smallest and most fragmentary, can be seen to express the body's capacity to function as a living instrument. These images thus generate fresh reflection about the relationship between death and life, departing, with a few subtle exceptions, from the standard *vanitas* paintings of this period with their guttering candles, empty skulls, and stern reminders of mortality. In Bidloo’s *Anatomia* Lairesse connects his audience, in ingeniously dramatic ways, to the intricate systems within the body that give it its tenacious if transient life. At the same time he demonstrates a new and startlingly effective means of intensifying the immediacy of his illustrations by repeatedly invoking an anatomist who is never seen, yet whose active presence becomes almost palpable as one follows the course of his work.

Only in the book’s frontispiece (fig. 1) does a fully embodied anatomist appear: a female personification of Anatomy enthroned within a classical setting. Elevated upon a sarcophagus, she holds a book in her left hand and a scalpel in her right; the position of the scalpel parallels the horn blown by the figure of Fame above her while drawing attention to two skeletons at the left. At the right the sculpture of a veiled putto on a base is posed like the flayed écorché (skinless) models used to demonstrate the body's muscular system to art students.6 Below the sculpture three living putti play with a dissection drawing, a skull, and a severed arm. At the lower left, pointedly overlapping one of the skeletons, an ancient Father Time with his hourglass and scythe draws aside a large curtain to reveal the scene as if it were on a stage.7 In addition to Bidloo’s and Lairesse’s individual theatrical activities, the image recalls the performative aspect of the anatomist’s work, which, beginning in the late sixteenth century, also involved public dissection demonstrations within theaters designed especially for that purpose.8 There the audience could learn more about the wonders of Creation as they were introduced to the unseeable (and never really imaginable) organic apparatuses within their own living bodies.

The effect of such a performance, like the performances on paper in Bidloo’s *Anatomia*, must have been profound, even shocking, since the body’s internal structures can only be revealed through invasion, fragmentation, and the utter ruination of the cadaver, producing an inescapable confrontation with its vulnerability and impermanence. The male and female classical nudes (figs. 2–4) that precede Bidloo’s dissections serve to provide both a physical and a theological point of departure, intensifying the dramatic effect of the dissections that follow, for the flesh of these flawless figures is intact and their anatomical perfection appears timeless and imperishable.9 Beside the rear view of the female figure (fig. 4), a classical urn with a relief of the Expulsion from Eden conveys the idea that these idealized beings represent the original God-created state of Adam and Eve, whose fall from grace would make humanity mortal and subject to death and the bodily ruin so vividly evoked in the pages that follow.10
Figure 2. Classical Male Figure Seen from the Front: Adam. Plate 1 from Anatomia Humani Corporis (fig. 1) (artwork in the public domain)

Figure 3. Classical Female Figure Seen from the Front: Eve. Plate 2 from Anatomia Humani Corporis (fig. 1) (artwork in the public domain)

Figure 4. Classical Female Figure Seen from the Rear: Eve. Plate 3 from Anatomia Humani Corporis (fig. 1) (artwork in the public domain)
Even a selection of the visual riches contained in the *Anatomia* shows how creatively Lairesse approached this project, often making innovative use of magnifying lenses. Dissections of the skull and brain take the most prominent place with six illustrations at the start (Plates 5–10) and four at the end (Plates 89–92), beginning with two views of a the same severed head (fig. 5). Isolated within the picture space, the heads are framed by the visible plate mark within the larger expanse of the page. Here and throughout the book this difference in scale between print and page gives the images an effect of materializing dramatically within that larger visual field, while being subtly but strongly grounded by touches of shadow, as here, or by depictions of the anatomist’s pegs and pins that create the illusion of specimens attached to a table.

On this page one head is placed frontally in the foreground and the other behind it in three-quarter view, but both are seen fully and from above, as if by an anatomist at work as he successively peels away the coverings of the brain, from the scalp to the layers of the meninges, in order to prepare for dissection of the brain. In both views the slit skin, pulled down over the eyes and cheeks, gives the individualized face of what was once a young man with shaggy hair and a somber mouth the look of someone blinded—but also protected—from the procedures in progress. A subsequent page depicting the same head (fig. 6) offers a potent contrast of fullness versus emptiness, as the entire intact brain spreads its lobes like an over-ripe fruit across the foreground with the evacuated chambers of the open skull yawning behind and above it. Between them at the right is one of the many startling details in the *Anatomia* that reward close observation: the barely visible fingers of the anatomist lifting the anterior lobe of the cerebellum, which controls smell and sight, to reveal the pituitary gland beneath (fig. 7).
Within the chapter on bones near the end of the treatise, Lairesse returned to the human skull (interior and exterior) in an intensely poetic image (fig. 8). This selective, harmonious composition translates two views of the skull into reciprocal convex and concave ovals modeled by light and shadow, again seen from above. But here evocative indications of context appear, for an inkwell and pen appear at the left—or is the pen really the anatomist’s scalpel and the polished inkwell his small specimen jar? Most striking is the fact that the empty skullcap, propped against a specimen box and a sheet of music in the foreground, draws the parallel, familiar from still lifes of this period, between the transient fading sounds of music and human mortality.12

In pages that illustrate the larger, fleshy parts of the human form, the artist (as translated by the printmaker) employs an animated play of line and tone to make his images appear alive, even though the figures they depict are not. This intriguing duality is especially evident in pages in the central section of the book, where the mortal descendants of Eve appear, unobtrusively braced from above or laid out upon the anatomist’s table. In Plate 27 (fig. 9), for example, the subject appears to be seated on a bed in a natural, relaxed way, leaning slightly forward as if in meditation. With her back to the viewer she displays the complex overlays of back and shoulder muscles, defined by angled, overlapping streams of fine parallel hatchings. Only gradually does the observer notice that the body is suspended by a rope, mostly hidden under the headdress, which the anatomist has positioned around the neck. Soft folds of drapery under the buttocks and around the head and hidden face, juxtaposed with the flayed skin of the figure are reminders that skin is the body’s own clothing, shed here not by the woman herself but by the unseen anatomist at work on her mortal remains. Through the visual contrast between these internal and external claddings, with their textures of soft flesh versus the tense, smooth sheath of muscle fibers, the artist emphasizes the materiality of the body—objectifying it even as he evokes the human presence of the woman as she was in life.13

Throughout the Anatomia, the reader notices how respectfully, even tenderly, Lairesse’s depictions treat the bodies of the dead, despite the violent effects of the dissection process. This sensitivity to the objects of his study and his unwillingness to see them as merely the detritus of living beings is especially evident in his illustrations of the female body and its reproductive organs, which are given unusual emphasis in this book. Notable examples are two consecutive images (figs. 10 and 11), which evoke successive moments in the process of the anatomist’s work. In both a sharply cropped view of a female torso, placed diagonally within the rectangular picture space, includes partial exposure of the breasts and pubis, with the multiple layers of skin, fat, and muscles between them folded back to expose the uterus and parts of the surrounding organs. In the first image (fig. 10), in which the pregnant uterus fills the visible expanse of the abdominal cavity, the lower part of the woman’s face can be seen at the upper left, relaxed as if in sleep. In the second (fig. 11), her face is covered by drapery, but the uterus is now opened to reveal the fanlike placenta and the unborn child within, who seems to sleep on as if still safely enclosed and protected by the mother’s body.
As Mimi Cazort has pointed out, Lairesse controlled and confined the viewpoint in his anatomical compositions to a fixed stance with limited peripheral vision so that the illustrations are not general summations, but display "the vivid particularity of unique specimens seen at a one particular moment." In other words, Lairesse lets us see not only what the anatomist saw but how he saw it. This approach is most vividly, and by far most painfully, exhibited in the representation of an anatomized female infant (fig. 12), perhaps the unborn or stillborn child previously depicted. Laid upon a small board, propped up by an elegantly tasseled cushion or sandbag, the little corpse is held in place by ribbons that connect the umbilical cord to a metal rod projecting from the wall behind. Here the complete opening of chest and abdominal cavities displays nearly all of the internal organs, so that this tiny figure seems to bear the brunt of the anatomical excavations performed throughout the book. The dispassionate directness and unsparing specificity of the image emphasizes the anatomist's practical tools and props, but far from depersonalizing the scene, this approach, which makes the figure appear even smaller and more vulnerable, elicits a powerful response in the viewer and—one senses—must have done so in Lairesse, too. As Paule Dumaitre writes: "Il dessine exactement ce qu’il a sous ses yeux, mais quelque chose de son art, malgré lui, vient voler l’atroce réalité, il donne une âme à ce qui n’a plus une âme."
This notion of a soulless cadaver being given a soul by an artist instinctively turning away from the grim reality of death raises an important question about Lairesse's illustrations, which modern scholars have come to see as the product of a new Cartesian way of defining the body as a mechanical machine distinctly separated from the soul or spirit. Descartes's philosophical position, formulated during his residence (1628–49) in the Dutch Republic and published in 1637 in *Discourse on Method*, had profound consequences for developments in anatomical illustration. Lairesse's illustrations, with their emphasis on the internal systems and workings of the body isolated from the whole, clearly belong to this new world. And yet, probably because the artist was not a scientific illustrator but a painter accustomed to using the body to evoke story and emotion, his anatomical studies often express subtle allusions to or reminders of the animating spirit of the living body (une âme à ce qui n'a plus une âme) even in images that most strongly objectify its materiality in death.

As these widely varied examples illustrate, Lairesse's goal in his illustrations was neither to produce scientific diagrams, which are clear but fundamentally static maps of the body, nor to animate his cadavers with movement as Andreas Vesalius had done in his venerated treatise of 1543, in which skeletons and skinless models come eerily and incongruously to life, posing and gesturing within landscape settings. In Lairesse's and Bidloo's *Anatomia* the dead remain manifestly dead, so that their lifeless state can convincingly present them as specimens on the operating table of the unseen anatomist. As one leafs slowly through these pages, examining the largest and most recognizable sections of the body or its smallest and most fractured parts, the illustrations begin to impress the viewer as the product of multiple levels of creation: foremost, to any seventeenth-century viewer, they would have been understood as representations of the work of the Creator responsible for devising the infinitely lovely and complex machinery of the body. For us today, the creative process most noticed and admired is found in the artist's powerful formal arrangements and the handling of line and tone that interpret each subject and give it visual eloquence. But always between the two is the anatomist himself, whose knowledge and sure hands performed the gestures, even before Lairesse made his drawings, that could bring those inner mysteries to sight. It is not surprising that hands were given close attention in the treatise, placed in angled positions and propped and pegged as if capable of movement, to display the muscles, tendons, and bones that permit the delicate maneuvers required by artist and anatomist alike (figs. 13 and 14).
ACKNOWLEDGMENTS

Alison Kettering and I have shared not only an interest in Dutch art but also the joyful yet demanding mission of teaching bright, eager undergraduates. Such encounters can encourage ventures far beyond one's instructional comfort zone, allowing a professor to take a course even as she teaches it. These reflections—the product of a recent undergraduate seminar at Vassar called “Art and Science in the Age of Vermeer”—are offered in tribute to all that I’ve learned from Alison's deep and widely ranging intellectual explorations.

Susan Donahue Kuretsky, Professor of Art on the Sarah Gibson Blanding Chair at Vassar College, received her AB from Vassar and an MA and PhD from Harvard. Recent publications include diverse articles on Rembrandt and printmaking in the seventeenth century and the 2005 exhibition catalogue Time and Transformation in Seventeenth-Century Dutch Art (Poughkeepsie, Sarasota, Louisville). She has also published a monograph on the Dutch genre painter Jacob Ochtervelt and coauthored the catalogue of Dutch paintings in the Detroit Institute of Arts.

LIST OF ILLUSTRATIONS

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Figure 2. Classical Male Figure Seen from the Front: Adam. Plate 1 from Anatomia Humani Corporus (fig. 1) (artwork in the public domain)

Figure 3. Classical Female Figure Seen from the Front: Eve. Plate 2 from Anatomia Humani Corporus (fig. 1) (artwork in the public domain)

Figure 4. Classical Female Figure Seen from the Rear: Eve. Plate 3 from Anatomia Humani Corporus (fig. 1) (artwork in the public domain)

Figure 5. Severed Head in Two Views: Dissection of the Scalp and Meninges. Plate 5 from Anatomia Humani Corporus (fig. 1) (artwork in the public domain)

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Figure 7. Detail of fig. 6, showing the anatomist's fingers lifting the cerebellum.

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BIBLIOGRAPHY


1 My thanks to Ronald Patkus, Curator of Special Collections at Vassar College, for his enthusiastic response to my suggestion that the library acquire this important book. A volume in top condition from the original 1685 edition was purchased in 2011 as the library’s “Millionth Book” to mark Vassar’s Sesquicentennial. The entire volume, from which the illustrations for this article are taken, may be accessed at http://digitallibrary.vassar.edu/fedora/repository/vassar:25503.

2 In the context of this discussion, a curious aspect of Lairesse’s appearance deserves mention. He was apparently a person of great personal charm, even something of a lady’s man, but his face (recorded in Rembrandt’s eerie portrait of 1665 in the Metropolitan Museum of Art) was an anatomical curiosity, even something of a ruin, which, according to Arnold Houbraken, horrified those who met him for the first time. The cause of his sunken saddle nose, pallid skin, and protruding forehead and jaw would not be diagnosed until the late nineteenth century: congenital syphilis, which can also produce corneal clouding, perhaps the ultimate cause of the blindness that afflicated Lairesse by 1690, forcing him to abandon painting and begin a second career as a lecturer on art theory. See Horton A. Johnson, “Gerard de Lairesse: Genius among the Treponemes,” *Journal of the Royal Society of Medicine* 97 (June 2004): 301–3.

3 The album of Lairesse’s wash drawings for this project is preserved in the Bibliothèque de l’Ancienne Faculté de Médecine in Paris and is thoroughly discussed in Paule Dumaître, *La Curieuse Destinée des planches anatomiques de Gerard de Lairesse, peintre en Holland* (Amsterdam: Rodopi, 1982). The identity of the printmaker(s) for Bidloo’s volume remains uncertain. Abraham Blooteling (1640–1690), who signed the title page with its portrait of Bidloo, may have executed the other plates, but these engravings have also been attributed to Pieter van Gunst (1659–1724). Variations in style suggest that several printmakers may have worked on the project, possibly including Lairesse himself, although the 117 known prints he produced between 1662 and 1688 are all etchings.


5 K. D. Robert and J. D. Tomlinson have suggested in *The Fabric of the Body: European Traditions of Anatomical Illustration* (Oxford: Clarendon Press, 1992), 311, that omissions or faults in the Bidloo illustrations may have been caused by the author’s inadequate supervision of the artist.

6 The presence of anatomical materials in artists’ studios of this period, such as anatomical prints and diagrams, skeletons, écorché models, and casts of antique sculptures of all or parts of the human body, is one of the many areas where seventeenth-century art and science met.

7 Alain Roy points out that Father Time is a variant of the figure of *Chronos* in Lairesse’s etched frontispiece for his *Signorum Veterum Icones* of 1671, while *Anatomia* derives from Euterpe, goddess of music, in his *Speelstukken door David Petersen* of 1683. Alain Roy, *Gerard de Lairesse 1640–1711* (Paris: Arthena, 1992), 394, 450, 479, pls. G66 and G108.


9 This abrupt and extreme transition in the Anatomia recalls the rhetorical device in Greek tragedy known as *peripeteia*, in which sudden reversal of a situation sets the story and the emotional tenor of the performance on an entirely new track.

10 As Joseph Koerner pointed out in his discussion of the corruptible body in Northern Renaissance art, the Latin verb cadere (to fall) is also the root of the word cadaver. Koerner, *The Moment of Self-Portraiture in German Renaissance Art* (Chicago: University of Chicago Press, 1993), 294.
Use of the microscope is immediately made clear in the text facing the very first dissection illustration (Plate 4), which depicts multiple details of the skin with its sheer dermal layers and minute underlying glands and follicles ("Figura I. In qua, ope Microscopii, depicta est cuticulae").

Similarly in Plate 52, which illustrates the dissection of the diaphragm and esophageal muscles, a housefly has landed on the striped cloth that masks the lower part of the torso. The insect is a common vanitas allusion to death and decay, but here its aliveness makes this ruined fragment of a corpse seem even more dead.

This observation about Lairesse's comparison and contrast between the drapery and the sheets of flesh hanging from the body of the cadaver was explored in a seminar paper on the Anatomia written in 2011 by Sierra Starr (Vassar 2011), a double major in biology and studio art.


"He drew exactly what he saw under his eyes, but something in his art made him flee, despite himself, the awful reality and give a soul to that which no longer has a soul." Dumaître, La Curieuse Destinée, 23.


In two of the last illustrations in the treatise, however, Bidloo and Lairesse made a deliberate bow to Vesalius. Plates 87 and 88 depict animated skeletons (of dubious anatomical accuracy), gesturing dramatically toward the tombs beside them. Andreas Vesalius's De humani corporis fabrica libri septem, published in Basel in 1543, can be studied in a modern illustrated translation by J. B. deC. M. Saunders and Charles D. O'Malley, The Illustrations from the Works of Andreas Vesalius of Brussels (New York: Dover, 1973).

Bidloo's book has indeed lived on, but ironically it was too large and expensive to sell widely to general readers, and its illustrations and texts were not considered complete or accurate enough to be suitable for scientific use. When the English anatomist William Cowper purchased the plates from Bidloo's publishers and reissued the volume with expanded texts under his own name—never mentioning Bidloo or Lairesse—one of the greatest plagiarism scandals of all time erupted. William Cowper, The Anatomy of Humane Bodies (Oxford: Sam Smith and Benjamin Walford, 1698).

"Vale, Lector, mecumque sperare perge, ut destructo mirifico atque terreo bocce aedificio, aeternam adipiscatur anima domum a Creatore Optimo Maximo, cujus gloriae, in nulle saecula fit finis." My thanks to Dr. Lily Beck for a translation that catches the subtleties of Bidloo's text.

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