“It Should Be on Every Surgeon’s Table”: The Reception and Adoption of Joseph Maclise’s *Surgical Anatomy* (1851) in the United States

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"It Should Be on Every Surgeon's Table": The Reception and Adoption of Joseph Maclise's *Surgical Anatomy* (1851) in the United States

Objects in Motion by **Naomi Slipp**
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Abstract
This article is part of the Objects in Motion series in *British Art Studies*, which is funded by the Terra Foundation for American Art. Projects in the series examine cross-cultural dialogues between Britain and the United States, and may focus on any aspect of visual and material culture produced before 1980. The aim of Objects in Motion is to explore the physical and material circumstances by which art is transmitted, displaced, and recontextualised, as well as the transatlantic processes that create new markets, audiences, and meanings. This article traces the US reception of Joseph Maclise's *Surgical Anatomy*, which was first published as fascicules in London starting in 1848, and in Philadelphia beginning in 1849 (the complete British and American volumes were each issued in 1851), and outlines its impact on American medicine. Through a consideration of the production of its American editions, US reviews, advertisements, and sales, and its accession into collections and adoption in the classroom, I argue that *Surgical Anatomy* played a role in the development of nineteenth-century American medical publishing, pedagogy, and practice. The text and its illustrations participated in a broader historical shift within American medical professionalization that occurred from the late 1840s into the 1880s and relied upon the international circulation of increasingly visualized anatomical and surgical knowledge. The article concludes by considering how the pictures themselves operated outside the bound volume. Pinned to the walls of dissecting rooms and replicated as large-scale painted teaching aids in the classroom, anatomical imagery—including illustrations from *Surgical Anatomy*—circulated in the United States and affected pedagogical and epistemic transformations, impacting the direction of the discipline.

Introduction

This article presents an object biography of sorts, outlining how a British medical publication became "American".[1] It has two aims: to trace the US reception of Joseph Maclise's *Surgical Anatomy*, which was first published as fascicules in London starting in 1848 and in Philadelphia beginning in 1849 (the complete British and American volumes were each issued in 1851), and to outline its impact on American medicine (fig. 1). There are no reception studies of this or comparable US medical publications. In light of that lacuna, I discuss the production of its

American editions, survey US reviews from major medical journals, and identify the ways in which US editions were advertised, sold, accessioned into private and public libraries, and adopted in the classroom. By tracking Maclise through the archive, we uncover the language used to describe and market the volumes and ascertain what niche it filled for American audiences. What did US reviewers perceive as the values and benefits of this volume to their profession? How was the volume used in practice and in pedagogy? In what ways were the illustrations understood and adopted, and how were they described by period viewers?

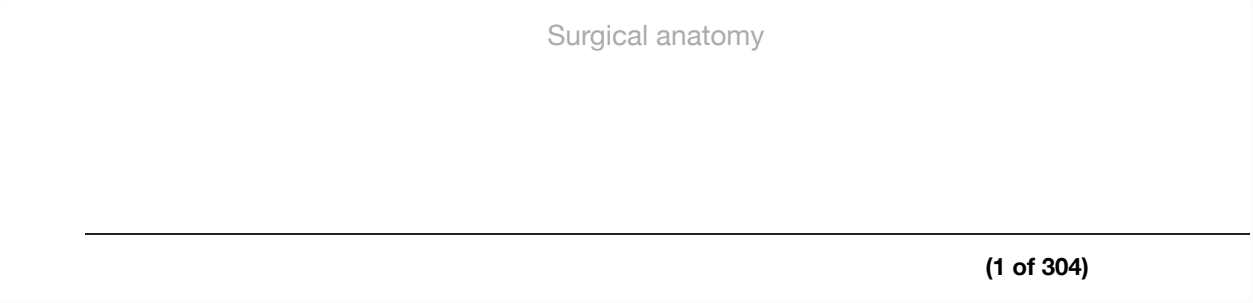


Figure 1

Joseph Maclise, *Surgical Anatomy*, (Philadelphia, PA: Blanchard and Lea, 1851). Wellcome Collection… Digital facsimile courtesy of the Wellcome Collection (CC BY 4.0).

By examining American editions of *Surgical Anatomy* as a single case study, I argue that it played a role in the development of nineteenth-century American medical publishing, pedagogy, and practice. Through this narrow lens, we are able to identify the aspirations of US medical publishers and professionals who undertook the contemporaneous printing of a British text for American audiences. *Surgical Anatomy* contributed to and participated in a broader historical shift within American medical professionalization that occurred from the late 1840s into the 1880s and relied upon the international circulation of increasingly visualized anatomical and surgical knowledge. In order to demonstrate the ways in which Maclise's illustrations, in particular, had a part in this transformation, the article concludes by considering how the pictures themselves operated outside the bound volume. As Maclise noted, "The best substitute for Nature herself, upon which to teach the knowledge of her, is an exact representation of her form".[2] Pinned to the walls of dissecting rooms and replicated as large-scale painted teaching aids in the classroom, anatomical imagery—including illustrations from *Surgical Anatomy*—circulated in the United States and affected pedagogical and epistemic transformations, impacting the direction of the discipline.

Illustrating Anatomy in the American Medical Context

In the 1840s and 1850s, professional medicine in the United States varied in focus and practice, from the more elite urban centers of the east coast to the French creole communities of New Orleans to the western boundaries of the nation in California and Oregon. While medical practice might have looked slightly different in each of these locales, overall, in the first half of the nineteenth century, the national professionalization of US medicine lagged far behind British and French models—and methods of practice were not unified or regulated. As John Harley Warner explains:

> *Professional identity was principally based upon practice, not, as it became to a large extent after the late nineteenth century, upon a claim to special knowledge … A*

professionally respectable practitioner could remain ignorant of much of basic medical science.[3]

Therapeutic practice was divided between various methods and movements—including "regulars", who practiced allopathy, and "irregulars", who subscribed to homeopathy, eclecticism, reformism, botanical medicine, or quackery. Among medical practitioners, knowledge of surgery and anatomy was inconsistent, and systems of medical instruction varied; some followed eighteenth-century apprenticeship models, others enrolled in a short series of lectures, and a small percentage attained a full degree in medicine.[4]

As Michael Sappol has persuasively demonstrated, however, training in human anatomy increasingly became a distinguishing factor in medical professionalization in nineteenth-century America. As he frames it, "the history of American medicine" was "an anatomical narrative".[5] As such, anatomy developed into a cultural currency, and was popularized and politicized in everything from public performance and literature to the passage of anatomy acts. Individuals and legislative bodies increasingly litigated, licensed, and promoted anatomical study for medical gain and public entertainment, while at the same time promoting anatomy as an elite body of knowledge that defined, ordered, and materialized social and corporeal differences based upon cultural constructs, such as race, sex, ability, and health—among other "embodied" characteristics—and united medical professionals.[6] Because of this cultural and disciplinary shift, knowledge of anatomy was increasingly central to a physician's training and clinical practice—no matter their disciplinary specialization or therapeutic allegiances.

A significant move toward national professionalization and the unification of "scientific" medicine was the 1847 founding of the American Medical Association (AMA), which privileged allopathy and introduced rigorous standards for medical education and practice.[7] The AMA lobbied for advanced qualifications and certification at the local and national levels, and enacted pedagogical reforms that placed an emphasis on surgical practice, clinical experience, and anatomical dissection.[8] Due partly to the reform efforts of the AMA and to the demands for unification of the profession coincident with a national medical military response to the American Civil War (1861–1865), allopathic medicine attained hegemony in the United States by the 1880s.[9]

Adding to the challenges for pedagogical reform, American medical schools were operated piecemeal and led largely by physicians who taught individual classes and took payment directly from students. Courses of study ran for short sessions and hospital residencies, quality of instruction, and anatomical dissection varied widely depending on institutional affiliations, location, and laws regarding cadaver acquisition.[10] As Warner has demonstrated, the French clinical tradition—which prized hands-on experience and dissection—slowly gained precedence in the 1840s within elite American medical schools, where the majority of professors had, themselves, trained in Paris.[11] These pedagogical emphases slowly disseminated outward to peer institutions that aimed to emulate their more elite competitors, although in regions without public hospitals or clinics and limited access to patients, such training was difficult to attain.[12] By the 1840s, elite medical instruction in Philadelphia, New York, and Boston was relatively consistent; however, enrollment was expensive and outside the scope of many would-be practitioners. In rural locales beyond the east coast, access to urban centers, medical education, and dissection was understandably more limited, including at the western boundaries of the United States. Without an established, universally instituted course of study, the education of American medical professionals was unpredictable.

Because of this, illustrations, publications, and other forms of visual instruction proved particularly useful for American medical students and physicians—no matter their approach. First and foremost, illustrated anatomy texts were didactic. They operated either in tandem with hands-on dissections or as a supplement to physical explorations; the latter was especially true in seasons when dissection was not practiced or during periods when cadavers were scarce. Such illustrations operated in concert with written commentaries and were often supplemented by other kinds of pedagogical objects, including models, blackboard drawing, and preserved specimens. As Eva Åhrén notes in relation to anatomical visualizations:

> *images were more than illustrative supplements to the written accounts they accompanied. Research in anatomy was a process of visualization, of making things visible to the eyes and minds of the scientists and artists themselves, as well as to an audience of peers or students. Images were therefore viewed as scientific results in and of themselves, and functioned as stand-ins for the objects they depicted.*[13]

In this case, Maclise's illustrations enabled viewers to "conjur[e] up before his mental vision a distinct picture of his subject".[14] He explains how "[w]e dissect the dead animal body in order to furnish the memory with as clear an account of the structure contained", indicating that the images served as an aide-memoire and represented an idealized form.[15] Contrarily, however, such bodies were also individualized and specific, as Maclise reminds readers: "in guarantee of their anatomical accuracy, … they have been made by myself from my own dissections".[16] While the realist aspirations of the author and universal modalities of his project may seem to sit uneasily together, such tensions were commonplace in anatomical visual and material culture.

The Delivery of Anatomical Knowledge

In the preface to the 1851 US printing of *Surgical Anatomy*, Maclise describes how he intends "to present to the student of medicine and the practitioner removed from the schools, a series of dissections demonstrative of the relative anatomy of the principal regions of the human body".[17] While he critiques the topographical or descriptive anatomist, who only identifies and names parts as unrelated to "the whole design of the form", he praises the surgeon—or practical anatomist—who requires a more holistic appreciation of the human body, its relative parts, their interrelationship, and their functions, and a comparative understanding of healthy versus diseased examples—repeatedly invoking the "normal". In these first few pages, Maclise outlines some of the primary challenges presented by anatomical study and its visualization: namely, the difficulty of rendering both part and whole, the comparative presentation of ideal and diseased examples which flatten difference and establish a binary or polarization between "normal" and "aberrant", and the complexities of relaying a temporal dissection or surgical procedure in singular images. In aiming to present an understanding of surgical anatomy that takes these traditional limitations into account, Maclise turns to visual representation, arguing that "an anatomical illustration enters the understanding straight-forward in a direct passage, and is almost independent of the aid of written language … It is an axiom encompassed in a frame-work of self-evident truth."[18] While we should question the assertion that illustration is somehow unmediated, the emphasis on directness and the pre-eminence of visual over linguistic description indicates that Maclise, like many of his peers, increasingly understood medical pedagogy and practice as a visual domain, an episteme shaped by ocular and sensory engagement and experience.

In invoking "truth" as the primary goal of successful illustration, Maclise identifies the challenge of presenting specificity and universality simultaneously in representations of the anatomical

body. Mid-nineteenth-century medical professionals prized didactic illustrations that were accurate, legible, and truthful. Significantly, visual accuracy in the strictest sense was often sacrificed in favor of representational legibility. Truthfulness was an ideal and an aspiration, and was also culturally defined and historically specific. As Martin Kemp reminds us:

> *The various permutations of intellectual, visual, economic, institutional, and political factors which bore in on the perceptual and representational processes involved in the making and reading of the illustrations varied greatly for different anatomists and illustrators working in different places at different times and on different projects.*[19]

Anatomical illustrators in Great Britain, France, and the United States sought to refine the human body to align with a mid-century ideal by condensing the actual viscera and multiple layers of a complex and specific bodily interior into a schematized, clean, carefully diagrammed, and universalized two-dimensional image.[20]

Contemporary methods for the visual delivery of medical and anatomical information were challenging and presented different kinds of information with variable efficacy. Dried or wet specimens served the straightforward function of preserving that which would decay. However, each had limitations: dried specimens lost dimensionality and color, while complex forms were hard to examine as wet specimens could degrade or become cloudy. Pamphlets with basic, woodcut illustrations disseminated medical information in a cheap, easily reproducible format, but any pictures were often rudimentary and, if colored at all, were garish. More elite modes of instruction included papier-mâché models, wax moulages, and illustrated anatomical atlases with engraved, hand-colored plates. Such models and treatises were expensive, luxury goods—most often produced abroad—and marketed to a privileged audience. Later in the century, chromolithographic charts, most often German-made, and photographs emerged as viable documentary or pedagogical tools. Each representational format captured varying levels of detail, especially pertaining to dimensionality, color, or the interrelationship of parts to a whole. As didactic tools, all were also challenged, in some manner, by their material state: either unique or infinitely reproducible; either presented in two dimensions or three; and either cheap, and, therefore, somewhat inferior, but promising a wide distribution, or very expensive, indicating limited circulation and an elite audience. The illustrations in *Surgical Anatomy* straddled both of the latter categories; they were regarded as accurate, detailed, and artistically impressive two-dimensional images that were also, surprisingly, quite affordable. Because of this—as we will learn momentarily—they were in high demand among American medical professionals at all stages of their careers.

The pedagogical and practical limitations of a singular mode of anatomical visualization were often overcome through aggregation. In other words, multiple systems of representation were employed at once to demonstrate distinctions and difference, dimension, coloring, and the relative composition between parts and whole. As Carin Berkowitz explains of systems of display in British anatomical theaters and museums:

> *drawings of "normal bodies" were a part of a broader system. Visual displays were selected because, taken together, they acted as tools to allow the discipline to "see" a nature that was both finite and ordered in its variation and therefore displayable … the system was only made meaningful by the anatomist himself, who provided the text and narration that brought the system together, situated its parts and showed the student what he was seeing.*[21]

In the United States, Maclise's *Surgical Anatomy* was one publication within a landscape of different representational ventures—both two-dimensional and three-dimensional—that aimed to visualize anatomical and surgical knowledge for an audience of aspiring and professional

medical practitioners. Such objects of visual and material culture gained meaning through sensory translation via handling, visual study, or the linguistic contextualization provided by caption or oral lecture, and through the corresponding practical experiences of dissection and clinical practice.

French and British anatomical and surgical publications and atlases—and their US editions—were prized by American audiences. Some atlases had deluxe images and limited captions; other anatomy publications relied on a symbiotic relationship between text and image, wherein one enlivened and explicated the other. Some texts presented healthy, idealized anatomy, and others focused on visual diagnostics, the growing fields of pathology or microscopy, or surgical procedure.[22] Surgical anatomy was an emerging field in the 1840s, and linked with the growth of operative surgery (influenced by the discovery and adoption of surgical anesthesia) and opportunities for human dissection. The relationship between anatomy, disease, and injury, and the methods for diagnosis and surgical treatment were paramount. Deluxe illustrated volumes on surgical anatomy published between 1830 and 1850 that were in direct competition with Maclise included the four-volume *Anatomy of the Human Body* by John and Charles Bell, published between 1797 and 1804, Richard Quain's *The Anatomy of the Arteries of the Human Body and its Applications to Pathology and Operative Surgery*, which appeared in 1844, and volumes by British authors Thomas Morton and Thomas Wormald, and French authors Alfred Velpeau, Jean Cruveilhier, and Jacques Lebaudy.[23] The 1850s and 1860s saw a marked rise in illustrated medical publications in the United States, as well as a shift in style of illustration, best typified by *Gray's Anatomy*, first published in London in 1858. These surgical anatomy publications focused explicitly on presenting human anatomy for the aspiring or practicing surgeon and represent the leading illustrated volumes of the period published prior to and contemporaneous with *Surgical Anatomy*. Despite this competition, through at least the 1870s, Maclise's *Surgical Anatomy* seems to have been one of the most popular and comprehensive illustrated atlases focused on anatomy vis-à-vis operative practice available in the United States.

Publishing Joseph Maclise's *Surgical Anatomy* in America

Joseph Maclise (ca. 1815–1880) was an Irish-born surgeon and medical illustrator, who studied medicine at University College, London (UCL), and in Paris. Returning to London, Maclise established a busy medical practice and published anatomical illustrations—sometimes living with his brother Daniel (1806–1870), a renowned history painter. The two traveled in Paris together in 1844 and to Lyon and Naples in 1855.[24] Daniel attended artistic anatomy lectures at the Royal Cork Institution; his 1838 diploma piece for the Royal Academy, titled *The Woodranger*, demonstrates his mastery of human anatomy—a requirement for history painting (fig. 2). It is tantalizing to imagine the exchanges between Daniel and Joseph, one an expert in a genre that relied upon accuracy and anatomical precision, the other a surgeon, skilled in anatomical illustration. One wonders if Maclise's abilities in illustration and lithography were influenced by his brother, who was a popular book illustrator trained in etching, and steel and wood engraving.

Figure 2

Daniel Maclise, *The Woodranger*, 1838, oil on canvas, 214.2 × 91.4 cm. Collection of the Royal Academy of Arts, London (03/1298). Digital image courtesy of Royal Academy of Arts, London / Photo: John Hammond (all rights reserved).

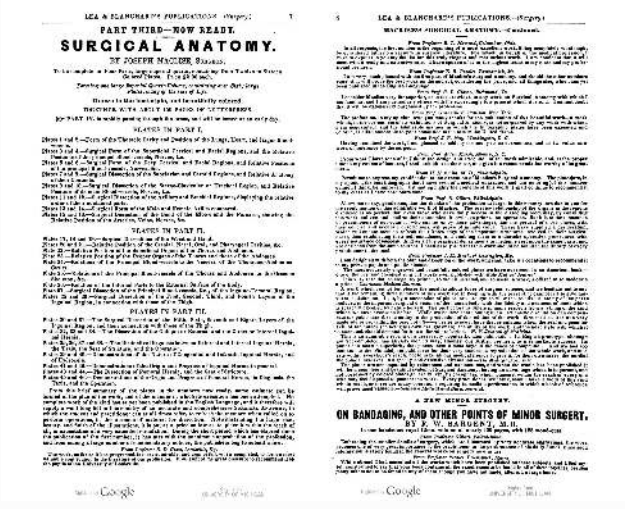
Joseph Maclise's first foray into illustration was for Richard Quain's *The Anatomy of the Arteries of the Human Body*, published in 1844 by Taylor & Walton, London. Maclise met Quain (1800–1887) while studying medicine at UCL. Quain was affiliated with the University College and Hospital from 1834 through 1866, initially as first assistant surgeon and rising to professor of clinical surgery.[25] The eighty-seven imperial folio plates for Quain were drawn from life and on stone by Maclise. No doubt encouraged by this enterprise, Maclise undertook the execution of his own illustrated publications. *Comparative Osteology being Morphological Studies to Demonstrate the Archetype Skeleton of Vertebrated Animals* appeared in 1847, followed by *Surgical Anatomy* in 1851. The latter included thirty-five lithographic plates, which were revised and expanded in 1856 to fifty-two plates. The illustrations were widely praised for their accuracy and truthfulness. Maclise himself identified their source, writing in the preface:

> *Of the illustrations of this work I may state, in guarantee of their anatomical accuracy, that they have been made by myself from my own dissections, first planned at the London University College, and afterwards realized at the École Pratique, and School of Anatomy, adjoining the Hospital La Pitié, Paris, a few years since.*[26]

Significantly, Maclise notes his training in London and Paris, direct connection to French clinical practices, and independent design and execution of the physical dissections and their expression as lithographic plates. The authority connoted by his distinguished pedigree and professional experiences is presumably conveyed to the reader via the direct translation of his dissections as observed by him and rendered by his own hand. In other words, Maclise here suggests that the illustrations might operate as a simulacrum or stand-in for the elite physical experience of training in London and Paris.

Maclise's anatomical illustrations circulated within the United States in a few ways. The primary method was within original publications. *Surgical Anatomy* was initially published in London as an imperial folio by John Churchill, with individual fascicules available beginning in 1848; a second, revised British edition was released in 1856. It proved so popular that it was licensed and issued in a US edition by the Philadelphia publishing house of Blanchard and Lea. Originally planned as a large folio comprising four parts with sixty-two plates, it was eventually realized in five fascicules with sixty-eight plates. These were released in November 1849, April and August 1850, and July and November 1851.[27]

As a two-page advertisement from the publisher explained, each fascicule contained twelve to sixteen colored plates and was priced at $2.00 (Part V was offered at $1.00) (fig. 3).[28] Together, they formed "one large imperial quarto volume, containing over sixty large plates, many the size of life/Drawn in the best style, and beautifully colored/Together with about 150 pages of letterpress".[29] The publisher emphasizes that some plates are "the size of life", highlighting the function of a good anatomical atlas, which aimed to replicate with exactitude—and, ideally, to scale—the human anatomy. Further, at sixty-eight plates to 150 pages of explanatory text, Maclise's volume was 45 percent illustrations—an impressive ratio.


PART THIRD—NOW READY.

SURGICAL ANATOMY.

ON BANDAGING, AND OTHER POINTS OF MINOR SURGERY.

Figure 3

Two-page advertisement for Joseph Maclise, *Surgical Anatomy*, (Philadelphia, PA: Blanchard and Lea, 1851) from Archibald Billing, *First Principles of Medicine* (Philadelphia, PA: Blanchard and Lea, 1851), 264–265, 1851. Collection of the University of Michigan. Digital image courtesy of Hathi Trust Digital Library (public domain).

Alongside the description of the plates in the advertisement, Blanchard and Lea printed ten testimonials from a veritable who's who of American medicine. These individuals represent a survey of key US medical institutions in 1850 and include Henry Hollingsworth Smith (1815–1890), University of Pennsylvania, Philadelphia, Pennsylvania, who published his own popular anatomical atlas in 1844 with Lea and Blanchard; Charles Bell Gibson (1816–1865), Medical College of Richmond, Virginia, who served briefly as Surgeon General of Virginia under the Confederate States of America and was surgeon-in-charge of the C.S.A.'s General Hospital #1; and Dr Samuel D. Gross (1805–1884)—then of University of Louisville, Kentucky, later of

Jefferson Medical College, Philadelphia—who is enshrined as the subject of Thomas Eakins's monumental surgical painting *The Gross Clinic* (1875).[30] Many commented on its "valuable contribution" to the field and role in filling "a vacuum in surgical literature". They noted its low price and correctness, [31] and the majority described its pedagogical utility, stating: "I shall continue to recommend it to my class"; "at the proper time in my course lectures, I shall exhibit it to the class"; and "it will afford me great pleasure to recommend it to the pupils".[32] In his effusive praise (longer by half than those of his colleagues), David Gilbert (1803–1868) of Pennsylvania College, Philadelphia, explained how:

> *even those who have daily access to the dissecting room may, by consulting this work, enliven and confirm their anatomical knowledge prior to an operation. But it is to the thousands of practitioners of our country, who cannot enjoy these advantages, that the perusal of those plates … will prove of infinite value.*[33]

In invoking the variable training and resources of his peers, Gilbert identifies the urgent reference function that a volume like this would serve in the United States, allowing such individuals to "undertake operative procedures with every assurance of success". Such testimonials echo what scholar Cindy Stelmackowich has identified as the twinned pedagogical function of French and English anatomical atlases: to operate as a stand-in for the physical body, and to create and confirm professional epistemologies.[34] Similarly, Maclise's volume served both to confirm the knowledge of the learned and to instruct the student.

Significantly, a number of testimonials praised the execution and coloring of the lithographic plates, with Granville Pattison (1791–1851)—a Scottish anatomist and expatriate then at New York University—declaring that it honored the house of Blanchard and Lea and the fine arts of the United States. In ascribing a national character to the success of the lithographs, Pattison echoed the praise of other reviewers, who celebrated—in the same breath—its British origins and its American character. The ambivalent status of the volume as simultaneously a British text and an American publication—and the ways in which reviewers navigated its national identity—highlight the ambivalence regarding medical training abroad. It is as if reviewers wanted to cash in on the elitism and cultural capital of the publication's British origins, and—at the same time—present their national aspirations to secure an American school of medicine, independent of France or Great Britain, by referencing its "American" identity.[35]

Notably, the advertisement concluded with excerpts from reviews in the *Buffalo Medical Journal* (New York), *Charleston Medical Journal* (South Carolina), *New York Journal of Medicine* (New York), *Medical Examiner* (Philadelphia, Pennsylvania), and *Southern Medical and Surgical Journal* (Augusta, Georgia).[36] All five reviews note its affordability, being "offered at so moderate a price" and "within the reach of *all*". Such commentaries promote the acquisition of the text by practitioners at all professional stages and economic strata, and indicate a democratic aspiration for the field—that *all* should attain knowledge of surgical anatomy—no matter their background or class. One reviewer emphasizes the superiority of this notable "American book", while another highlights its London antecedent, popularity with British readers, and Philadelphia origins. The textual confusion over the nationality of the US edition of *Surgical Anatomy* in both individual testimonials and published reviews allowed the text to assume broad appeal as an affordable illustrated treatise that was both a "native" work and an international publication.[37]

Blanchard and Lea summarize the benefits of the text and its import in their introductory paragraph (which appears in most advertisements), claiming:

> *As no complete work of the kind has hitherto fore been published in the English language, the present volume will supply a want long felt in this country of an accurate and*

comprehensive Atlas of Surgical Anatomy, to which the student and practitioner can at all times refer to ascertain the exact relative positions of the various portions of the human frame towards each other and to the surface, as well as their abnormal deviations. The importance of such a work to the student, in the absence of anatomical material, and to practitioners, either for consultation in emergencies or to refresh their recollections of the dissecting room, is evident. Notwithstanding the large size, beauty and finish of the very numerous illustrations, it will be observed that the price is so low as to place it within the reach of all members of the profession.[38]

In this extensive quotation, the publishers recapitulate the individual assessments found in testimonials and reviews. They note its size, beauty, and low price; indispensability as an aide-memoire and teaching tool; function as a supplement to fresh dissections and reference during medical emergencies; and uniqueness within the English-language marketplace. They indicate that its primary benefit is coverage of both part and whole, surface and depth, and the corresponding relationships between these areas of the body, both in "normal" specimens and in "abnormal deviations". This final observation—that Maclise was unusually comprehensive in his treatment of human anatomy—was echoed in the first review of Part I of the British edition, published in the *Lancet* in 1858. The reviewer explicitly distinguishes what sets Maclise apart from Blandin, Velpeau, Cooper, Lawrence, Morton, Tiedemann, Quain, and Dermott—contemporaries who had similarly published illustrated treatises on anatomy. Unlike those others, who—the reviewer claims—treated only parts of the human anatomy as discrete and separate entities without considering the inter-relationship of anatomical parts, or surface and depth, Maclise fashions a holistic account of human anatomy.[39] As a piece of advertising, then, this one example does an extraordinary amount of work.

While this was the most common advertisement circulating for *Surgical Anatomy* and appeared in most mid-century Blanchard and Lea publications, an extended advertisement also circulated that spanned three full pages and quoted excerpts of fifteen personal testimonials and sixteen reviews from prominent medical journals, including international venues such as the *Dublin Medical Press* and the *Lancet*.[40] A condensed version included only abbreviated commentary from seventeen reviews.[41] The latter examples were reviewing the British edition and not the American one; this presents a number of questions about the US edition and its American publisher, which we will return to momentarily.

Blanchard and Lea advertised *Surgical Anatomy* not only in specialist medical publications, but also in generalist periodicals, such as *The Literary World: A Journal of Society, Literature, Science, and Art* (New York). The notice appears surrounded by advertisements for *The Book of Home Beauty* by Mrs. Kirkland, which contained twelve portraits of American Ladies, *Putnam's Home Cyclopedia* in six volumes, and an advertisement for the public exhibition of Emmanuel Leutze's grand history painting *Washington Crossing the Delaware* (1851), then on view at the Stuyvesant Institute. Readers were urged to "complete their sets without delay, as the sale in numbers has been stopped".[42] In another instance, an announcement appeared in *Norton's Literary Advertiser* (New York) among such riveting fare as *Lives of the Chief Justices of England* and *Latin Dictionary for Schools*.[43] These advertisements notified American audiences of all kinds—beyond the medical community—about this useful, beautifully illustrated, surgical anatomy volume. It indicates that, as scholars have argued elsewhere, anatomy was a popular concern in the United States, and anatomy texts found a ready readership with medical audiences and laypeople of diverse backgrounds and interests.

We must maintain a critical vantage point when considering the publisher's advertisements, which necessarily aim to make the case for the relevance of Maclise's volume within a competitive marketplace. These varied advertisements are careful constructions focused on increasing the marketability of *Surgical Anatomy* to as many groups as possible. Blanchard and Lea, a relatively new composition of a historic firm, intentionally highlight influential journals and individuals from across the United States, target different buyers by advertising in different kinds of venues, and praise the price, artistry, accuracy, and function of the volume.

Maclise's Publishers, Blanchard and Lea

The publishing house of Blanchard and Lea was well known in the United States. Founded in 1785 by Mathew Carey, the firm went through a number of partnerships, operating as Blanchard and Lea from around 1851 to 1865. By mid-century, the firm was known for their medical catalogue, notably publishing the *American Journal of the Medical Sciences*, established in 1820 as the second oldest US medical journal. As outlined in *The Literary History of Philadelphia*, the house "devoted itself principally to the publication of scientific, and particularly medical works … to make the city a centre for the medical text-book trade, as it has long been a centre for medical education".[44] The distinctive printer's mark—used only on their medical imprints—directly speaks to these aspirations (fig. 4).[45] The caduceus, or winged staff of Hermes, stands vertically wrapped by two twisting snakes inside of a pointed escutcheon with a deep swooping top. The shield bears a border with the Latin inscription "*QUÆ PROSUNT OMNIBUS*", which translates as "benefit to all". This adapts the motto of the Royal College of Surgeons, London, which concludes with "*ARTES*" meaning "the arts which are of service to all".[46] The adoption of the shield with caduceus and motto is also likely a direct reference to the printer's mark of John Churchill (1801–1875), the pre-eminent London medical publisher for John Snow, Robert Liston, Francis Sibson, and Joseph Maclise, among others (fig. 5).[47] The Churchill mark also depicts two snakes wrapped around the winged staff of Hermes within an almond-shaped shield. However, Churchill's mark demonstrates a much finer level of execution. The bodies of two snakes contain the words "*MEDICINA*" and "*LITERIS*", while "*IRRUPTA TENET COPULA*" appears in the border of the escutcheon. Translating to "unbreakable bond unites", the motto indicates medicine (*medicina*) and literature (*literis*) bound—implying the dual meaning of unification and binding—within the volume. By borrowing the central motif from Churchill's mark—signaling a British house known for excellence in medical publishing—Blanchard and Lea stake a comparable role in the future of American medical publishing.

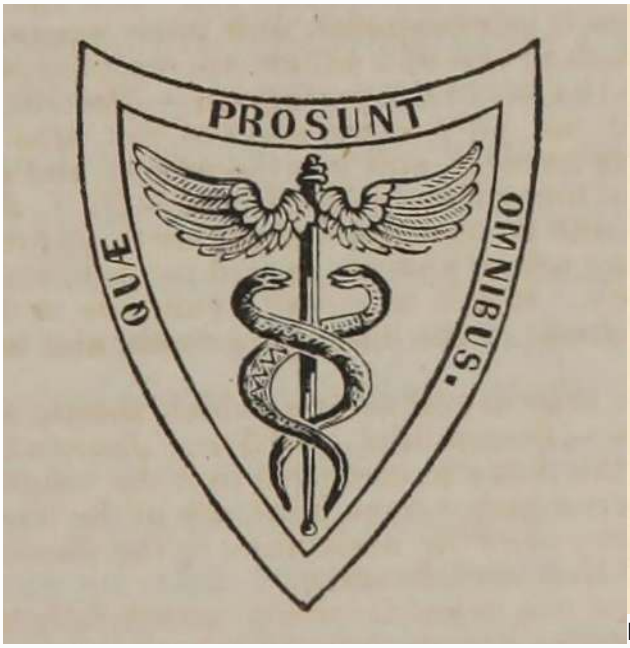


Figure 4

Blanchard and Lea Printer's Mark, from William E. Horner, *Special Anatomy and Histology: In Two Volumes* (Philadelphia, PA: Blanchard and Lea, 1851), 1851, lithograph. Wellcome Collection. Digital image courtesy of Wellcome Collection (public domain).

Figure 5

John Churchill Printer's Mark, from Robert Liston, *Practical Surgery* (London: John Churchill: Renshaw, 1846), 1846, lithograph. Wellcome Collection. Digital image courtesy of Wellcome Collection (public domain).

Blanchard and Lea establish a similarly bold claim in their adaptation of Maclise's lithographs for the American edition. While lithographic printing was the leading method for illustrating books, texts, and printed pamphlets by mid-century, illustrated texts—especially lithographed works—still made up only a fraction of American publications.[48] Although lithographs could be reproduced quickly and cheaply, lithographic images could not be combined with professional type, thereby limiting their utility and making the printing process more complex. The lithographic process involved specially manufactured machinery, specialist materials, and numerous trained and untrained individuals, who contributed to the final product. Invented by German Alois Senefelder in 1798, lithography is the process of drawing directly on a flat, porous limestone surface with a grease pencil.[49] Two individuals were involved in printing: the artist (alternately referred to as lithographer), who either drew the image on transfer paper or directly on the stone; and the printer, who ran the stone through the press. Artisans, technicians, and laborers of varying ages, races, and genders worked in concert to facilitate the production of the lithograph—making it an expensive and technically specific industry, distinctive in the 1850s from most book publishing houses. In this way, individuals at varying socio-economic levels contributed to the production of a lithograph.

Despite the complexities of lithographic production, Blanchard and Lea elected to reproduce the deluxe lithographic illustrations of Maclise's British edition, but with American materials and talent.[50] This was an audacious endeavor: by replicating contemporaneous English illustrations, Blanchard and Lea placed the fledgling field of American lithography in direct conversation with their British counterparts.[51] Such a move made a bold statement: both about Blanchard and Lea's

ambitions in the American medical publishing industry, and about the perceived American demand for US-produced deluxe anatomy folios. Indeed, as an American edition produced after a contemporaneous British work—one whose fascicules were still being released at the time of the US production—Blanchard and Lea set themselves up for a challenge. Whereas the British publication was sold internationally, the audience for the US edition was markedly limited and had to compete for US buyers with the British edition—a daring proposition, as imported folios carried extra resonance with elite buyers as a form of cultural capital.[52]

The American Illustrations

The sixty-eight hand-colored plates in Maclise's *Surgical Anatomy* issued by Blanchard and Lea were lithographed by Thomas Sinclair (1807–1881), one of the premier lithographers in Philadelphia. Sinclair was a Scottish immigrant to the United States, who founded his own lithography firm in 1838. It was a leader in the production of hand-colored lithographic plates for publication. Alongside book illustrations, the firm also produced various lithographic materials, including advertisements, maps, and sheet music covers.[53] Sinclair's lithographs, drawn after Maclise's illustrations—instead of being inked from the original, imported British stones—admirably capture the graceful manner of the originals.[54] If we examine Plates 7 and 8 (figs. 6 and 7), which demonstrate the surgical dissection of the subclavian and carotid regions, and contrast them with Plate VII of the British edition (fig. 8), we see that—while the general tone appears lighter in the American printing—Sinclair's rendering conveys Maclise's lighting and unique chiaroscuro. On occasion, dimensionality, scale, and the realism of certain textures, especially the fatty tissue along the cut opening, appear lost in translation and, while Sinclair remains almost entirely faithful to the originals, certain aspects deviate. For example, in the figure at left, wispy strands of hair project outward from the bangs, and there is a slightly more pronounced point at the tip of the nose, an elongated ear, and a more visible shape of the mouth and roundness of the chin. Despite such minor differences, Sinclair manages to capture the elegant linework and anatomical complexity of the original.

Figure 6

Thomas Sinclair after Joseph Maclise, *The Surgical Dissection of the Subclavian and Carotid Regions*, from *Surgical Anatomy* (Philadelphia, PA: Blanchard and Lea, 1851), Plate 7, 1851, lithograph, 38 cm. Collection of the Getty Research Institute. Digital image courtesy of Getty Research Institute (Internet Archive).

Figure 7

Thomas Sinclair after Joseph Maclise, *The Surgical Dissection of the Subclavian and Carotid Regions*, from *Surgical Anatomy* (Philadelphia, PA: Blanchard and Lea, 1851), Plate 8, 1851, lithograph, 38 cm. Collection of the Getty Research Institute. Digital image courtesy of Getty Research Institute (Internet Archive).

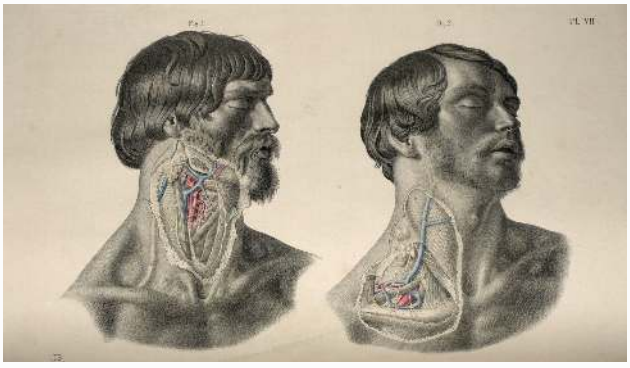


Figure 8

Joseph Maclise, *The Surgical Dissection of the Subclavian and Carotid Regions*, from *Surgical Anatomy* (London: John Churchill, 1856), Plate 7, 1856, colored lithograph, 29 × 39 cm. Collection of the University of Toronto Anatomia Collection. Digital image courtesy of University of Toronto Anatomia Collection (public domain).

In contrast, considering Plates 9 and 10 (figs. 9 and 10) of the surgical dissection of the sternoclavicular or tracheal region in comparison with Plate IV of the British edition (fig. 11) reveals the linework, in the hair especially, has been softened. The individual almost spontaneous gesture of Maclise's crayon—which marks out the bristles of sideburn and wiry eyebrow—are

smoothed in Sinclair's adaptation. Most notably, as Keren Hammerschlag explains, the American printing switched out the figure of a Black man for a mirror image of his white companion. This erasure establishes a normative anatomical ideal as white—despite the fact that anatomical study, especially in the United States, relied on the dissection of marginalized persons, including Black subjects.[55] Presumably, Sinclair accommodated this modification by making adjustments to the original material himself—and, by the looks of it, he struggled.[56] Despite the visual limitations of Sinclair's pictorial translations vis-à-vis Maclise's originals, the lithographs for Blanchard and Lea's edition of *Surgical Anatomy* are refined, relatively faithful adaptations that utilize subtle hand-coloring to draw the viewer's attention to relevant anatomical structures.

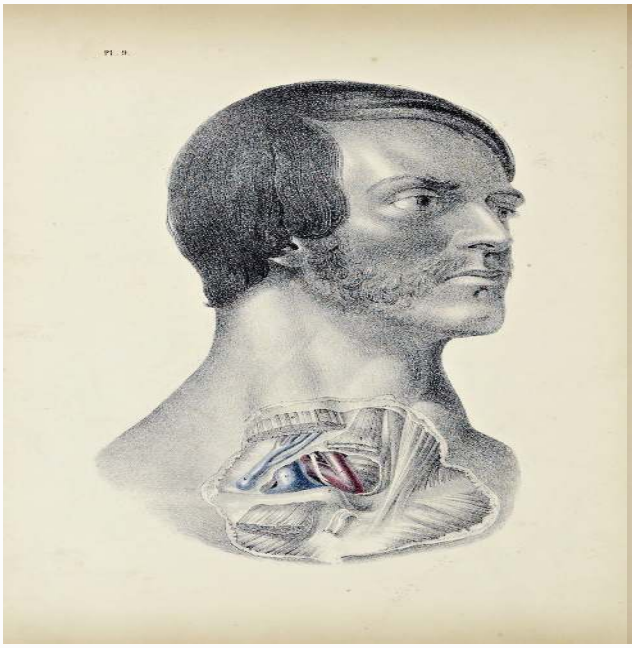


Figure 9

Thomas Sinclair after Joseph Maclise, *The Surgical Dissection of the Subclavian and Carotid Regions*, from *Surgical Anatomy* (Philadelphia, PA: Blanchard and Lea, 1851), Plate 9, 1851, lithograph, 38 cm. Collection of the Getty Research Institute. Digital image courtesy of Getty Research Institute (Internet Archive).

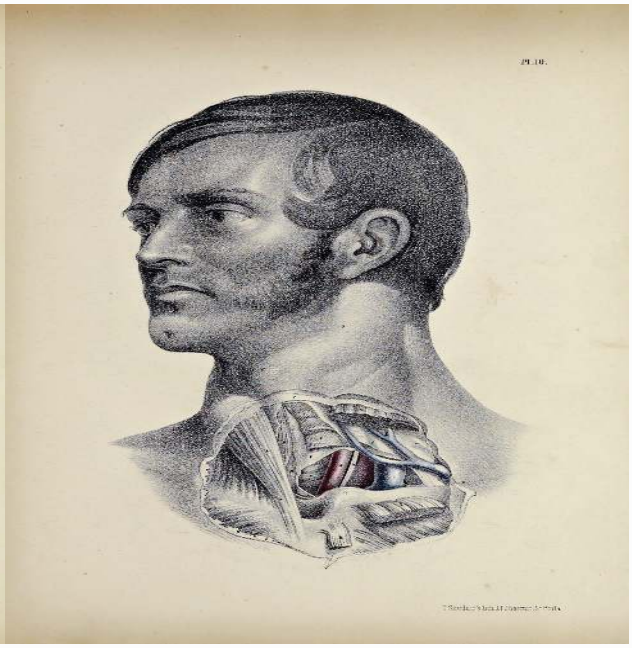


Figure 10

Thomas Sinclair after Joseph Maclise, *The Surgical Dissection of the Subclavian and Carotid Regions*, from *Surgical Anatomy* (Philadelphia, PA: Blanchard and Lea, 1851), Plate 10, 1851, lithograph, 38 cm. Collection of the Getty Research Institute. Digital image courtesy of Getty Research Institute (Internet Archive).

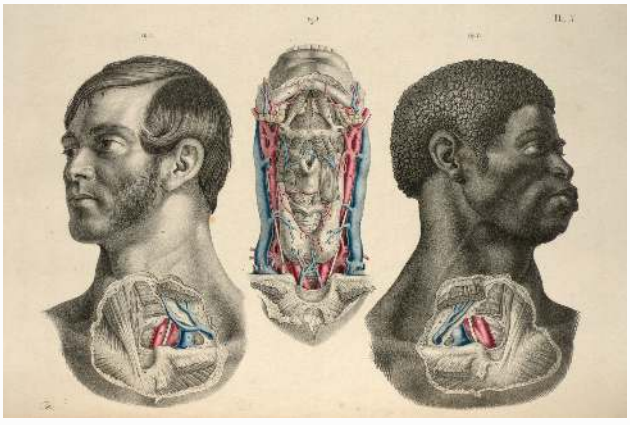


Figure 11

Joseph Maclise, *The Surgical Dissection of the Sternoclavicular or Tracheal Region*, from *Surgical Anatomy* (London: John Churchill, 1856), Plate 4, 1856, colored lithograph, 29 × 39 cm. Collection of the University of Toronto Anatomia Collection. Digital image courtesy of University of Toronto Anatomia Collection (public domain).

The corresponding commentaries further distinguish *Surgical Anatomy* from comparable publications. Maclise includes surgical directions, such as for Plates 7 and 8, where he describes how if a hemorrhage upon opening the veins is so profuse that it prevents ligature, the surgeon

can compress the parts as instructed. He elucidates the purpose of these illustrations, noting how they are intended to present "the superposition of parts contained in each region, as well as the plane relationship of organs which hold the same level in each layer".[57] In other words, Maclise aims to illustrate the order of superimposition of each part relative to the next structure beneath, and to clarify the depth of the corresponding parts. In effect, the illustrations present an ideal arrangement, which Maclise clarifies in the text through sensorial and directional notations—beyond visual modes of apprehension, indicating at one point, for instance, that "points of relationship to the skeletal parts can be ascertained by touch … even in the undissected body".[58] This narrative highlights how such images struggle to visually demonstrate relationships between part and whole, reference non-visual epistemes, or communicate depth and surface structures simultaneously. Such problems relate to the obvious distinctions between a three-dimensional body and the two-dimensional drawing and lithograph; all anatomical illustrations are a mode of faulty or flattened translation. He also acknowledges the variability of aspects of the organs or vessels depicted and outlines the possible deviations that the surgeon may encounter, making a practical addition to this reference text and enhancing its pedagogical function. In attending to "anomalies of form" in the commentaries at the same time that he aims to establish a universal anatomical model in the illustration, he underscores the communicative failures of many anatomical illustrations: they cannot simultaneously present ideality and aberrance. Instead, they render the anatomical body as a fictitious universal.

Maclise's commentaries and their relationship to the illustrations were exceptional, because of his attempts to underscore both interrelationships and deviance from the norm. As a comparison, Henry Hollingsworth Smith's *Anatomical Atlas* presented individual structures as discrete layers at differing scales and views (microscopic and cross-section) and without a relative sense of the interrelationship between parts or the whole human form.[59] There are no jagged cuts, ropes, or limp limbs, which visually situate us within the dead human body, as in Maclise. Instead, akin to Albinus and Vesalius, full body skeletons (fig. 12) and écorché figures stand (fig. 13), pose, cast shadows, and walk across the page, while cellular views (fig. 14), cross-sections, and independent specimens (figs. 15 and 16) are removed from their source and drastically magnified. In the organization of the volume, execution of plates, and treatment of anatomy as a system of parts rather than a cohesive, functioning entity, Smith's anatomy atlas diverges in myriad ways from Maclise's volume.

Figure 12

Henry Hollingsworth Smith and William Edmonds Horner, *Anatomical Atlas: Illustrative of the Structure of the Human Body*, (Philadelphia, PA: Blanchard and Lea, 1845), Figure 1, 1845, lithograph. Collection of Emory University, Manuscript, Archives and Rare Book Library. Digital image courtesy of Internet Archive (public domain).

Figure 13

Henry Hollingsworth Smith and William Edmonds Horner, *Anatomical Atlas: Illustrative of the Structure of the Human Body*, (Philadelphia, PA: Blanchard and Lea, 1845), Figure 120, 1845, lithograph. Collection of Emory University, Manuscript, Archives and Rare Book Library. Digital image courtesy of Internet Archive (public domain).

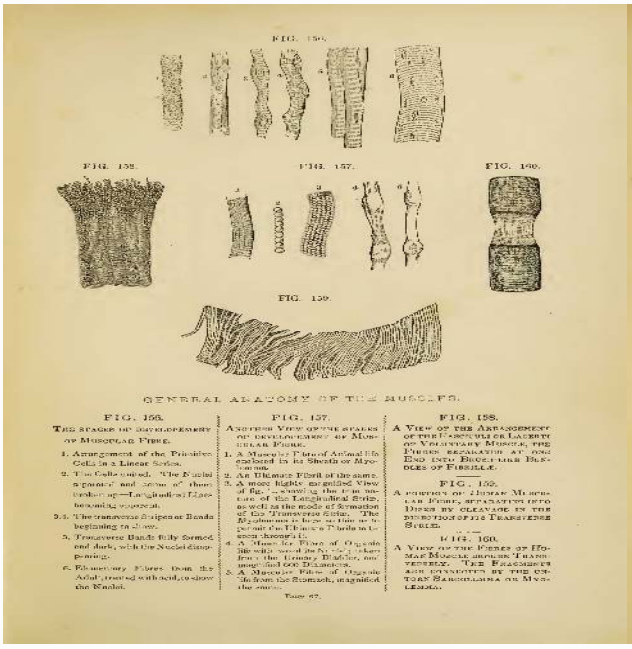


Figure 14

Henry Hollingsworth Smith and William Edmonds Horner, *Anatomical Atlas: Illustrative of the Structure of the Human Body*, (Philadelphia, PA: Blanchard and Lea, 1845), Figure 156–160, 1845, lithograph. Collection of Emory University, Manuscript, Archives and Rare Book Library. Digital image courtesy of Internet Archive (public domain).

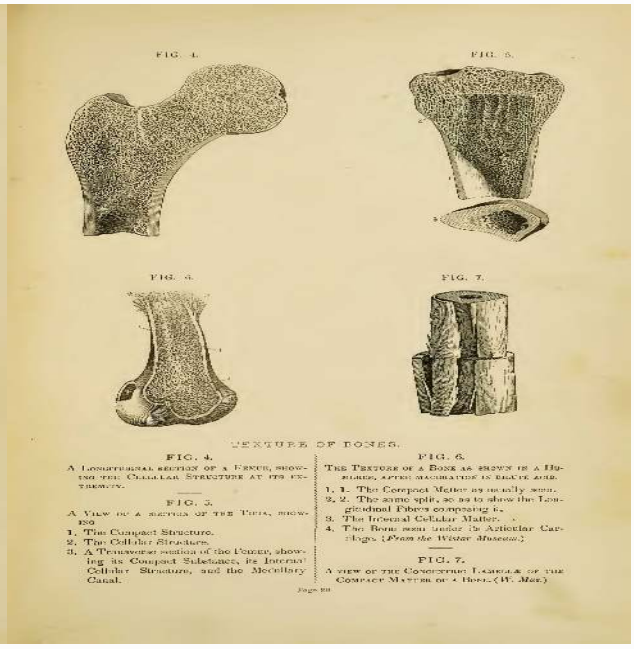


Figure 15

Henry Hollingsworth Smith and William Edmonds Horner, *Anatomical Atlas: Illustrative of the Structure of the Human Body*, (Philadelphia, PA: Blanchard and Lea, 1845), Figure 4–7, 1845, lithograph. Collection of Emory University, Manuscript, Archives and Rare Book Library. Digital image courtesy of Internet Archive (public domain).

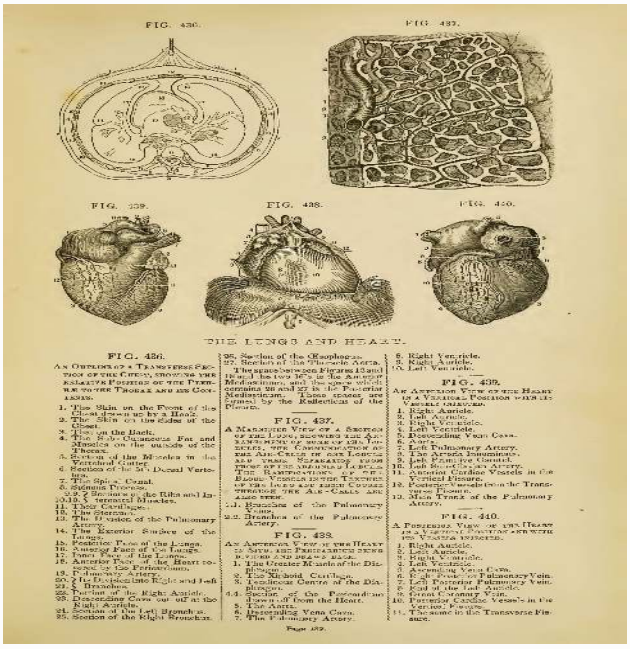


Figure 16

Henry Hollingsworth Smith and William Edmonds Horner, *Anatomical Atlas: Illustrative of the Structure of the Human Body*, (Philadelphia, PA: Blanchard and Lea, 1845), Figure 436–440, 1845, lithograph. Collection of Emory University, Manuscript, Archives and Rare Book Library. Digital image courtesy of Internet Archive (public domain).

Blanchard and Lea were not the only US publishers to adapt Maclise's *Surgical Anatomy* for the American market. Interestingly, in 1853 and 1857, John P. Jewett, the Boston publisher known for *Uncle Tom's Cabin* (1852), reprinted the original thirty-five plates of Maclise's *Surgical Anatomy* following the British arrangement and added one plate from Bourgery's *Traité complet de l'anatomie de l'homme* (Paris: 1839). Unusually, the plates were printed in oil colors "after Baxter's process". While other publishers utilized lithography, copper and steel plate engraving, or the woodblock, adding hand-coloring on demand, British printer George Baxter invented oil printing, a woodblock printing process wherein the print was created and inked in separate blocks with an oil-based ink. It premiered at the 1851 Crystal Palace Great Exhibition, London, and in New York in 1853.[60] The process was quickly adopted and adapted by American printers like Jewett, who noted in the preface to their editions of *Surgical Anatomy* that "this is the first attempt, we believe, to give a series of scientific plates executed in this manner".[61] While the plates were created by Charles H. Crosby and approved by prominent Harvard professors, including George Haywood, Henry G. Bigelow, and Louis Agassiz, the pale illustrations are poor imitations of the originals. Consider Plate 4 (fig. 17), which reproduces Maclise's surgical dissection of the subclavian and carotid regions, and Plate 5 (fig. 18), which demonstrates the surgical dissection of the episternal or tracheal regions. The primitively rendered figures are simple outlines in pale brown ink, and the detail and chiaroscuro of the original lithographs is gone. While Jewett may have followed the British arrangement, two white men are presented in Plate 5 instead of the white man and Black man, indicating that Jewett may have looked to the Blanchard and Lea edition for inspiration. The hand-colored dissections are replaced by an

arrangement of flatly printed, almost technicolor, planes of color in maroon, tangerine, and cyan. While the anatomical interiors therefore draw attention, the figures themselves—head, face, and shoulders—are overtaken by the white of the page and absorbed into the background. In oil, the figures become clumsily flattened schematics. The rudimentary effect of the illustrations was amplified by the fact that Maclise's detailed commentaries were excluded from this printing; instead, only the descriptions—alphanumerical lists identifying the corresponding parts from the illustration by name—were reproduced.

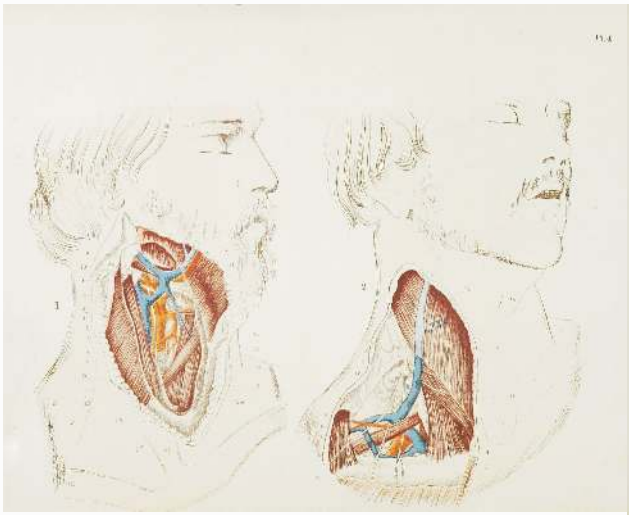


Figure 17

Charles H. Crosby after Joseph Maclise, *The Surgical Dissection of the Subclavian and Carotid Regions*, from *Surgical Anatomy* (Boston, MA: Jewett, 1857), Plate 4, 1857, colored lithograph, 26 cm. Collection of Cornell University. Digital image courtesy of Hathi Trust Digital Library (public domain).

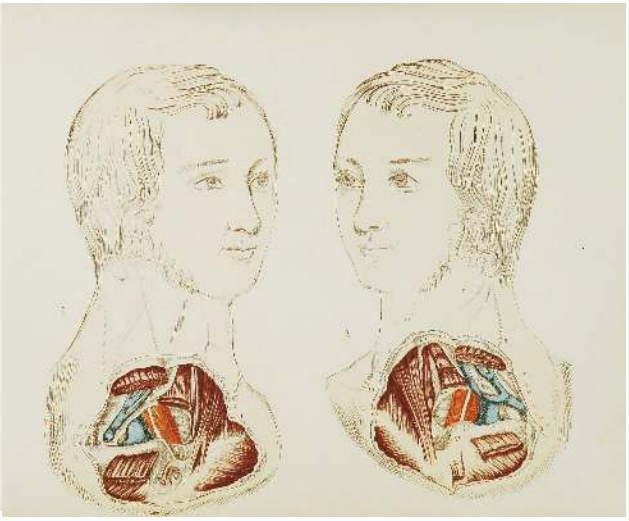


Figure 18

Charles H. Crosby after Joseph Maclise, *The Surgical Dissection of the Subclavian and Carotid Regions*, from *Surgical Anatomy* (Boston, MA: Jewett, 1857), Plate 5, 1857, colored lithograph, 26 cm. Collection of Cornell University. Digital image courtesy of Hathi Trust Digital Library (public domain).

Finally, *Surgical Anatomy* was reprinted as a second edition by Henry C. Lea in 1866, a full fifteen years after the first American printing. By this time, Lea was operating independently at 706 and 708 Sansom Street in Philadelphia and advertising his *Catalogue of Medical and Surgical Publications* widely, including in the *Pacific Medical Journal*, touting a variety of anatomy texts.[62] For example, Smith & Horner's *Anatomical Atlas* and Richard Hodges's *Practical Dissections*—both American authored—are listed alongside *Gray's Anatomy*, Sharpey & Quain's *Human Anatomy*, and Erasmus Wilson's *A System of Human Anatomy*. Lea lists Maclise's *Surgical Anatomy* and reproduces the publisher's paragraph from earlier advertisements, making a case for the continued relevance of Maclise's volume within a marketplace increasingly crowded by pedagogically focused volumes like Gray's and American-authored publications, like Smith & Horner's and Hodges's. By 1877, Lea was still advertising Maclise's *Surgical Anatomy* and offering it bound for $14.00, indicating that there was a ready market for the volume over twenty-five years after its initial American printing.[63]

American Reviews and Notices of Publication

Today, Maclise's *Surgical Anatomy* is in almost every major American medical library. But how did it get there? New medical publications were primarily marketed in the United States in two ways: through advertisements placed in other publications, as described above; and by sending review copies to medical journals direct from the publisher. The foremost American medical periodicals, from Boston, Philadelphia, and New York, to Louisville, Chicago, Cincinnati, Charleston, and New Orleans, printed notices of receipt of the various parts of the first American edition of Maclise between 1849 and 1852.[64] These reviews varied in length but unanimously recommended it for its accuracy, illustrations, and facility to students, surgeons, and physicians. The *Boston Medical and Surgical Journal* called it "the very best work on surgical anatomy that has been published in this country",[65] while the *New York Journal of Medicine* described it as a "work which has no parallel in point of accuracy and cheapness in the English language",[66] and the *Western Journal of Medicine and Surgery*, from Louisville, Kentucky, claimed that "no medical library, however large, can be complete without Maclise's *Surgical Anatomy*".[67] Such reviews uniformly emphasized its affordability and importance, especially in relation to comparable volumes available in the United States.

Reviewers also praised the pedagogical utility of *Surgical Anatomy*, noting how Maclise's illustrations served as accurate visual references at an emergency surgery and during or in lieu of anatomical dissections. For example, the *Ohio Medical and Surgical Journal*, of Columbus, Ohio, claimed that for "the young surgeon, who cannot have frequent access to the dissecting room, these plates are a desideratum".[68] The *American Medical Gazette and Journal of Health* of New York noted that:

> *country practitioners, whose opportunities of dissection may be rare, and who may nevertheless have need to revive their knowledge of human structure, by the necessity of performing surgical operations, and often at short notice, will find these plates of immense value as a preparation for the use of the scalpel.*[69]

Finally, the *North-Western Medical and Surgical Journal*, of Chicago and Indianapolis, proclaimed that "it should be on every surgeon's table".[70] Reviewers repeatedly and emphatically praise the pedagogical utility of the text and images for both students and practitioners.

In a lengthy American review of J.F. Malgaigne's *Treatise on Surgical Anatomy and Experimental Surgery* (1859) that appeared in the *North American Medico-Chirurgical Review*, the author outlines a bibliography on surgical anatomy, which they define as treating "the mutual relations of parts, or the relative position which one structure bears to another, considered in its application to surgical operations and accidents".[71] While "the work of Malgaigne must be viewed as a prodigious failure", and "as a book to work by in the dissecting-room, detestable",[72] they praise Thomas Morton, whose *Surgical Anatomy* is described as "the most valuable and important contribution to topographical anatomy yet made by any British surgeon", and conclude by noting that Maclise's "splendid volume … possesses many excellencies" and is "an extremely valuable contribution to the science of topographical anatomy as taught in the schools of the present day".[73] Because the summary is geographically diverse, it demonstrates the American reception of *Surgical Anatomy* in comparison with peer publications from Europe and Great Britain. The author concludes by remarking that:

> *the physicians of this country have not been unmindful of the value and importance of a knowledge of surgical anatomy … not having a good native work upon the subject … for the*

purposes of the student; in other words, one that shall serve as a ready companion for the dissecting-room.[74]

The implication is that Maclise's *Surgical Anatomy* fills the US demand for a "native" work. The myriad reviews of Maclise's *Surgical Anatomy* in leading northeastern publications and regional journals targeted student audiences, elite readers, and rural practitioners located across the country, from the American south to its westernmost borders, and were overwhelmingly positive.[75] Collectively, they praise its affordability, illustrations, and use as a reference and teaching tool for students and rural practitioners. While some suggest that it may present errors of fact, the noted absence of any comparable text—especially a US printing—led reviewers to unanimously recommend readers purchase a copy straightaway. Reviews recirculated in publications like the *Eclectic Medical Journal*, a compendium of medical miscellany repackaged in one monthly format and marketed to irregulars.[76] We can therefore comfortably assume that by 1852 medical students and practitioners across the United States with varying degrees of training, specialization, and financial resources, were at least aware of Maclise's *Surgical Anatomy*.

Readers acquired *Surgical Anatomy* bound or in fascicules by mail or through their local booksellers.[77] Numerous reviews mention which bookseller in that city—be it New Orleans, Louisiana, or Salem, Oregon—was carrying Maclise, allowing the would-be buyer to place an order directly with their local bookseller.[78] However, stocking the early parts appeared problematic, as a notice in the *Boston Medical and Surgical Journal* demanded: "Why are there not copies of Maclise's illustrated surgery for sale in Boston? Now is the time to sell them, if ever!"[79] By 1881, rural booksellers were listing used bound copies of *Surgical Anatomy* for sale for $10.00. It does not appear to have depreciated much in value from its original unbound price of $9.00, even though it had presumably been superseded by more recent texts.[80]

Maclise in American Medical Schools: The Dissecting Room and the Classroom

Surgical Anatomy was adopted in numerous American medical classrooms. By 1867, Willamette University in Salem, Oregon, recommended Maclise for surgical anatomy and claimed that "students will find a good assortment of Medical Books in this city".[81] Likewise, in 1871, the Bellevue Hospital Medical College, New York, used it as a textbook in surgical anatomy classes along with the 1859 revised edition of *New Elements of Operative Surgery* by Alfred Velpeau and Valentine Mott.[82] Starting in 1872, Maclise and Herting were consistently recommended for reference in surgical anatomy courses at the University of Chicago Medical School and Rush Medical College.[83] However, in 1881, Herting was replaced by Hyrtl and then Godlee by 1883.[84] This implies that while some texts were deemed dated or inferior, the College used Maclise into the 1880s. Interestingly, it was not just traditional programs focused on allopathy that employed Maclise; those who followed homeopathy, and the reform, eclectic, or American movements also adopted Maclise.[85] For example, in 1874, the College of American Medicine and Surgery in Macon, Georgia, which followed eclectic medicine and proudly declared themselves the "oldest medical institution in the United States opposed to Allopathy", used Maclise and Bellamy.[86] Similarly, by 1869, Hahnemann's Medical College, previously the Homeopathic Medical College of Pennsylvania, had a copy of *Surgical Anatomy* in its college library.[87]

The adoption of Maclise's *Surgical Anatomy* as a textbook in such disparate educational environments reveals that, despite deep practical divisions between therapeutic practitioners,

anatomy united them all. Sappol explores how:

> *[r]egulars, homeopaths, neo-Thomsonians, and eclectics alike emphasized the importance of anatomical dissections in the education of physicians, using the same anatomy textbooks, making the same gestures and claims in the anatomical theater, and performing the same rituals at the dissecting table*.[88]

Beyond the anatomical fraternity that this created, surgery was also—practically speaking—a relatively consistent practice. If tonsils were always in the same place, removing them would be the same whether you were an eclectic practitioner or a regular surgeon.

One criticism about Maclise's own unorthodox medical views appeared in a review in the *Lancet* in 1849. The author critiques Maclise's "rather peculiar" language and deduces that it must be owing to his studies in transcendental anatomy. Transcendental or philosophical anatomy explicitly focused on morphology, and supported comparative anatomy in order to establish correspondences between patterns and structures created by divine design.[89] Rather than "censuring" him, the reviewer expresses an appreciation for the contrast it presents to the normal "dry and dusty details of descriptive and surgical anatomy".[90] This in turn affirms the widespread appreciation and adoption of Maclise's volume, even if transcendental anatomy was outside "the norm". It also suggests why Maclise's preface and commentaries focus on the importance of comparison and, indeed, why the entire volume—illustrations and text—is so careful to maintain overall morphological characteristics and an awareness of surface and depth, part and whole.

Maclise was further enshrined in the American classroom via the inclusion of plates from *Surgical Anatomy* within later US medical textbooks and publications, including *An American Text-Book of Surgery: For Practitioners and Students*, a volume edited by William Williams Keen (1837–1932) and J. William White (1850–1916), published in 1892.[91] Dedicated to "the medical profession and medical students of America", the book reproduced nine of Maclise's illustrations in the chapter devoted to ligation of the arteries. Similarly, Charles Nancrede of University of Michigan, Ann Arbor, included plates in his 1894 *Essentials of Anatomy, and Manual of Practical Dissection*, noting that "the topographical features of each region are so beautifully illustrated, that the student can confirm his dissection at a glance, and can as quickly review his knowledge in preparing for examination".[92] Joseph Raymond, of Long Island College Hospital, New York, included three plates in *Human Physiology, Prepared with Special Reference to Students of Medicine,* published in 1901.[93] Over fifty years after the book was first published, Maclise's illustrations for *Surgical Anatomy* were still appearing in new medical textbooks in the United States.

Such examples make clear that *Surgical Anatomy* was utilized in American medical classrooms, and plates were reproduced in American textbooks decades after its publication. This indicates that, for students, it was an excellent visual supplement to hands-on dissections, which were limited by region and season. Second, its cheap cost, which reviewers repeatedly commented on (going so far as to question how Maclise or the publisher made money), made it financially accessible. Third, Maclise's instructive illustrations and corresponding commentaries, which served a wide audience, were considered accurate and truthful enough that, in America at least, they had a long life and were incorporated into other later publications.

Finally, the hand-colored lithographs were offered bound or loose as a portfolio. In this way, the plates from *Surgical Anatomy* circulated outside of the traditional book format and were used in the classroom or anatomy lab as a visual reference for lectures and dissections. As Tomlinson and Roberts described in *The Fabric of the Body*:

this format is a much more satisfactory form for ready consultation. A volume of this size is almost impossible to bind or to manage. The lithographic impressions were taken on to thin paper, which was then mounted on one of a heavier weight.[94]

The illustrations were taken into the lecture hall or dissecting room and used as instructional aids during lessons or dissections. Unfortunately, their frequent use and fragility, along with their perceived disposability, means that few documented examples physically survive. Many were probably thrown away, left to deteriorate, or sit disused or uncatalogued in university archives, storage closets, and cabinets, and will perhaps emerge in the future. Despite this lacuna, archival evidence suggests that this practice was widespread, especially in the latter half of the nineteenth century, and occurred in Great Britain and across North America. For example, in 1859, Professor Campbell was using "Quain's large plates, Maclise, Dalrymple, &c", in Surgery lectures at McGill University in Montreal.[95]

Archival photographs of medical school interiors suggest the ubiquity of this practice. Photographs of dissecting rooms in nineteenth-century America—including at Rush Medical College, Chicago; Women's Medical College of Pennsylvania; University of Pennsylvania; Yale University School of Medicine; University of Minnesota Medical School; University of Maryland School of Medicine; and Harvard Medical School—operate to, as Warner explains, affirm "collective identity": "These narratives of professional formation … [draw] particular attention to the relationship of the students to one another, to the lay community they have in some ways left behind, and to the professional fraternity-sorority they are joining."[96] These images also document the use of anatomical illustrations as visual referents. In some examples, institutional resources were obviously limited and only one or two illustrations are provided for student use. In an 1890 image of a University of Minnesota dissecting room, a single framed anatomical chart modeled after Vesalius is the only visible referent (fig. 20). In contrast, well-lit anatomy labs at the University of Pennsylvania, Yale University School of Medicine, and Rush Medical College depict large, spacious interiors with numerous anatomical illustrations arranged for quick visual reference. The first is a cavernous space lit by a clerestory, with a variety of well-sized framed images of human anatomy hung along the wall at eye level (fig. 21). Numerous cadavers in varying states of dissection are laid out on wooden tables, with a group of students in the middle ground. At Yale, a group of individuals cluster around one deeply dissected subject, a medical book propped in the foreground (fig. 22). Behind them, similarly sized framed anatomical illustrations are presented in neatly organized rows, at least three high, forming a visual reference to the body below. A 1900 photograph of the anatomy lab at Rush Medical College, presumably taken at the start of term, shows rows of undissected bodies laid out on tables (fig. 23). The dissecting room is immense, with enormous skylights that cast sunlight onto the work below. Various sized illustrations hang on the walls, along with two skeletons and cased specimens. In the majority of these photographs, it is impossible to determine exactly which images are used; therefore, there is no way to know how many US medical schools specifically had Maclise illustrations in their dissecting rooms. We can, however, consider why such illustrations were used in this way.

Figure 19

Content Notice: This gallery of images contains photographs of human remains being dissected…

Figure 20

Dissecting Room, University of Minnesota Medical School, Minneapolis, circa 1890, photograph. Collection of the Minnesota Historical Society, Minneapolis. Digital image courtesy of Minnesota Historical Society, Minneapolis (all rights reserved).

Figure 21

Anatomy Lab, University of Pennsylvania, circa 1885, photograph. Collection of the University of Pennsylvania Archives, Philadelphia, PA. Digital image courtesy of University of Pennsylvania Archives, Philadelphia, PA (all rights reserved).

Figure 22

William Blackwood, *Dissecting Room, Yale University School of Medicine*, 1899, photograph. Collection of the Bicentennial Collection, Cushing / Whitney Medical Library, Yale University School of Medicine, New Haven. Digital image courtesy of Yale University (all rights reserved).

Figure 23

Anatomy Lab, Rush Medical College, Chicago, 1900, photograph. Collection of the Wisconsin Historical Society, Madison. Digital image courtesy of Wisconsin Historical Society, Madison (all rights reserved).

Anatomical illustrations in the dissecting room were useful didactic tools for students as they cut open the body and explored parts within. Such imagery offered an organized, clean, and schematized rendering of an idealized or pathological example contrasted with the gory viscera on the table before them. Indeed, contrary to the physical body, the illustration was refined, often labeled, and sometimes showed multiple views of the same part from various vantage points. They also served as road maps or instruction manuals to a perfect dissection—visually demonstrating the proper way to make a particular cut. Having illustrations hung on the wall of the anatomy lab, rather than bound in a book, made this information more accessible for a number of reasons. First, hands were busy, occupied with dissection and unclean. A book was cumbersome; turning pages and peering at images was impractical. In contrast, large, vividly colored images were easy to consult. Buying loose folio plates was also cheaper than a bound volume and therefore more economical. As institutional property, illustrated books could "walk away" from an open anatomy lab or be damaged; in contrast, large illustrations, especially framed ones, were less likely to be stolen or damaged. Finally, a book could only be used by one student or group at a time, whereas large illustrations could be consulted by numerous individuals at once.

Anatomical illustrations were employed in American medical school classrooms as pedagogical tools. Lecturers used lithographic charts, preserved specimens, papier-mâché and live models, and blackboard drawing in combination with illustrated atlases in order to demonstrate particular points with one or more visual referents.[97] As Berkowitz explains:

> *books that were designed to be affordable for students and practising medical men … were meant to be used in conjunction with dissection and other forms of display and might more accurately be termed "reference books", rather than textbooks, as they were not meant to stand alone.*[98]

Archival photographs document this practice and make clear that nineteenth-century medical lectures were dynamic events, where lecturers took advantage of myriad methods of visual

demonstration. For example, an image from about 1884 of a biology classroom at the University of Pennsylvania shows German chromolithographed wall charts, jarred wet specimens, articulated skeletons, and blackboard drawing (fig. 24).[99] Meanwhile, an 1880 catalog for the Louisville Medical College in Kentucky describes how, along with a collection of European papier-mâché models "of the brain, heart, lungs, eye, ear, larynx, large joints, the abdominal and pelvic viscera, the gravid uterus in each month of gestation, with the foetus [*sic*], membranes, etc.", they also had "a large number of enlarged colored drawings, anatomical, medical, obstetrical and surgical. For practical teaching, these preparations are of great value to the class."[100] A 1906 photograph of Parkman Professor of Anatomy Thomas Dwight lecturing on anatomy at Harvard Medical School (fig. 25) shows a wide array of materials, including anatomical specimens and models, a skeleton, a Beauchene skull—an exploded skull that is reassembled with moveable parts and can be opened and studied—mammoth paper-mâché sagittal skull, and seven large anatomical illustrations. On the blackboard, Dwight has drawn a skull. Students sit with pencils poised, ready to take notes.

Figure 24

Benjamin Sharp, *Biological Hall*, circa 1884, photograph. Collection of the University of Pennsylvania Archives, Philadelphia. Digital image courtesy of University of Pennsylvania Archives, Philadelphia (all rights reserved).

Figure 25

Francis A. Countway, *Timothy Dwight Lecturing Students*, 1906, photograph. Collection of the Library of Medicine, Center for the History of Medicine, Boston. Digital image courtesy of Center for the History of Medicine, Boston (all rights reserved).

As these photographs demonstrate, across the country, from Kentucky and Pennsylvania to Massachusetts and Illinois, students were learning anatomy and surgical practice—at least in part—through visual aids, tactile models, and large-format pedagogical illustrations, including those by Maclise. For medical students, anatomical illustrations such as those taken from the folio editions of Maclise's *Surgical Anatomy* and then pinned on dissecting room walls or hung in lecture halls, echoed direct observational experiences and augmented the oral delivery of information during lecture. Such illustrations—made following similar dissections—operated as visual surrogates or mnemonic devices, or paralleled anatomical dissections and surgical demonstrations. Yet, they also added to such experiences by filling gaps, resolving queries, and operating as visual tools through which knowledge about surgical practice, human anatomy, and diagnosis was conveyed differently than through hands-on dissection or three-dimensional

specimens and models. Such illustrations clarified information, isolated incisions, and highlighted techniques or injuries. Information was manipulated in a way that was impossible on a real human body—either alive or dead.

Paintings after Maclise: Visual Pedagogy in Surgical Anatomy at Harvard

One final example demonstrates the unusual manner in which anatomical illustrations, including those by Maclise, were deployed within American medical schools. In 1849, Harvard Medical School professor Henry Jacob Bigelow (1818–1890) commissioned Oscar Wallis to create teaching paintings for his clinical surgery course. Their collaboration lasted five years and produced a stunning amount of material, including almost 500 large pedagogical paintings and hundreds of small watercolor studies, sketches, lithographs, and case notes covering surgery, anatomy, and microscopic pathology.[101] The paintings on large sheets of paper were mounted on canvas, edged with green fabric, and set on all four corners with grommets in order to hang vertically or horizontally. About fifty visually describe cases from Bigelow's practice, while the majority reproduce plates from popular French and British medical texts. Bigelow's selection of illustrations from recent international publications offered a global anatomical and surgical education to Harvard Medical School students, augmenting examples drawn from local practice. Bigelow used the paintings in the classroom until his retirement in 1882, gifting them to the school in 1890.[102]

The Wallis–Bigelow paintings are one portion of a larger pedagogical landscape of instructional objects, illustrations, and publications used in the classroom and dissecting lab, which trained medical students and professionals in visual diagnosis, anatomical dissection, and surgical practice. Such illustrations were integral participants in the professionalization of American medicine, a transformation that relied upon the international circulation of increasingly visualized anatomical and surgical knowledge. More than two-thirds of the paintings reproduce illustrations from at least twenty-one medical texts published roughly contemporaneous with the creation of the paintings, including those by British anatomists Richard Quain, Joseph Maclise, and Thomas Wormald.[103] Wallis, who trained as a lithographer in Germany, developed a specialized aesthetic vocabulary that emphasized bright pigments, illusionistic shading, and formal clarity. His consistent approach aesthetically unified diverse illustration styles. Wallis adopted a simple visual language that allowed students to read and understand the images, training them in diagnostics via the simultaneous presentation of multiple systems of information at once—normal and aberrant, surface and subcutaneous.

Bigelow selected at least one plate from Maclise's *Surgical Anatomy* (fig. 26). In his translation, Wallis takes the tonal, lightly colored dissection of the hand and wrist and renders it in opaque washes of red, yellow, and peach (fig. 27). The handwork of the lithographic print has been erased in favor of bold linework. Wallis removes close detail from the original and erases lettering that denotes parts and corresponded to a key. Unlike the light, delicate lithograph, this simple, brightly colored painting was easily read from afar when hung on the dissecting room or lecture hall wall. This is the only known example from Maclise's *Surgical Anatomy*, although there may have been others; less than half of the paintings are extant—a vivid illustration of the perceived disposability of such pedagogical tools.

Figure 26

Thomas Sinclair after Joseph Maclise, *The Surgical Dissection of the Wrist and Hand*, from *Surgical Anatomy* (Philadelphia, PA: Blanchard and Lea, 1851), Plate 17, 1851, lithograph, 38 cm. Collection of the Getty Research Institute. Digital image courtesy of Internet Archive (public domain).

Figure 27

Oscar Wallis after Joseph Maclise, *Teaching Watercolor of a Surgical Dissection of the Wrist and Palm*, 1849–1854, watercolor on paper mounted on canvas, 100 × 69 cm. Collection of The Warren Anatomical Museum, Francis A. Countway Library of Medicine, Boston (WAM 21142.075). Digital image courtesy of The Warren Anatomical Museum, Francis A. Countway Library of Medicine, Boston (all rights reserved).

Maclise's illustrations shape other aspects of the teaching paintings. For example, surviving paintings replicate Plates 2, 3, 39, 17, 60, and 67 from Richard Quain's *The Anatomy of the Arteries of the Human Body* of 1844, illustrated by Maclise. In Plate 3, "The Muscles and Blood Vessels of the Neck and Jaw" (fig. 28), Wallis simplifies the language of Maclise's original lithograph (fig. 29) but retains the classicizing features and pose, and the sheet, which wraps around the shoulders of the subject, making him appear like a neoclassical marble bust seen in profile instead of a dissected cadaver. Maclise's work for Quain laid the foundation for later illustrations. Some hint at the romanticized, vivified, and beautiful figures in *Surgical Anatomy*. Others, like Plate 17 showing the muscles of the neck and jaw (fig. 30) or Plate 2 of arteries of the thorax and neck (fig. 31), present obviously dead, desiccated, aged cadavers with hollow cheeks, sagging flesh, and sunken eyes. Maclise's graphic, palely colored lithographs enhance this effect, making them seem almost gruesome. In Plate 2, the subject is emaciated, their collarbone and ribcage protruding, the deep-set socket of the eye almost black. Is that a shadow from a hangman's noose wrapping their lower jaw or simply chiaroscuro? In contrast to the unsettling effects of Maclise's lithographs, Wallis's translations bring the subjects to life through color and rudimentary shading. In the first, split into two paintings, the gaunt gray cheeks become pinkened cheekbones, the sunken eyes simply sedated (figs. 32 and 33). In the second, the cavern of the orbital socket houses a bright eye, while the open mouth seems to breathe air (fig. 34). These subjects are somehow transformed and vivified.

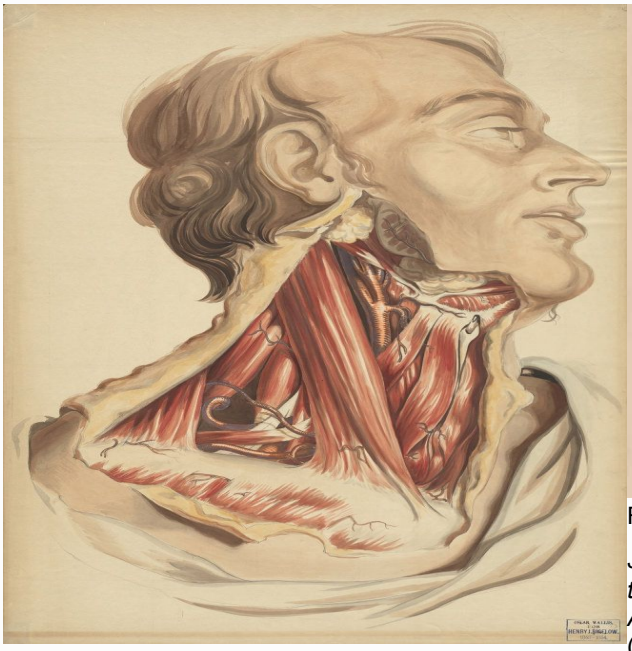


Figure 28

Oscar Wallis after Joseph Maclise, *Teaching Watercolor of the Muscles and Blood Vessels of the Neck and Jaw*, 1849–1854, watercolor on paper mounted on canvas, 100 × 69 cm. Collection of The Warren Anatomical Museum, Francis A. Countway Library of Medicine, Boston (WAG 21142.401). Digital image courtesy of The Warren Anatomical Museum, Francis A. Countway Library of Medicine, Boston (all rights reserved).

Figure 29

Joseph Maclise, *The Muscles and Blood Vessels of the Neck and Jaw*, from Richard Quain, *The Anatomy of the Arteries of the Human Body* (London: Taylor & Walton, 1844), Plate 3, 1844, colored lithograph. Collection of the US National Library of Medicine. Digital image courtesy of US National Library of Medicine (public domain).

Figure 30

Joseph Maclise, *The Muscles and Blood Vessels of the Neck and Jaw*, from Richard Quain, *The Anatomy of the Arteries of the Human Body* (London: Taylor & Walton, 1844), Plate 17, 1844, colored lithograph. Collection of the US National Library of Medicine. Digital image courtesy of US National Library of Medicine (public domain).

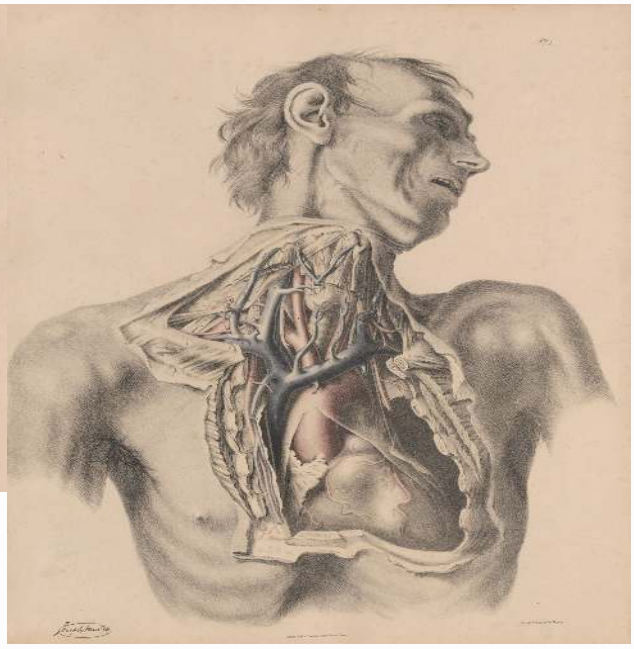


Figure 31

Joseph Maclise, *The Muscles and Blood Vessels of the Neck and Jaw*, from Richard Quain, *The Anatomy of the Arteries of the Human Body* (London: Taylor & Walton, 1844), Plate 2, 1844, colored lithograph. Collection of the US National Library of Medicine. Digital image courtesy of US National Library of Medicine (public domain).

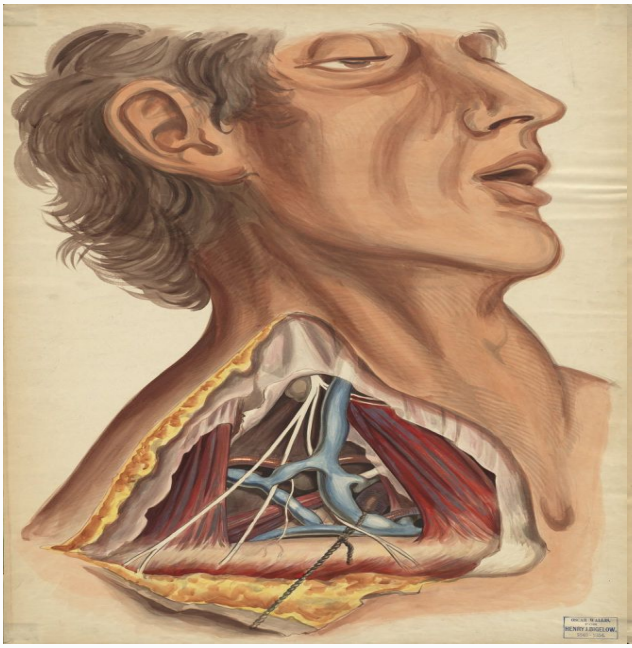


Figure 32

Oscar Wallis after Joseph Maclise, *Teaching Watercolor of the Muscles and Blood Vessels of the Neck and Jaw*, 1849–1854, watercolor on paper mounted on canvas, 100 × 69 cm. Collection of The Warren Anatomical Museum, Francis A. Countway Library of Medicine, Boston (21142.391). Digital image courtesy of The Warren Anatomical Museum, Francis A. Countway Library of Medicine, Boston (all rights reserved).

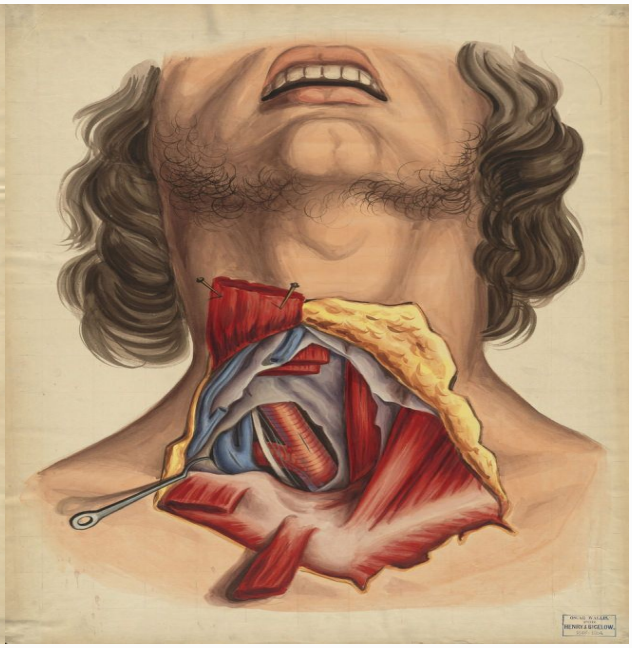


Figure 33

Oscar Wallis after Joseph Maclise, *Teaching Watercolor of the Muscles and Blood Vessels of the Neck and Jaw*, 1849–1854, watercolor on paper mounted on canvas, 100 × 69 cm. Collection of The Warren Anatomical Museum, Francis A. Countway Library of Medicine, Boston (21142.3890). Digital image courtesy of The Warren Anatomical Museum, Francis A. Countway Library of Medicine, Boston (all rights reserved).

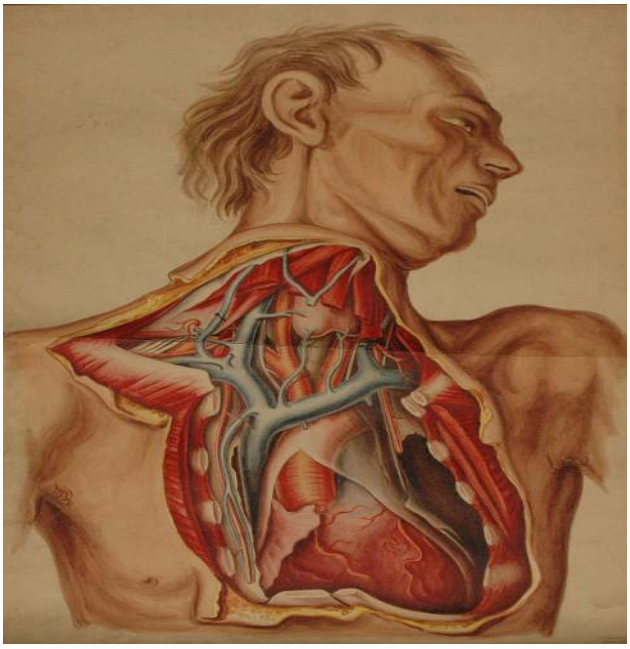


Figure 34

Oscar Wallis after Joseph Maclise, *Teaching Watercolor of the Muscles and Blood Vessels of the Neck and Jaw*, 1849–1854, watercolor on paper mounted on canvas, 100 × 69 cm. Collection of The Warren Anatomical Museum, Francis A. Countway Library of Medicine, Boston (21142.410). Digital image courtesy of The Warren Anatomical Museum, Francis A. Countway Library of Medicine, Boston (all rights reserved).

Conclusion: Medical Illustration as Fine Art

What is the pedagogical and aesthetic function of anatomical illustration? Is it a fine art or a mode of scientific instruction? As scholars continue to demonstrate, it is unquestionably both. The adaptability of *Surgical Anatomy* and its broad pedagogical, professional, and aesthetic appeal is signaled by one final consideration. Institutional spaces that focused on the acquisition of high art and medicine both collected *Surgical Anatomy*. Following its publication, copies were quickly added to American medical libraries and professional or learned societies, including the Medical Society of South Carolina library by 1 February 1850, the Maine State Library by 1856, and the Pennsylvania Hospital library by 1857.[104] By the 1870s, various editions are listed in the collections of the Mercantile Library Association of San Francisco, the St Louis Mercantile Library, and the Library of the US Surgeon General, which would develop into the National Library of Medicine.[105] And the Colorado Medical Library Association had an 1851 printing available for members by 1900.[106] By this account, Maclise's *Surgical Anatomy* appears in numerous geographically dispersed US libraries by 1900 and should therefore be understood as a central text for American medical professionals. Its early presence in these collections demonstrates its import to the profession and widespread adoption.

In addition, the Metropolitan Museum of Art, a veritable temple to "high" art, holds a bound copy of *Surgical Anatomy*, published by the Philadelphia firm of Blanchard and Lea in

Philadelphia in 1851.[107] Gifted to the Museum by Lincoln Kirstein (1907–1996) in 1952, its presence in the collection represents the uneasy status of scientific illustration within the canon of fine art. Kirstein's ownership of this significant anatomy text was, in all probability, related to his foundational research on American artist and doctor William Rimmer (1816–1879), although his interest may equally have been indebted to his role as co-founder of the New York City Ballet.[108] Kirstein appreciated the beauty of the human body and its anatomical composition, not as a surgeon or student, but as someone deeply invested in the history of art and the morphological characteristics of the human figure. This serves as a reminder that beyond their function as didactic tools in medical schools and anatomy labs, Maclise's illustrations are elegantly rendered, highly skilled works of art. The book's collection by Kirstein and then acquisition by the Metropolitan Museum of Art solidifies Maclise's place within the canons of both American medicine and fine art.

This article has operated as a case study for tracing systems of knowledge transmission from Britain to the United States. Focusing solely on a single publication—Joseph Maclise's *Surgical Anatomy*—and charting its circulation and reception in mid-nineteenth-century America—from advertisements and reviews to libraries, dissecting rooms, and lecture halls— shows how British medical knowledge, especially of human anatomy and its practical applications for surgery, reached American audiences and aided in their struggles for professionalization. *Surgical Anatomy* was one publication within a sea of similar texts, objects, illustrations, and visual materials that, collectively, disseminated forms of medical knowledge and supported the professionalization of American medicine during a period of upheaval and transformation. It was a book that should "be on every surgeon's table".

Acknowledgements

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About the author

Currently an Associate Professor of Art History at Auburn University at Montgomery, Naomi Slipp assumes the position of Chief Curator at the New Bedford Whaling Museum in August 2021. Slipp holds a PhD in art history from Boston University and an MA from the University of Chicago. Her research on nineteenth-century American visual and material culture focuses on popular entertainments, pedagogy, disciplinary histories, and the intersections between art and science, including special interests in marine fisheries science and the history of medicine and anatomy. She has presented and published widely, including in *Sculpture Journal*, *Panorama*, and *Athanor*, and the edited volumes *Beyond the Battlefield: New England and the Civil War*, *Bodies Beyond Borders: Moving Anatomies, 1750–1950*, *Ecocriticism and the Anthropocene in Nineteenth-Century Art and Visual Culture*, and *Victorian Science and Imagery: Representation and Knowledge in Nineteenth-Century Visual Culture*. She is at work on her book

manuscript, *The Art of the Body: Medicine and Anatomy in American Culture, 1800–1880*.

Footnotes

1. There is a lacuna in the field related to information on the publication of international editions in US medical publishing and no reception studies exist on any individual American medical publications. Therefore, one aim of this article is to answer basic questions about how and why a US publisher might edition a British publication and print and advertise it, and in what ways US audiences responded. This article also presents an archival account of the myriad reviews of Maclise in the United States; in aggregate, such reviews present a holistic reception history for said volume. By invoking object biographies, I reference the ways in which a full consideration of the lives and histories of scientific objects and artworks allows for a more complex understanding of their meanings and contextual resonances. Such a methodological approach is less common in bibliographic studies. Viewing a single publication in a similar fashion, I aim to outline the object biography of *Surgical Anatomy* in the United States. Such an approach allows us to gesture toward its reception, adoption, and impact in America. Samuel J.M.M. Alberti, "Objects and the Museum", *Isis* 96, no. 4 (2005): 559–571.
2. Joseph Maclise, *Surgical Anatomy* (Philadelphia, PA: Blanchard and Lea, 1851), vi–vii. There are small differences in phrasing and word choice between the prefaces for the 1851 London edition and the 1851 Philadelphia edition.
3. John Harley Warner, *The Therapeutic Perspective: Medical Practice, Knowledge, and Identity in America, 1820–1885* (Cambridge, MA: Harvard University Press, 1986), 13.
4. "The supply of physicians in the early and mid-nineteenth century was unrestricted by significant institutional barriers to entry. Because of the proliferation of medical schools, offering easy terms and quick degrees, the cost of medical education, in both money and time, was kept relatively low. Nor was an education beyond an apprenticeship always necessary. In five New England counties during the period from 1790 to 1840, the proportion of medical school graduates among practicing physicians ranged from 20 to 35 percent … And since neither licensing requirements nor a limit on the number of places in medical schools impeded entry into medicine, the supply of practitioners grew. Between 1790 and 1850 the number of physicians in the United States rose from five to forty thousand." Paul Starr, *The Social Transformation of American Medicine: The Rise of a Sovereign Profession and the Marking of a Vast Industry* (New York: Basic Books, 1982), 63–64.
5. Michael Sappol, *A Traffic of Dead Bodies* (Princeton, NJ: Princeton University Press, 2002), 48.
6. Sappol, *A Traffic of Dead Bodies*, 58.
7. Starr, *The Social Transformation of American Medicine*, 90–92.
8. An 1849 national survey by the AMA uncovered the variable quality of American medical education and demonstrated that shockingly few US practitioners were degreed in the traditional sense. Robert Slawson, "Medical Training in the United States Prior to the Civil War", *Journal of Evidence-Based Complementary & Alternative Medicine* 17, no. 1 (2012): 11–27.
9. Shauna Devine, *Learning from the Wounded* (Chapel Hill, NC: University of North Carolina, 2014). Devine outlines how the Civil War directly contributed to the dominance of allopathy in the post-bellum period.

10. In the United States, anatomy acts and laws regarding cadaveric dissection varied throughout the century and by region. The politics of cadaver sourcing often meant that individuals had to be resourceful, skirting social mores and breaking laws. Dissections tended to occur in the winter months, when it was cold and bodies were less susceptible to putrefaction. For more on anatomy and cadaver acquisition, see Sappol, *A Traffic of Dead Bodies*; Ruth Richardson, *Death, Dissection and the Destitute* (Chicago, IL: University of Chicago Press, 2000); and Helen MacDonald, *Human Remains: Dissection and its Histories* (New Haven, CT: Yale University Press, 2005).
11. On the influence of the Paris Clinical school in the United States, see John Harley Warner, *Against the Spirit of System: The French Impulse in Nineteenth-Century American Medicine* (Princeton, NJ: Princeton University Press, 1998).
12. On the history of American hospitals, see Diana Long and Janet Golden, eds., *The American General Hospital* (Ithaca, NY: Cornell University, 1989); and Charles Rosenberg, *The Care of Strangers* (Baltimore, MD: Johns Hopkins University Press, 1995).
13. Eva Åhrén, "Figuring Things Out: Visualizations in the Work of Swedish Anatomists Anders and Gustaf Retzius, 1829–1921", *Nuncius* 32, no. 1 (2017), 168.
14. Maclise, *Surgical Anatomy*, vii.
15. Maclise, *Surgical Anatomy*, vii.
16. Maclise, *Surgical Anatomy*, viii.
17. Maclise, *Surgical Anatomy*, v.
18. Maclise, *Surgical Anatomy*, vi.
19. Martin Kemp, "Style and Non-Style in Anatomical Illustration: From Renaissance Humanism to Henry Gray", *Journal of Anatomy* 216, no. 2 (February 2010), 207, DOI:10.1111/j.1469-7580.2009.01181.x.
20. This process of refinement and its relationship to historically contingent categories such as truth, accuracy, and legibility center much of the scholarly discourse regarding the development and evolution of scientific illustration in Europe, Great Britain, and the United States. Often, the visual characteristics and function of nineteenth-century medical illustration is framed as an evolution toward scientific objectivity and reflective of a widespread epistemic shift that reframed the body as a visible and knowable entity. See Caroline Jones and Peter Galison, eds., *Picturing Science, Producing Art* (New York: Routledge, 1998); and Jonathan Crary, *Techniques of the Observer* (Cambridge, MA: MIT Press, 1990).
21. Carin Berkowitz, "Systems of Display: The Making of Anatomical Knowledge in Enlightenment Britain", *British Journal for the History of Science* 46, no. 3 (2013), 384.
22. An excellent example of idealized anatomy would be the 1849 edition of Julien Fau's *Plates Illustrating the Anatomy of the External Form of Man, Intended for the Use of Artists, Painters, and Sculptors*, which was translated, along with additions by infamous Scottish surgeon Robert Knox. The text included anatomical renderings mapped over classical Greek and Hellenistic statuary, such as the Laocöon. For more on anatomical illustration, see Cindy Stelmackowich, "The Instructive Corpse: Dissection, Anatomical Specimens, and Illustration in Early Nineteenth-Century Medical Education", *Spontaneous Generations: A Journal for the History and Philosophy of Science* 6, no. 1 (2012): 50–64, DOI:10.4245/sponge.v6i1.17159; Cindy Stelmackowich, "Bodies of Knowledge: The Nineteenth Century Anatomical Atlas in the Spaces of Art and Science", *RACAR* 33 (2008): 75–86, DOI:10.7202/1069549; Domenico Bertoloni Meli, *Visualizing Disease* (Chicago, IL: University of Chicago, 2017); Richard Barnett, *Sick Rose: Disease and the Art of Medical*

Illustration (New York: DAP, 2014); Deanna Petherbridge and Ludmilla Jordanova, *The Quick and the Dead: Artists and Anatomy* (Berkeley, CA: University of California, 1997); Carin Berkowitz, "The Illustrious Anatomist: Authorship, Patronage, and Illustrative Style in Anatomy Folios, 1700–1840", *Bulletin of the History of Medicine* 89, no. 2 (Summer 2015): 171–208, 10.1353/bhm.2015.0028; Michael Sappol, *Dream Anatomy* (Bethesda, MD: US Dept. of Health and Human Services, National Institutes of Health, National Library of Medicine, 2006); Carin Berkowitz, "The Beauty of Anatomy: Visual Displays and Surgical Education in Early-Nineteenth-Century London", *Bulletin of the History of Medicine* 85, no. 2 (Summer, 2011): 248–278, DOI:10.1353/bhm.2011.0030.

23. These surgical anatomy publications are roughly contemporaneous with Maclise and represent the leading illustrated volumes of the period. I have intentionally not introduced comparable volumes published after Maclise's *Surgical Anatomy*, as the 1850s and 1860s saw a marked rise in illustrated medical publications as well as a shift in style of illustration, best typified by *Gray's Anatomy*. The four-volume *Anatomy of the Human Body* by John and Charles Bell, published between 1797 and 1804 (Edinburgh: Cadell and Mudie, 1797–1804), is considered one of the first texts devoted to surgical anatomy. It is followed by Jean Cruveilhier, *Anatomie pathologique du corps humain* (Paris: Baillière, 1829–1842); Alfred Velpeau, *Traité complet d'anatomie chirurgicale, générale et topographique du corps humain* (Brussels: Dumont, 1834); Jacques D. Lebaudy, *The Anatomy of the Regions Interested in the Surgical Operations Performed Upon the Human Body* (London, Baillière, 1835); Thomas Wormald, *A Series of Anatomical Sketches and Diagrams* (London: S. Highley, 1838–1839); Sir Charles Bell, *Practical Essays* (Edinburgh: Maclachlan, Stewart & Co, 1841); Richard Quain, *The Anatomy of the Arteries of the Human Body and its Applications to Pathology and Operative Surgery* (London: Taylor & Walton, 1844); Thomas George Morton et al., *The Surgical Anatomy of the Principal Regions of the Human Body* (London: Taylor, Walton, & Maberly, 1850). See Ruth Richardson, *The Making of Mr. Gray's Anatomy: Bodies, Books, Fortune, Fame* (Oxford: Oxford University Press, 2009); Carin Berkowitz, "Charles Bell's Seeing Hand: Teaching Anatomy to the Senses in Britain, 1750–1840", *History of Science* 52, no. 4 (2004): 377–400, DOI:10.1177/0073275314559334; Henry Gray, *Anatomy: Descriptive and Surgical* (London: John W. Parker and Sons, 1858).
24. John Turpin, "Daniel Maclise", *Ireland Illustrated, 1680–1860*, NUI Galway, https://ttce.nuigalway.ie/irelandillustrated/?ttce_function=5&object_type=person&id=ii_person_1345567325.
25. Sidney Lee, ed., "Quain, Richard", *Dictionary of National Biography*, Vol. 47 Puckle–Reidfurd (New York: Macmillan, 1896), 90–91, https://archive.org/details/dictionaryofnati47stepuoft; and Anon., "Obituary: Richard Quain, F.R.S.", *British Medical Journal* 2 (24 September 1887): 694–695.
26. Maclise, *Surgical Anatomy*, viii.
27. The release dates of the individual parts are approximated based upon the first published reviews of each part. Instead of waiting to review the entire publication as one unit, most major US medical journals published individual reviews of the separate parts, as they were issued.
28. Part V was unexpected. Lea & Billings had initially offered *Surgical Anatomy* for subscription as four parts. However, they could not finish the complete publication as anticipated. Their advertisements indicate that readers and subscribers were getting a price break on Part V. For comparison, the London edition published by John Churchill was offered as "Sets in

numbers", for £2 5s. each. "1851 Publications", *Medical Times and Gazette Advertiser*, 3 January 1852, n.p.

29. Archibald Billing, *First Principles of Medicine* (Philadelphia, PA: Blanchard and Lea, 1851), n.p. https://babel.hathitrust.org/cgi/pt?id=mdp.39015045573592&view=1up&seq=25&skin=2021.
30. The ten professors of surgery or anatomy were Dr Samuel D. Gross (1805–1884), then of University of Louisville, Kentucky, later of Jefferson Medical College, Philadelphia—and enshrined as the subject of monumental surgical painting Thomas Eakins's *The Gross Clinic* (1875; Philadelphia Museum of Art and Pennsylvania Academy of the Fine Arts); James M. Bush (1808–1875), Transylvania University, Lexington, Kentucky; Richard L. Howard (1809–1854), Starling Medical College, Columbus, Ohio; Edmund R. Peaslee (1814–1878), Bowdoin College, Brunswick, Maine; Charles Bell Gibson (1816–1865), Medical College of Richmond, Virginia; Granville Pattison (1791–1851), New York University; Dr John F. May (1812–1891), Columbian College, Washington, DC; Alden Marsh (1796–1869), Albany Medical College, New York; Henry H. Smith (1815–1890), University of Pennsylvania, Philadelphia, Pennsylvania; and David Gilbert (1803–1868) of Pennsylvania College, Gettysburg, Pennsylvania.
31. Was this really affordable? House carpenters and stonemasons in the United States earned, on average, $2.50 per day. "Prices and Wages by Decade: 1850–1859", Libraries: University of Missouri, https://libraryguides.missouri.edu/pricesandwages/1850-1859. As a further comparison, in 1843 the discounted price of delivery by subscribing to the seven-volume set of Jean-Baptiste Marc Bourgery's *Traité complet de l'anatomie de l'homme comprenant la médecine opératoire*, published in Paris in 1840, was £8 per volume, with black and white illustrations, and £16 for color. Purchasing the total set by subscription allowed for a small discount, making the total for eight volumes with color plates £112. *Bulletin bibliographique des science médicales* (Paris: Chez J.-B. Baillière, 1843), 16. Based upon the historical conversion of silver weights, in 1850 a British pound was worth approximately $4.35. This would mean that a single volume of the colored plate version of Bourgery's text cost almost $70 and almost $500 for the entire eight-volume set. For historical currency conversion, see "How Much was the English Pound Worth in American Dollars in 1850?" *CoinSite*, http://coinsite.com/how-much-was-the-english-pound-worth-in-american-dollars-in-1850.
32. Advertisement, *American Journal of the Medical Sciences* 21 (1851): 7–8.
33. Advertisement, *American Journal of the Medical Sciences* 21 (1851): 7–8.
34. Stelmackowich, "The Instructive Corpse", 54. "Their [medical publications] function was to teach those who had not performed a dissection nor had yet seen the interior of the body. Furthermore, they enable physicians to talk about the body and dissection, not in terms concerned with what the untrained had the opportunity to witness, but in terms uniquely their own, representing relationships, techniques and tools not readily available to the lay observer."
35. For a discussion of the American perception of British versus French medical practice during this period, see Warner, *The Therapeutic Perspective*, especially "Attitudes toward Foreign Knowledge", 185–206.
36. Scientific periodicals constructed professional networks and were integral to the dissemination of scientific knowledge, the construction of globalized communities, and the acceptance of various disciplinary specializations in the nineteenth century. Gowan Dawson, Bernard Lightman, Sally Shuttlesworth, and Jonathan R. Topham, *Science Periodicals in*

Nineteenth-Century Britain: Constructing Scientific Communities (Chicago, IL: University of Chicago Press, 2020). For more on the culture of scientific journals and their role in knowledge transmission and international exchange, see Alex Csiszar, *Scientific Journal* (Chicago, IL: University of Chicago, 2018).

37. By this, I don't intend to indicate that there was actual confusion over the origins of this publication. Instead, I mean to highlight that reviewers made mention that this volume was both American and British, demonstrating a desire both to link the field to British practice and precedent, and to develop and distinguish an American school of medicine and medical publishing. It seems that John Churchill's advertisements for *Surgical Anatomy* were significantly shorter and did not include a publisher's introduction. However, they do include testimonials and reviews that highlight its cheapness and national character, with the *British and Foreign Medico-Chirurgical Review* noting: "This work bids fair to redeem our country from the stigma of possessing no original work on surgical anatomy." See, for example, "Mr. Churchill's Publications", in the backmatter to Charles Bland Radcliffe, *The Philosophy of Vital Motion* (London: John Churchill, 1851), n.p. By August 1852, he advertised a second edition, noting that "[t]he singular success of this work has exhausted the Edition of 1000 copies within six months of its completion". See, for example, "Mr. Churchill's Publications", in the backmatter to Henry A. George, *Compendious History of Small-Pox*, 2nd ed. (London: J. Churchill, 1852), n.p.
38. "Henry C. Lea's Classified Catalogue", *Pacific Medical Journal* 11, nos. 2–4 (July–September 1868), backmatter, 7.
39. "[H]e would still be deficient in that information which an examination of the parts of the body, as constituting the elements of a continuous whole, could convey; and still more deficient would his knowledge be, if the relation of the deeper-seated parts to the surface had been overlooked, as has too often been the case. Mr. Maclise has been very successful in surmounting this difficulty." Thomas Wakley, ed., *The Lancet*, Vol. 2 (London: George Churchill, 1848), 610.
40. "Blanchard & Lea's Publications", in the backmatter of William E. Horner, *Special Anatomy and Histology*, Vol. 1 (Philadelphia, PA: Blanchard and Lea, 1851), 9. https://babel.hathitrust.org/cgi/pt?id=uc2.ark:/13960/t1zc7tb9z&view=1up&seq=1&skin=2021.
41. *Catalogue of Blanchard & Lea's Medical and Surgical Publications* (Philadelphia, PA: Blanchard & Lea, 1855), 22.
42. "Maclise's Anatomy Complete", *The Literary World: A Journal of Society, Literature, Science, and Art* 9 (November 1851): 373–374.
43. "New Books: Blanchard & Lea", *Norton's Literary Gazette and Publishers' Circular* (September 1851), 50.
44. Ellis Paxton Oberholtzer, *The Literary History of Philadelphia* (Philadelphia, PA: George W. Jacobs, 1906), 342.
45. A survey of their publications indicates that this printer's mark was only used for medical publications. See, for example, Leonard Schmitz, *A Manual of Ancient History* (Philadelphia, PA: Blanchard and Lea, 1855), or any of the firm's Dickens imprints, none of which bear this mark. See survey results for "Blanchard & Lea", in the Open Library, https://openlibrary.org/publishers/Blanchard_&_Lea. In contrast, every medical imprint—including those issued under later iterations of the firm, such as Lea Brothers & Co.—continued to utilize this mark for most of their medical publications. It appears to have been

implemented as early as 1844, under Lea and Blanchard, as determined by a search of the US National Library of Medicine digital archives. It is unclear if there is rhyme or reason to when it may or may not be employed. Curiously, medical volumes distinguished as French or London editions are less apt to have the mark. Therefore, I conjecture that the printers only used their distinctive mark on licensed American publications of English and French editions or works for which they held copyright.

46. Thomas Robson, *The British Herald* (Sunderland: Turner & Marwood, 1830), 179 and 183.
47. Walter Friedlander, *The Golden Wand: A History of the Caduceus Symbol in Medicine* (New York: Greenwood Press, 1992), see especially "Caduceus as a Printer's Mark", 109–126.
48. As noted by Erika Piola in *Philadelphia on Stone*, "In 1850 lithographers made up 12 percent of the printing and publishing establishments reported in the US Census of Manufacturers." Erika Piola, *Philadelphia on Stone: Commercial Lithography in Philadelphia, 1828–1878* (University Park, PA: Pennsylvania State University, 2012), 12.
49. The drawing is fixed with gum arabic and acid, which etches the unmarked parts of the drawing; a water-wash clings to the raw stone but not the greasy lines. The stone is then inked; the ink clings to the grease but is repelled by water. Damp printing paper is laid over the stone and run through a hand-cranked or steam-driven press. The resultant image is a reverse of the original drawing. The artist could also draw the image on paper and transfer it onto the stone, thereby creating an unreversed image. Sally Pierce and Catharina Slautterback, *Boston Lithography, 1825–1880: The Boston Athenæum Collection* (Boston, MA: Boston Athenæum, 1991); and Harry Twyford Peters, *America on Stone: The Other Printmakers to the American People* (New York: Arno Press, 1976).
50. Consider, for example, that Americans had to manufacture or import their lithographic hand or steam printing presses and tools, produce papers and inks, and also cultivate talent.
51. Peter C. Marzio, "Lithography as a Democratic Art: A Reappraisal", *Leonardo* 4, no. 1 (Winter 1971): 37–48.
52. American editions were distinguished from British editions through subtle changes, including revised texts (although not to the extreme) and a different order of contents and plates. One significant question emerges almost immediately: why release a US edition at all? It likely had to do with cost and copyright protections. Nineteenth-century international copyright law is beyond the scope of this article. However, it is worth noting that while British authors enjoyed significant copyright protections within the United Kingdom, the only way they could curtail infringement by US publishers was to print American editions almost simultaneously with the British release. For a brief summary on this, see Philip Allingham, "Nineteenth-Century British and American Copyright Law", http://www.victorianweb.org/authors/dickens/pva/pva74.html. In 1862, Blanchard and Lea would repeat this within the field of surgical anatomy, by purchasing the full American rights to *Gray's Anatomy*; they would publish the first of twenty-five distinct American editions. They also released an American publication of the English edition in 1859.
53. " Sinclair, Thomas", *Philadelphia on Stone Biographical Dictionary of Lithographers*, The Library Company of Philadelphia, https://digital.librarycompany.org/islandora/object/digitool%3A79775; and Piola, *Philadelphia on Stone*, 145–148.
54. Detailed visual analysis comparing the British plates to American versions indicate minute compositional differences and variations of scale between them, leading the author to conclude that Sinclair drew his own stones, after the British illustrations. It is unclear exactly

how Sinclair made his copies after Maclise's illustrations, since the British fascicules were still being released when Blanchard and Lea commissioned Sinclair to begin. Perhaps the licensing agreement included access to plate proofs or Maclise's own drawings. In either case, models would have been shipped from London across the Atlantic to Philadelphia, where Sinclair would use them as referents for his lithographic drawings. In thinking about the trans-Atlantic direction of material transportation and then visual translation, I look to the work of Jennifer Roberts, whose studies on Copley and Audubon in particular are equally attuned to networks of circulation. *Transporting Visions: The Movement of Images in Early America* (Berkeley, CA: University of California Press, 2014).

55. Rana Hogarth, *Medicalizing Blackness: Making Racial Difference in the Atlantic World, 1780-1840* (Chapel Hill: UNC Press, 2017); see also Antoine S. Johnson, Elise A. Mitchell, and Ayah Nuriddin, "Syllabus: A History of Anti-Black Racism in Medicine," for further reading.
56. Keren Rosa Hammerschlag, "Black Apollo: Aesthetics, Dissection, and Race in Joseph Maclise's *Surgical Anatomy*", *British Art Studies* 20 (July 2021), DOI:10.17658/issn.2058-5462/issue-20/khammerschlag; see also Keren Rosa Hammerschlag, "Drawing Racial Comparisons in Nineteenth-Century British and American Anatomical Atlases", in *Victorian Science and Imagery: Representation and Knowledge in Nineteenth-Century Visual Culture*, ed. Nancy Rose Marshall (Pittsburgh, PA: University of Pittsburgh Press, forthcoming).
57. Maclise, *Surgical Anatomy*, 21.
58. Maclise, *Surgical Anatomy*, 22.
59. Henry Hollingsworth Smith, *Anatomical Atlas: Illustrative of the Structure of the Human Body* (Philadelphia, PA: Lea and Blanchard, 1844).
60. Morris Martin, "George Baxter and his Oil Color Prints: Painting by Printing", *Princeton University Library Chronicle* 40, no. 2 (Winter 1979): 155–170.
61. Editor's Preface, *Plates of Maclise's Surgical Anatomy, with the Descriptions from the English Edition with an Additional Plate from Bougery, edited by R.U. Piper* (Boston, MA: John P. Jewett, 1857), n.p.
62. "Henry C. Lea's Classified Catalogue of Medical and Surgical Publications", *Pacific Medical and Surgical Journal* (July 1868): 6–7.
63. John Cleland, *A Directory for the Dissection of the Human Body* (Philadelphia, PA: Henry C. Lea, 1877), backmatter, n.p.
64. "Maclise's Surgical Anatomy", *American Journal of Medical Sciences* (Philadelphia, PA: Lea & Blanchard, 1850), 151–154, https://babel.hathitrust.org/cgi/pt?id=umn.31951p01139569h&view=1up&seq=1&skin=2021; and "Surgical Anatomy", *Transylvania Medical Journal* (Lexington, KY: The Observer and Reporter, 1849), 471, https://babel.hathitrust.org/cgi/pt?id=hvd.32044102963550&view=1up&seq=475&skin=2021. The *Medical Examiner and Record of Medical Science*, published in Philadelphia, stated: "we desire to express our conviction of its excellence, as regards both plates and commentary. That it is without fault, we do not pretend to say; but they are so few in comparison with its merits, that they can be readily forgiven." "Biographical Notices: Joseph Maclise", *Medical Examiner and Record of Medical Science* 7 (1851), 723, https://babel.hathitrust.org/cgi/pt?id=mdp.39015022404464&view=1up&seq=1&skin=2021.
65. "Medical Intelligence: Surgical Anatomy", *Boston Medical and Surgical Journal* 42 (1850), 207.

66. "Critical Biographical Notices: Surgical Anatomy", *New York Journal of Medicine and the Collateral Sciences* 8 (1852): 131–132. https://babel.hathitrust.org/cgi/pt?id=mdp.39015067139132&view=1up&seq=15&skin=2021.
67. "Maclise on Surgical Anatomy", *Western Journal of Medicine and Surgery*, series 3, vols. 5–6 (1850): 525–526, https://babel.hathitrust.org/cgi/pt?id=mdp.39015062206506&view=1up&seq=1&skin=2021.
68. "Biographical Notices and Reviews: Surgical Anatomy", *Ohio Medical and Surgical Journal* 4 (1851): 159–160, https://babel.hathitrust.org/cgi/pt?id=mdp.39015076675407&view=1up&seq=1&skin=2021. The *New Orleans Medical and Surgical Journal* declared: "With these plates before him … the student of surgical anatomy can easily triumph over all the tedious details of anatomy and make himself master of human anatomy." "Surgical Anatomy", *New Orleans Medical and Surgical Journal* (New Orleans: Weld & Co., 1850), 359. The *Charleston Medical Journal and Review* recommended it for diagnostic purposes. "Biographical Notices: Surgical Anatomy", *Charleston Medical Journal and Review* 7 (1852): 107–108, https://babel.hathitrust.org/cgi/pt?id=mdp.39015062238111&view=1up&seq=1&skin=2021.
69. "New Publications: Surgical Anatomy", *American (New-York) Medical Gazette and Journal of Health* 1 (1850), 268, https://babel.hathitrust.org/cgi/pt?id=mdp.39015058518575&view=1up&seq=1&skin=2021.
70. "Article III, Surgical Anatomy", *North-Western Medical and Surgical Journal* 3 (1851), 229, https://babel.hathitrust.org/cgi/pt?id=mdp.39015062274827&view=1up&seq=1&skin=2021.
71. Anon., "Malgaigne's *Treatise on Surgical Anatomy and Experimental Surgery*", *North American Medico-Chirurgical Review* (Philadelphia, PA: Lippincott, 1860), 823.
72. Anon., "Malgaigne's *Treatise on Surgical Anatomy and Experimental Surgery*", 824.
73. Anon., "Malgaigne's *Treatise on Surgical Anatomy and Experimental Surgery*", 827.
74. Anon., "Malgaigne's *Treatise on Surgical Anatomy and Experimental Surgery*".
75. From the more limited British reviews that I have read, I get the impression that the US reception of Maclise was uniformly more positive. A particularly critical review of Maclise's *Surgical Anatomy* appeared in 1851 in the *British and Foreign Medico-Chirgical Review*. The reviewer took Maclise to task for crowding his figures on the plates, critiqued his commentaries including claims that the spleen was a correspondent part to the liver and that physical formation can cause bladder stones, and noted that the work is so cheap Maclise cannot have been adequately remunerated for his efforts. They conclude by saying: "the best advice we can now give him, is, that he should steadily pursue the subjects in which he has shown himself so well fitted to succeed, leaving transcendental anatomy and physiology to those whose genius lies more decidedly in that direction … therefore we are consulting his interests in every way, in tendering him, … our hope to meet again, ere long, in some other department of the same field". One wonders at the viciousness of this British reviewer, who couches their criticism as a favor to Maclise. Anon., "Bibliographical Notices", [October 1851] in *British and Foreign Medico-Chirgical Review* (London: John Churchill, 1851), 529–531.
76. "Surgical Anatomy—Reprint from *Boston Medical and Surgical Journal*", *Eclectic Medical Journal* 8–9 (1849–1850), 361, https://babel.hathitrust.org/cgi/pt?id=hvd.32044103053880&view=1up&seq=947&skin=2021.
77. The publisher advised: "The books … will be sent by mail, post-paid, to any Post Office in the United States, on receipt of the printed prices. No risks of the mail, however, are assumed,

either on money or books. Gentlemen will therefore, in most cases, find it more convenient to deal with the nearest bookseller." Cleland, *A Directory for the Dissection of the Human Body*, backmatter, n.p.

78. "Surgical Anatomy," *The New Orleans Medical and Surgical Journal*, vol. VII (1851), 76.
79. "Medical Miscellany", *Boston Medical and Surgical Journal* 41 (1849), 427.
80. "Books for Sale", *Publisher's Weekly* 20 (1881), 246.
81. "Willamette University, Annual Announcement for 1867–8", *Pacific Medical and Surgical Journal* 10, no. 6 (November 1867), advertisement, n.p.
82. "List of Textbooks", *Bellevue Hospital Medical College Annual Circular and Catalogue, 1871–1872*, n.p.; and Alfred Velpeau and Valentine Mott, *New Elements of Operative Surgery*, 3rd ed. (New York, S.S. & W. Wood, 1859).
83. *Thirtieth Annual Announcement of Rush Medical College* (Chicago, IL: Fergus, 1872), 46; and *Sixteenth Annual Catalogue of the University of Chicago* (Chicago, IL: Birney Hand, 1875), 46. "Old" University of Chicago operated between 1856 and 1886. Damaged in the Chicago Fire of 1871, it was foreclosed and reopened in 1890 as the University of Chicago. Rush Medical College was chartered in 1837, affiliated with the University of Chicago from 1898 to 1941, and closed in 1942.
84. "Text-Books", *Thirty-Ninth Annual Announcement of Rush Medical College, Chicago* (Chicago, IL: Tucker, Newell, 1881), 15; and "Text-Books", *Forty-First Annual Announcement of Rush Medical College, Chicago* (Chicago, IL: Newell, 1883), 16.
85. As mentioned earlier, medical practice in the United States was deeply divided between those who practiced allopathy, or "regulars", and "irregulars", who followed homeopathy or the reform, eclectic, or American movements—among other alternatives. Eclectic medicine, alternately known as the American or Reform movement, used botanical remedies and physical therapies, while homeopathy argued that small doses of medication that produced symptoms similar to an illness in a healthy patient would cure the afflicted. Allopathy diminished the popularity of these alternative modes of therapeutic practice, especially through the actions of the AMA and other modes of professionalization. A code of ethics, educational requirements, standards for practice, and later licensing, all helped promote allopathy over alternative forms of practice.
86. *Annual Announcement of the College of American Medicine and Surgery, Session of 1874–5* (Macon, GA: Lines & Wing, 1874), 8. Formerly the Reform Medical College of Georgia, it became the Georgia College of Eclectic Medicine and Surgery in 1877 and closed in 1916.
87. C.M. Thomas, *Catalogue of the Museum and Library of The Hahnemann Medical College* (Philadelphia, PA: Kildare, 1869), 44. Hahnemann operated as the Homeopathic Medical College of Pennsylvania from 1848 to 1869, when it became Hahnemann Medical College. In 1993, it merged with the Woman's Medical College of Pennsylvania, founded in 1850, and then was absorbed by Drexel University in 2003.
88. Sappol, *A Traffic of Dead Bodies*, 137; see especially "'Indebted to the Dissecting Knife': Alternative Medicine and Anatomical Consensus in Antebellum America", 136–167.
89. For more on transcendental or therapeutic anatomy, its adoption in the United States, and its relationship to Darwinian theory, see Toby A. Appel, "Jeffries Wyman, Philosophical Anatomy, and the Scientific Reception of Darwin in America", *Journal of the History of Biology* 21 (1988): 69–94, DOI:10.1007/BF00125794.
90. Thomas Wakley, editor, *The Lancet*, Vol. 2 (London: George Churchill, 1849), 74.

91. William W. Keen and J. William White, eds., *An American Text-Book of Surgery: For Practitioners and Students* (Philadelphia, PA: W.B. Saunders and Co., 1892), https://babel.hathitrust.org/cgi/pt?id=mdp.39015076965907&view=1up&seq=5&skin=2021.
92. "Preface to Third Edition", in Charles B. Nancrede, *Essentials of Anatomy and Manual of Practical Dissection: Together with the Anatomy of the Viscera* (Philadelphia, PA: W.B. Saunders Co., 1894), n.p.
93. Joseph Howard Raymond, *Human Physiology: Prepared with Special Reference to Students of Medicine* (Philadelphia, PA: W.B. Saunders and Co., 1901), Plates II, III, and IV.
94. J.D.W. Tomlinson and K.B. Roberts, *The Fabric of the Body: European Traditions in Anatomical Illustrations* (Oxford: Clarendon Press, 1992), 562.
95. "Course of Study: Surgery", *Annual Announcement of the University of McGill College 1859–60* (Montreal: Becket, 1859), 5.
96. For more examples of photographs of American dissection room, see John Harley Warner, *Dissection: Photographs of a Rite of Passage in American Medicine*, 1880–1930 (New York: Blast Books, 2009), 165.
97. For other examples, see Martin Kemp and Marina Wallace, *Spectacular Bodies: The Art and Science of the Human Body from Leonardo to Now* (London: Hayward Gallery; Los Angeles: University of California Press, 2000). In addition to printed material, the works of numerous European anatomical model makers entered medical museums and collections from the eighteenth through the twentieth centuries. These makers include Dr Felix Thibert and Dr Louis Auzoux. For more on Dr Auzoux, see Mark Dreyfuss, "The Anatomical Models of Dr. Auzoux", *Medical Heritage* 2, no. 1 (1986): 60–62; B.W.J. Grob, *The Anatomical Models of Dr. Louis Auzoux* (Leiden: Museum Boerhaave, 2004); and Anna Maerker, "Dr. Auzoux's Papier-Mâché Models", *Explore Whipple Collections*, Whipple Museum of the History of Science, University of Cambridge, 2008, http://www.hps.cam.ac.uk/whipple/explore/models/drauzouxsmodels.
98. Berkowitz, "Systems of Display", 375.
99. Painted charts were increasingly replaced by printed wall charts that rose to prominence between 1870 and 1920, blossoming through what visual culture historian Luc Pauwels outlines as "a result of technical developments (lithographic technology), educational reform (resulting in a dramatic increase in pupil populations), and the changing view of the pivotal role of visualization in education (the need to see and handle an object)". This shift in printing technologies allowed for the creation of more wall charts, which corresponded to "a more visual pedagogy in science [that] not only embodied a general idea that visuals are essential devices in any type of knowledge transfer, but also signified a shift with regard to theory"; Luc Pauwels, "Introduction", in *Visual Cultures of Science: Rethinking Representational Practices in Knowledge Building and Science Communication*, ed. Luc Pauwels (Dartmouth: Dartmouth College Press, 2006), xiv. Large chromolithographed and hand-colored lithographed scientific wall charts range in subject, from botanical to anatomical. Most were produced in Germany and exported throughout the world during the "Golden Age" of scientific wall charts, identified by Massimiano Bucchi as between 1870 and 1920. See Massimiano Bucchi, "Images of Science in the Classroom Wall Charts and Science Education, 1850–1920", in *Visual Cultures of Science: Rethinking Representational Practices in Knowledge Building and Science Communication*, ed. Luc Pauwels (Dartmouth: Dartmouth College Press, 2006), 90–119. A suspicion toward scientific illustration, felt in some scientific circles, is examined in Anne Secord, "Botany on a Plate: Pleasure and the

Power of Pictures in Promoting Early Nineteenth-Century Scientific Knowledge", *Isis* 93, no. 1 (March 2002): 28–57.

100. *Annual Announcement of the Louisville Medical College, Session of 1880–81* (Louisville, KY: Brewers' Printing House, 1880), 2.
101. Over 200 of the paintings are extant. Naomi Slipp, "International Anatomies: Teaching Visual Literacy in the Harvard Lecture Hall", in *Bodies Beyond Borders: Moving Anatomies, 1750–1950*, ed. Kaat Wils, et al. (Leuven: Leuven University Press, 2017), 197–229.
102. Justin Winsor, ed., "From the Record of the Corporation", *Harvard University Bulletin* 45 (January 1890): 4.
103. British works reproduced in the extant series include, in chronological order: John Shaw, *A Work on the Nature and Treatment of the Distortions to Which the Spine and the Bones of the Chest are Subject* (1824); Astley Cooper, *A Treatise on Dislocations and Fractures of the Joints* (1829); James Syme, *The Principles of Surgery* (1832); Thomas Wormald, *A Series of Anatomical Sketches and Diagrams* (1838); Thomas George Morton, *The Surgical Anatomy of the Principal Regions of the Human Body* (1838); Richard Quain, *The Anatomy of the Arteries of the Human Body* (1840); Charles Bell, *Practical Essays* (1841); Samuel Solly, *Remarks on the Pathology of Mollities Ossium* (1844); Robert Druitt, *The Principles and Practice of Modern Surgery* (1844); Edward Stanley, *Treatise on Diseases of the Bone* (1849); Joseph Maclise, *Surgical Anatomy* (1851); and George W. Hind, *Fractures of the Bones of the Extremities* (1853).
104. In 1800, there were only eight medical libraries in the United States; by 1876, there were sixty. Wyndham Miles, *A History of the National Library of Medicine* (Bethesda, MD: National Library of Medicine, 1982), 11, n. 27. Significant US medical libraries included the three oldest—Pennsylvania Hospital (f. 1763), College of Physicians in Philadelphia (f. 1788), and New York Hospital (f. 1796)— and the Medical and Chirurgical Faculty of Maryland (f. 1799), Philadelphia Almshouse (f. 1732), Boston Medical Library (f. 1805), and those of private collectors including John Redman Coxe (1773–1864) and John B. Beck (1794–1851). Although an American library might now contain an early edition of Maclise's *Surgical Anatomy*, it is difficult to ascertain exactly when they may have acquired it since period catalogues and accession records are scarce. Edition not specified. *Constitution and By-Laws of the Medical Society of South Carolina* (Charleston, SC: Walker and James, 1850), 44; Edition not specified, but with 68 colored plates. *Catalogue of the Maine State Library* (August, ME: Fuller & Fuller, 1856), 69; this was the London 1851 edition. Emil Fischer, *Catalogue Raisonné of the Medical Library of the Pennsylvania Hospital* (Philadelphia, PA: Collins, 1857), 32.
105. This was the 1859 Philadelphia printing. *Catalogue of the Library of the Surgeon General's Office, United States Army* (Washington, DC: Government Printing Office, 1872), 236; Edition not specified. *Nineteenth Annual Report of the Mercantile Library Association of San Francisco* (San Francisco, CA: Turnbull & Smith, 1872), 44; London 1856 Folio edition. *Supplement to the Classified Library of the Saint Louis Mercantile Library* (St. Louis, MO: McKittrick, 1876), 37.
106. This was the 1851 edition. "Books on Medicine: Property of the Public Library", *Denver Medical Times* 16 (1896–1897), 271.
107. Joseph Maclise, *Surgical Anatomy* (Philadelphia, PA: Blanchard and Lea, 1851). Metropolitan Museum of Art, Gift of Lincoln Kirstein, 1952, 52.623.

108. Lincoln Kirstein, *William Rimmer: 1816–1879* (New York: Whitney Museum of American Art, 1946); and "Lincoln Kirstein", www.lincolnkirstein.org.

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