Ideal Pathologies: Jean-Marc Bourgery's *Traité complet de l'anatomie de l'homme* (1831-1854)

by

Melissa Lo

A.B. History of Art and Architecture and
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Harvard University

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Signature of Author ... ...

Department of Architecture
May 22, 2008

Certified by ... ...

David Friedman
Associate Professor of the History of Architecture
Thesis Supervisor

Accepted by ... ...

Julian Beinart
Professor of Architecture
Chair of the Department Committee on Graduate Students

Thesis Readers:
Mark Jarzombek
Professor of the History and Theory of Architecture
History, Theory and Criticism of Architecture and Art
Department of Architecture
Massachusetts Institute of Technology

Erika Naginski
Associate Professor of Architectural History
Department of Architecture
Graduate School of Design
Harvard University

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ABSTRACT

This thesis takes as its subject a remarkable anatomical atlas produced between 1831 and 1854: the *Traité complet de l'anatomie de l'homme*. Authored jointly by anatomist Jean-Marc Bourgery and artist Nicolas Henri Jacob, the *Traité* proposed a re-visioning of the ideal body at a moment when the very notion of such a body was undergoing transformation on two fronts: aesthetic philosophy and medicine and surgery. Because of their transverse cuts through skin and viscera, and their equal treatment of proportions and surgical interventions, the treatise's lithographic plates challenged the stability of the ideal body, whose form had typically been exemplified by classical Greek statues (and their fragments) and heavily circulated through the disciplines of art history, archaeology and academic artistic practice. At the same time, the images smoothed over the tattered edges of the pathological specimens that had become the subject of much research, teaching, and treatment in the 19th-century Parisian medical school and clinic; consequently, the images were rendered null for medical theory and surgical practice. Through an investigation of five of the *Traité*'s plates, this thesis underscores the fraught incommensurability of these images while also taking seriously how both anatomist and artist invested in the potential of representation to bridge the gap between the ideal and the dead.

Thesis Supervisor: David Friedman
Title: Associate Professor of the History of Architecture

We are doomed because humans always flow over their targets; their souls are gratuitous and busy, congested with aspiration and desire.

James Wood, "Abhorring a Vacuum"

But she often reminded herself that there were essential reasons why one's ideal could never become concrete. It was a thing to believe in, not to see – a matter of faith, not experience. Experience, however, might supply us with very creditable imitations of it, and the part of wisdom was to make the best of these.

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Introduction

On the third page of his *Traité complet de l'anatomie de l'homme,* anatomist Jean-Marc Bourgery introduced the body that he and his artist, Nicolas Henri Jacob, intended to produce throughout their book:

> "[A]n ideal form, the most beautiful and most perfectly developed of the species, a type after which all [the rest of the] figures will be equally represented. To this end, we have described a Caucasian man, five feet in height, 33 years old, and endowed with the happiest of proportions. ... We have adjoined [this image] with an infant and an old man: in other words, we describe the same individual [throughout the text.... and] Woman, simply man modified for the accomplishment of certain functions, must be described for every part of her organization that differs [from his]."[1]

Such were the limited parameters that Bourgery and Jacob set out for their 725 plates and 2,108 pages, published between 1831 and 1854. But could the constraints of this ideal plausibly describe the gross anatomical body as well as the surgical wound? And if such subjects were taken up within this rubric, what could it mean for the definition of the ideal? This thesis offers an analysis of five of the *Traité*'s most exemplary plates and the text that surrounds them. As each text-and-image combination refracts Bourgery's initial definition of the ideal through the family unit, ideal proportions, the amputated limb, spinal deformities, and the transverse cut of the body, the stability of the ideal comes into question (if not to say that it is dismantled). The argument that drives the following pages is, then, twofold: that the images and text of the *Traité* put pressure on the ideal, as it had been defined in academic artistic practice, the history of art, and aesthetic philosophy; and that the idealized body produced in its pages ran against the currents of contemporary medical and surgical practice. Even as artist and anatomist pushed the ideal

[1] Jean-Marc Bourgery, "Introduction," *Traité complet de l'anatomie de l'homme*, vol. 1 (Paris: C.-A. Delaunay, éditeur,1831-1854): 3.

beyond its previously defined edges, their joint commitment to the potential of representation never wavered. The *Traité* was evidence of a persistent belief in the power of images to do what real bodies, real hands, real surgeries could not: to achieve an ideal that could be – and describe – everything all at once.

Bourgery and Jacob produced their *Traité* during a moment of extraordinary charge for the representation of the classical ideal: from 1816 until his death in 1825, artist of the Revolution, Jacques-Louis David, lived in exile in Brussels, while the Neoclassical bodies he had produced in his very public history paintings acquired the contemptible taint of a failed politics.[2] Meanwhile, back in Paris, Quatremère de Quincy, antiquarian, scholar, and head of the curriculum at the Académie des beaux-arts, was attempting to recover and neutralize Greek marbles from the damage that David's polemical pictures had done to them.[3] It was at this moment that Quatremère was leading the effort to strip the most recent past from the classical male ideal, to de-politicize it – indeed, to restore the ideal to the ideal. No matter how much Quatremère attempted to deflect these histories, the classical Greek male body was no empty vessel. Bourgery and Jacob themselves appeared to welcome this history in order to fabricate their own parallel vision of what the ideal could be and what it could encompass.

Describing and cataloguing the human body and all that lay beneath its skin, the *Traité*'s images might seem to have been beyond the scope aesthetic debate, which mainly erupted in archaeology and the fine arts. But throughout Bourgery's text and Jacob's images is an insistence that these images fulfilled artistic criteria. Unlike previous anatomists (Vesalius comes most immediately to mind), Bourgery commended Jacob for his expertise, and for their shared dialogue – one that intertwined medicine and art:

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[2] Simon Lee, "Jacques-Louis David," Grove Art Online (Oxford University Press, 3 May 2008): http://www.groveart.com

[3] René Schneider, *Quatremère de Quincy et son intervention dans les arts (1788-1850)* (Paris: Hachette et Cie, 1910).

> The work that we publish, M. Jacob and I, must be considered as the product of the combined efforts [...]. We have seriously engaged with representing that which appeared best to each of us by mutually aiding each other's strengths. Thus, the sprawling whole of our immense work that we have undertaken, M. Jacob must be given consideration less as an auxiliary figure gifted with a special talent that I have used, and more as a collaborator whose expert judgment I have always relied upon.[4]

If we are to take this meeting of art and medicine seriously, we must also understand that Jacob's bodily knowledge (and bodily representation/production) was first inscribed while he trained in David's atelier. Indeed, it was a kind of representation of the body that even Etienne-Jean Delécluze, another one of David's students (and, later, a good friend of Bourgery's), recognized when he very positively reviewed the *Traité* for the *Journal des debats.*[5] Bourgery and Jacob's ideal was already fraught with the political memory that had sent David packing.

But the exacting aesthetic of these images had everything to do with their content. Fundamentally knit into their forms was a vision of how the anatomical and surgical body could be known, and of *what* needed to be known by those opening up cadavers and those treating the breathing patient. Bourgery predicated his treatise on the idea that a reader would look at these images in order to set a standard for how the body was meant to look in disease and health. He asserted that other treatises had not given sufficient guidance: "It is true, he possesses books, he is able to rely [on them], and absorb himself in them; but from them, the intelligence creates for itself a singular description always vague or inexact, how such ideas deny the true representation of [these things, these body parts]!"[6] Bourgery and Jacob would remedy this. The mental image of the body, then, was privileged over the hand that treated the patient (or, in the case of the anatomist, the cadaver). And, further, knowledge of the whole body – and how parts fit

[4] Bourgery, "Introduction," *Traité*, vol. 1: 8
[5] Etienne-Jean Delécluze, *Journal des debats*, 15 November 1834.
[6] Bourgery, "Introduction," *Traité*, vol. 1: 1-2.

together into its corporeal frame – held authority over individual parts. The same logic would be applied to anatomical and surgical descriptions, without discretion. Further, the treatise that integrated descriptive anatomy and surgical anatomy was rare. Most atlases took only anatomy or only surgery as their subjects, while some even ventured to investigate pathologies alone. In his introduction, Bourgery transcribed the advice that his mentor, Baron Georges Cuvier, who had warned him of the difficulties of such a task:

> In anatomy, in the field of science, you were at home, on the solid ground of nature and truth, seeing for yourself, sure of your information, and free in your judgments. In surgery, in the field of practical art, you are in someone else's house, on the fickle platform of opinions and interests, floating on error, illusion, and fashion, often obliged to see only through the suspicious eyes of others, and without certainty how to distinguish truth from lies.[7]

Bourgery forged ahead anyway.

As Cuvier had admonished outside the glass cases of the Musée National d'Histoire Naturelle, and between the wards of the teaching hospital and everyday clinic, engagement with bodies was more than just theoretical: it was physical, laborious, odiferous, grotesque; it was a matter of life and death. After Xavier Bichat had published his *Tratié des membranes* in 1802, pathological anatomy had taken hold of many doctors' research programs, which meant that while the foundations of medical knowledge were built on understanding the whole body, the focus during bedside consultations and in bureaucratic paperwork had shifted to the recognition of diseases and their lesions. As the medical profession became increasingly specialized, certain kinds of diseases and afflictions – scoliosis, for example – received more scrutiny than others. But what the rise of expertise acknowledged was not necessarily the health of the body. Rather, it emphasized the body's constant vulnerability to disease. While reference to Hippocrates

[7] Jean-Marc Bourgery, *Atlas of Human Anatomy and Surgery*, ed. Jean-Marie Le Minor and Henri Sick (Köln: Taschen, 2005): 22.

might make a publishing doctor appear learned, the days of thumbing through the ancients for advice on balancing the humors were over, at least in the medical metropolis that Paris was acknowledged to be. In the place of the past emerged a new understanding that disease could overtake the body organ by organ, and that as disease spread there was only so much that the doctor could do, and there were only so many incisions that the surgeon could make. At the same moment, Paris was known to offer an increasingly cosmopolitan and transnational medical education, which lured aspiring doctors from all over Western Europe and the Americas. They flocked to see how Parisian doctoring was marked with death and disease, sometimes to the detriment of therapeutics. Some joked that while British doctors killed their patients through over-treatment, those in France – and Paris in particular – took a more hands-off approach, letting their patients die so they could see disease run its course.[8]

How could a combination of images and words aspire to the ideal in such conditions? The point of the following pages is to illustrate just how precarious Bourgery's text and Jacob's images were: caught, as they were, between the binary system of art and medicine, and, as Michel Foucault would have it, symptomatic as they were of the epistemic rupture between the classical and the modern.[9] Chapter One begins with a general description of the *Traité* and its publication after situating both Bourgery and Jacob within their respective medical and artistic milieus. The following chapters demonstrate the various ways in which Bourgery and Jacob's ideal unraveled. Chapter Two is centered on an iconographical reading of *Traité*'s frontispiece and a comparison of the other ways in which the ideal had been conjured in

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[8] Erwin Ackerknecht, *Medicine at the Paris Hospital, 1794-1848* (Baltimore, MD: Johns Hopkins Press, 1967): 129.

[9] See: Michel Foucault, *The Order of the Things* (New York: Vintage Books, 1994): 274. Regarding the bridging of art and medicine, a litany of texts come to mind, including: Caroline Jones and Peter Galison, ed. "Introduction," *Picturing Science, Producing Art*, ed. Caroline Jones and Peter Galison (New York: Routledge, 1998); Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007); Michael Lynch and Steve Woolgar, "Introduction: Sociological orientations to representational practice in science," *Human Studies* (vol. 11: 1988): 99-116; Bruno Latour, "Drawing Things Together," *Representations in Scientific Practice*, ed. Michael Lynch hand Steve Woolgar (Cambridge, MA: MIT Press, 1990): 19-68; Barbara Maria Stafford, *Body Criticism* (Cambridge, MA: MIT Press 1992).

Revolutionary and post-Revolutionary French culture. Chapter Three treats the doctor's conception of the ideal more directly, taking his first plate of ideal proportions as the template for the rest of the treatise, and as it aligned with the aesthetic philosophy of Quatremère de Quincy. With the centerpiece of Chapter Four – a plate of amputations from the sixth volume of the treatise – and other examples of amputation throughout early 19th-century visual culture, we begin to see the ways in which the forms and conception of the ideal were being tested by the cultural consequences of war. Chapter Five, featuring a plate of tenotomic spinal corrections and other examples of both medical and artistic representations of the spine, will give the reader a better sense of how the ideal was being pushed to its limits. And Chapter Six lands on one of the few foldout plates of the entire treatise. Featuring an overabundant and very colorful description of the sympathetic nervous system, taking full advantage of the technology of lithography and capitalizing on Quatremère's argument for polychromy, the picture thrusts the ideal to its breaking point.

Throughout this paper, it is worth remembering that although medical texts had begun to feature more images during this period, the *Traité* was a somewhat anomalous. There was no sense of the volumes' practical portability: these were oversized folios to be studied. But, perhaps even more important, when it came to opening the book, Bourgery and Jacob's reliance on the ideal prohibited these pictures from being useful, pushing them somewhere closer to the realm of art rather than medical and surgical practice. Even as they veered towards the aesthetic, Jacob's pictures and Bourgery's corresponding text proved themselves incommensurate with the base content they attempted to describe. The very idea of the ideal buckled under the pressures of anatomical and surgical description. And during the 23 years between the publication of its first and last volumes, the *Traité* proved just how difficult it was to elide the living body in order to suspend its representation between death and the ideal.

Chapter 1: Bourgery, Jacob, and the Traité

Jean-Marc Bourgery was born in 1797 in Orléans. Although his family was of limited means, he, like many aspiring doctors, began his medical education in Paris as a teenager.[10] Four years later, at age eighteen, he was elevated to the position of extern at the *École pratique*, and, the same year, following an examination, became an intern at the *Hôtel-Dieu*. Such appointments were highly coveted, and they bore the recognition of things to come. Bourgery would indeed prove himself to be an exceedingly capable student: in both 1817 and 1818, he was commended for his studies at the *École pratique*, and in 1819 received the Parisian hospitals' coveted gold medal for superior performance during his internship. But the cost of a medical education and city-living were high, and the Bourgery family's modest financial situation precluded Jean-Marc from immediately continuing on to the doctorate. Even with his enviable collection of accolades, Bourgery's limited training only allowed him to work as an *officier de santé*. His new occupation was the bottom rung of the professional medical ladder, promising him neither the

[10] Although the traces of Bourgery's biography appear limited, there is a surprisingly healthy paper trail about the man that helps stitch together a life out of entries in various medical dictionaries, some medical society proceedings to which he contributed, medical journals that ushered his name beyond France's borders, his own writings in the *Traité*, and an exuberant tribute by a colorful friend, Étienne-Jean Delécluze. While I did use the biographical bit in the Taschen edition as a template, I wanted to do some double checking. The texts I have found most useful for this section have been: Claude Lachaise, "Bourgery, Jean-Marc," *Les médecins de Paris* (Paris: L'auteur, 1845); Philippe Le Bas, *France, dictionnaire encyclopédique* (Paris: Firmin Didot Frères, 1851); Étienne-Jean Delécluze, *Souvenirs de soixante années* (Paris: M. Levy, 1862); and "Bourgery, Marc-Jean," *Dictionnaire encyclopédique des sciences médicales,* ed. Raige-Delorme and A. Dechambre (Paris: P. Asselin, 1864). Bourgery's medical education seems to start at an early age, but It seems that the sight of a teenage medical practitioner was not totally uncommon. Ramsey relates an anecdote about Alfred Velpeau, a Parisian surgeon of Bourgery's generation, who was a self-taught, practicing doctor during his teenage years, but who eventually turned to medical studies when he almost killed a patient. Matthew Ramsey, *Professional and Popular Medicine in France, 1707-1830* (Cambridge: Cambridge University Press, 1988): 110.

income nor prestige of a fully certified physician.[11] After leaving Paris, Bourgery took up work as a medical officer at the copper mines at Romilly-sur-Andelle. During the next eight year, while earning his keep, he occupied himself with chemistry on the side, analyzing the composition of copper and its coloration. But bodies, not elements, remained Bourgery's interest, and he decided to return to Paris in 1827. That same year, he earned his doctorate upon submitting his thesis on circular ligature, and two months later, his research would be published in *Journal des progrès.*

There are few records that identify the means with which Bourgery continued his research. And there is nothing that indicates his having established a patient-based medical practice. Instead, he amassed a healthy record of publication on anatomical observation and preparation. Two years after earning his doctorate, Bourgery published the *Traité de petits chirurgie,* which would be printed into a second edition, and translated into both English and German. He presented a number of papers to the *Académie des sciences* between 1836 and 1843, on topics ranging from the spleen to capillaries, to embryology to the nervous system. Because Paris continued to loom over all other cities as the world's medical metropolis, doctors from England, Scotland and America combed through new research, and, in a few instances, were keen to reprint Bourgery's findings. There is also mention of an award Bourgery received in 1838, but the organization that might have given it and for what purpose remains unclear.[12] The *Traité* was certainly

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[11] As Matthew Ramsey describes it, the Revolution had caused the *ancien regime* medical system to buckle. The new government had instigated a number of new laws and new kinds of certifications for medical practice along with them, and the *officier de santé* was the result of a post-Revolutionary policing of medical education made more stringent with the Laws of Ventôse and Germinal. While making a career in medicine highly accessible, such training was still delimited by the amount of money a family could put into the education of their upstart son. See: Ramsey, 78, However, given the many years that it seems Bourgery spent in Paris, it seems that he could very well have received his medical doctorate, as the doctorate required only four years of formal study; perhaps his first apprenticeship could not count toward certification as a doctor. To receive the certification of *officier*, a student had to either "train for six years with a doctor, five years in a hospital, or three in a school. Ramsey, 108-109.

[12] "Bourgery (Marc-Jean)," Claude Lachaise, *Les médecins de Paris, jugés par leurs oeuvres...* (Paris: Sachaile, 1845): 133-132; "Bourgery (J. M.)," Philippe Le Bas, *France, dictionnaire encyclopédique*, Vol. III (Paris: Mm. Firmin Didot Freres, 1851): 247; "Bourgery, Jean-Marc," *Nouvelle Biographie Universelle*, vol. VII (Paris: Mm. Firmin Didot Freres, 1853): 82;

the most important of his projects, but even in the midst of its publication, he continued to pursue other, smaller works; between 1836 and 1839, he published an elementary anatomical text, with only twenty plates, (with the publishing house Crochard). This work, too, went into a second edition, and was translated into both English and Dutch.[13]

Bourgery's published research speaks to a man with rather eclectic interests in the body, and his comprehensive anatomical treatise offered him the chance to engage with the body's parts and interstices. The reviews of the *Traité* were generally positive, and in 1845, the *Académie des sciences* awarded him and Jacob 5000 francs, in recognition for their contribution to the discipline of anatomy. But Bourgery was continually denied what he coveted most: an academic chair. Three times he competed for three different academic positions. Three times his name had been published as a finalist for these *concours*, the highly competitive, thoroughly comprehensive and extremeley public job interview for any position in the Parisian medical-scientific academy. (For anatomy, the *concours* typically included a written exam on a specific topic relating to anatomy, a public dissection, and a presentation of anatomy-related research.)[14] And all three times – for a chair in the section of medicine and surgery in 1843, for the chair of anthropology at the Museum of Natural History in (1844-5), and for the chair of anatomy on the *Faculté de médecine* in 1846 – Bourgery was not selected.[15] These were the blows he would lament in his introduction for the final book of the *Traité*:

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[13] A version of the English translation can be found at the Countway Library's Center for the History of Medicine in Boston and the Huntington Library in Pasadena, CA: J. M. Bourgery, *A treatise on lesser surgery; or, The minor surgical operations*, trans. William C. Roberts and James B. Kissam (New York: Francis, 1834). The Dutch translation can be found at the Wellcome Institute in London: Jean-Marc Bourgery, *Grondbeginselen der ontleedkunde van den mensch in 20 platen ... benevens eene ofzonderlijke verklaring daarstellende een volledig handboek der natuurkundige ontleedkunde* (Amsterdam: H. Thompson, 1844).
[14] Elizabeth Williams, *The Physical and the Moral* (Cambridge: Cambridge University Press, 1994): 209.
[15] "Bourgery, Jean-Marc," Alphonse Pauly, *Bibliographie des sciences médicales* (Paris: Librarie Tross, 1872): 131.

> And now, on the point of completing my work for which I possess all the material, coming close to achieving what I wanted to do, may the public recognize that I have not failed in my task, although fortune has cheated me out of the success a great man [Cuvier] had predicted for me. ... Instead of the happy career that he saw smiling at me, what have I found? Loathing, obstacles, intrigues, a hidden league of tenacious opposition. During the 20 years that I have worked relentlessly, I do not have to blame myself for not helping myself. I have done everything that was honorable to attain something. I have presented myself everywhere I could. But to no avail. I have seen everybody pass in front of me, both those who had some right, but particularly those who had none. Having so much to say about a science that I have worked on so much, it seemed to me that there should be a place for me somewhere: but no. Academies, faculties, colleges of higher education, I have presented myself everywhere: everywhere there were always others who presented themselves. Two facts sum up everything: today, after 20 years, I am nothing, and I do not expect anything anymore; my name even fails to be quoted in any of the modern books, although many of them are indebted to mine. I finish with this single statement: it is the cry of 20 years of oppression that escapes from me. I might as well hold myself up as an example, so that any unwary person, in danger of being seduced, as I was, by an inconsiderate love for science, might escape this fate. At least they will learn from me that conscientious work leads to nothing. Please forgive me for this complaint. It is the first; it will also be the last![16]

While Bourgery's anguish reflects the high expectations he held for himself, and that his early successes seem to have foretold, they also speak to a collective, generational phenomena—what Alan Spitzer calls the French Generation of 1820. Defined not just because of their relative youth and adolescence during the Restoration, but also for

> their characteristic behavior: the generation of 1820 was distinguished in its own eyes and in those of its contemporaries by its 'gravity,' by the high moral tone it struck on issues of cosmic or personal significance. There was little trace among them of Bohemianism, dandyism, or the inclination to shock the bourgeoisie. Their brand of the *mal du siècle*—the emotional tone of stylish melancholy or genuine despair attributed to cohorts of cultivated youth throughout the first half of the century—was laced with a bracing sense of personal and collective superiority.[17]

[16] Bourgery, *Atlas*, ed. Sick and Minor, 2-3.
[17] Alan B. Spitzer, *The French Generation of 1820* (Princeton, NJ: Princeton University Press, 1987): 9.

Although Spitzer is careful to focus his study on the literary and intellectual pantheon (Balzac, Victor Hugo, and Victor Cousin among them) and the publishing armatures that supported it (the *Globe*, in particular), he also attends to the post-Revolutionary French educational systems that trained these men and their peers. While many passed through the *lycée*, and fewer through the post-Napoléonic university system, some fought their way into the medical profession in the fiercely competitive atmosphere of contemporary French medical education. Bourgery was one of these men. His biography – the sum of which can only be stitched together from a small and rather scattered paper trail – points to a man who shared the *mentalité* of his generation, and whose high expectations for himself would ultimately fall short of being fulfilled.[18]

Though it is true that Bourgery's portrait does not appear in the *Centenaire de la Faculté de medecine de Paris* – the celebratory book of portraits of professors of the *Faculté de médecine* published in 1896 –, he was not excluded wholesale from the records of the medical establishment. The *Dictionnarie encyclopédique des sciences médicales* included Bourgery in its first edition, published between 1864 and 1888. But his place is not exactly certain. Under the heading Bourgery, he is cited as "Marc-Jean" and not "Jean-Marc." And in the same dictionary's entry on anatomy – sub-divided into a general section, one on the history of anatomy, another on anatomical philosophy, and the last on pathological anatomy – the *Traité* is not included.[19] But by the time of the *Dictionnaire*'s publication, however, the *Traité* had been produced in several different versions. Bourgery's text and Jacob's plates were first published in 70 sixteen-page pamphlets, each with eight pages of Jacob's plates and eight pages of Bourgery's text, between 1831 and 1844. Beginning at the same time as the periodical publication, the atlas was also bound into

[18] Spitzer even mentions the life story of Louis Véron, who seems to have had a very similar medical career, having been well-received during his *internat* and *externat* but never winning a chair in the medical academic community. Spitzer, 216.
[19] "Anatomie," *Dictionnarie encyclopédique des sciences médicales*, vol. 4 (Paris: Pancoucke, 1812): 37-38.

more permanent volumes, published under the editorial auspices of C. A. Delaunay, and three versions were on offer: two in black and white - one on regular paper and the other on China paper – and hand-colored lithographs, also on China paper. And later, publisher L. Guérin reissued the complete treatise in color between 1867 and 1871. The atlas also found its way into other languages: In 1833, P. H. Scott translated Bourgery's text into an English version, comprising three volumes. D. Serantoni of Florence produced four volumes for an Italian translation, which was published between 1841 and 1856.[20] This version's title, *Iconografia*, seems to have emphasized the pictorial achievements of the text. And, for many, including those who did sing Bourgery's praises in such officially sanctioned medical publications as Lachaise's biographical dictionary of important doctors and the *Gazette Medicale*, the pictures were the main attraction of the book.[21]

While Bourgery had a strong hand in their creation, the images were primarily the work of Nicolas Henri Jacob. The remnants for Jacob's biography are even more scant than for Bourgery's, as they are mainly to limited to short entries in biographical dictionaries of the period. (Apart from his lithographic prints, Jacob does not seem to have left many records.) A cursory reading, however, makes clear that he was a well respected lithographer at the Salon, as well as in medical circles, where he would ultimately land. Born in 1782, Jacob was slightly older than Bourgery, and would not necessarily be identified as part of Spitzer's Generation of 1820. Rather, Jacob spent his adolescence in the midst of the Revolution, and his education and subsequent career would be direct products of it. A student of David's, Jacob would go on to be employed by Napoléon's adopted child, Prince Eugène de Beauharnais, and

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[20] The Italian translation is at the Wellcome: Jean-Baptiste-Marc Bourgery, *Iconografia d'anatomia chirurgica e di medicina operatoria* (Florence: D. Serantoni, 1841-1856). An English translation can be found at the Countway Library's Center for the History of Medicine: Jean-Marc Bourgery, *A Complete Treatise on Human Anatomy, Comprising Operative Medicine by Bourgery*, trans. P. H. Scott (Paris, 1833).

[21] "Bourgery (Marc-Jean)," Claude Lachaise, *Les médecins de Paris, jugés par leurs oeuvres*... (Paris: Sachaile, 1845): 133-132.

resided at his Milanese court between 1805 and 1814. Here, Jacob made a few large-scale paintings, of which the best known to his contemporaries was *The Parade of the Viceroy Surrounded by his Staff* (1809).

When he returned to Paris, he found a very different city than the one he had known with David. The capital was in turmoil, having been lost in the War of Liberation, and subject to heavy renovation as Louis XVII took the throne. With Napoléon exiled to Elba, Jacob seems to have been under pressure to form a new career. He abandoned history painting and, instead, tried his hand at lithography, where he found much success. In 1819, Jacob began to display a number of lithographs at the Salon – portraits, mainly, but also copies of famous paintings (including fellow Davidian Girodet's *Les Funerailles d'Atala*).[22] His lithographic touch was much celebrated, and earned him a medal at the 1824 Salon. And his sensitivity to the medium did not go unnoticed by doctors, who wanted to make sure they had images to accompany their texts. Before beginning the *Traité*, Jacob collaborated with other doctors to illustrate their anatomical texts, including an atlas that investigated hernias in horses, and another in more familiar territory – the regions and parts of the human body. There is also some mention of a project he undertook with famed anatomist and surgeon Baron Guillaume Dupuytren. He ultimately found work as a professor drawing and design at the renowned veterinary school at Alfort, in the suburbs of Paris. This appears to have been his day job as he worked on the *Traité* with Bourgery. But the rest of Jacob's career, beyond his work with Bourgery, remains unclear, and little is known about what Jacob might have pursued between completing the *Traité* in 1854, and his death in 1871.[23]

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[22] W. McAllister Johnson, *French Lithography: The Restoration Salons 1817-1824* (Kingston, Ontario: Agnes Etherington Art Centre, 1977): 58-59.

[23] This short biography draws on a number of sources. "Nicolas Henri Jacob," Louis Dussieux, *Les artistes français à l'étranger* (Paris: Lecoffre fils et cie, 1876): 437; "Nicolas Henri Jacob," Charles Gabet, *Dictionnaire des artistes de l'école française, au XIXe siècle...* (Paris: Madame Vergne, 1831): 366; "Nicolas Henri Jacob," Michael Bryan, *Dictionary of Painters and Engravers, Biographical and Critical* (London: George Bell and Sons, 1886): 701. A more detailed version catalogue of his work can be found in Gabet.

Beyond the directorial efforts of both Bourgery and Jacob, there were others involved in the treatise's production. Bourgery could count on the knowledge and handiwork of a handful of doctors and surgeons, anatomical preparators, and, above all, medical students. The exact number is unknown, but there are two who stand out. One was Ludwig Hirschfeld, who would go on to becoming an anatomist at the *Faculté de médecine* and author of a notable treatise on neurology. Even more recognized was preparator Claude Bernard, who, later in the century, would become a vocal advocate of physiological experimentation (a practice that, because of its active, chemical reconfigurations of the body, was distinct from the more straightforward observation of dead cadavers). Indeed, Bernard had become so famous by the 1867 publication of the *Traité*'s second edition that the publisher, L. Guérin, added his name to the byline, even though it seems that Bernard had done little else than minor anatomical preparations. Jacob also had a team of lithographers and draughtsmen who helped him to create the treatise's vast store of images. One of the illustrators, Jean Baptiste Léveillé, went on to collaborate with Hirschfeld for his treatise on neurology. And Jacob's first student, Charlotte Hublier (who would later become Jacob's wife), was one of the few female scientific and anatomical illustrators of her day.[24]

With a reserve of lithographers on the one hand, and a cache of medical practitioners and students on the other, it might appear difficult to make the argument for the uniformity of the publication. Indeed, the original – and rather scattered – publication chronology suggests that the text and the pictures were independent means of understanding the human body. The muscular system, meant to be the second volume, was published first in 1831 and its accompanying text was published much later, in 1852. The text for the first volume on the skeletal system was published in 1832. The skeletal plates were published in 1840. The atlas and text for the nervous system were bound together for the third volume, and published

[24] Bourgery, *Atlas*, ed. Sick and Minor, 24-25.

Table 1: Publication Chronology for the *Traité*	
Date	*Volume and Contents Published*
1831	t. II: Muscular System plates
1832	t. I, Skeletal system, text
1839	t. V, Digestive system, text and plates
1839	t. VI, surgery, plates published
1840	t. I, Skeletal system plates
1840	t. VII, surgery part 2, plates and text
1844	t. III, Nervous system, plates and text
1851	t. IV, lymphatic system, plates and text
1852	t. II, Muscular System text
1852	t. VII, surgery part 1, text
1854	t. VIII, Embryology, comparative, philosophical and microscopic anatomies, plates and text

in 1844. Book four, on the lymphatic system, came out in 1851. The fifth volume on the digestive organs and genitalia was published in 1839, along with its images. The plates for both volumes on surgery were published in 1839; and their accompanying text was published in 1852 and 1840, respectively. The eighth and final volume on philosophical anatomy and microscopic anatomy was published, along with its plates, in 1854, after Bourgery's death in 1849.

But what is so remarkable about the treatise is that despite this piecemeal production, despite the many hands involved in the process of its creation, and despite the numerous images and the many anatomical and surgical details it would contain, Bourgery and Jacob made sure that the *Traité* retained a unilateral vision. Page by page, their insistence on producing an ideal body – one that could be easily conjured in the mind – disciplined what the images could reveal and how they could be made. Few images spoke so clearly to this agenda and for the way in which these images filtered the artistic, medical and cultural climate – those that Bourgery and Jacob experienced day to day in the midst of their respective practices – than the frontispiece.

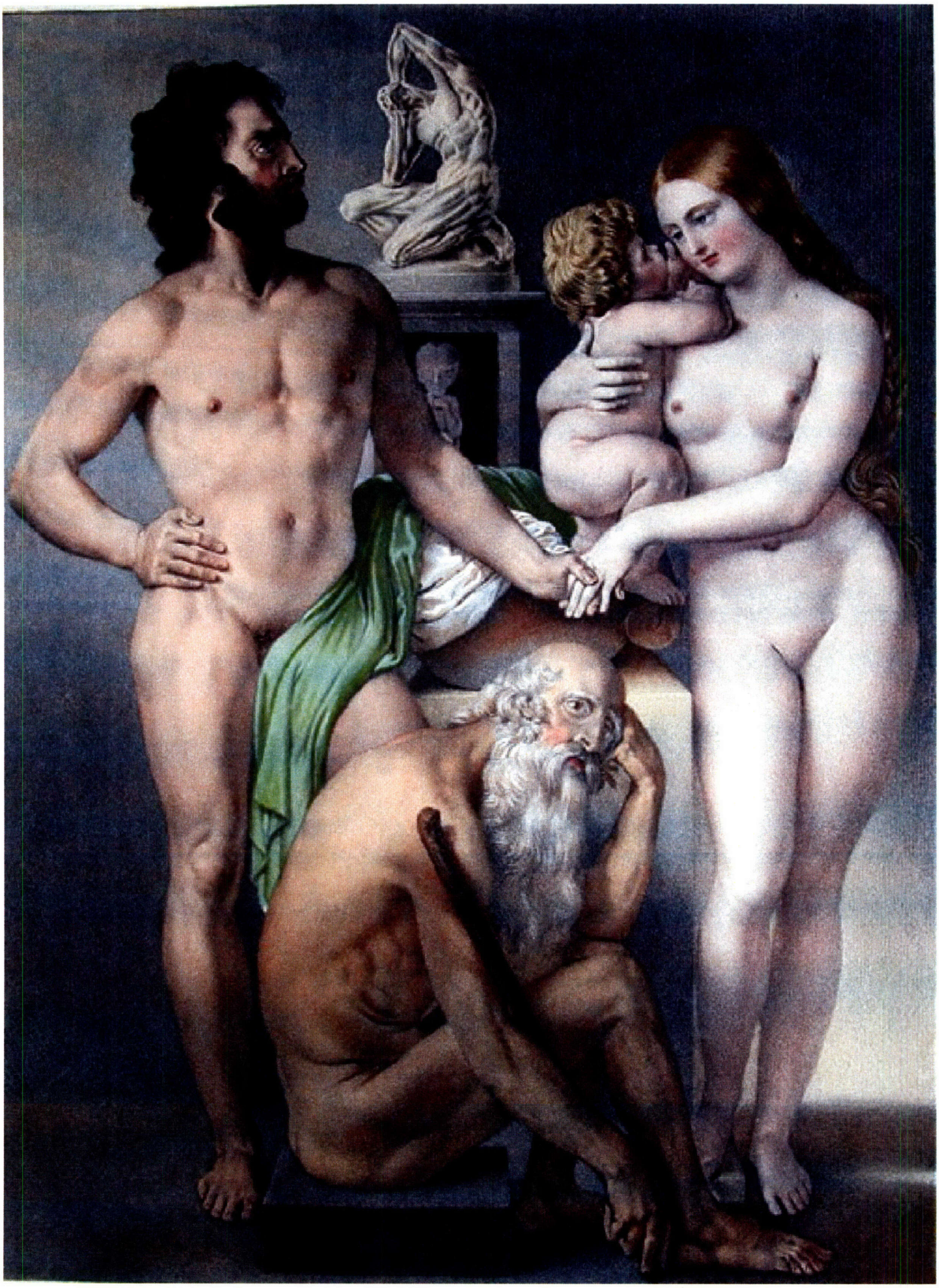

Fig. 2.1: Bourgery, *Traité*, Vol. 1, Frontispiece.

Chapter 2: Borrowed Bodies

Of all 725 plates in the *Traité*, this was the only one for which Bourgery did not provide any explanation. [**Fig. 2.1**] Prefacing the rest of the text and its images, the frontispiece seems not much more than a fairly attractive family comprised of a man, a woman, their child, and a contemplative grandparent. The man on the left – a stately nude with curly dark hair and a beard to match – looks off to the distant right. Across a stony plinth – overflowing with strategically placed drapery –, to the auburn beauty to his left, he extends his hand. She delicately accepts it, letting one of his fingers slide rather erotically between her ring and pinky fingers, while clutching a blonde infant in her other arm. Beneath them, the grandfather, a rather forlorn old man with a long, bushy gray beard, sits lost in thought. Lurking in the shadows behind this family, however, are rather ominous signs: a statuette of an agitated écorché and, on its pedestal, a fetal head and arms. Chiseled and gray, with insides on full view, these sculpted objects appear quite incompatible with the supple family in the foreground. Such strange emblems, such weird icons, they call into question the stability of the other images offered by the frontispiece: What exactly is the octogenarian holding that wooden pole that appears too short to be a staff and too long to be a wand? How is d it that the green sash so adequately covers the man's genitalia, while the woman's crotch is left so noticeably bare? Where are these people?

Because Bourgery chooses not to explain the image, the curious reader must refer to other sources in order to decipher the figures – these tessera – offered by the frontispiece. Iconology, as advocated by

Erwin Panofsky, has its limits of course.[25] We cannot always assign meaning to objects and images just because they bear some resemblance to their forerunners. But I want to suggest in this chapter that both Bourgery and Jacob were highly aware of the pictures they were making, and of the kinds of texts they produced (or did not produce) to accompany them. Indeed, Bourgery reminded his reader just how equal his partnership with Jacob's was:

> Since the beginning of the publication of scientific works accompanied by illustrations, we have always named the book after the name of the author of the text, without making mention of the artist who cooperated. The writer himself has regarded the work in its entirely as his own [...] So much for that [...] The work that we publish, M. Jacob and I, must be considered as the product of the combined efforts [...]. We have seriously engaged with representing that which appeared best to each of us by mutually aiding each other's strengths. Thus, the sprawling whole of our immense work that we have undertaken, M. Jacob must be given consideration less as an auxiliary figure gifted with a special talent that I have used, and more as a collaborator whose expert judgment I have always relied upon.[26]

Here is a remarkable assertion of the interdependence of text and image, and of anatomist and artist. In the same way that Bourgery has mastered the information he transmits through his text, we can be sure that Davidian-trained Jacob mastered the drawing of the body and was highly aware of the precedents and techniques for how one might approach its representation. The picture I analyze in this chapter appears to stand alone because it has no accompanying text, and because it appears so (deceptively) ideal. But what is curious about it is that there are no immediate precedents for the whole of the image, either in anatomical atlases or in artistic or visual culture. It portrays a group of figures that has been knit together from a panoply of sources in order to represent an ideal family constituted of ideal bodies. As a result, it

[25] See: Irwin Panofsky, Introductory" in *Studies in Iconology: Humanistic Themes in the Art of the Renaissance* (New York: Harper & Row, 1962): 3-32.
[26] Bourgery, "Introduction," *Traité*, vol. 1: 8.

functions not only as the primary marker of their artistic aspirations but also an indication of the conservatism that the ideal had come to stand for in 19th-century artistic and medical culture.

Many anatomical atlases begin with such prominent frontispieces, but few of these frontispieces are absent text. Andreas Vesalius, the Renaissance anatomist whom Bourgery would refer to somewhat frequently throughout the rest of his own treatise, had his artist fashion a title page thick with a buzzing anatomical theater, laced with the publication information. [**Fig 2.2**] At the center is a gouged-out female corpse, the mysteries of her uterus on very public display. Vesalius attends to her side (and her innards), while a skeleton of death rises up behind them. The image puts the act of dissection center-stage.[27] Subsequent frontispiece images instruct their readers about other features of anatomical study. Govart Bidloo's offers a busy enclave, replete with figures: a trumpeting angel in the upper-right; below, Mother Nature – scalpel in hand and book in her lap – de-fleshing the arm of a mostly cloth-covered infant statue; in the lower left, Father Time opening the curtain to the scene; on the lower-right, three putti playing around with a skull, an amputated limb, and an anatomical diagram; and, in the shadows, two menacing skeletons skulking in the background. The abundance of symbolic imagery emphasizes the cutting open and observation of the body, while also sounding warnings about life's inevitable end. [**Fig. 2.3**] Albinus's title page features a bucolic scene, complete with a small hut behind a bed of rocks, and, most prominently, a toga-wearing anatomist, dissecting a monkey, with a slain deer at his feet. [**Fig. 2.4**] Under the base of the tree are a few books – open and closed – that the anatomist is intent on putting to little use. His calling, it would seem, is both a natural and an ancient one: in the distance, there are a few

[27] Katharine Park, *Secrets of Women* (New York: Zone Books, 2006): 207-267.

more men in classical garb, all lining the edge of the hill.[28] Haller simply footed his title page with a group of cloud-bound, harking angels, triumphantly ushering in the text that would follow. [**Fig. 2.5**]

While the older anatomical atlases that Bourgery celebrated included glorifying frontispieces – with images that expressly made the case for anatomical practice –, most of the more notable medical atlases published around the same time as the *Traité* did not rely on such set pieces to generate themes, or to preview an argument for the body and the practice of anatomy. In neither *Anatomie de l'homme* (1821) nor *Manuel d'anatomie descriptive du corps humain* (1825) did Jules Cloquet, the first French surgeon to employ lithography for the plates of his descriptive anatomical atlas, open his text with an image.[29] Nor was Cruveilhier interested in launching his folio, *Anatomie pathologique* (1829-1835), with a potentially divisive picture. The closest that he came to a comprehensive opening image was an alphabetical table, outlining particular parts and maladies of the body. There was perhaps a need to orient the reader to the text, but no need to offer a clear aesthetic emblem or program.[30]

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[28] The theme of anatomical naturalism of the scene is acute, and underscores what Peter Galison and Lorraine Daston have noted as Albinus's aspiration to "truth-to-nature." Daston and Galison, *Objectivity*. 55-113.

[29] Cloquet – In Anatomie de l'homme, he sets the mood for the title page with a quote from St. Augustine: "Mirantur aliqui altitudines montium, ingentes fluctus maris, altissimos lapsus / fluminum, et gyros siderum: -- relinquunt seipsos nec mirantur!" Jules Cloquet, *Anatomie de l'homme* (Paris: Lasteyre, 1821): title page.

[30] Jean Cruveilhier, *Traité d'anatomie descriptive* (Paris: Labé,1843): title page. There is, perhaps, a case to be made for the political volatility of images during this period, and how they might apply to frontispieces. "During the Restoration," Carol Duncan writes. "History was the most popular, the most controversial, and the most ideologically charged literary pursuit. In this context, every image and utterance of and about the national past could be ammunition in an ideological battle." Medical institutions did not go untouched: In November 1822, at opening exercises for the academic year, students loudly voiced their distaste for the ecclesiastical leanings that had been reintroduced to the Faculté following Charles X's installation as monarch. Three days later, the government upended the school in its entirety, canceling classes, purging all eleven left-leaning professors, and shutting its doors. (As a result of the weeding-out, only half the faculty was left.) The Faculté would re-open four months later, in March 1823, with ten professors who wore their royalist loyalties on their sleeves, to make a total of 23 chairs, and no adjunct lecturers. Assistant professorships, however, had been created, and through them, both Cloquet and Cruveilhier – they of the texts without frontispieces, they who seemed to conform to the ideologies of Charles's regime through their silence – had been installed. Bourgery himself had seen medical education prior to and after Charles X's installation as monarch, and could have been highly aware of the charge of images during the period. See: Carol Duncan, "Ingress Vow of Louis XIII and the Politics of the Restoration," *Art and Architecture in the Service of Politics*, ed. Henry A. Millon and Linda Nochlin (Cambridge, Mass.: MIT Press, 1978): 80-91, 83. Ackerknecht, 40.

Thus, contrary to Bourgery's silence, this bizarre frontispiece – whose figures go nameless, placeless, and unaccompanied – *does* require a certain amount of unpacking, for it defines the artistic authority for the entire treatise. The artistic echoes begin simply enough, with the proud, solid man on the left. He stands upright but with a slight contropposto, his hand on his hip and his hirsute head in profile. Athleticism becomes him: capped by tan nipples, his pectoral muscles pop out from his chest; his biceps and deltoids bulge; his large left hand casually rounds the curve of his hip; and he is somewhat modest with folds of an iridescent, green cloth sweeping across his leg – a cloth which, conspicuously, lets a tuft of brown pubic hair peek out of its edges. Nonetheless, this impressively built man tilts his head upward and beyond as his thick, serious brow attends to serious question off in the distance. But what defines this figure above all else is the outline of his body and the way it encloses his flesh. He would not be so solid without it.

Such attention to bodily contours, and to a so familiar and classical pose, would not have been lost on those who had practice with the *académie*, Jacob included. [**Fig. 2.6**] Since the 17th century, the *académie* – the drawing that artists-in-training would sketch after the live, male nude model – had been a steady, reliable feature of artistic training at the *Académie* and even in the privacy of established artists' ateliers. The constant demand for the *académie*'s production helped students become more familiar with surface anatomy and the rendering of corporeal heft, and using simple strokes of crayon or pencil in order to delineate form. Typically, the shape of the *académie* was limited to a rather strict rotation of poses that models could assume. Any dis-proportionality or any quirk evidenced by these bodies could be smoothed over – and was meant to be erased as the body was drawn –, for the finished *académie* would not offer a depiction of a specific individual, but, rather a picture of a more general type that gestured toward the ideal. Of it, Al Boime has written, "The principle of this teaching was to proceed from the part to the whole, by

grouping elements into an ensemble of the stereotyped pose."[31] While the male nude and its constant repositioning provided ample opportunity for the artist to display his ingenuity, it also ran the risk of becoming a tired template, a mere teaching tool.[32] Put to much use, the term *académie* later assumed a slightly pejorative meaning, especially among critics who would lambast artists for clichéd poses and too-familiar types. At best, great history paintings were the product of seamless integration of *académies* and the ability to fashion and torque the male nude into a scene so tightly knit that the all-too-recognizable body would be lost to the vortex of the canvas. This was, as Darcy Grimaldo Grigsby has shown, one of the astounding merits of Gericault's *Raft of the Medusa*: that, even after having starved for 15 days, the abandoned and ignored still managed to have exquisite musculature. The *académie* still ruled over the logic of the picture.[33] [**Fig. 2.7**]

To quite different ends, and rather less successfully, Jacob applies this same principle of manipulation to his frontispiece. Instead of only using the athletic male nude, he calls on other stereotyped figures such as the mother and her baby and the sitting old man in order to instill a dignified seriousness to his image. Each can be found in other artistic precedents – and, as I will later show, so can this kind of three-generation family, but in quite different circumstances. Here, these bodies seem like a cut-and-paste patchwork, in which form, rather than content, reigns supreme. Perhaps this becomes most obvious with the mother and child figure. The Madonna and child allusion is obvious here, and Jacob certainly would have been aware of the kind of mother he was producing. Perhaps the most immediate precedent would have been Jean-Auguste-Dominique Ingres's *Vow of the Louis the XIII* (1824), in which

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[31] Albert Boime, *The Academy and French Painting in the Nineteenth Century* (New Haven, CT: Yale University Press, 1986): 19. This logic was of a piece with the anatomical training at the hospitals, which saw students crowding over cadavers in order to ingrain in their memories different kinds of parts, and, later, with the advent of pathological anatomy, particular pathologies.

[32] Darcy Grimaldo Grigsby goes into brilliant detail about the strictures of the *académie*, with particular attention to race. See: Darcy Grimaldo Grigsby, *Extremities* (New Haven, CT: Yale University Press, 2002): 35, 76-77.

[33] Grigsby, 192-207.

Madonna and Child – haloed, bathed in light, seated on a billow of clouds, and revealed and hailed by a band of angels and putti – bless the humble and very historical monarch. [**Fig. 2.8**] It is easy to imagine that Jacob has simply turned the baby into his mother's chest, the better to show the figure of the woman he has put on display. But among the multitude of reasons for why Ingres's *Vow* is incongruent is that there are so many accoutrements in the painting, while Jacob relies on almost nothing to convey a story. Jacob's female figure seems so unaccustomed to holding the baby in her arms that it seems her toddler is just about to slip out of her grasp. A standing nude with a snake of a braid rounding the swivel of her hip, she reveals all, whereas Ingres's seated Madonna reveals nothing. Indeed, Jacob's mother is sensuous, but also restrained: while the curve of her body might initially appear alluring and the baby in her arm invites desire, that light, rather erotic, hand-holding indicates that she is possessed by another who is much too close by. She can only be wanted from a distance.

A different work by Ingres throws more light on the woman that Jacob has depicted. A preparatory study for *Roger déliverant Angélique* (1819), *Angélique* (1819) features a supple female nude, similarly curvaceous and without a tuft of pubic hair. [**Fig. 2.9**] Although Angélique will find herself in much more distress than Jacob's stilled frontispiece figure, what is important here is that both figures shift into slight contrapposto, their auburn hair falls along the outline of their bodies, and both appear destined for other works but are trapped by the confines of their respective picture planes. Neither appears to have any agency, and both figures' hands are occupied: Angélique's are crossed one on top of the other (Ingres will eventually chain them); and Jacob's female is an attractive lover, on the one hand, and an attentive mother, on the other. Nor has either woman been depicted in an identifiable place. Indeed, Angélique seems to complete the rectangle of red behind her (or, alternatively, helps un-scroll the red rectangle), while the woman in the frontispiece also takes on a complementary function – completing the picture's

nuclear family. But both are figures set against a plain backdrop, their forms holding precedent over any backstory; they appear very much as cutouts, easy to carry over from one work to another and very easy for their artists to manipulate.

The transferring of images continues with the old man sitting in a state of rapt but empty contemplation. Below the rest of the figures, this octogenarian, with his dogged beard, cradles his head with his left knuckles as he casts his brown eyes above. His body has been thinned with old age, although below a few folds of skin, his legs seem to retain some kind of muscle memory for triumphs of the past, even as they darken and taper into his bony calves and feet. His right hand clasps the bottom edge of a stick that leans against his forearm and measures only the length from his hand to his shoulder. Even though he appears to have curled into the beginnings of as hunchback, the wooden crook appears too short to be a walking stick, and too large and too thick to be described as a wand. Of the four fleshly bodies, he remains the one whose artistic origins are most difficult to recuperate, his legibility, unlike the other figures, is somehow incomplete.

Could he be a pensive version of Girodet's *Ossian*, the Gallic bard whose work was "recovered" in the middle of the 18th century? [**Fig. 2.10**] Shake awake the center of the teeming, slightly psychedelic 1801 painting, drop Ossian and his walking stick onto a little stoop, and, with reminders about widespread Ossianism in early 19th century Europe, the suggestion becomes increasingly plausible.[34] But perhaps we might ultimately go back on the *Raft*, and on the old man that hangs heavy as his son's dead weight sprawls across his lap. [**Fig. 2.11**] Shrouded in a blood-red cloth, this starved man also sits pensively with his head heavy against his fist. His son's body has been drained of life, and he is surrounded by the dead, dying

[34] Sylvain Bellenger, *Girodet, 1767-1824* (Paris: Gallimard, 2005): 234-255.

and decayed. For him, all the hope surging on the other side of the raft is no consolation. Jacob seems to enact a similar melancholic survey of life – and of lively bodies – with his old man.

In particular, this old man helps the image evoke three successive generations. He completes an inverted triangle that consists of father and mother, child, and grandparent. But even as it attempts to figure this span across time, it still bears the marks of when it was made – and by whom. Filtered into the scene, through the washed-out grisalle of the walls, or the stillness of the bodies, is evidence of the *mal de siècle.* Even without the interlocking, dead and corroding bodies of *The Raft of the Medusa,* and the politics of the post-Revolutionary limb. The picture is so reticent, so absent of movement, so heavy with lack of will that it seems to have been pervaded with a melancholy. None of the figures' gazes meet, not even the mother and child. Indeed, the only hints of activity are the hand-holding in the middle of the plate, and the baby, who looks as though he is about to whisper something into his mother's ear. But, of course, we cannot hear it. Every gesture is incomplete, dissatisfied. Romantic artists and writers, Hugh Honour observes, "Had transformed the Christian doctrine of spiritual victory in physical defeat into a cult of failure – a cult not only of the defeated hero but of the unfulfilled genius, the poet who died young and neglected [...], of the incomplete masterpiece and the unconsummated passion."[35] Perfected and unwounded as Jacob's bodies are, consummated as their passions might be, each appears heavy in his or her skin. And the family unit is not the happy picture of family, but something grave and serious. Jacob's frontispiece does appear somewhat incomplete – devoid of narrative.

This becomes especially clear when taking into account contemporary pictures of generations, Anne-Louis Girodet's *Une scene de deluge* (1806) in particular. [**Fig. 2.12**] It does not take long to realize that the Girodet's larger-than-life-sized figures are at complete and total risk: the old man, collapsed and

[35] Hugh Honour, *Romanticism* (New York: Harper & Row, 1979): 42.

decaying, is just about to die on the back of his son; the woman swoons backwards, curiously defying gravity as a young boy pulls anxiously at her golden locks; the baby rests almost obliviously on her chest; and the survival of the whole clan dubiously rests on the younger man's arms, one pulling up his wife and the other clinging to a branch that has begun to splinter. A dark shadow is cast across the entire canvas: mortality is eminent. What makes this painting especially applicable to Jacob's frontispiece is that Girodet so publicly insisted that this was *a* deluge, not *the* Deluge. This was not representative of Noah or Greek myth – specific enough scenes that could then be invested with universal meaning – but an instance, a type, rendered with a fine brush and an eye sensitive to anatomy. Representing man against nature, the image captured how man must mediate between family members and between generations – indeed, it illustrates precisely how difficult that struggle is. Jacob's lithograph, however, put its family group in a different relationship with one another; indeed, no figures in particular appears to mediate this picture, there is no struggle. Instead, there is a heavy feeling of inertia.

Those who had championed Girodet's painting in 1806 were impressed by its harrowing drama. Most agreed that the life-sized painting was a great one, even after issuing complaints about the windswept precariousness of the figures and the story they seemed to describe. (It seemed critics wanted *the* Deluge.) The man with the over-taxed, outstretched, and bulging musculature, was the fulcrum for such criticisms. While he enjoyed much attention for its anatomical certitude, one critic, upon inspecting it some more, complained that his figure was too reminiscent of the *académie.* There was something apparently unfinished about the figure, something too Michelangelo-esque.[36] Underlying this critique was a fear that too much attention to hyper-extended musculature could harm the seamless ideal – that, in a sense, Girodet had not yet mastered the *académie.* Indeed, he had not manipulated the *académie* in the

[36] Dale Cleaver, "Girodet's *Déluge*, a Case Study in Art Criticism," *Art Journal* (Vol. 38, No. 2: Winter, 1978-79): 96-101, 97, n. 24.

same way that Géricault would about thirteen years later. And unlike either Girodet or Géricault, Jacob offers a very serviceable version of the *académie* in the figure on the left. The body, instead of serving a narrative purpose becomes a dignified but ghostly image. Indeed, it is a solid image of man idealized, and stuck in within the confines of his generation, perhaps a father, and perhaps a son, but, somehow, nothing more.

If Girodet had attenuated, over-muscularized and, therefore, potentially compromised the ideal, there was a painting that had explicitly reinforced the stillness, the inactionability of the classical Greek the ideal. This was David's *Battle of the Sabines* (1799). [**Fig. 2.13**] While Girodet and David's personal relationship had stewed to a boil since he left David's atelier, as Thomas Crow has shown, Girodet's *Deluge* was a direct response to David's *Sabines*.[37] The contest between them was not simply a private one of student versus teacher, son versus father, but manifested itself very publicly in the race for the 1810 *Prix décenneaux* for history painting. Napoléon had invented the prize, which was to be doled out to artists alongside poets, scientists and intellectuals, in order to celebrate the familial culture that had been effected through his empire. Even after the jury – and ostensibly Napoléon – had selected Girodet's *Deluge*, they never awarded the prize.[38]

Between Girodet and David's paintings, there appear very different forms of the male nude. On the one hand, Girodet's *académie* is in danger of being pulled apart, whereas, on the other, in David's *Sabines*, the male figures in the foreground enjoy a cooled, statuesque stillness, even as chaos rages around them. In David's very horizontal painting, Hersilia stretches her arms out to cut battle short,

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[37] Thomas Crow, *Emulation* (New Haven, CT: Yale University Press, 2006): 250-257.

[38] As the contest between David and Girodet fermented (and the other prize for painting national character, which pitted David against another student, Antoine-Jean Gros), so too had the distribution of power throughout Napoléon's bureaucracy, ultimately threatening the Emperor's stronghold. Darcy Grimaldo Grigsby, "Classicism, Nationalism and History: The *Prix Décenneaux* of 1810 and the Politics of Art Under Post-Revolutionary Empire," (Ph.D. diss., University of Michigan, 1995): 1-12.

babies are hoisted manically above a fray of criss-crossed javelins, and a cluster of women – young and old – struggles to fend off harm. But these two male bodies that frame Hersilia's reach are stiff and marble-esque – as though their limbs have been manipulated to lean on a bent right leg (as with the figure on the left) or to ready a javelin for launch (as is the case with the figure on the right). They do not appear to will their actions; instead, they are posed as gladiators. But they still embody an ideal – made sweeter by a promise of political freedom – that is unmatched even as Hersilia's urgency appears to grind the scene to a halt. As Alex Potts shows in *Flesh and the Ideal,* these bodies continue to be hemmed by the Greek ideal – and the binary of the male and female ideal bodies:

> The beautiful male figure can thus function as both an ideal object of desire and an ideal subjectivity with which the male spectator can identify. In this ideological and sexual economy, the female body is either a marginalized erotic image, denied the ethical and political investment given to the male body; or it functions in a quite different mode. Clothed, austere, maternal, it becomes, as in Winckelmann's scheme of things, a de-eroticized and hence partly disembodied signifier.[39]

Applying such logic to the Jacob's frontispiece, we might add that the old man also appears just as impotent. While Bourgery and Jacob's bodies are drawn out to allude to Girodet's theme of generations and even man versus nature as I will discuss shortly, they are rendered in such a way that ultimately privilege the sexual economy of David's classical Greek male ideal – where minimal action can be taken by the male figure and the female figure complies, where older bodies do not count (indeed, the only older figure in David's painting is a wrinkled woman beating at her breast). We can also read this in Girodet's painting, if somewhat more dramatically: the whole painting hinges on the man's ability to hold on. When grafting the same protagonist narrative onto Jacob's plate, it becomes easier to see that even if the man and woman are both standing, the most solid figure is this *académie;* and although both the woman

[39] Alex Potts, *Flesh and the Ideal* (New Haven, CT: Yale University Press: 1994): 229. Others have also interrogated the *Sabines*, Ewa Lajer-Burcharth most notably among them.

and the old man emphatically inscribe generation into the image, the gravity of his form appears to dictate the rest of the picture.[40] Even as these other bodies have been cultivated from other sources and placed onto the plate, the *académie* is central to the image. As Bourgery describes in his "Introduction" a few pages later, woman, octogenarian and baby have been adjoined to the ideal.

While Jacob denies his frontispiece figures the same vulnerability that Girodet subjects to his, the rest of the *Traité*'s images will have proven to be entirely vulnerable. Very few of the rest of the images in the treatise – especially those of descriptive anatomy – could have been modeled from living people. Most were rendered with reference to cadavers, or to parts that had been preserved by the *Musée Dupuytren,* a museum attached to the *Faculté de médecine,* whose collections was (and to this day still is) made up of pathological specimens.[41] And yet, the *Traité*'s images—displaying the inner-workings of the body with such brilliantly systematic colors, and, typically, with supple organs in the body's cavity— bear only a few hints of having been made with cadavers. Hooks, operating hands, and instruments bring the viewer back to the puncturing and slicing of flesh, but when splayed, even the edges of the gouged-out torso are idealized. Death itself is always concealed as much as possible. Vessels and viscera are never flaccid; bodily parts are typically arrayed such that their boundaries fade to paper white. Over the plates

[40] There is also something to be said about the initial exhibitions of these paintings – and the way that such display roused bodily awareness. Girodet's *Deluge* hung predictably in the Salon but its outsized bodies dwarfed those of its viewers, aiding the *Deluge* in being larger than life. David's *Sabines* was initially displayed in a small room. The price admission won its visitors a more direct conversation with the painting – in the form of a psyche mirror and a rather intimate room in one of David's friend's apartments. *Sabines* was hung on one wall and the psyche mirror was placed facing the painting, such that any viewer who approached the mirror could find himself or herself as part of the painting, care of the mirror image. The viewer's body, then, was incorporated into the painting itself, just slightly; bodily flesh was contrast to the licked marble surface of the athletic men, even as Hersilia emphatically spread her arms. Both Girodet and David were well aware of how their paintings could serve as instruments of bodily awareness, but to entirely different effects. See: Ewa Lajer-Burcharth, *Necklines* (New Haven, CT: Yale University Press, 1999): 130-235.

[41] Université de Paris, Faculté de Médecine, *Muséum d'anatomie pathologique de la Faculté de médecine de Paris, Musée Dupuytren* (Paris : Béchet Jeune et Labé, 1842).

may loom the warnings of mortality, but the images themselves show the body without reference to real time, and continue to map and display parts that are implicitly related to a singular, corporeal whole. In other words, the anatomical atlas – and Bourgery's in particular – purports to resisting nature's course by attempting to describe the body definitively and completely. The family in the foreground, still and seemingly immortal, uphold this fantasy very well.

Girodet's *Deluge* hangs on the man in the middle, who, himself, hangs on a flimsy branch. An unreliable tree trunk – i.e. nature – threatens the very survival of the family unit. Likewise, the threat in Bourgery and Jacob's frontispiece is the écorché – the reminder of the nature and the matter of man – in the background. It unfixes the ideal, telegraphing the pressure that the rest of the treatise will put on the very notion of the ideal body. The figure is borrowed from a wax cast identified as Michelangelo's *Anatomy* or *Crouched Écorché*, and which can, today, be found in the collection of the Kaiser Friedrich Museum in Berlin, the Musée des beaux-arts at Lyon, and the École des beaux-arts in Paris.[42] **[Fig. 2.14]** While Ludwig Choulant, an early 20th-century surveyor of anatomical atlases, might have referred to this kind of object as a "graphic arts" miniature, its flayed body torques in anguish, as though it has just been made aware of his excoriated state. The pose underscores muscularity above all else, but it also serves as a steady warning. As the tip of the elbow rises just slightly above the *académie*'s dark head of hair, the statuette gains a certain amount of prominence in the picture, tolling a morbid bell, challenging the hierarchy of bodies that the more supple ideals below represent. In the background, a premature specter of anatomy – the fetal head – doubly connotes the beginning of life, but, also, through its eerie figuration, warns of the body's limits: one cannot help but think about how such a head could have only been produced

[42] For references to Michelangelo's *Crouched Écorché*, see: E. Tietze-Conrat, "A Lost Michelangelo Reconstructed," *The Burlington Magazine for Connoisseurs* (Vol. 68, No. 397: April, 1936): 163-170; and Daniel Schulman, "Marion Perkins: A Chicago Sculptor Rediscovered," *Museum Studies* (Vol. 24, No. 2: 1999): 84-107, 96.

by studying a premature baby, a stillborn child, or the vessel of a woman who had died during pregnancy. Both the frieze and the sculpture call attention to the unseen inner-workings of the body, the parts known only through cadavers.

But note how those figures that represent the consequences of dissection are in stony grayscale, and pushed back into the distance. Because neither the écorché, which reveals the muscles, nor the fetal head, which prematurely exposes an unborn baby, have been rendered in color and without flesh, they read as fabrications of an artist's imagination – as made things. A miniature statue and a decorative frieze, they are cast as unnatural. In front of them, however, the family unit, this ideal that has been given human form, evokes generation – in both senses of the term –, which helps them lay claim to life and nature, as opposed to artifice. Even though they are mainly based on figures that have surfaced in previous pictures, because they are covered in skin, they are flush with life. The perversity of the picture, however, lies in the fact that nothing in the picture is natural at all. Every figure is borrowed from other works of art, or fashioned after artistic conventions; every figure has been brought onto the plate because of previous encounters with these or similar types of representations of the body. Although Bourgery and Jacob's *Traité* would be about anatomy, their frontispiece became an opportunity to avoid anything that references the cutting up of flesh. Instead, this stand-alone image gives them space with which to put the ideal front and center and – for at least one plate – to picture what ideal bodies might look like if they did not have to be broken down, whether by the accidents and carnage of life, or the inevitability of death.

While frontispiece had recoiled from the act of anatomical dissection only to put the ideal front and center, the visceral nature of descriptive anatomy was being overtaken by a form of research and dissection that was even more gruesome: pathological anatomy. Within a three-year period, between

1797 and 1800, the emphasis at the *École de médecine* had shifted from the anatomical theater of the dead to the clinical ward and the lesions of the diseased. In 1797, the School had created an attached dissection compound, expressly meant for the 120 best students who had publicly competed for their place. But by the time the first bronze medal was awarded to one of these dissection students in 1800, the first dean of the *École de médecine*, Michel Augustin Thouret, emphasized a new hierarchy: "The most important creation of the School is the clinical teaching. Limited first to three hospitals, which were insufficient for the crowd following its lessons, the School has now obtained the doubling of the internal and external clinic. Three new clinics have been instituted: for vaccination, for the treatment of syphilis, and for the practice of obstetrics." The next time any new facility was opened for anatomy was not until after the Three Glorious Days (in 1830), but it was only for those students who had won internships at the hospital.[43] This was the phenomenon of the clinic – its bureaucracy, the medical gaze, the classification of patients into diseases and numbers – to which Foucault would devote an entire book.[44] Indeed, the centrality of the clinic would persist well into the Restoration, and beyond. Anatomy had become a basic, first step toward the more important practice of observing of live bodies, warts, tuberculosis, cholera and all, instead of the other way around.

Bourgery had hoped to invert the paradigm, emphasizing that a keen knowledge of anatomy – and constant reference to an anatomical atlas – would make for better practitioners. He insisted that anatomy, not experience with disease, would best help the doctor or surgeon cure the body in disrepair – indeed, it would provide the practitioner with comapranda, with a normal ideal body against which to assess the damaged body:

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[43] Ackerknecht, 38.
[44] Michel Foucault, *Birth of the Clinic: An Archaeology of Medical Perception*, trans. A. M. Sheridan Smith (New York: Vintage Books, 1994).

> Far from the amphitheaters and centers of instructions, absorbed by work, by his profession, the doctor [employs] the day-to-day habits of his practice. ... [I]n the moment of practicing a grave operation, he searches his memory in vain for the forgotten facts of anatomy. It is true, he possesses books, he is able to rely [on them], and absorb himself in them; but from them, the intelligence creates for itself a singular description always vague or inexact, how such ideas deny the true representation of [these things, these body parts]! This surgeon, his mind wandering elsewhere, absents himself from the operation [for a moment], and fears an accident, which he possibly exaggerates because he cannot calculate its odds [its probabilities].[45]

But in order to argue for anatomy above all other medical practices in his frontispiece as in the rest of the treatise he relied solely on *artistic* representations of anatomy, and the veil of the ideal. Unlike Vesalius, Bidloo or Albinus before him, Bourgery used his frontispiece to marginalize the tactile, morbid aspects of anatomical practice – the cutting open of the body, etc. – in favor of smoothing and fusing all parts together to create ideal wholes by way of artistic models. The figures of the frontispiece suggest that the following volumes and pages would pay continued attention to artistic types and ideals, shoving aside, first, the idea that anatomy depended on the vulnerability – and death – of the body, and, second, the fact that anatomy now occupied a secondary place in the hierarchy of medical education and practice.

The kind of idealization that Bourgery and Jacob favored was reminiscent of how Revolutionaries had shaped an ideal body – and an ideal citizen – after August 1789. Of the Revolutionary conceptualization of the body Foucault has observed that "[t]he first task of the doctor is therefore political: the struggle against disease must begin with a war against bad government. Man will be totally and definitively cured only if he is first liberated." Further, liberation was the political state from which the ideal would develop: "Medicine must no longer be confined to a body of techniques for curing ills and of the knowledge that they require; it will also embrace a knowledge of *healthy man*, that is, a study of *non-*

[45] Bourgery, "Introduction," *Traité*, vol. 1, 1-2.

sick man and a definition of the *model man.*"[46] Because these Revolutionary liberators had taken up the government, it was up to the government to care not only for the socio-economic equality of its citizens, but also to somehow equalize the bodies of its citizens. Thus, the duc de la Rochefoucauld-Liancourt, chairman of the National Assembly's Poverty Committee, identified disease as one of the major causes of poverty, and attempted to implement the first public health program in French history, a program in which the equal rights of man was optimistically translated into equal health for man. No longer was charity, defined by the monarchy-cum-Catholic church, the guiding principle for caring for the ill; indeed, charity was now deemed condescending. Instead, the logic was that those who had been incapacitated by disease were not capable of being productive citizens in the way that those who were healthy; the government could then, as Dora Weiner has put it, "compensate for these imperfections."[47]

And yet, as in-patient care became the focus of the hospitals and the Poverty Committee's ideals were slowly put to work, a new consciousness about disease spread. During the beginning of Napoléon's reign, Thouret, upholder of Enlightened values even in the face of Revolutionary fervor, looked to the clinic and Marie François Xavier Bichat published *Recherches physiologiques sur la vie et la mort* in 1800: within the Parisian School, the model-man paradigm was quickly being overturned, in favor of an emphasis on disease and its prevention. The ambition for a body of healthy citizens remained the driving engine for the new medical bureaucracy, but the reality was that disease was all around. The education of physicians was increasingly based on medical observation of sickbed after sickbed, diseased patient after diseased patient; and Bichat's definition of life – "the total functions which resist death" – and his call that doctors should only look at diseased organs and diseased tissues was a now touchstone of medical and

[46] Foucault, *Order*, 33-34.
[47] Dora Weiner, *The Citizen-Patient in Revolutionary and Imperial Paris* (Baltimore: The Johns Hopkins University Press, 1993): 3-17.

surgical training.[48] The ideal body, the equal citizen, the liberation that both would afford – try as doctors might to restore the scourged body, these were nothing more than ideals which could not be attained.

In the wake of disappointments following the Revolution, and following empire, the ideal body could be materialized – or, at the very least, represented – through an emphasis on the artistic ideal. The frontispiece was an especial opportunity to bear out the artistic ambition of the treatise, not only through reference to artistic tropes and figures, but also stressed the very act of making, and of drawing. Key to the frontispiece's gestures to artistic authority – and the rest of the treatise's – was its medium: lithography. While cheap, readily available, and easy to use, lithography was also the printing process most similar to drawing that artists had at their disposal, fixing as it did the greasy crayon's contact with the lithographic stone. Along the same lines, the *académie*, as we have already seen, represented a crucial moment in the formation of the artist: for any artist to move forward he must mastery drawing the *académie*. This adherence to artistic tradition, in other words, was not simply a declaration that Bourgery wrote down, it was one that Jacob would readily defend with his forms, and the potential of lithography.

While most of the *Traité*'s first editions bear the weight of this text-less frontispiece, there is one darker printing that differs.[49] **[Fig. 2.14]** In this altered plate readers might first note the old man's elongated walking stick and the fact that drapery no longer covers the standing man: an unfortunate coincidence that overshadows most other figures on the plate. But upon further inspection, one is likely to discover a ghostly list, in which every name is the name of an anatomist, from Galen to Vesalius to Haller, from Albinus to Bichat. Jacob had given this superimposed text a strange effect: as the list gets closer and closer to the figures – as it might potentially harm the frontispiece's main figures – the names

[48] Ackerknecht, 53-56. Also see: N. J. Jewson, "The Disappearance of the Sick-Man from Medical Cosmology, 1770-1870," *Sociology* (vol. 10: 1976): 225-244.
[49] One such impression can be found at the Center for the History of Medicine at Harvard Medical School's Countway Library, call no: 1.Mw.1831.B.

at the bottom of the list fade out of view, and the list takes on a wafting, ethereal quality. Consequently, these anatomical legends become apparitions, in much the same way the écorché and the fetal head have become the specters of anatomical practice. In other words, anatomists and their work defer to these borrowed artistic figures; the family, and the upright man, in particular, would assume a pride of place in the *Tratié.* These were the bodies of the text that would first define the artistic ideal to which Bourgery and Jacob's subsequent pictures would aspire.

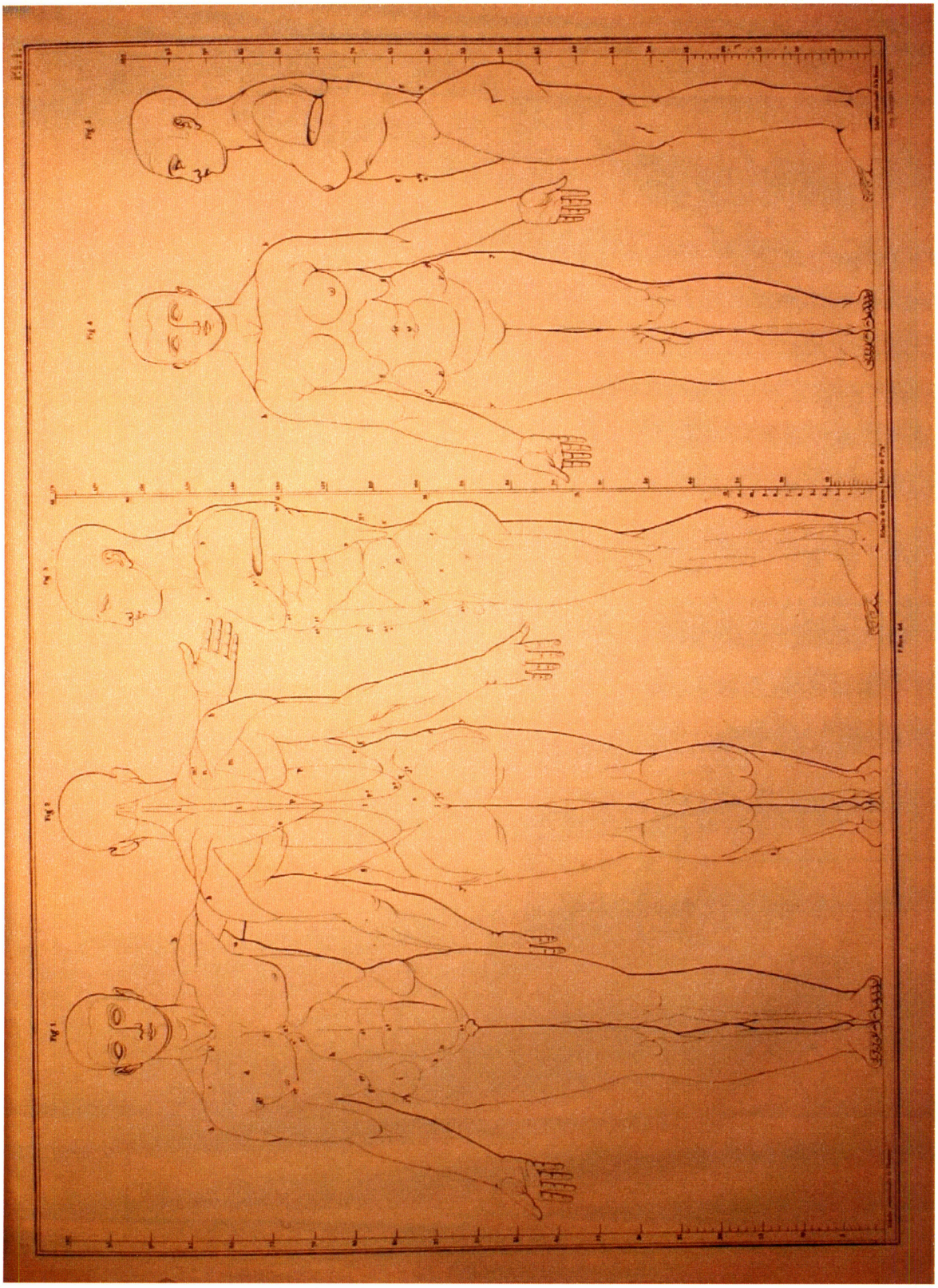

Fig. 3.1: Bourgery, *Traité*, Vol. 1, Pl. 1.

Chapter 3: Shifting Proportions, Altered Ideals

But soon enough – indeed, with the first plate of their treatise – Bourgery and Jacob would offer another set of ideals: outlines of a man and a woman with impeccable proportions and, sometimes, jagged stumps in place of arms [**Fig. 3.1**]. Each figure is defined by careful contours; each torso is segmented into hardened pockets of muscle. (Although, it might be noted that the bald female figure also enjoys a soft set of curves.) Both man and woman are rotated on their sides in order to show the placement of still more parts; and, in addition, the man's back is on full display. Each human form has been distilled to topography, to delineation, blankness and discoloration. All the while, strict rulers have divided male and female, measuring out their heights along with their respective parts. When Bourgery wrote the text that accompanied this plate, he seized an opportunity to restore something that his anatomist-peers and immediate predecessors had done away with: the (ideal) dimensions and proportions of the human body. But he buried his reasons in a footnote:

> Today, few anatomists have treated the dimensions of the human body, and the proportions of these different parts; considerations of this nature have found themselves relegated to artists' works, as if [the proportions] do not offer anything useful for understanding the design [of the body]. We believe it necessary to repair this omission in our treatment of the subject which evidences the science of human forms; with good authority we are surprised that, as a diagnostic element, doctors and surgeons are not more interested than the anatomist in knowing about the relative configuration of the parts to the body, deformation, or, in other words, the changing of the relationship between the three dimensions being necessary for nearly all illnesses. To establish our proportions, we have consulted the fruits of J. Cousin and Gérard Audran, the plates of Martinez, the Table of Gautier, in Duverney's *Myologie complete*, Houdon's *L'Écorché*, and the excellent treatise by M. Gerdy on the external forms of the human body, and with M. de Montabert, on painting; but here, as for all of our plates, we have most of all copied

> nature, and we did not break [from] anything that we found proof of in our living models of the most beautiful proportions.[50]

In this suppressed paragraph, Bourgery laid out the tenet of his treatise: the bodily integrity of the ideal. But the note was colored with the tones of regret: artists, not anatomists, were the only ones still depicting this history of proportions; anatomists, and neither doctors nor surgeons, were the only ones who could still see the usefulness of the proportions. In this argument for what must be described, and of the kind of theory that could help practice, Bourgery insisted that the only way to move forward in anatomical studies and in medical practice would be to look back. Thus, Jacob's emphasis on the ideal – and its archaeological appearance (or, rather, deformation, as evidenced by their stumps) – in this plate resonated with Bourgery's quest to reintegrate the ideal into anatomical, medical and, particularly, surgical practice. Indeed, he believed that he would offer ideal comparative material: the highest form of the normal body, which could then be opposed to the broken down and diseased.

At the end of this subtext, however, Bourgery faltered, exposing a key disjuncture between text and image; or, rather, he misidentified how his text worked alongside Jacob's images when he referred to these pictures as copies of "living models." Even a quick glance reveals that these pictures refute any claim to being live. Figures 3 and 5 feature figures in profile, and, quite curiously, what at first appear to be the stumps of amputation and surgical intervention are in fact the remnants of fragmentation. Depicted here are not human beings, having lost flesh and feeling, but antique sculptural fragments – objects that can continue to reinforce Bourgery's initial claim about creating ideal forms. Still very much models, but far from lively. There is also a paradox in this last sentence: as Bourgery describes the strict act of copying from nature, he writes, "we did not break [from] anything." Most obviously, this "break

[50] Bourgery, *Traité*, vol. 1, 26. For a history of footnotes, see: Anthony Grafton, *The Footnote: A Curious History* (Cambridge: Harvard University Press, 1999).

[from]" would refer to Jacob having paid close attention to his models' slick curves, and transferring that attention back to the page for an identical copy.[51] But it is equally possible to think this phrase into a conception of a place in history – of breaking or continuing with the past. Both Bourgery and Jacob evidence an increased attention to the past, and emphasize their inheritance of it. They offered a series of images that declared that neither anatomist nor artist had broken from a lineage of antique forms; further, they upheld the template for the body that the ideal could offer. But a review of Bourgery's cited texts makes clear that the ideal itself was not a stable template – not only that it was not always used in the same way, but that the parameters of the ideal had been tested. Bourgery and Jacob's claim for creating an ideal body, then, could not be stable for long.

But first: how the ideal was laid to waste in more immediate surroundings. Bourgery and Jacob's perfectly proportioned body – in front, side and rear view – stood in sharp contrast to the localized, lesion-inspecting premises of the early 19th-century Paris Clinical School. The javelin-throwing musculature of the athlete became less useful as a picture of health once Xavier Bichat and J. N. Corvisart – and François Broussais after him – inverted the paradigm of the ideal body in medical theory. Lesions, disease, and, ultimately, death became the measures of the patient, especially as more cases were seen in the hospitals. In dissection annexes attached to therapeutic clinics and wards, cadavers were used less for strict anatomical practices, and more for the purpose of seeing how afflicted organs decayed and corroded. During his postmortems at the *Hôtel-Dieu,* Bichat and his students emphasized specific kinds of inflammations – "*anasarca, inflammation de la péricarde,* or *inflammation du péritoine*" instead of using

[51] Even just the word "copy" within the parameters of 19th-century art will ultimately lead readers to: Richard Shiff, "The Original, the Imitation, the Copy, and the Spontaneous Classic: Theory and Painting in Nineteenth-Century France," *Yale French Studies* (No. 66: 1984): 27-54.

the catch-all phrase "fever" to describe the causes of death.[52] By 1806, when Corvisart published *Essai sur les maladies et les lesions organiques du Coeur et des gros vaisseaux*, death and disease, not health, were the fundamental premises on which medicine was practiced. As Corvisart let the expectation of health fall away, he shifted the gradient of life, and foresaw its inevitable end: "Now from the physical impossibility of independent life due to a monstrous conformation, to that precision of organization which makes the rarest longevity possible, the degrees of the defects in precision are probably incalculable, but they are no less real on that account. [...] A necessary death for the immense majority of beings, those who occupy all the intermediate positions between these two extremes, is thus a sad but inescapable truth."[53] Whereas disease had previously been tied to the patient's experience of illness, opening up the dead during the early nineteenth century revealed that disease could not always be experienced or detected, and that parts could crumble, disintegrate and fail under the skin, and out of the doctor's sight. Once infected, doctors could do little to restore the body to its formerly less-diseased state.

Ten years after Corvisart, in 1816, Broussais amplified the promise and nearness of death's inevitability. In his *Traité de physiologie appliquée à la pathologie*, he argued that every part and every organ could fall victim to disease, bringing the rest of the body down with it. Indeed, everything from "the exercise of the intellect, the emotions [to] the passions" would cause irritation in the body, and this irritation would result in the inflammation of an organ, and ultimately disease. That which best measured these sensations of imbalance, discomfort, and death's knell was the stomach. In the middle of the body, this very "sympathetic" internal pouch was prone to irritability, and its gurgles of indigestion, pangs of

[52] Russell Maulitz, *Morbid Appearances* (Cambridge: Cambridge University Press, 1987): 24.
[53] W. R. Albury, "Corvisart and Broussais: Human Individuality and Medical Dominance," *Constructing Paris Medicine*, ed. Caroline Hannaway and Ann La Berge (Amsterdam Editions Rodopi B. V., 1998): 221-250, 224.

emptiness, and sharp contractions were signs of its delicate – and always uneven – balance.[54] Bile was not just a metaphor for anger; for Broussais, it was a sure sign of death's intractability.

It had been, during the latter half of the 18th century, however, that the full constitution, good working order, and interconnectedness of the body dominated medical theory. And the very definition of health – and the perfect workings and shape of the body – was bound to a picture of the ideal. In the *Encyclopédie,* Arnulfe d'Aumont, a Montpellier-trained physician, defined the experience of "*Santé*" as " the ease which one feels when the functions of body and soul are exercised; by the satisfaction which one takes in one's physical and moral existence; by the agreeableness and constancy of this exercise; by the outward manifestations of this feeling and the relations of all these effects, that one can know that one is enjoying a life as healthy and as perfectly as possible."[55] D'Aumont's positive referent was health—the corporeal whole made up of interdependent parts and functions working in seamless concert with one another. Because there was no way for doctors to see beneath the skin of the living (surgery was a particularly risky business), an individual could assume he was healthy when he did not feel anything going wrong; only if the individual felt a jolt of his body's inner-workings, sensed the spread of fevers, or saw his own pockmarked skin could he know whether or not an illness had taken hold. Health, D'Aumont

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[54] Albury, 228-232. Also see: Jacalyn Duffin, "Laennec and Broussais: The 'Sympathetic' Duel," 2 *Constructing Paris Medicine*, ed. Caroline Hannaway and Ann La Berge (Amsterdam Editions Rodopi B. V., 1998): 251-275.

[55] Albury, 223. In his article on Corvisart and Broussais, on which I have relied a good deal, W. R. Albury stresses the social hierarchy of Enlightenment medical practice: The restoration of bodies that fell to the less healthy side of the spectrum required time and money, leaving the detailed maintenance of health and hygiene to the privileged aristocracy. A physician's attendance to his wealthy patient was mainly at the behest of the patient himself. Within this hierarchy, the doctor was called to listen to and attempt to reverse the manifestation of disease, not as an expert on the experience of disease. Although his bookish knowledge and previous might give him some insight on how to treat his patient, whatever patient he was seeing at a given time was a new individual who had a subjective experience of illness. The terms on which such subjective experience was described deviated from health – not from disease. In other words, the body was typically thought to be in good, working order, and any illness was believed to be something external to the body or something that happened to it. It is also perhaps worth mentioning Barbara Duden's book: Apart from the infrequent house visit, doctors—especially those in small villages—encountered disease mainly in the form of letters, when patients would write describing inflammations, palpitations, intake and outgo and their variation, changes in skin color, or pockmarked skin, they felt unwell. Soon, the patient would receive a letter with prescribed instructions; this could go on for a few more exchanges, unless the patient got better, or took a turn for the worse.

went on to emphasize, was a gradient running "between the robust state of the athlete who is the furthest from the state of illness, and the state which comes nearest to that disposition in which health is entirely lost because of the lesion of some function."[56] The classical meaning of the word "athlete" would not have been lost on the *Encyclopedie*'s literate audience. In fact, cross-referencing within the *Encyclopédie* reveals that the word solely referred to those brave, muscular ancients who engaged in public combat and competition. By extension, the term "athlete" embodied the virtues of hardened courage and valiant patriotism; but at its most basic level, it evoked a form that had been perfected, an inviolable body.[57] In other words, given that these "athletes" no longer existed, neither D'Aumont nor the anonymous author of the "Athletes" entry could have ever encountered these bodies in the flesh. The only way they could have known about these perfect bodies was through the (mediated) words of the ancients, ancient sculpture that had been recovered and preserved, and their subsequent representations.

These perfect bodies were precisely the figures to which Bourgery wanted to return his readers – and medical, anatomical, and surgical practice. Laced through the ancient ideal athlete's segmented abdominals and smooth, sculpted biceps was a didacticism that stretched back to the authority of the ancients. Although medicine, he acknowledged, had shifted toward rotting morphologies, his point was that the ability to compare this perfectly proportioned body against real people – living or dead – would help create a better model for doctors to understand the body. And, perhaps more resonant with the contemporary interest in localized lesions and increasingly blemished organs, he implied that the doctor's ability to conjure the ideal would help offer a more dramatic and marked comparison to the pathological. But this ideal referent deviated so far from contemporary medical practice that Bourgery

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[56] W. R. Albury, 223

[57] "Athletes," *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers, 1751-1772*, American research on the treasury of the French language. Chicago, Ill.: American and French Research on the Treasury of the French Language, http://libraries.mit.edu/get/artfl.

resorted to other sources so that he could reinstate the ideal. His footnote about the proportions of the ideal and beautiful body – what might be deemed a miniature literature review on the subject – hints that even the ideal was a ruptured field that had been made and remade, that was never stable from text to text, that was never stable across time. While the classical sculpture continued to serve as a touchstone for the ideal, the ways in which anatomists and artists attempted to extract the ideal out of classical sculpture are quite different from one another. By taking seriously the texts that Bourgery "consulted," not only does a fine catalogue of Bourgery's precursors emerge, but also the shifting grounds upon which Bourgery had premised his treatise. As this chronological collection of texts suggest, Bourgery was putting stock in a term – and its representation and interpretation – that, while theorized – and theorized very well, as we shall see in the end of this section –, was not concrete.

Most of Bourgery's footnoted references were not strictly surgical or medical texts but texts that offered themselves to the medical, surgical and artistic communities simultaneously – those that were *anatomical* but not necessarily manuals for medical practice. Take Jehan Cousin's *Livre du povrtraitvre* (c. 1600). Throughout the seemingly thin (and portable) volume, Cousin would do work of grafting geometric lines and comparisons onto the head, torso and extremities in order to demonstrate the proportional divisions of the body. On the inscription of his frontispiece, he declared them "most useful and necessary for painters, sculptures, architects, goldsmiths, embroiderers, carpenters, and generally all those who love the art of painting and sculpture."[58] Throughout the rest of the volume, as dotted lines crossed a selection of excoriated body parts, they track how the leg, arm torso, head, hand, and even the

[58] "...fort vtile & necessaire aux Peintres, Statuaires, Architectes, Orfeures, Brodeurs, Menuisiers, & generalement à tous ceux qui ayment l'art de Peinture & de Sculpture." Jehan Cousin, *Livre de Portraiture...* (Paris: Jean Leclerc,1600): Frontispiece.

foot, could be segmented into matrices of correspondence. [**Fig. 3.2**] Here was some version of the Vitruvian man three times over – and, yet, still on a flat, geometrical plane. In his plates, Cousin rotated these parts, sometime just front to back, sometime front, back, side, and 45 degrees, the better to establish how the proportions of one view correlated to the proportions of the other – to show, line by line, how geometry was inherent to the structure of the body. This network of relationships – where a foot, head on, was likened to a foot from the side and where each part corresponded to itself when at a different angle – is a rather confusing one; one, I suspect, that seems to fit the body into geometry, rather than the other way round.

But what is quite striking in this plate, as in others, are the leftovers that pop up toward and around the edges of each frame: the eye (marked A) at the left-most edge of the frame, the slivers of sun rays that have interrupted some head-to-head lines in the upper right quadrant, and a short line segment in the lower-right quadrant—a line ticked and ready to measure. In the description of the plate, Cousin remarks that the eye "looks at the figure from the soles of his feet"; the sun "shines directly like a plumb line over the said figure"; and what appears almost as a row of four stitches – especially as they press into, sometimes puncturing, the paper – "represents the measure of the head which has been made smaller than the preceding [figures], to make our figures whole."[59] Enacted in this plate is a whole observational sequence in which light hits the body, the body hits the eye, and the eye (somehow connected to the mind – although, Cousin does not go into this) then abstracts from the measurement of the body a number. [**Fig. 3.3**] What is more is that even as the treatise helps build the body to a whole, it ends with a plate of geometric diagrams. Starting first with the head, the body in full (and fully excoriated, à la Vesalius and

[59] Cousin, 37: "...l'oeil marqué A regarde par la plante des pieds la figure qui est estendue de son log, ainsi se voit la figure racourcie."'; "céme si le soleil donnoit directement à plomb dessus ladite figure, comme il appert en ladite figure del'ombre, obseuant ses proportions & measures en sa largeur..."; and "La petite mesure separee en 4. parties egales, represente la mesure de la teste qu'il a faillu faire plus petite que la precedente des particularitez, pour faire noz figures entieres."

van Calcar) is not revealed until the very middle of the book; and from this point forward, Cousin can examine the body head to toe, rotated from front to back and from side to side. Nowhere in his texts does he address the ideal explicitly. But he foregrounds his images with the harmony of measurements, tropes of the classical – bodies, when they are clothed, are draped with togas, feet seem eerily reminiscent of the overwhelming fragments of Constantine – stressing their availability for imitation.

The paradigm of classicism would become more visible with Gérard Audran. Still concerned with proportions and, to a certain extent, geometry, Audran took his ruler to classical sculptures in *Les proportions du corps humain, mesurées sur les plus belles figures de l'antiquité* (1683). [**Fig. 3.4**] Throughout the text, Audran offered measurements for famous sculptures of antiquity only to discover that their proportions were imperfect. Laocoön, he found, "has a left arm longer than the other by four units of the model; Apollo has a left leg longer than the right, around 9 units; [...] the right leg of the large child of the Laocoön is longer by 9 units than the left."[60] Wanting as these numbers were, disproportional as these ideal sculptures may in fact have been, Audran relied on their venerated histories, and the model of the ideal that they still continued to offer in order to forgive their makers: "We must believe that the Originators of these beautiful works had their reasons for their work; it would be reckless to condemn them; it is much more honorable and more instructive for us to examine these great Men as having reasons for their design."[61] Here was a fervent, faithful believer in the ideal, and the correctness of the ancients. Such an investment in the past was not simply Audran's; his vision was so forceful that it was

[60] Gérard Audran, "Discours Préliminaire," *Les proportions du corps humain...* (Paris: Chez Gérard Audran, 1683): 3.
[61] Ibid: "Il fat croire que les Auteurs de si beaux ouvrages ont eu leurs raisons pour agir ainsi; il y auroit de la témérité à les condamner; il seroir beaucoup plus honorable & plus instructif pour nous, d'examiner si ces grands Hommes ne les ont pas faites à dessin."

reproduced in *l'Éncyclopèdie* (Plate XXXIV) for its section on drawing and proportions.[62] While it would be easy to limit such abiding faith in the ideal to Audran's late 17th-century moment or, later, to subsequent Enlightenment interest in archaeology, *Les proportions* was republished in Paris in 1801.[63] The lure of the antique had not been lost; and the sculptures of antiquity continued to provide an instructive corporeal framework to which many still wished to subscribe.

The curious history of Crisóstomo Martinez's *Tablas anatómica* (c. 1689) also provided another inscription of the ideal into artistic and medical practice – and a strange instance of collision between the two. In the *Tablas*, there was only one plate of proportions, which did not take classical sculpture directly as their ideal, but, rather, the Vitruvian man, who himself was possibly derived from the Canon of Polykleitos. [**Fig. 3.5**] On this grid, Vitruvius's venerated corporeal geometry had been sliced further, but only in order to enumerate even more specifically, and to show how both musculature and the bones complied with such measurements. There was even an effort to describe how the fetal skeleton, waving in the lower right hand corner, shared the same proportional principles as the adult male, because he, too, was made of man, and would become one. This skinning – and miniaturizing – of the Vitruvian man was the product of medical-cultural exchange between Valencia and Paris. The Lord Mayor of Valencia commissioned Martinez, an artist in that city, to travel to Paris to prepare anatomical tables, which Valencian medical students could reference. But the images morphed from a straightforward commission for medical learning to a product distributed throughout Europe for artistic purposes: with printings in Leipzig and Frankfurt in 1692, and, later, after Martinez's death, the *Académie Royale de Peinture*

[62] See: Charles Cochin, *A Course in Drawing, by Nicolas Cochin the Younger and Denis Diderot; Being the Plates and Notes on Figure Drawing in the Encyclopédie...* trans. Philipp P. Fehl (Chicago: University of Chicago Press, 1954).
[63] See: Gérard Audran, *Les proportions du corps humain...* (Paris: A. Morel, 1801).

reprinted them twice, in 1740 and 1780, as a detailed explanation of anatomy for art students.[64] Even the *Académie* approved a variety of ideals – not just surviving sculptures from the Greek classical age, but, rather, different interpretations of that ideal. Surely, the fact that so many of the referenced works, like the Borghese Gladiator, were Roman copies of Greek originals, played a role; but is worth noting the sheer variety of images, pictures, and sculptures from which artists could learn to observe the body. The ideal, even after Winckelmann, could be found in many examples, which meant that many objects could be exemplary. By the late 18th-century the ideal did not simply exist in one, sculptural form. Somehow, its definition had been made flexible as soon as it found its way into print.

Among Bourgery's references to the ideal, Jacques Fabian Gautier D'Agoty's plate in Duverney's *Myologie complete* (1747) is perhaps the most curious. [**Fig. 3.6**] Gautier created dark, eviscerated, part-by-part mezzotints for Duverney's *Myologie* whose ominous tone were entirely counter-intuitive to Bourgery's project. But this is precisely the point: when citing this two-volume text, Bourgery specifically avoided the disorderly flayed and decapitated, eviscerated images. Instead, it is the *table* (of tables) full of numbers and ratios that he emphasized. Ordered and abstracted, these numbers snap the morbidity of their corresponding images into manageable forms – indeed, into a kind of numeric form that specifies what ought to be, not necessarily what is. Even as Guatier trots out these columns, the antique still looms – these proportions were "composed on all the Figures of antiquity & of our better Masters [...]"[65]

But two dimensional or numeric ideals were not the only ones available from which Bourgery and Jacob could draw. Added to these textual examples was Houdon's three-dimensional *L'Écorché* (1767). [**Fig. 3.7**] Initially made in preparation for a commission to depict Saint John the Baptist (which Houdon

[64] Francisco Guerra, "Review – *El Atlas Anatómico de Crisóstomo Martinez*," *Proceedings of the Royal Society of Medicine* (January 1965: vol. 58, no. 1): 77.
[65] Jacques Fabien Gautier d'Agoty, *Myologie complete en couleur et grandeur naturelle, composée de l'"Essai" et de la "Suite de l'Essai d'anatomie en tableaux imprimés"...* (Paris: Gautier, 1746): pl. 5.

completed the same year), this study of muscular structure, with its deep plaster cuts and taut interconnectivity, was widely reproduced and recognized during Houdon's lifetime, and well after. As the thicket of muscles in the neck and the arms' overlapping mycological braids attest, Houdon's engagement with anatomical practice was by no means superficial. He made the first plaster cast of this figure in Rome (during his Prix de Rome sojourn) after having received a series of lessons in anatomy from a professor of surgery.[66] Soon after seeing the original plaster cast, Charles Joseph Natoire, stationed at the *Académie de France* in Rome, wrote to the Marquis de Marigny, then the Directeur-Général des Bâtiments in Louis XV's court, to request that the king send more money to compensate Houdon for this newly unveiled work of art. Thereafter, Natoire also deemed it a central part of the academic artist's curriculum. Following Houdon's return to Paris in 1768, *l'Écorché* had been and continued to be widely and well.

Four years later, in a letter that accompanied one of the *l'Écorché* casts, Houdon reflected on his intentions for the sculpture and his reasons for idealizing its form: "I had done this work to teach artists, which is the reason for the correction of the design [...] Surgeons, as skilled as they may be, are not artists, and artists are not surgeons. In my view the skilled surgeon must study after nature, as defective as one may find it to be, in order to be able to treat every infirmity. But we [artists] must study it differently. It is nature in all her nobility, her perfect state of health, that we are looking for, or if not, we are nothing but wretched imitators."[67] Of course, as the *Encyclopédie* entry on "santé" suggests, the ideal had continued to pervade medical theorization of the body and its healthy state. And such stress on the ideal did not stop at abstraction. Even the most practical of medical institutions, the *Académie de Chirurgie*

[66] Anne Poulet, "L'Ecorché," *Jean-Antoine Houdon: Sculptor of the Enlightenment*, ed. Anne L. Poulet (Washington D.C.: National Gallery of Art, 2003): 63-66, 63.
[67] Poulet, "L'Ecorché," *Jean-Antoine Houdon*, 64.

(Academy of Surgery), had acquired a version of Houdon's *l'Écorché.*[68] However, it seems worth underscoring the boundaries that Houdon attempted to draw in his letter, private as the correspondence may have been. Houdon's was an incisive understanding of what was at stake with the living, breathing human body: that the paragon of the ideal could never be attained; and that real bodies – in all their wild diversity – must be treated as real bodies, and taught as real bodies. By calling surgery to task, he was comparing the artists' making of the body whole (even if part by part) to the surgeon's attempts to repair what had been irretrievably lost or unmade. Houdon's mitigation of diversity in favor of a transcendent, universal form echoed what Richard Schiff has called Winckelmann's predilection for the pure and the "tasteless."[69] That instead of showing the body at its most raw – in other words, as a dissected cadaver –, Houdon was showing the *exemplary,* flayed body, the one that was neither messy nor unmanageable, the one that was never alive.

This was certainly not how Pierre Gerdy saw it: he looked over antiquities modeling the ideal attempted to identify what they lacked. As a professor of anatomy, surgery and physiology at the *Faculté de médecine,* Gerdy did think of the body as whole entity whose parts fit together, and used his treatise as a way of drawing attention to the anatomical parts that artists had mangled or simply omitted. He had seen so many bodies that, even though he held antiquated statuaries in high regard, he seemed to cringe every time there was an anatomical foible, or some kind of omission in service of the whole. In *Anatomie des formes extérieures du corps humain, appliquée à la peinture, à la sculpture et à la chirurgie* (1829), he stressed the importance of simple, studious observation of the human body would ultimately yield a better

[68] Christine Defazio, Karl Fugelso, and Philip Mezzatesta, ed. *Houdon* (New York: Sander-O'Reilly Galleries, LLC, 1998): 2-5.
[69] Schiff, 39.

result.[70] [**Fig. 3.8**] In his rather clipped introduction, he repeatedly emphasized his frustrations with the anatomical inexactitude of ancient sculpture and contemporary painters, namely, David and Girodet, and how his text would finally provide a corrective. Particularly troubling for him was how artists had neglected to describe the joints and, instead, emphasized the furious flex of the muscles: Laocoön and the heroic man in Girodet's *Une scene de deluge* are foremost examples of how artists ignored anatomical details.[71] While purportedly a reference manual for surgeons as well as artists, the knowledge stuffed into the text did not provide an actual manual for how surgeons could go about cutting open the body; it was sheer description. Even so, Gerdy was convinced that he had built a system for understanding the body: "If the body of man divides itself naturally in two orders of principle parts, the trunk and the extremities, these parts subdivide themselves naturally into many regions, into many surfaces, and into many much smaller forms."[72]

In the body of his text, as Gerdy continued to enumerate and describe part after part, it became clear that the shell of his system – the Greek ideal – was precisely what held the entirety of his system together. Gerdy's coda consisted of three orienting plates, featuring three views of a sculpture in which a man about to launch a ball in the air. Surely, the figure seems like a rather regular imitation of the Greek ideal – but one whose body is tattooed with an excessive range of numbers. Each number corresponds to a part of the body, all of which are compiled in a list accompanying the plates. The grand total of parts between all three plates is about 1140 (Plate 1 had 380; Plate 2, 379; Plate 3, 381). Gerdy's images appear to define the classical ideal as no more than outline and container, keeping all these numbers from being nothing more than numbers on a blank page. But what continues to riddle the text is how Gerdy thrust

[70] Pierre Gerdy, *Anatomie des formes extérieures du corps humain, appliquée à la peinture, à la sculpture, et à la chirurgie* (Paris: Béchet, 1829): xxvii.
[71] Gerdy, xxviii.
[72] Gerdy, 321.

surgical descriptions of the body together with artistic descriptions of the body; that each category of knowledge – artistic or surgical – is different enough from the other that one (surgical) requires italics. In visual terms, this uneasy relationship can only be resolved as Gerdy reduced carnal knowledge – i.e. knowledge derived from dissection – to numeric abstraction, and, further, endowing those numbers with the outline of the Greek ideal.

Bourgery's final reference to another author's ideal is Jacques Nicolas Paillot de Montabert's. Amidst his *Traité complet de la peinture* (1829), a sprawling, nine-volume primer and textbook, Paillot de Montabert introduced the aspiring artist to ideal proportions, which he deemed one of the techniques necessary for constructing a good painting. In line with academic classicism, Paillot used this work to set down the foundations of painting, theoretical and practical, and the pedagogy necessary to continue to produce canvases that were classicism's standard-bearers. Paillot himself was not interested in medical anatomical description:

> One could thus compare this science of which I have been speaking [anatomy], an extremely simple knowledge of muscular nomenclature relative to the tendon, to the attachment and to the body of a dead muscle, in which one studies action little, a science of spectacle and ostentation to which a crowd of laborious pupils arrive, but which with all its plunder in the hospital and the amphitheater remains incapable of producing a good figure.[73]

He completely refutes Gerdy, in that the naming of the body does not necessarily describe its form or its mechanisms. And compared to Houdon, Paillot's is a much more vociferous drawing of the line between the artistic study of anatomy, and the form of the body studied by the medical and surgical community.

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[73] "On ne saurait donc comparer à cette science infinie que je viens d'indiquer, la connaissance fort simple de la nomenclature myologique relative au tendo, à l'attache et au corps du muscle mort, et dont on étudie peu l'action, sceince de parade et d'ostentation à laquelle parviennent une foule d'élèves laborieux, mais qui avec tout leur butin d'hôpital et d'amphitéâtre incapables de produire une bonne figure." Jacques Nicolas Paillot de Montabert, *Traité complet de la peinture*, vol. 5 (Paris, J.F. Delion, 1829-51): 45.

Such a bitter attack on hospital and dissection-centered anatomy underscores the uneasy relationship between the two, especially the distance that artists attempted to create between them.

But Bourgery simply ignored such warnings. He took what he could from Paillot, mostly his images and text about ideal proportions as devices for the *Traité.* [**Fig. 3.9**] In his first paragraph describing the proportions of the body, Paillot describes the body of rules for the human proportional model: "[T]his canonical figure offers an image or a type of man such that he conforms to the general character of his species, and not the figure of man bearing particular and distinct characteristics; in kind, this canonical figure should not repeat the measurements of the most beautiful antique statue known; it need not offer the elegant and slender proportions of the Apollo Belvedere, or the robust forms of the Farnese Hercules, and or, finally, any other figure having [such] determined characteristics; but it must be only a happy medium, adhering to the mechanical and anatomical structure decent for man in general[.]"[74] What Paillot described was an average – one that, as he later pointed out, previous artists such as Jean Cousin, Michelangelo, Vasar, and Primaticcio seemed to have ignored, one that was certainly not exemplified by classical Greek ideals.[75] He was deeply troubled by the singular apotheosis of the ideal that he saw as having been passed down from generation to generation of artists; and Paillot gave voice to the conception of an ideal that had multiple manifestations. And yet, he forcefully stressed that "[it] is

[74] "...cette figure canon doit offrir l'image ou le type de l'homme tel qu'il est, conformément au caractère general de son espèce,et non la figure d'un homme portant un caractère particulier et distinct; en sorte que cette figure canon ne doit point répéter les measures de la plus belle statue antique connue; elle ne doit offrir ni les proportions élégantes et sveltes de l'Apollon du Belvédère, ni les formes robustes de l'Hercule Farnèse, ni celles enfin d'aucune autre figure à caractère determine; mais elle doit être seulement un terme moyen, conforme à la structure mécanituqe et anatomique proper à l'homme en general[.]" Paillot, *Traité*, vol. 5, 79-80.
[75] Paillot, *Traité*, vol. 5, 80-81.

essential to establish well the different that distinguishes the proportions general or near from the general canon of man, and the particular proportions affected by the canonical characteristics."[76]

Thus, with his images, he offered solutions – culled from Dürer – by dividing the whole body into 100 parts, which he evinces more clearly in his image, and which is flexible enough to conform to both woman and baby. (In Martinez's conception, only one ruler applies to both man and child.) The proportional figures in Paillot's *Traité* are much slimmer than Dürer's, and much simpler and more abstract than those which Bourgery had cited as their predecessors. Oddly, Paillot says little about them, perhaps because of the flexibility inherent in his definition of the ideal. In his text, it is almost as though he eschewed any discussion of the ideal, in favor of a more varied catalogue of figures that gestured toward the ideal. His proportional figures are modest, simple contour lines on the page. And both the skeletal and mycological figures are measured against the same ruler. But even if his text refutes the Greek ideal – only implicitly hinting at its importance – the Greek ideal continues to make its mark on the drawings. In the first muscleman in profile – face to face with a skeleton – has lost an arm. The shading underneath the shoulder does not suggest that the arm was torn off, ripped away or wounded; it does not even suggest a stump's scarred flesh. Instead, as the rest of the figure echoes Houdon's *l'Écorché*, this loss suggests that a fragment has broken off (or been broken off), leaving a whole missing a part, and a part missing a whole. Even as Paillot kept trying to cast off a singular ideal, the classical statue retained its value as the embodiment of the ideal, and Paillot gestured to it.

While Bourgery indicated that ideal proportions threaded all these various texts together, each author – from Cousin to Paillot, Martinez to Gerdy – continued to illustrate his own particular

[76] "Il était essentiel de bien établir ici la difference qui distingue les proportions generales ou propres au canon general de l'homme, et les proportions particulières affectées aux canons caractéristiques." Paillot, *Traité*, vol. 5, 81.

manifestation of the classical ideal. D'Agoty was the only one Bourgery referenced who did not attempt to delineate his own version, relying instead on numbers to convey ideal proportions – and yet, even his numbers had to be supported by ancient masters. More than anything else, it was this mantle of antiquity that Bourgery hoped to acquire. Even so, the stitching together of these authors and artists reveals that the classical ideal male was contested territory. Whether it took the form of Paillot's "happy medium" or Audran's measuring of the antique, because as authors were attempting to put the ideal to use or to analyze its measurements they were applying pressure to it. And Bourgery, in ripping the body apart after setting the groundwork for the ideal, would apply pressure to a detrimental degree.

But what could a picture like the first plate communicate about the ideal that others had not? How could this vision be applied such that it still retained a measure of the ideal? And what was its function for the rest of the text? In an imaginary parable, Bourgery insisted on the comparative use of his atlas and the bodies it contained, as well as the dangers of a misrepresented body:

> Far from the amphitheaters and centers of instructions, absorbed by work, by his profession, the doctor [employs] the day-to-day habits of his practice. [...] [I]n the moment of practicing a grave operation, he searches his memory in vain for the forgotten facts of anatomy. It is true, he possesses books, he is able to rely [on them], and absorb himself in them; but from them, the intelligence creates for itself a singular description always vague or inexact, how such ideas deny the real representation of [these things, these body parts]! This surgeon, his mind wandering elsewhere, absents himself from the operation [for a moment], and fears an accident, which he possibly exaggerates because he cannot calculate its odds [its probabilities].[77]

While the bibliography he cited in his footnote was configured around the constitution of the ideal, or its measurements, none picks up on this idea(l) of reconstitution so crucial to Bourgery's stated intentions. Even Gerdy's text, meant for both artist and surgeon, fell on the side of being much more a descriptive

[77] Bourgery, "Introduction," *Traité*, vol. 1, 1-2.

anatomy rather than prescriptive for the injury of its parts. The surgeon and anatomist had essentially written about the body from head to toe, and, in his two plates, used a classical statue as the reference for his discussion. Bourgery had a specific outline for his books, and, even amidst its scattered publication schedule, carried out his intentions in full: the anatomical description of the body, followed by two books on surgery and one on more philosophical contemplations of anatomy (including embryology and comparisons with other species). These preliminary grids, then, laid down the pattern, and the measure for the rest of the treatise, and served as an ideal map for how best to reconstitute the body, even as they insisted on a sculptural, three-dimensional quality, care of their textured, antique stumps.

But, as we have already seen, medical notions of the ideal and the paradigmatic antiquated body had long since come to pass. Other branches of scientific practice had taken up other approaches to the ideal, most notably natural history. Proponents of transcendental anatomy, an import from Germany, advanced the idea that there was an ideal template from which all species were derived, prompting the homology of limbs in species as seemingly far apart from one another as birds and horses. The debate also encouraged an ideological war, one side of which was spearheaded by Bourgery's mentor, Cuvier, head chair at the *Musée d'histoire naturelle.* Cuvier's position was that the form of animal parts followed function, and that there was no ideal template against which species were modeled. His opposition, Etienne Geoffroy Saint-Hillaire, insisted that function followed form. (Politics had also polarized these two men, who, along with this debate on the origin of different forms, ultimately became symbols for their respective places on the political spectrum: Cuvier was an upstanding royalist and Geoffroy vocally espoused Republicanism.)[78] The idea of transcendental anatomy ran much against the grain of contemporary medical practice. Straying from pathology and intervention, it seemed to complement the

[78] Philip F. Rehbock, "Transcendental Anatomy," *Romanticism and the Sciences*, ed. Andrew Cunningham and Nicholas Jardine (Cambridge: Cambridge University Press, 1990): 144-160.

Traité's ideal quite well. But it did not offer the robust practicability that Bourgery insisted on from the very beginning.

Instead, the charge of Bourgery's use of the ideal is symptomatic of currents in aesthetic philosophy and antiquarian theory, as particularly forwarded by Quatremère de Quincy in his *Le Jupiter Olympien* (1815). A philosopher, architect, antiquarian and writer, Quatremère was a veritable polymath whose life spanned five regimes, and among his many acquaintances (and friendships) were artistic luminaries, David and Canova among them. His battle against the Romanticism of early 19th-century Paris was a fervent one; he held tightly to the classical, historical and the ideal, and wrote in order to mete out his theories about each. Having been elected *secrétaire-perpétuel* for the *Académie des Beaux-Arts*, Quatremère was given the reins to steer the academy toward the dignity of the antique, even as students hoped their education would reflect the Romantic currents of their age.[79]

Before Quatremère assumed his influential chair at the Académie, before he tried to deflect Romanticism's furious brushwork, he had confirmed his status as leading French antiquarian with *Le Jupiter Olympien*. The major feature of Quatremère's folio was a theoretical and practical outline for how antiquities might be best restored to their original and most authentic brilliance. While his insistence on polychromy is something I will address in the last section of this essay, what we can reap from Quatremère for the moment is his sense of how to put fragmented things back together. In order to demonstrate the disrepair done unto the Greek ideal throughout time, due to weather, and as a result of the rise and fall of civilizations –, Quatremère issued a number of plates featuring sculptural fragments. In his introduction, he declared that "[a] sole fragment can reveal to us the principles and the manner in

[79] Schneider, *Quatremère de Quincy et son intervention dans les arts (1788-1850)* (Paris: Hachette et Cie, 1910).

which the whole work was executed – that is to say [it can reveal] a masterpiece."[80] A more haunting passage reveals how Quatremère would deal with damaged goods, and how decomposed fragments might continue to be useful: "The mutilated marble statue, broken, either in its place or by being dropped, after a destroyer has appraised it, does not appear offer any charms of interest through its debris [...]. These neglected fragments, recovered from ruins, or buried under the protective earth, always wait, for any new change, for that happy instant which, in returning them to the light, restores them to their first whole."[81] Even those artifacts which were once destroyed – and found in pieces – could be useful contributions toward reconstructing a larger, grander thing that was once complete.

Such optimism about the maimed fragment had already been built into Quatremère's conception of the ideal. Not simply manifest in the imagination, the ideal was produced and re-produced by reason and judgment; and with such logic, the superiority of classical sculptures could be demonstrated piece-meal.[82] Fragments embodied a clear connection to their original wholes – their ideal, sculpted bodies, and a whole history of ancient art. In Plate 29 of *Jupiter,* Quatremère would illustrate how, after extant parts were cast in plaster and fit together, the whole could be re-fabricated, modeling the lines of "dissection" along which it had fragmented. [**Fig. 3.10**] In the upper left, Quatremère depicted the sculpture of an ideal, some divine hero – articulated "part by part and piece by piece" while still related to

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[80] "Un seul fragment pouvait nous reveler, soit la composition d'un chef-d'oeuvre, soit les principes et la manière de celui qui l'exécuta." Antoine-Chrysostome Quatremère de Quincy, *Le Jupiter Olympien* (Paris: Chez de Bure frères, 1815): i.

[81] "La statue de marbre mutilée, brisée, soit en sa place, soit par sa chûte, après avoir appaisé le génie destructeur, n'offrit dans ses débris aucun appas à l'intérêt, ni presque aucun emploi utile aux besoins de la vie. Ces fragments negligés, recouverts de décombres, ou ensévelis sous une terre protectrice, attendirent souvent, dans aucune alteration nouvelle, l'instant hereux qui, en les rendant à la lumière, les devait restituer à leur premier ensemble." Quatremère, *Jupiter*, vi

[82] "Je ne parle que de l'imagination: quant à la raison et au jugement, il leur est impossible de ne pas admettre cette progression, sur-tout lorsque les lumières de l'histoire, la connaissance des faits, et les notions de tout ce que le temps nous a ravi de l'héritage des anciens, démontrent la supériorité des objets perdus sur ceux qui se sont conserves." Quatremère, *Jupiter*, v.

its original, but now vanished, whole.[83] Simply by showing new methods for putting things back together, Quatremère had laid out a program for any stray part that an antiquarian might disinter. Here was the potential to put the ideal to (re)constructive use, to make the part useful to the whole once more, even if the rest of the whole could not be found.

Quatremère's system for restoring the ideal was not limited to *Le Jupiter Olympien.* It could also be found his *Essai sur la nature, le but et les moyens de l'imitation dans les beaux-arts,* published in 1823 – eight years prior to the publication of the *Traité* – as he was building up the conception of the ideal he would fully expand upon in his 1837 *Essai sur l'ideal* (at which time Bourgery's *Traité* volumes were continuing to come off the presses). In *Essai sur la nature...*, Quatremère gave an abstract definition of the ideal: "*Ideal* then is an adjective serving to designate and characterize, either notions existing in the mind or understanding, or works which would seem to be more especially connected either with the operation of the mind, or the employment of intellectual means fitted to give rise to impressions other than those of the physical senses."[84] Platonic indeed, the ideal could only be conjured in the mind – in mental images –, and could never be encompassed by material things or the physical world. Quatremère would go on to describe that this ideal could not exist in nature or in a single person, but conjured by the combinatory skills of the artist: "as nature had neither furnished nor could furnish any perfect and complete model for imitation, as regards art, so it remained for the genius of the artist itself to complete by

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[83] "Le moule de la figure Pl. XXIX, fig. 1, étant fini, on en tirera un exemplaire en plâtre, lequel sera monté et raccordé dans toutes ses parties. On tirera ensuite du meme moule une second épreuve, mais partie par partie et pièce par pièce. Je m'explique. Comme un moule ou chaque grande division d'un moule est, ainsi qu'on l'a vu, une reunion de pieces qui s'assemblent et se désassemblent à volonté, on peut à volonté couleur, soit dans toutes les pieces assemblees une empreintre géngérale, soit dans chacune des pieces désassemblées un fragment d'empreinte: car on a vu que le moule appelé *composé,* est un reunion de petits mouls. Supposons donc (ce qui est très-facile à obtenir), savoir, que toutes les pieces du moule soient de l'étendue qui convient aux morceaux d'ivoire que nous avons à notre disposition, que ferons-nous? Nous allons faire couler partiellement en plâtre chacune de ces pieces. Ce coulage partiel opère la dissection naturelle de notre modele." Quatremère, *Jupiter,* 410.

[84] Quatremère de Quincy, *An Essay on the Nature, the End, and the Means of Imitation in the Fine Arts*, trans. J. C. Kent (London: Smith, Elder and Co., 1837): 212.

a judicious combination, the qualities of the particular model... This the true imitator did: and he could alone do it by generalizing, through extensive observation, the study of nature, and reducing it to a system."[85] The grafting of physical experience and observation onto the processes of the mind: this was precisely the operation – the *ideal* operation – upon which the visceral images of Bourgery and Jacob's *Traité* would hinge.

Their maps of the human help a reader identify where particular parts of the body are located, so long as she refers to the accompanying text; but all this information is encased within the contours of a classical Greek statue. For example, although the third figure does not share the contrapposto of Greek statues and Quatremère's depiction, it harkens back to the sculpted ideal male explicitly, with a stump in place of a lost left arm. All together, they illustrate the ideal that Bourgery describes in his introduction, for they have acquired the "judicious combination" of parts and qualities that Quatremère's "true imitators" alone could piece together. But as near-empty fields, these grids prime a gestalt impression of the ideal body. Their outlines provide the basis for seeing this ideal as part of a holistic schema, and form the grid for a conceptual puzzle: piece by piece, page by page, volume by volume, various parts can be contextualized by these perfectly proportional bodily grids such that the ideal remains subject to the mind of the beholder. In order for surgeons to be able to put such images to practice, the mental place-holding of an ideal outline was key. The first plate of proportions could provide just that. With this classical abstraction looming over the anatomical atlas and its use, it was not necessary for pictures of the body to hew to the reality of the corpses they illustrated. Because the ultimate ends of these images were abstract – as mental pictures – there was no need for them to render gritty, tactile corpses. What the outlines

[85] Quatremère, *Essay*, 223.

provide for each part of the body was a referential ideal whole. It seemed that its parts would simply fall into place.

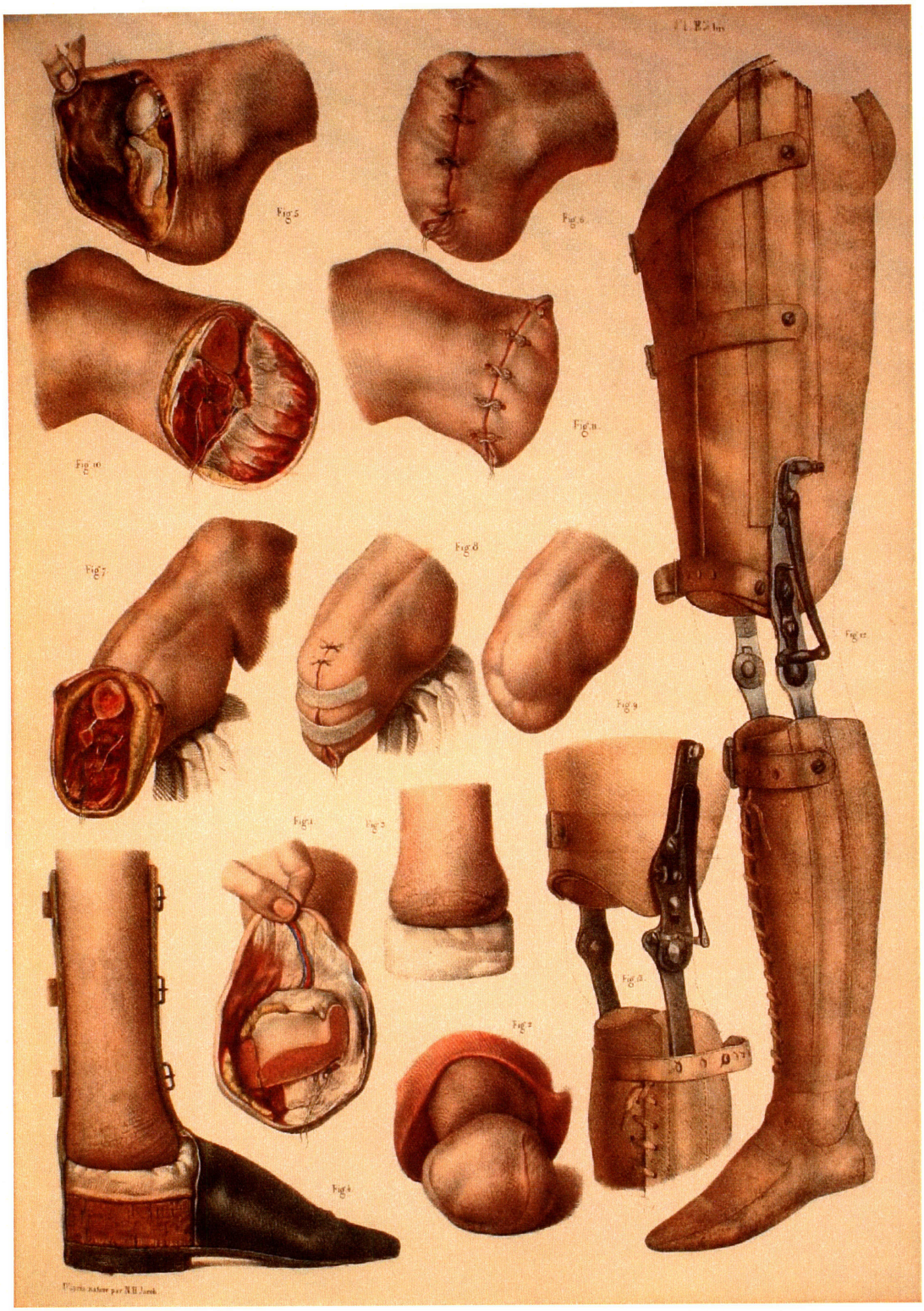

Fig. 4.1: Bourgery *Traité*, Vol. 6, Pl. 83bis.

Chapter 4: Perfect Cuts

But what of those limbs that had to fall away permanently, never to be reconstituted? Put differently: What of the amputated stump, and the limb that the act of amputation discarded? Although the first five volumes of descriptive anatomy seemed to show a body exemplary for its perfectly proportioned parts, the volumes on surgery challenged the very notion that the representation of the body could always be perfected. They put the ideal in conversation with the wounded; indeed, they put the ideal to work on the wounded. Whether it was the act of sawing off arms or legs or the fitting of their wooden substitutes, the question persisted: how could any aspect of amputation be smoothed over as ideal – indeed, *legitimized* as ideal? In the sixth volume of the treatise, Bourgery and Jacob devoted 26 plates to amputation and the stitching together of unruly stumps. The logic underpinning this set of lithographs is analogous to the lithographic stone itself: a renewable ground on which new part, or a new approaches to a limb or organ already described, can be presented, with little recourse or memory for earlier corporeal descriptions. One kind of operation could take place repeatedly, as each completed treatment marked a package that was complete, whole, and seemingly unto itself. Although Bourgery and Jacob were content to leave these plates, there was one print lined with three different kinds of prosthetics that insisted on remedying a lack. This same plate – vol. 6, pl. 83 bis – also acknowledged that however much the body is a specimen of the surgical theater, the successful post-op patient must also be able to move around in a very social world. [**Fig. 4.1**]

Recently, the term "prosthesis" has become a widely circulated term, ranging from street festival architectural accoutrements to the computer as an extension of both body and mind. It has also been employed by literary critics and grammatologists to describe the addition of a letter or a syllable (although this appears to have been the original use of the word).[86] I will focus on the representation of prosthetics in their most surgical sense: "The replacement of defective or absent parts of the body by artificial substitutes[.]"[87] My intention is to situate this plate in its cultural context, especially in relationship to and against a spate of earlier lithographs that probe the cultural and political meaning of amputation and prosthesis. While I mean do to compare their formal characteristics, I also intend to more fully accentuate the political and cultural significance of the amputee and his substitute limb: how both the images and history of surgical excision were decisively shaped by war and national sacrifice. Géricault and Charlet's lithographs offered bodies destroyed by the battlefield. But embedded in them are reminders of how surgery was so necessary to the sidelines of war, and, indeed, how war helped to refine surgical technique. From the Revolution forward, the increasing speed and accuracy of amputation or the suturing of a wound was not simply due to protocol made more efficient in the surgical theater, but, rather, to the grim circumstances of battle itself and the need for surgeons to treat their wounded patients as efficiently as possible.

The point connects to the larger question that has driven this thesis as a whole: how do Bourgery and Jacob square the representation of body parts, especially pathological parts and their disruptive, potentially violent implications, to an aesthetic concept so smooth as the ideal? How can a body still be ideal, even when it has been broken down? And how to compare the imagination of marble statuary to the

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[86] See: David Wills, *Prosthesis* (Stanford, CA: Stanford University Press, 1995); Marquard Smith and Joanna Marra, ed. *The Prosthetic Impulse: From a Posthuman Present to a Biocultural Future* (Cambridge, MA: MIT Press, 2006).

[87] "prosthetic, a.2" *The Oxford English Dictionary*. 2nd ed. 1989. OED Online. Oxford University Press. 15 May 2008 <http://dictionary.oed.com/cgi/entry/50190590>.

real vulnerability of bodies and their use in war? Before the surgical volumes, the encyclopedic tactics of the *Traité* had successfully described and catalogued the body. And with the help of the proportional plate, these unharmed parts could be easily slid back into the idea of a whole. Thus, I offer my analysis of this plate of amputation and protheses to describe a rupture within the treatise itself, to show how the ideal, even after Quatremère, was beginning to be stretched too thin.

Before turning back to the plate, it is worth investigating how these images might be construed as ideal. In his *Studies for the Apotheosis of Homer* (1826-27), Jean-Auguste-Dominique Ingres spreads a sequence of hands across the canvas so that they *can* be used again. [**Fig. 4.2**] On the left is Raphael's bust in profile – his red hair sculpted onto his scalp, his eyes and pursed lips glowering at something far off in the distance. But he seems to have nothing to do with the series of hands that take up the rest of the picture plane: One hand plumbs from the top of the canvas to the center in order to lightly guide another set of fingers; a left hand, with somewhat distorted knuckles, appears upright in prayer; a right hand recedes into shadow; and superimposed across Raphael's chest is a demonstrative pair with one hand pointing to something below while the other offers an opaque scroll. Although clipped from the rest of their bodies, these fragments refuse to be described as mutilated. They are focused studies of white, pink, and beige flesh tones. They are the hands turned around, flipped over, and reconfigured to get the shape of the fingers just right. They are complete, closed – even supple – forms, implicitly attached to wholes that Ingres has chosen not to depict. Ultimately, in the *Apotheosis*, of course, the held hand would indeed belong to Raphael. In the study, these hands have been laid out as models for later use.

Similarly, contour lines hold Jacob's forms together against the blankness of the page. The first three rows – in the upper-right hand corner – are the only ones laid out in clear chronological succession.

The remaining limbs are scattered, with Figures 1, 2, and 3 forming a soft triangle of stumps. The three prosthetics snugly fit into the rest of the page. And each specimen presents some combination of leathery skin, yellow pockets of fat, bony fillets, sutures whose threads still dangle loosely, or cabbage-shaped scar tissue. Even as each form is self-contained, it can still be supplanted with a prosthetic – whether the cork-cushioned shoe on the left or the elongated mechanical boot on the right. The plate offers the possibilities for reconstructing a whole body.

Explicit or cut-by-cut instructions for the each surgery are absent from the plate, but in the accompanying text Bourgery offers some measure of their history without going into too much detail. The four figures clustered in the lower-left corner, numbered one through four, describe Jean-Baptiste Lucien Baudens's suggested procedure for amputating the foot at ankle joints. The first figure is described as "[t]he surface of the wound after the operation"; the second is "the surface of the amputated stump after it has healed entirely, after nature"; the third and fourth feature, respectively, the "extremity of the stump seen head-on" and "a lateral view with a cushion, extended with a cork and an appropriate shoe."[88] As an army doctor, Baudens was quite familiar with the requirements of the procedure, but also the needs of soldiers in amputation's aftermath. He had joined the army medical service in 1823, traveled to Africa (from 1830 to 1837), returned to Paris to take a post in the hospital at Lille, only later taking up a professorship at the Vale de Grâce hospital in Paris in 1842. He published his practical experience in the army, compiling his procedures into manuals for doctors such as Bourgery who had stayed in Paris; and in 1842, he published his *Nouvelle méthode des amputations.*[89] It was clear that the authority Baudens had gained was not simply due to some inborn gift for slicing through skin, but, rather, skill built up through his years in the army.

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[88] Bourgery, *Traité*, vol. 6, planche 83 bis.
[89] Frederic S. Dennis, *System of Surgery* (Philadelphia: Lea Brothers & Co., 1895): 112.

For Bourgery, these details about how Baudens had acquired expertise were not necessary to include, not even in a footnote. The *Traité*'s compulsive encyclopedism forced Bourgery to catalogue in other ways, and to siphon off that which might confuse or muddy the image of clean-cut surgical practice. As his compilation of amputation techniques suggests, he was interested in how surgeons had written about their procedures – and how such procedures might be imaged efficiently. The historical frame for his accounts stretched several centuries: Bourgery was eager to cite everyone from 16th-century anatomist and surgeon Ambroise Paré to Jean-Louis Petit to a prominent contemporary, Alfred Velpeau. When he described Velpeau's techniques for having to amputate two different diseased limbs in one fell swoop, he described how two surgeons named Vermale and Ledran had written about the same kind of procedure that "M. Velpeau has practiced once on the living" – an indication that such surgeries, quite rare (and quite painful) as they were, could only be demonstrated on corpses.[90]

But Bourgery did not demonstrate any interest in how people incurred their injuries, or even the fact of surgery outside of the hospital complex. Indeed, he remained silent on how a surgeon might go about extracting a bullet from the pectorals or treating a stab to the heart. Although it is certainly possible to attribute his reticence on these matters to a lack of space, or, perhaps, to the comparative improbability of such incidents, this suppression also signals a belief that these spheres Bourgery described – medicine, surgery, and, most of all, anatomy – were somehow untouched by the political inconstancy of violence. None of these bodies is ever placed in a context outside of the first plate of ideal proportions. They seem adhere to the rubric of past descriptive or surgical anatomical atlases, many of which attempted to render their subjects devoid of cultural context. Politics, it seems, were simply absent from the interior of the body.

[90] Bourgery, *Traité*, vol. 4: 245.

This could not have been further from the reality of the early 19th-century medical and surgical situation. Medicine, surgery and even anatomy had been fundamentally restructured as a result of political will, especially since the Revolution. Not only had medical education – its institutions and professoriate – been constructed with political will, surgery was also constantly being refined by war. It was not just Baudens who had gained surgical experience while he toured with the army's medical service; the whole practice of surgery had been improved during the Revolution. As David Vess has shown, after the Directory's dismantling of the institutions of the *ancien régime* in 1795, surgeons and their apprentices, now unaffiliated with either hospital or university, began to take the opportunity to treat those who had been wounded in battle. Compared to doctors, who took, as Vess describes them, "secret potions and complicated treatments" with them to the battlefields, between 1789 and 1796, surgeons approached the injured with their simplest instruments and with the understanding that they needed to treat their patients – and their patients' wounds – as quickly as possible. The result was that much surgical intervention had to be quick, decisive, and creative, especially because there were a limited number of tools and resources at the surgeon's disposal. With more bodies around to be treated, surgeons and their apprentices became more practiced at cutting them open.[91] Anatomists, too, had enjoyed the benefits of the institution-abandoning Directory. After establishing new medical schools free of *ancien régime* politics – the *Écoles de médecine* – the government also began to monitor the *salles de dissection*, encouraging a less expensive and easier circulation of cadavers for anatomists and their students to inspect.[92] While direct experience in the battlefield was not always the prerequisite for inspecting, touching, and, ultimately, dissecting bodies, the fact was that as *ancien régime* politics were upended and

[91] David Vess, *Medical Revolution in France, 1789-1796* (Gainesville, FL: University Presses of Florida, 1975): 117-132.

[92] Maulitz, 27. There seems to be little discussion as to whether or not this fell out of favor. Later on in his book, Maulitz describes that the price of a cadaver was about $1.50 in France versus $42 in England. Also see: Maulitz, 141-143.

overturned practical experience with cadavers increased. And the importance of the hands-on experience of bodies did not fall away once the Directory was dismantled.

Surgeons were also taught to make due with what they had. On Napoléon's battlefield, the expertise of doctors and surgeons was equated with the skills of soldiers who cared for the food supply, oversaw sanitation and prison guards, and few doctors had the resources they needed for the gruesome wounds of war. Consequently, their training had to be site-specific and improvisational. Napoléon's attitude towards health was one in which army medics were taught to stress prophylaxis over therapeutics. Not quite denying that soldiers were sacrificing their bodies for their Emperor, it more had the effect of *preparing* bodies for battle. Back in Paris, Napoléon and his bureaucracy reinforced the 1794 merger of medicine and surgery at the *Faculté de médecine.* This rather new educational structure acknowledged that while medical theory and surgical practice approached bodies differently the two disciplines still fundamentally had bodies in common. While this seemed a bureaucratic move, Napoléon's policies about bodily care on the battlefield had also produced a fleet of caregivers who had become accustomed to the body through its experience of war, and who would then pass on such knowledge to their students as well.[93] And after Napoléon, there were also steady reminders of those who had gained and produced medical knowledge as a result of their time in the military. One of the most comprehensive and ambitious medical dictionaries, *Dictionnaire des sciences médicales* (1812-1822) published by Charles Louis Fleury Panckoucke, included entries on military and naval medicine, acknowledging the debt that the 19th-century Parisian clinical school owed to those who had treated the wounds of war.[94]

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[93] Maulitz, 11; Weiner, 285-292.

[94] Weiner, 291. After Napoléon, politics and political will continued to intervene in medical education. We have already seen the disruption and ultimate closure of the medical schools in 1822, due to royalists' frustration with liberal sentiment that pervaded the school (and the students, in particular). And if the career of Théophile Laennec – inventor of the stethoscope, and promulgator of pathological anatomy – is any indication, political tensions continued to stew. Laennec was offered a lectureship and later a chair during the Restoration

Bourgery chose to take cues from the encyclopedic treatment of amputation, but pushed this history out of the picture. His streamlining, his act of generalization and de-complication – this was also the scruple of Quatremère's ideal: "Hence then it is certain that, in theory, *ideal,* and *generalized,* are to a certain extent synonymous, because they express the same effect, although the analysis of these two notions proves to us that the one is derived from the other, and that the act of generalizing is undeniably employed by the mind of the imitator as a means of attaining the ideal."[95] In order for a body to be made into an ideal, it had to be generalized. And in order for the body to be generalized, it needed to somehow be expunged of all political accoutrements. But, as he begins his meditations on imitations of the ideal in the fine arts, Quatremère warns: "We have also deemed it needless to remark that if, in the fine arts, all poetical ideality results from the act of generalizing, every operation that generalizes does not reciprocally produce the ideal, according to the meaning of the word poetical as applied to the fine arts. Be it as it may, the act of generalizing, applied to the arts of design, is concerned as well in the composition of subjects, as in the representation of the human body."[96] Consequently, what we see in the combination of Bourgery's texts and Jacob's images is how much the ideal was put at risk.

While Bourgery had very visibly extricated his treatise from any historical memory of the Napoléonic regime in all of his plates, amputation and amputees continued to emerge within the broader sweep of visual culture in the late 1810s and early 1820s, and in the circulation of lithographs in particular. The loss of limb had become the haunting emblem for the sacrifices of war. A decade before Bourgery

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government's closure of the École for the several months between 1822 and 1823. While the *Académie des Sciences* recommended François Magendie, a noted physiologist, the Minister of the Interior heartily endorsed Laennec to the king. Wearing royalist sentiments on one's sleeves could only help a job applicant. Ackerknecht; Maulitz, 101-103.

[95] Quatremère, *Essay*, 332.

[96] Quatremère, *Essay*, 323.

published his treatise, Nicolas-Toussaint Charlet had imaged the memory of war and the heat of battle in a series of lithographs. With his prints of battle, Charlet, a friend of Géricault's, demonstrated how this (re)productive medium could image the same kinds grand views as the national genre of battle painting.[97] *Recrue à l'exercice* (1817), one of his earliest lithographs, engages with the last days of Empire. [**Fig. 4.3**] Signaling that the military's soldierly reserves have dried up, a young adolescent boy stands weary at the prospect of joining the ranks: his knee is wrapped in a makeshift handkerchief-tourniquet, and the knife of his bayonet towers over his tasseled military hat. In the background are two figures: on the right, a soldier drills into the field just beyond, and, on the left, a captain-like figure – quickly sketched in – smokes a pipe. The captain's amputated stump – outfitted with a peg – eerily echoes the barrel of the young boy's bayonet.

In another lithograph, *Infanterie légère montant à l'assaut* (1819), printed two years later, Charlet pit the dressing of a wound in the foreground against a blurred horde of stiff, jagged bodies, all charging against one another in the background. [**Fig. 4.4**] The victim under treatment appears wistful, and the soldier behind him – one of his arms in a sling – gestures to a shared urge to rush back into the fray of battle. In both these prints, even as their figures endure the pain and suffering of injury, a sense of collective allegiance – and duty – persists. But the tableau depends on both Charlet's and the viewer's abstraction of the body. Elaine Scarry observes the mute sensibility that wounds seem to inspire in those who see them from a distance: "We will respond to the injury (a severed artery in one giant, a massive series of leechbites in another) as an imaginary wound in an imaginary body, despite the fact that that imaginary body is itself made up of thousands of real human bodies, and thus composed of actual (hence

[97] Stephen Bann, *Parallel Lines: Printmakers, Printers and Photographers in Ninettenth-Cetury France* (New Haven, CT: Yale University Press, 2001): 67-68.

woundable) human tissue."[98] Charlet's subject valiantly struggles *against* his pain and *against* his wound in the name of national piety. The puzzle is that this body also seems to have been treated in quick, slapdash fashion, less surgical than topical. And by transforming this body into a valiant symbol of war, Charlet has effected a model that stands in for all the other bodies that have been caught in the throes of war, regardless of how deep their wounds might have been. The idea is that pain and suffering are worthy sacrifices for the good of the nation.

Not so with Géricault's lithographs of injured soldiers – *Return from Russia* (1818), *Wagon of the Wounded* (1818), and *The Swiss Guard* (1819) – which evidence an uneasiness with the spoils and aftermath of Napoléon's campaigns. Gone is the heroic classical soldier that David had put in so many paintings in order to mediate political will. Géricault reinvests the bodies of contemporary soldiers with pathos, picturing those that have been face to face with the enemy on the front lines of battle, those who have been traumatized by the experience. In the foreground of *Return from Russia* is a pair of soldiers, both in tatters. [**Fig. 4.5**] Although the bulk of his right arm has been amputated, the soldier on the left uses his left hand to guide the weary horse. The soldier on the horse steadies himself on his friend's shoulder, while wearing a sling for his broken arm and a thin layer of bandages over his eyes. In the background, two other men – one of whom hangs heavy on the back of the other – trudge through the snow in search of refuge. It's a sorry scene of slumped, broken down bodies. Antoine-Jean Gros had previously depicted the aftermath of the Russian campaigns on an official and very large scale. Although bodies remain strewn across Gros's *Battle of Eylau* (1808), as Napoléon and his troops survey a day after fighting, there are only a few reminders of bodies' *parts* having been sacrificed. [**Fig. 4.6**] It is either the whole body – which now appears gruesomely frozen and blood-smeared – or parts that tangle into other bodies, or are packed

[98] Elaine Scarry, *The Body in Pain: The Making and Unmaking of the World* (New York: Oxford University Press, 1985): 71.

into snow. In the center, as Napoléon raises his right arm to acknowledge his troops to echo ancient statues of Marcus Aurelius, with his left he offers a golden pouch to the man beneath him, as compensation for his now-useless arm. And though the battle has been lost, a loyal legion, caparisoned in velvet and fur, trails behind Napoléon.[99] Nine years after Gros's canvas, with *Return from Russia,* Géricault offers a monochrome picture that, while much more barren than Gros's painting, defuses the majesty and spectacle of war. Far from the smoking battlefields, adorned not with feathers in their caps but by threadbare uniforms, and bereft of Napoléon's guiding fingertip, these men are left to find their way back to their fatherland their own. Broken down, weary, and injured, they cannot even see straight ahead of them. They are note quite directionless, but the horse – whose head hangs flaccid – bears the weight of these downtrodden troops.

A similar heaviness hangs in *Wagon of the Wounded,* in which the sick and the dying are piled one on top of the other, only to amass a heap of tangled bodies and body parts. [**Fig. 4.7**] The cart and the caretakers on its sides morph quickly into the bucking forms of unruly horses (one of which sinks its teeth into the hindquarters of its companion). It becomes difficult to distinguish one person's body from another. Darcy Grimaldo Grigsby describes the scene as a twisted amalgamation of bodies where "interspersed with parts of humans and horses are markers of military rank: epaulets, breastplates, helmets, hats, and caps. But while the insignia are there, they no longer determine hierarchy. Rather than the disciplined, organizing structure of military rank, physical disabilities – so many random inflictions – now determine spatial relationships among men."[100] Géricault also shoves the most legible part of the image off to the left – a man with a crutch and leaning on the wagon for support. He looks up at the

[99] One can find a more thorough treatment of Gros's *Eylau* in: David O'Brien, "Propaganda and the Republic of the Arts in Antoine-Jean Gros's *Napoléon Visiting the Battlefield of Eylau the Morning After Battle,*" *French Historical Studies* (Vol. 26, No. 2: 2003): 281-314.
[100] Grigsby, *Extremities*, 181.

armored soldier who seems to hold the reins. As their eyes lock, a gulf of body parts teems between them; behind the armor there is a note of regret, a hint of charity. And yet helplessness reigns. As this unit returns, it seems that corporeal order cannot be resuscitated. Though quick surgical efforts might have been made, there is a sense that no one has attempted to treat them in full. They seem destined to return to their hometowns lame and mangled, never again to be useful.

While *The Swiss Guard* restores the post-op soldier back to society, it also makes clear how easily his body can be replaced as quickly as regimes are overturned. [**Fig. 4.8**] Here, a Napoléonic soldier stands in defiance of a Restoration-appointed Swiss Guard, and asserts himself as the real soldier between the two.[101] But the veteran has none of the official accoutrements: he has traded a feathered helmet for a crumpled top hat; instead of his epaulets, he now dons a coat barely shut by one button; and, most obviously, his bayonet and swords have been substituted by a peg-leg strapped to a stump and a simple, steadying cane. While he might not be able to give voice to these soldiers, at the very least, Géricault has given them images; and these images become enmeshed in a practice of reminding viewers about the sacrifices made in war, and, more generally, the fact of the body's vulnerability. The veteran pulls his coat away from his chest in order to reveal a small medal, presumably awarded because of his valiant soldiering. His pose is a defiant reminder of the costly ambitions of empire. The veteran was rewarded his medallion because he had courageously sacrificed some part of his body; and he could only have received such recognition if surgeons had acted quickly enough to help him survive.

Géricault frames the wound as a consequence of imperial hubris, and accessorizes it with the empty spoils of good soldiering. But the wounds themselves – as they rupture flesh in the course of battle – become difficult to tally for one side or the other. Scarry is worth turning to once more:

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[101] Grigsby, *Extremities*, 179.

> One may wish to think that the wound is specifically 'French' because it resides in the body of a French boy, but it is the nature of injury that its attributes can be lifted away from the site, as though the wound in the chest were the severing of that tissue's relation with the rest of the body. If from the wound he dies, his whole body is deeply effected, radically altered; his whole body is now the wound. Does this dead boy's body 'belong' to his side, the side 'for which' he died, or does it 'belong' to the side 'for which' someone killed him, the side that 'took' him. That it belongs to both or neither makes manifest the nonreferential character of the dead body that will become operative in war's aftermath, a nonreferentiality that rather than eliminating all referential activity instead gives it a frightening freedom of referential activity, one whose direction is no longer limited and controlled by the original contexts of personhood and motive, thus increasing the directions in which at the end of the war it can now move.[102]

The wound's subsequent non-referentiality – its ability to become radically empty of cause, to become a floating signifier – runs parallel to how Bourgery and Jacob depict their operations. In returning to the plate of amputations and prosthetics, there is nothing that contextualizes these injuries were acquired. Nor is their any instruction on how to cope with the radical transformation of the rest of the body. All that is allowed in these plates are clean slices, neat cutaways, and tidy operations; anything more would ruin the credibility of such images. Any loose ends would take away from the pictures' didactic potential.

But this didactic potential could also be undermined by the extreme pain that was wrought by any kind of early-to-mid-19th-century surgical practice. Until 1846, when a dentist named William T. G. Morton first showcased ether for an audience at Massachusetts General Hospital, anesthesia had simply been a pipe dream.[103] And for the majority of the treatise's initial publication lifespan, the images of surgery – and apparently simple images of open cavities – evoked the cut of the knife, and the pain of incision. Even to 21st-century eyes, Bourgery and Jacob's images are surprisingly painful to look at.

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[102] Scarry, 119.

[103] While Parisian doctors began to employ ether in the next three months that followed, it took a little while – and many letters across the Atlantic – before trust could be put in this novel pain-free surgery.Martin Pernick, *A Calculus of Suffering: Pain, Professionalism, and Anesthesia in Nineteenth-century America* (New York: Columbia University Press, 1985): 3, 205.

Seeing the insides, and, especially, seeing a step-by-step chronology of a surgical loperation, remains a morbid proposition. We are somehow asked to absent ourselves from our bodies in order to learn the techniques of a trade. But these pictures of human bodies demand that the viewer identify with them. For although Bourgery has been explicit about the ideal, and mindful as we are that he and Jacob have outlined classically-inspired proportions in the first plate and continued to use classical allusions throughout, the poking, prodding and sometimes violent opening that such images illustrate overwhelms ideas and reminds the reader very quickly of the body's tactility, its sensations. These images could not be so effective if they were simple diagrams of the torso or of the head.

And yet there does remain a divide between the vulnerable human body and Bourgery and Jacob's pictures. Every part – even if pathological – has been idealized in order to demonstrate a type. Such images did not to serve as precise mirrors of the experience of operation; instead, as Bourgery reminded his readers from the very beginning of the treatise, they were caught in a didactic mental operation meant to help conjure the body. Bourgery emphatically recognized that images – and not just simply the written word – must inform practice.

These images, however, did not explain what to do with surgery's detritus; they did not even attempt to describe such discarded parts. The task was, instead, Géricault's. In his literal *natures mortes*, he lavished attention on a collection of rotting arms, legs and heads that he had gathered at a Parisian morgue.[104] His subject matter is the height of grotesque: in *Severed Limbs* an amputated arm is slackly bent over two feet, and an unidentifiable stump in the background echoes the curve of the arm. [**Fig. 4.9**] The feet are the worse for wear, darkened by rot. In the lower-left portion of the canvas, Géricault

[104] Nina Athanassoglou-Kallmyer, "Géricault's Severed Heads and Limbs: The Politics of the Scaffold," *Art Bulletin* (Vol. 74, No. 4: December 1992): 599-618, 599-602. Also see: Linda Nochlin, *The Body in Pieces: The Fragment as a Metaphor of Modernity* (New York: Thames and Hudson, 1994): 2.

renders flesh-colored reverberations of the foot against the dark black background, and does the same with the hand and its fingertips. Géricault's dis-junctured body parts give us little reason to assume that these feet formed a pair, or that any of these parts made up one individual's body. Throughout the picture are persistent reminders of violence, decay, disrepair; loss pervades it. These parts are not simply shrouded with the signs of stillness and death; frayed with muscle and flesh, they seem to have been violently excised. And Géricault has put these limbs in conversation with one another precisely because they are damaged goods, parts that will never be useful again. These sites of amputation splay into darkness, their limbs now incommensurate with the bodies they have lost.

Bourgery's plate bracketed the lost limb, in favor of the whole body – offering up fabricated replacements for irrevocable pasts. The prosthetic, here, functions as more than mere metaphor; it is an active part of corporeal reconstruction. But as the convenient leather boot masks the stump of the ankle, or engulfs the body of its wearer, it simultaneously historicizes the moment at which the missing part was lost. Between Géricault's and Charlet's prints of wounded and amputated soldiers, Géricault's *Severed Limbs* paintings, and Bourgery's plate of prosthetics, the one missing thing – the very thing that the prosthetic simultaneously asserts and denies – is precisely this irreversible moment of loss: when a bayonet's knife pierces an arm, or a bullet rips through the skin, when the hubris of hyper-extending the body with weaponry and the accoutrements of war is quickly blunted by the sacrifice of extremities. But these prostheses are glaring reminders of this moment, and, ultimately of the body's corporeality.

When attempting to reconstruct classical statuary, however, antiquarians Winckelmann and Quatremère had the luxury of rebuilding within a historical imaginary. Because they were working with history and its leftover fragments, their reconstructions were acts of persuasion. They While they took the disinterred part as the lynchpin for their discussions, not all that they proposed about an original

whole could be implemented on material terms; their ideas did not always have physical, material consequences. Although they relied on a similar type of mental completion and idealization, the bodies about which Bourgery wrote, and the ones that Jacob aspired to depict, were tethered to the reality and very real vulnerability of *living* bodies. Even as both anatomist and artist attempted to map these figures into their outlines, or render organs in pristine states, their depictions remained too close to actual human scale, too near to the flesh and bones of the bodies that existed in the world and found themselves in hospital beds, and, ultimately, on their death beds. But Bourgery and Jacob's idealizations were meant to be applied to the deathbed or in the surgical theater. These were meant to be actionable pictures that would render futures for the individuals upon whom surgeons operated. Caught in between the ideal and the real, these images stretched the limits of what the ideal could be. And the question lingered: as soon as the ideal became operative – as soon as it was translated from abstracted idea to guiding practice – could it still be ideal?

At the bottom of a number of plates, Jacob modestly reminded his readers that his images were "après nature"; in other words, even though the pictures he presented were "ideal", they were variations on the real. In a similar move in *Imitation in the Fine Arts,* Quatremère compared the imperfect reality of portraiture with the marble perfection of classical Greek sculpture, writing of the former:

> In the one every part of the body, every form, every muscle is imitated with all the irregularities of detail, all the accidental particulars, that, owing to the chances of generation, and numberless other causes, are present in all bodies. It is no uncommon case to find the bones and muscles deformed, altered, and modified from their natural condition, by the skin, the cellular tissue, or the more or less degree of corpulency in the individual. *Again, who is not aware that the relations one with another of all the parts of the body, from which result the beauty and harmony of proportions, are dependent on an infinity of causes and circumstances tending to impede or modify their development?* Nothing in the imitation of the human body is more common than that manner which consists in re-producing its forms, peculiarities, proportions, and relations, just as they occur to the

> artist in the individual model. It is imitation after the idea of *portraiture.*[105] [emphasis mine]

Here, Quatremère posits the ideal as a product of the off-kilter variegations of real bodies, and acknowledges the heightened improbability of any real body being ideal. Similarly, as Jacob acknowledges that his images are "après nature," he is reinforcing that these are not images *of* nature and natural imperfections. Rather than specifics, rather than individuals, Jacob's plate abstracted from nature and still remained within the realm of the ideal: even Jacob's amputated stumps are anchored to that first plate of proportions, a fact underscored by the dotted line of a leg that fits neatly in to the prosthetic. Instead of portraits, Jacob's images represent types that fit into the ideal reasoned out by Quatremère.

However, when Quatremère more explicitly describes classical Greek sculpture, he bridles at the thought of including the imperfect into his assessment of the ideal:

> In examining what is so legibly written before the eye, in statues of the ancient style, are we not obliged to confess that there is in them a certain grandeur of form that excludes all accidental littleness, and that a judicious combination of relations between the several parts produces a concord of proportions, seemingly constituting the rule by which the Creator appointed human nature, before it was subjected to the accidents that generation, labour, poverty, and sickness, have rendered it liable to?[106]

This pre-lapsarian reading of classical statues casts any imperfect image out of the garden; and it attempts to evacuate history from the ideal entirely. While an artist may distill from imperfection, the form and content attributed to the ideal cannot be imperfect. Thus, with deep wounds that turn to scar tissue, Bourgery and Jacob's images and text aggressively test these parameters by idealizing amputations and prosthetics, and by pushing to the margins the history of "accidents," "labour, poverty and sickness" that real bodies must endure. The lack evidenced by an amputated stump most obviously marks the moment

[105] Quatremère, *Essay,* 331.
[106] Quatremère, *Essay,* 331-332.

of separation of part from whole; and, by extension, the rest of the body cannot escape its sacrificial past. However idealized Bourgery and Jacob have made them out to be, these amputated stumps and prosthetics acknowledge and insist that the real, live, working body must be used, even if some of its parts have been reduced to fragments. While the classical Greek, marble ideal stands still, the post-injury body must live in the world and weather the "accidents" that result might from it. As they edge out illness and expiration, these images will always refer back to the vulnerability of the human body. No matter how light Jacob's touch, no matter how much he feathers them into the blankness of the page, they are pictures that, for all their idealization, reveal themselves as potential sites of death. These are bodies that still marred with the their histories.

Fig. 5.1: Bourgery, *Traité*, Vol. 7, Pl. O.

Chapter 5: Standard Deviations

But what of the wish to correct history – and to acquire a better body? As Quatremère suggests in his discussion of the ideal, not all bodies are created equal. There are some that happen to be the "accidents" of generation, those which, at birth, are already malformed and unfortunately proportioned. Quatremère pushes these out of the way of the classical ideal. But an image like this of spinal deformations and their respective corrections asserts the possibility that they can – at the very least – attempt to approach the ideal through intervention. [**Fig. 5.1**] In both their pathological and corrected states, these backs are accompanied by classical cues: messy piles of drapery fluffed out beneath their buttocks and abruptly cut-off arms. (These parts – just like the amputee's torsos – remain off the page.) Each pair of examples functions as a diptych of correction, of snapping the potentially monstrous serpentine line back into something closer to straight. In describing the plate, Bourgery mentions only one "young girl" whom he and Jacob have depicted. The rest, though likely the backs of men, remain ambiguous.

But Jacob has so softly rendered them all, lavishing attention to curves and sinews, treating the crooked with the same stylistic effects as the straight. The result is that scoliosis is idealized, thereby undermining the stability of the ideal, and ultimately normalizing the abnormal, in much the same way that Georges Canguilhem describes much of early 19th-century pathological anatomy and physiological research. And yet, the diptychs also foster the hope that corrective surgery can return the body to a more general norm, even if far from idealized. In two of the "after" images, Figures 2 and 8, the spine continues bend, but, comparatively, it looks a good deal better. The pair of images suggests that the ideal can exist as

a gradient. Arbiter of positivism Auguste Comte, after reading Broussais, maintained something similar, if more modest: that the pathological can only help inform the notion of the normal.[107] If we transfer the same logic to Bourgery and Jacob's print, pathologies finessed into idealizations become the means of defining the normal, and, consequently, the ideal. At the core of the image's effect – and Comte's interpretation of Broussais – is correctability and a normalization of correction. Along these lines the back enjoyed a great deal of scrutiny in 19th-century France – not only as expertise in orthopedics emerged, but also at the Salon. From the controversy over prominent *Gazette médicale de Paris* editor Jules Guérin's treatment of orthopedic deformities – and the spine in particular – to Ingres's notorious odalisques, the representation of the back was continually the contested ground on which to make things upright. Not only did it serve as a site with which to demonstrate the pathological, the back's discursive function was to differentiate the pathological from the normal – and, further, the normal from the ideal.

Similar to how, in *Le Jupiter Olympien*, Quatremère described every fragment as having the potential to reveal a masterpiece, Bourgery and Jacob cut into the body and proffered it part by part. Each image, then, had the potential to serve as a localized unit of the ideal, and each volume would, in effect, offer a multiplicity of ideals. Although Bourgery and Jacob described and mapped those initial proportioned outlines, it was not as though each image of the treatise was compiled in order to produce one body both normal and abnormal, as was the case with some preceding anatomical imagery.[108] They had framed their treatise with the ideal in mind, so that a *container* existed to discipline its parts – and so that the reader could mentally complete the work. Each page presents a slate wiped clean, and provides

[107] Georges Canguilhem, *The Normal and the Pathological*, trans. Carolyn R. Fawcett (New York: Zone Books, 1991): 43.

[108] Hans von Gersdorff's image from *Feltbuch der Wundartzney* is particularly apt for showing cumulative damage as opposed to an accumulation of ideal parts. Gersdorff, Hans von. Feldtbůch der Wundartzney : newlich getruckt und gebessert. (Strassburg: Hans Schotten zům Thyergarten, 1528).

the opportunity for a new representation of a new body part, or a different aspect of one that had been previously illustrated. In their detailed cataloguing, Bourgery and Jacob attempted to picture the body in very controlled states of disease and health, with reference only to this constantly reproducible ideal frame. What the reader would typically be left with was an ideal grid and a slew of ideal parts in various states of completion. The plate of backs offered something different: an example in which the slate was wiped clean with every other image, and where a multiplicity of pathological ideals were coupled with their normalized – and then idealized – counterparts. There are four bodies on the page, each represented twice, and each representing the breakdown of a singular ideal.

But in order to justify this variety of bodies, correction towards idealization needed to be continually asserted. The lithograph was based on drawings and plaster casts of individuals with scoliosis or any such curvature, all of whom had been patients of one M. Bouvier, a Parisian tenotomist, a kind of surgeon who would cut tendons in order to make club feet or S-curved spines straighter.[109] This information, which Bourgery offers in his accompanying text, quietly reminds readers that the images are at a remove from real bodies themselves. That like Quatremère's idea of artists abstracting the ideal from the vagaries all around them, Jacob had made a plate in which each specimen had been mediated three times over: by Bouvier's plaster cast or drawing, by Jacob's own drawing, and then by the lithographic press. Details consequently get lost in translation: each body goes nameless, with respective, individual parts distilled and idealized in order to create an exemplar of surgical miracle-working. While Bouvier is paid mention, the wonder of these corrections is how effortless and painless they appear, as though wrought by an invisible hand.

[109] Bourgery, t. 7, Planche O explanation.

However, it seems unclear as to whether or not the before and after bodies match up with one another. The first pair, especially, which Bourgery describes as "the dorsal curve with a depression of the left shoulder and the jutting out of the right shoulder" seem, in fact, s todepict a girl, on the left, and a heftier man on the right.[110] For all we know, these could be different plaster casts that have no direct relationship with one another, but that simply rehearse and reinforce the idea of correction. But the plate continually reinforces that these are cases, not individuals – indeed that these are four different spines before and after treatment. Any other difference, we disregard. As the raised ridges of these S-curved spines are absorbed into their more normalized counterparts, the correction becomes more pronounced. So much so that the figures' varied hair styles and head-wraps, the different crumpled fabrics around their hips, the difference in bodily frames – none of these matters as much as the picture's proof that the correction has been performed.

And yet, these pictures of pathological "befores", still retain idealization, as wrought by generalization, and the mediation between plaster casts, drawings, and the lithographic press. It would seem that the ideal had already been compromised by the very display of the pathological. But the iconic *Torso Belvedere* provided an example of anguish made all the more present through the spine, and it was continually evoked in antiquarian debates well into the second half of the 19th century.[111] [**Figs. 5.2, 5.3**] What is more, the complicated lure of this particular fragment was its invitation to conjure, to build up an idea of the ideal from something that had been broken down – precisely the same kind of mental operation on which Bourgery had premised his entire treatise. Johann Joachim Winckelmann himself had read it as nothing less than a contemplative portrait:

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[110] Bourgery, t. 7, Planches O and P, explication.
[111] Francis Haskell, *Taste and the Antique: The Lure of Classical Sculpture, 1500-1900* (New Haven, CT: Yale University Press, 1981): 106.

> It seems inconceivable that one could depict the power of thinking in any other part [of the body] than the head; yet witness here how the hand of a creating master has the capacity to render material into spirit. I have the sensation as though the statue's back, bent over by lofty acts of contemplation, manages to create for me the image of a head which is busied with happy recollection of its extraordinary deeds. And just as this head, so full of majesty and wisdom, rises before my eyes, so the other missing limbs start to form themselves in my thoughts. Out of the present condition of the work a new creation assembles itself, producing, as it were, a sudden complete restoration.[112]

This was a fully imaginary portrait, one that could never exist in the flesh. Further, as Leonard Barkan notes, there was no effort to physically reconstruct the *Torso*, to restore it with new arms or a new head. Renaissance artists attempted to draw the sculpture to completion, jauntily or not extending its thighs into more complete, frog-like legs. But, somehow, they always left the arms and, most importantly, the head alone. The fragment, as Winckelmann's passage attests, could set off the imagination, and permit the viewer to contemplate it towards completion.[113] And in order to complete the *Torso*, its anguish needed to be articulated with a narrative. For Winckelmann, the bending curve of the *Torso*'s spine, as the left shoulder juts upward and the right is pulled down, suggests at least a temporary twist of the spine and the result of a hero's anguished state. Reading the *Torso* through Winckelmann as Hercules in the garden of Hesperides, Alex Potts observes that:

> In envisaging the Torso to be the fullest surviving embodiment of the Greek ideal, so it encompasses and yet at the same time suspends the violent disturbances of the sovereign subject in action, Winckelmann has to complicate its apparent calm. He has to endow its sensual plenitude with a certain ambivalence by imagining it as the transfigured after-image of a dead hero. The embodiment of an ideal masculinity is effected through the dissolution or destruction of living, acting manhood. The ideal forms of the figure are redolent of a utopian plenitude and calm, their free-flowing contours the physical correlative of a freely harmonious sense of self. Yet the calm of these same forms takes on another aspect as they conjure up a deathly stillness, and recall the outlines of a manly strength that has been drained away or suddenly annihilated in violent death.[114]

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[112] Johann Joachim Winckelmann, as quoted in Leonard Barkan, *Unearthing the Past: Archaeology and Aesthetics in the Making of Renaissance Culture* (New Haven, CT: Yale University Press, 1999):189.
[113] Barkan, 191.
[114] Potts,180.

Winckelmann read suffering into a heroic body because there was no other reason an ideal body to be rendered so defective. There could be no calm in the midst of such apparent suffering.

Bourgery and Jacob, quite differently, attempt to suppress any violence that may be read into their backs. Because they describe a surgical process, the picking apart and the putting back together of the body are implicit, and the narrative is a simple by-product of side-by-side comparison. There are no mythic heroes here. Rather, in their first states, these figures are offered as lame, pitiable specimens in need of correction. Their second states describe a job well done. And the plate as a whole displays attempts to undo the tremors of disease, acknowledging all along that the backs it shows can never be as upright as Hercules's once was. Instead of depicting heroic subjectivity, Bourgery and Jacob's spines are records of "diseased" subjectivity having been righted. These "after" states come closer to the ideal, but they still bear the traces of deviation. (Indeed, they would not work nearly so well if the reader could not intuit an intervention) But like the *Torso*, the ideal continues to pervade each of these forms. Despite being deviant, they are modeled towards the ideal – towards bodies they can never achieve, with or without their corrections. Smoothed over, contained, and whole, each example from each diptych becomes an idealized increment of abnormality. Generalized towards an ideal, tapered to finer lines, they insist that even pathologies, before being corrected, might have an ideal too.

It was only a few years before the publication of the *Traité* that surgeons had begun to use their knives to correct spinal deformities. But images had been critical to the sub-specialty of correcting spines and setting bones straight. Orthopedics – broadly defined as the correction of the musco-skeletal system – did not have a name until Nicolas Andry coined the phrase "orthopedia," meaning "straight child," in his

1741 treatise *l'Orthopédie.* Implicit in the term was the teratological and the behavioral and their correction. Although *l'Orthopédie* itself was a guide for parents and not necessarily physicians, it was the first landmark text for the medical-surgical specialty. Its most prominent image is a picture of a coiled tree trunk held to a straight pole with a snake-like and rather improbably tied rope. [**Fig. 5.4**] Around the tree sprout tufts of grass while a rotten stump rests in the background. Meant to illustrate the benefits of restructuring the bones in general, but mimicking the spine in particular, the metaphorical image fully evoked the powers of human intervention as they sought to correct congenital deviance. In something of a pre-emptive move, the hug and tug of the tree, the rope, and the stake distill deviance into one sinuous, natural, and wholly unusual, form. Static as it is, the picture turned the act of straightening-out into a hands-free operation, rendering the deep mechanics of correction – what was happening inside the trunk of the tree – invisible. The message was effective enough to become the icon of orthopedic practice.[115]

In 1780, about 40 years after *l'Orthopédie*'s publication, Jean-Andre Vernal rallied a cohort of surgeons and doctors interested in scoliosis to open an orthopedic hospital that specialized in correcting skeletal deformities, such as rickets. Few dared to perform surgery on the spine until the mid-nineteenth century, and most doctors and surgeons relied on back-braces or metal corsets which forcibly corrected posture through the tightening of dowels and prescriptions of prolonged use. The process by which backs could be corrected was a potentially harrowing one, especially in an era when anesthesia had not yet been invented: a tenotomic surgery –whereby surgeon would cut short, tense, and tight tendons in order to elongate muscles – could involve anywhere between two and sixty cuts. The particular brand of tenotomy practiced at mid-century was called "subcutaneous," for surgeons would simply make the incision through

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[115] Leonard F. Peltier, *Orthopedics: A History and Iconography* (San Francisco: Norman Publishing, 1993): 20-24. Although published about 15 years later, one might also think of the frontispiece to Laugier's *Essai sur l'architecture* of 1753. See: Marc Antoine Laugier, *An Essay on Architecture*, trans. Wolfgang and Anni Herrmann (Los Angeles: Hennessey and Ingalls, 1977).

the skin, in order to cut the tendon.[116] What is perhaps most fascinating about the practice were its origins: at first, a remedy for clubfeet, surgeons began to realize that the same practice might be able to be applied to other parts of the body. The result was a conceptual amplification by which the same muscular tension that caused the foot to curl was believed to be the one which also caused the spine to hook around.

One of tenotomy's more visible advocates and practitioners was Jules Guérin, editor of the *Gazette médicale de Paris.* In 1837, the *Académie de médecine* offered the Monthyon prize for the best answer to a question about orthopedics. In response, Guérin sent in a folio of sixteen volumes, consisting of 500 drawings, that he had written and collated together over seven years. He shared this prize with his intellectual adversary, Sauveur-Henri-Victor Bouvier, maker of the plaster casts from which Bourgery and Jacob described spinal deformations. (He would later donate these drawings to the new museum of anatomy, the *Musée Dupuytren.*)[117] Two years later, a new orthopedic wing of the *Hôpital des enfants malades* was built. The hospitals' overseers had been so impressed by Guérin, that the hiring committee disregarded the usual protocol of public competition, and simply extended an offer to their favorite.[118]

As Bourgery mediated Guérin and Bouvier's different positions in his own treatise, he identified Guérin as a corrector to the fullest extent – a surgeon who believed that a correction could endure, long after surgical intervention. Bouvier, while always ready to straighten the spines of his own patients, seems to have thought that the illness was chronic, and permanent – hence, the trace deformities in his post-correction plaster casts. Even as Bourgery had Jacob reproduce Bouvier's casts, the anatomist sided with Guérin in his explanatory text. Although, on the whole, he strove to include as much as possible – such was the premise for his encyclopedic *Traité* –, and to steer clear of subjective judgment, backs

[116] Kathleen Moen, "Treatment of Scoliosis: An Historical Perspective," *Spine*, Volume 24(24), 15 December 1999, p 2570. Also, Robert Hunter, "On Subcutaneous Operations in Surgery," *The London Medical Gazette*, vol. 28, 1841: 18-24: 19.
[117] *The Medical Times and Gazette* (New York: John Churchill and Sons, 1879, vol. 1): 104.
[118] Peltier, 35-36.

provided Bourgery with an exception. He relied on the expertise of his own eyes to affirm Guérin's approach and method: "[...] this surgeon again had the occasion to practice his myotomy [or, dissection and correction of the back] on about three hundred rickets cases, on isolated bundles and on the mass of the spinal column. We have seen practiced before us this last operation [of dissecting, cutting and re-stitching together different muscles of the spine] which promptly allowed the straightening of the torso in a young girl in whom, frankly, the dorso-lumbar curves were not very substantial."[119] Bourgery's sentence hints at apprehension, but his doubt was ultimately outweighed by his belief in Guérin's theoretical position.

It is a wonder that, given Bourgery's preference for Guérin's surgical-theoretical approach to myotomy and tenotomy, he did not rely on Guérin's collection of casts or drawings. The surgeon and editor had rather obsessively documented the before-and-after stages of his treatments, having had his patients' backs cast and re-cast, and remade into drawings before the publication of his book on his surgical back operations, *Premier mémoire sur le traitement des deviations de l'épine par la section des muscles du dos* (1843). His method was less a strategy to identify type, but rather, to amass evidence name by name, and detail by detail, and to ultimately prove that his surgical techniques were effective. Take for example this foldout plate of severely deformed spinal casts and its accompanying description. [**Fig. 5.5**] "This plate," Guérin writes. "Represents three casts of lateral deviations simulated by imitation, viewed in different positions, and one cast of pathological deviation."[120] In the subsequent description, Guérin explains that one back belongs to Victoire Villemen (fig. I), the next is Jenny Guéry's (fig. II), one is Joséphine Cayeux's (fig. III), and the last belongs to a rather anonymous 17 year-old man (fig. VI). Both figures IV

[119] Bourgery, *Traité*, vol. 7, xlix
[120] Jules Guérin, *Premier mémoire sur le traitement des déviations de l'épine par la section des muscles du dos* (Paris, 1843): 128.

and V are re-iterations of previous casts featured (Victoire Villemen's and Jenny Guéry's, respectively), but with a slight outline in the lower-right corner that is meant to both complete the cast itself. Such dotted lines stressed the grave deformities that these backs suffered. The most marked pathology, however, needs no actual completion, for it fully demonstrates its disabling severity.

But Guérin's story is an instance in which diligent positivism turned its back. Although he had been celebrated in the late `30s, by the time Bourgery published this volume of his *Traité,* there were efforts within the *Académie* to admonish the editor and orthopedist for publishing a number of cases that had not in fact gone as well as he had reported. After Guérin's arrest in 1845, a committee of prominent doctors presided over by *Faculté de médecine* dean Matthieu Orfila, leveled the charge that Guérin had made false reports of successful operations, and the commission revisited sixteen of his patients. Their pamphlet included no pictures and, instead, required the cold, hard abstraction of numbers. An initial table, presented by Guérin, which tallied the cases at his disposal during his tenure at the hospital, was the first to enrage a wide-eyed medical community, even "*du public.*"[121] [**Fig. 5.6**] The glaring problem was that such numbers did not indicate whether or not the patient had been corrected or not; they were unreliable because Guérin had lumped together patients who were healing with patients who had been verifiably cured. As he recounted the types of cases he had overseen, he tagged them with the following columns: Number of cases, completed operations, cases on the mend, not improving, dead, and not treated or in treatment. This left a wide range of corrective possibility. Of the 1349 cases he had taken into his two rooms at the *Hôpital des enfants,* 609 lay in wait. (Those with spinal disorders, it must be said, seemed to fair better than those with strabismus, a condition which caused the permanent squinting of the eye.) Instead of shirking the charge and subsequent case against its own editor, the *Bureau de la Gazette*

[121] Ackerknecht, 177; and Moen, 2570.

médicale made sure to publish the full interrogation on the treatments that Guérin had mischaracterized between 1843 and 1845 at the *Hôpital des enfants.*[122] Even his own publication insisted that Guérin be publicly condemned for his dishonesty, for his lack of precision, and for his failure to be correct about his own corrections.

The Salon had also seen its fair share of misaligned backs, some for which critics demanded straightening. Delacroix's fragmented, muscular posteriors, spilling out of *The Barque of Dante* (1822), or his twisted, nearly spineless, female figures in *Death of Sardanapalus* (1827) come to mind, but few artists had as prolonged and ostensible an engagement with the back as Jean-Dominique-Auguste Ingres. In order to fulfill his *académie* requirement for the *Académie des Beaux-Arts,* Ingres sent his *Bather of Valpinçon* (1808) from Rome. [**Fig. 5.7**] The public welcomed it with open arms. And so began Ingres's lengthy engagement with the female back.

The favorite introductory art historical survey anecdote – that Ingres's backs had one or several vertebrae too many – found its first sparks in the critical firestorm surrounding some of Ingres's mid-19th-century Salon entries: that Ingres's backs were deformed, or, one might say, super-formed, was a point of much antipathy for his critics. When Paul Mantz came across *The Grand Odalisque,* he began cataloguing its faults: "The method of this painting is so strange, the modeling so imperceptible, the accessories of such crude tonalities, that it is hard to get one's bearings before it. This in no way resembles the softness of living flesh. The undersides of the feet are like bloated bladders. The ear is too high, as in the *Oedipus;* the hair is sea green, as in the portrait of Mme. d'Haussonville; the right arm is too long and stiff."[123] [**Fig.**

[122] *Rapport adressé à M. le délégué du Gouvernement provisoire sur les traitements orthopédiques de M. le docteur Jules Guérin, à l'hôpital des enfants, pendant les années 1843, 1844 et 1845* (Paris: Bureau de la Gazette Médicale, 1848): 3.
[123] Andrew Carrington Shelton, *Ingres and his Critics* (Cambridge: Cambridge University Press, 2005): 168.

5.8] Charles Laborieu's general criticism of Ingres's odalisques was both mordant and morbid: "all smell like corpses."[124] Either these pictures were not bodily enough or much *too* bodily.

Andrew Carrington Shelton notes that Ingres's *Grande Odalisque* was not discussed in terms of color and line; instead, critics were concerned with his lack of anatomical *correctness.* But looking at the anatomical perfection of the painted body was an insult, and one that ultimately could help stave off the suggestion that Ingres's pictures were modern or symptomatic of modernity.[125] Stalling any reading of the present into Ingres's frames evoked a return to the *Académie* and the *académie,* a demotion back to the simple, elementary act of drawing the body (as opposed to modeling it with color), and the careful and dutiful neophyte's observation of anatomy. The point was that Ingres had not proven a mastery over rendering and modeling the body, and, therefore, he could not yet be modern or, worse, even traditional. Instead, these bodies were suspended somewhere in between.

But Ingres's engagement with the sinuous, smoothed back was not haphazard. The female back appears in no less than seven of his paintings, and in five more iterations of the *Grande Odalisque* that were executed under Ingres's watchful eye, including an 1825 lithograph that appears to have been done by the artist himself.[126] The last painted copy of the *Grande Odalisque* was made in 1829.[127] He reiterated a trope, seeming to employ a cast (or a template) to draw and paint the same thing over again. Some have suggested that perfectionism haunted Ingres throughout this career, and that a constant need to re-draw,

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[124] Carol Ockman, *Ingres's Eroticized Bodies: Retracing the Serpentine Line* (New Haven, CT: Yale University Press, 1995): 85.
[125] Ockman, 169.
[126] Stephen Bann, "Ingres in Reproduction," *Fingering Ingres*, ed. Susan L. Siegfried and Adrian Rifkin (London: Blackwell Publishing, 2001): 56-75, 59.
[127] "The 1808 *Valpinçon Bather* is the first appearance of the figure that consistently recurs throughout the series; in the 1826 *Small Bathing Woman* (Washington D.C.), the Louvre *Interior of a Harem* (1828), the *Turkish Bath* *1863) and the 1864 watercolours *Bather*, at Bayonne, and *Turkish Bath* (Fogg Art Museum, Harvard). In all of these the turbaned figure is a full-length upright, seen from the back. The *Grande Odalisque*, its repetitions and variants, is also part of this group." Wendy Leeks, "Ingres Other-Wise," *Oxford Art Journal* (Vol. 9, No. 1: 1986): 29-37: 31. Also see: Patricia Condon, *Ingres, in Pursuit of Perfection: The Art of J.-A.-D. Ingres* (Bloomington, IN: Indiana University Press, 1983): 128; Dimitri Salmon, *Ingre: La Grande Odalisque* (Paris: Musée du Louvre, 2006): 26-29.

correct and contain his own production characterized his oeuvre.[128] If so, Ingres's constant engagement with backs could be thought of as one example of his quest for the fine spinal line, yet another try at mastering its nuances.[129] But, then again, as Susan Siegfried and Adrian Rifkin have recently shown, Ingres is so very hard to read, for, even among his reiterations, breaks and discontinuities that splinter apparent cohesion, not to mention the not inconsiderable circulation of prints after Ingres's paintings.[130] Thus, what was at stake with these backs, "pumiced" as Robert Rosenblum has described them,[131] was not simply the back as a repeated part, but the situations within which the back could find itself, and the bodies with which it could be compared. Pushing Ingres's contemporary critics' admonitions further, Carol Ockman has suggested that there was pleasure to be found in the deformity of Ingres's curvaceous and always-female spines, and that their serpentine lines were both repulsive and alluring.[132] Even as one might luxuriate in the curve of the *Grand Odalisque*'s spine as she casually turns her head back to the viewer, her gentle twist appears to discomfit because it looks slightly uncomfortable. Correction, then, had already been mapped as part of the work's form and its implicit dialectic.[133]

Both the *Odalisque* and Bourgery and Jacob's are symptomatic of the discursive impulse to correct, but not on physical terms. In the *Traité*, the "before" backs are contorted to such potentially disabling

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[128] Condon, 120.

[129] And yet, if we attempt to frame the *Grande Odalisque* in terms of Ingres's series of backs, she and *La Baigneuse à mi-corps* (1807) are the only women who look back at the viewer. They are the only backs to turn their heads to meet the gaze of the viewer, thereby enacting a consciousness in the viewer of being watched as he or she watches. The *Grande Odalisque* in particular displays this flirtatious awareness almost as though Ingres himself is acknowledging his prodigious treatment of spines covered in flesh, as though he is acknowledging his own consciousness of having so often reproduced and re-presented the back in his work.

[130] See: Susan Siegfried and Adrian Rifkin, ed. *Fingering Ingres* (Oxford: Blackwell Publishers, Ltd., 2001); esp. Susan L. Siegfried, "Editor's Introduction," *Fingering Ingres*, 1-3.

[131] Robert Rosenblum, *Jean-Auguste-Dominique Ingres* (New York: H. N. Abrams, 1990): 87.

[132] Ockman, 169.

[133] Indeed, it is worth mentioning that all of Ingres's backs are female, and the only back whose sex Bourgery identifies is female. In other words, it would seem that only female backs are capable of being shown as deformed. (Winckelmann, of course, reads the *Torso* as a broken Hercules, not as any other kind of man or god who might be called effeminate.) Women's backs are the only backs that need help so that they can become he objects of erotic desire.

degrees that they seem to cry out for correction. The "after" spines are meant to demonstrate the desire for correction fulfilled – a clean realignment that normalizes the body. (Some, as we have seen, still suffer from leftover cricks.) But it is worth noting how the *act* of correction is left off the page. Unlike Andry's iconic tree, whose tension is heightened by the rope wound around the tree and the stake, Bourgery's images only imply – and the let the reader conjure – the operation. That correction is possible, that correction has been successful, is the main point.

Much to the dismay of his medical and surgical colleagues, Guérin's table (and his treatments) dwelled on generalities instead of decisively identifying patients who had been fully and completely corrected. Overloaded with many cases and unable to distinguish one from another in his table, he was forced to own up to his own failure to fully correct them all. And this was an extreme abstraction of the body. Even as Bourgery and Jacob cracked bodies open to describe and picture them in their *Traité*, both anatomist and artist attempted to distance themselves from the unruliness of actual bodies. What their mediated backs indicate is a wish to assimilate a particular feature of the ideal classical body into medical discourse: the mental operation of making the body whole and complete again, of correcting freak mutation. The invisible process of putting the past back together – of righting a lack or a de-configuration – was precisely what made an artifact like the *Torso Belvedere* so sublime. But idealized as they were, Bourgery and Jacob's backs were under the pressure of tenotomy's slices and stitches. These images read as corrections because they offered their backs before and after their operations. And it is precisely because they told this story – and because this story competed with the authority of the first plate of proportions – that the ideal could no longer contain all that Bourgery and Jacob wanted.

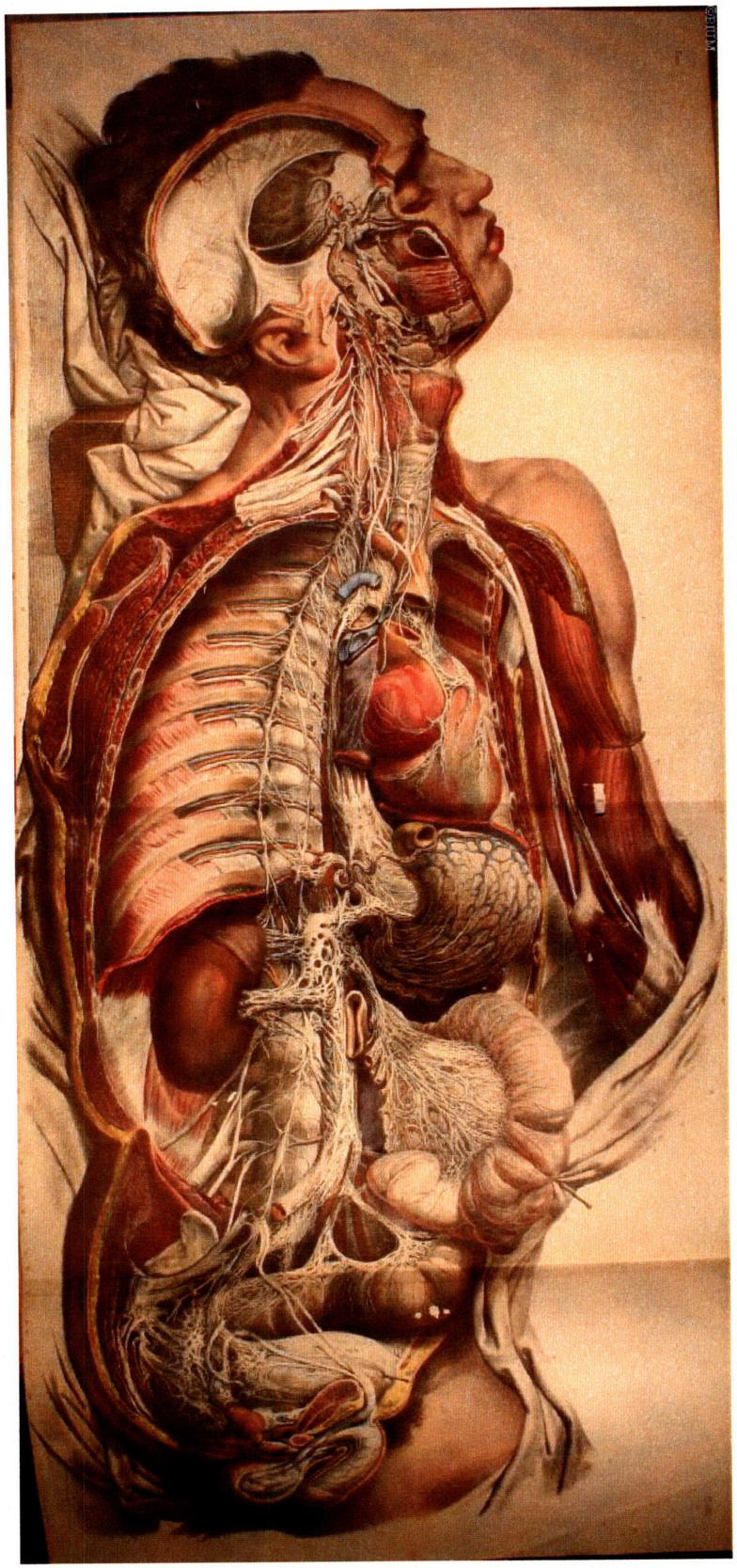

Fig. 6.1: Bourgery and Jacob, *Traité*, Vol. 3, Pl. 100

Chapter 6: Nervous Excess

If the frontispiece built up the artistic aspirations of the *Traité* and the first plate prescribed a set of ideal outlines, if the plate of prosthetics was a moment in which the treatise's ideal operations broke down and the plate of before-and-after spines evinced a culture of correction that overshadowed the ideal, then this final fold-out from the third volume of the *Traité* might be considered an overstuffed, hyper-descriptive container of interconnected organs that ultimately punctured the ideal. [**Fig. 6.1**] In this plate, there are too many simultaneous reminders of the living and the dead. Both the frontispiece and the first plate of proportions are deceptively simple, making only subtle mention of preceding iconography, and eschewing any mention of a body with an exterior (skin) and interior (viscera). This picture, on the other hand, does much of the synthetic work that the previous images of the *Traité* had avoided. After flesh and fat have been cut through and excised from the torso, after hooks have been pierced into the remaining skin to ensure an unobstructed view, all organs related to Bourgery's sympathetic nervous system are on display. Webs of nerves connect a billowing small intestine to the spine; the heart wears a pink sheen and its blue veins are plump from pumping. While some muscles retain their striated form, others take on an unseemly sponginess dotted with the remnants of bones; and the leftovers of three blue veins, near the trachea, have become pipelines to nowhere. The idea is that *everything* is available to the eye, that the picture permits unprecedented access to the insides of the torso. But this information overload compromises the very premise of Bourgery's attempt to depict the ideal. Here, all parts are smoothed and idealized; so is the container in which they are stuffed. Everything is tucked back in the

shadow of the ribcage, and then encased by the shell of body that, at first, appears dead, but, then, on second thought, appears to have fallen into a heavy sleep. Elegantly classicized – with a tapered nose, cupidinous lips or brown curls near the cut of his cranium –, his body does not appear to have expired. We seem to be privy to a transverse cut of the body that simultaneously lives but, obviously, can only have been modeled off the dead.

Strives as it does to render the flesh as a licked surface,[134] the oversaturated picture ultimately fails to remain a tenable ideal. This failure has as much to do with the content and form of the image as with the constellation of practices within which it was situated. First, I want to take this last section to put into sharper relief the deep historical links between anatomy, archaeology, and the ideal, by way of Vesalius's *Fabrica*. The problem of Bourgery's attempt to recuperate this Renaissance archaeological ideal in his *Traité* was heightened as a result of 19th-century medicine and 19th-century antiquarianism. Both disciplines had changed drastically since Vesalius and his 16th-century Padua; but it seemed as though Bourgery was hoping to collapse history, to make Vesalius's strategies his own. In order to underscore this distinctive 19th-century unearthing of the past, I will refer back to Quatremère's *Jupiter* to investigate polychromy and the ideal, and the historical imaginary that such images occupied. Putting Bourgery's ideal back in conversation with Quatremère's will reveal just how different their ideals were; and, really, just how alien Bourgery's looked in relation to any other conception of the ideal. As a coda to polychromy and Quatremère's own production of images, I will discuss how the plate's status as a colored lithograph – and, more generally, as a product of the lithographic process – exerted added pressure to the ideal that Bourgery declared to be the model for his treatise. Here is where the connections between antiquities

[134] For more on the licked surface see: Henri Zerner and Charles Rosen, "The Ideology of the Licked Surface," *Romanticism and Realism: The Mythology of Nineteenth-century Art* (New York: The Viking Press, 1984): 205-232.

and cadavers – which had run so seemingly parallel to one another – ultimately forked: Quatremère's *Jupiter Olympien* charted new kinds of colored ideals and contexts for antique sculpture and architecture, while Bourgery and Jacob's relied on color and insisted on idealization to describe gross anatomy. Quatremère and Bourgery and Jacob were attempting to materialize the ideal. But, Quatremère was re-writing history and re-conceputalizing the classical ideal with its leftover fragments; his figure would ultimately remain in the abstract. The anatomist and his artist were writing about and depicting a body that was suspended between life and death, that captured the human body's susceptibility to waste and rot, its imperfection, and its impermanence. However ideally rendered, the comprehensive body that the *Traité* offered would always fall short of the ideal. Real bodies got in the way.

In his introduction, Bourgery posed a rhetorical question: "Who does not know that the progress of anatomy was always good for [the progress] of medicine and surgery? Such is its importance that, among the doctors and surgeons celebrated in the history of medicine, the anatomists' names alone are the only ones that have lasted, whose works and discoveries have been the base for a perfect knowledge of the organization of the human body."[135] Bourgery was no card-carrying historian.[136] Although he relied on the fame of previous anatomical atlases to promote the importance of his own, he was less interested in giving full accounts of their histories. But he was ready to uphold the work of one century in particular – the 16th – and the most prominent anatomist of that century: Andreas Vesalius. Not only one of the major innovators of anatomical practice, Vesalius, Bourgery asserted, was the veritable heir to Classical Greek

[135] Bourgery, "Introduction," *Traité*, vol. 1,1.
[136] Incidentally, the history of medicine had recently gained traction. A new course on the history of medicine would be offered by Charles Daremberg, a professor at the *Collége de France*, in 1846. See: *Archives générales de médecine* (4 series, vol. 13): 285.

medical tradition.[137] Upon the 1543 publication of *De humani corporis fabrica*, both the man and the book had become the stuff of legend: the volume was deemed a landmark because Vesalius had revived the practice of dissection and even critiqued the ancients – Roman doctor Galen, in particular – for having failed to carry out dissections on human bodies. Throughout his over 600-page tract, he emphasized anatomy's role as a descriptive science, one that hinged on the ability of the anatomist to identify the working parts of the body and communicate them as specifically as possible. And such specificity could, for Vesalius, only be the result of tactile experience.

He also connected such studied observation and description to an *art* of describing.[138] For the *Fabrica*'s unprecedented pictures, Vesalius employed a student, Stephen van Calcar from Titian's workshop. Van Calcar created a wealth of illustrations, including a series of animated muscular ecorchés, a table-top full of tools, and a number of skeletal details. As Glenn Harcourt has suggested, one of the most striking features of the atlas was how many of his corporeal representations mimicked antique, sculptural fragments, many of which had been exhumed and celebrated from the 15th-century onwards. **[Figs. 6.2-6.4]** Instead of siphoning Vesalius's images off to the artistic side of an art-medicine binary, Harcourt insists that in Vesalius's *Fabrica* was "a powerfully descriptive art [...] employed not only to visualize anatomical 'facts' but also to define a particular cultural matrix within which these discrete facts can be validated as systematic anatomical science."[139] Here are fragments that retained their contrapposto, while tangles of innards splay out from their abdomens. Viscera are fashioned into the objects of anatomical description, leaving the rest of the body to evoke unearthed marble vessels. Take, for instance, the

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[137] Bourgery, "Introduction," *Traité*, vol. 1,1.

[138] I borrow the term from Svetlana Alpers's *The Art of Describing*, in which she discusses 16th-century Dutch painting, optics, and scientific illustration. Her argument that artists and natural historians and microscopists were invested in the means with which they could describe the world's minutae has been influential across the disciplines of art history and history of science. Svetlana Alpers, *The Art of Describing* (Chicago: Chicago University Press, 1983).

[139] Glenn Harcourt, "Andreas Vesalius and the Anatomy of Sculpture," *Representations* (No. 17: Winter, 1987): 28-61, 30.

amputated stumps on either side of each of these bodies. Like Quatremère's fragments, and the first plate of the *Traité*, these lost arms appear to have been sliced off unevenly by the ravages of time. There is no sense of these as fleshy, muscular, or fibrous. As Harcourt continues to argue, these images make anatomical violation palatable. They soften the blows of the scalpel and the flesh they discard. While this aesthetic tempered their subject, these figures also gave anatomical knowledge an ancient élan, especially as Vesalius continued to annotate, critique, and rely on the texts of his Classical predecessors.

Vesalius's obvious appropriations of antique sculptural vestiges were unique to the period's anatomical atlases, but the impulse to borrow and fashion after the ancients was not unusual for the broader, humanist climate. 16th-century Italy – and Europe – had enjoyed an ancient boom, in which "hundreds, perhaps thousands" of sculptural fragments were unearthed before the century came a close. Leonard Barkan observes that, for Renaissance artists and humanists alike, "[T]he physical incompleteness of so much ancient sculpture [...] enables both artists and viewers to enter into the works, to decide what the works depict, to define or alter the narrative, to view the works as beautiful shapes rather than only as narratives, and, finally, to take part literally in the creation by restoring the objects in a particular way."[140] Here was the period in which much of the Western canon – for aesthetic objects and texts – was being shaped and defined – a moment during which the incomplete parts that had been lifted from the earthen stratas of the past were critical. In mimicking these artifacts, Vesalius not only underscored his reliance on Galen, he and van Calcar inscribed antiquities into a tactile approach to anatomy. Thus, the dissected body was not so different from ancient fragments; and the act of plumbing the depths of the earth for the stuff of history would not seem so different from plunging beneath the skin.

[140] Barkan, 9.

If, as Barkan puts it, the past could be best resurrected through narratives that wove fragments into imagined (or, as Quatremère would later have it, reasonable) wholes, Vesalius's partial and descriptive fragments benefited from being monochromatic woodcuts. While they could describe organs in impressive detail, the amputated shoulders or legs of these fragments were always fashioned with an abrupt, ruinous cut. Even when innards spilled out and over, there was little doubt of their status as antiquities. Rather than being blatantly subcutaneous, these torsos insisted on the fantasy that their intestines and stomachs were rare discoveries, tucked deep in the cavities of ancient fragments. There was room for the mind to conjure up the reality of bodies, precisely because these parts were incomplete.

But this was not the case for Bourgery and Jacob's plates. As their text and images purportedly continued to look to the past, plate by plate, the contemporary situation of both body (pathological medicine, the birth of the clinic) and technology (lithography) reared its head. A comparison between Vesalius's torso and the Bourgery and Jacob's sympathetic nervous system appears to make the point emphatically clear. Bourgery and Jacob's plate describes a fully integrated system in relentless detail. The classical continued clung to the picture, in the form of drapery and an aquiline nose. But the ruptured, cadaverous body – amplified in full color –continued to announce itself in the image, ultimately engulfing the ideal.

Although it had was not always been associated with the ideal, Quatremère's *Olympien* argued that color – and lots of it – had been an original feature of Antiquity. Quatremère's position was entirely distinct from Winckelmann's, but he insisted that the original brilliance of classical statuary and

architecture had long since been interred and scrapped from historical memory.[141] The culprit for such inaccuracy was less time than antiquarians themselves. Restorers had been inculcated with Winckelmann's white marbles, blinded by his elegant descriptions of polished freedom and frozen action. Quatremère intended to right the record. His plates included brightly colored reconstructions of ancient sculptures and temples, feverish visions in comparison to the austerity of white marble. This new, all-over color, reaped from the light, residual patina left on architectural (and some sculptural) fragments, fomented an entirely new imaginary for architecture and sculpture. As David van Zanten writes:

> Color was the sign of life; of particularity and simultaneity of general harmony; of change and simultaneously of the retention of traces of the past. It was the visual quality of these things which finally freed them from the confines of physical form and permitted them to inhabit the immaterial, conceptual space the nineteenth century mind had succeeded in creating for itself.[142]

The chromatic pressure that Quatremère had placed on the ideal – or, as van Zanten might argue, the life he infused into it – was not one that Bourgery or Jacob shirked; in fact, they fully embraced it. As they published their treatise, the doctor and artist offered three different print options: two black and white, the difference between the two being the quality of the paper used to impress the images, and the more costly chromolithographs.[143] Both the content of the text and the contents of the body's trunk remain the same; but the premium was placed on what color could do, not mere description. Here were the channels through which life flowed – even if they were modeled after bodies that were beginning to rot.

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[141] From my understanding, Quatremère saw in Winckelmann a predecessor to his own ideas about the ideal. In *Le Jupiter Olympien*, he writes "L'ouvrage de Winckelmann avait répandu chez toutes les nations le gout et l'étude de l'art des anciens." Quatremère de Quincy, *Le Jupiter Olympien* (Paris: Chez de Bure Frères, 1815): i. In Alex Potts's words: "Winckelmann represents the Greek ideal as perfectly realized at one peculiarly privileged historical moment, which comes as the climax of a long process of evolution sustained by conditions of freedom uniquely favourable to the cultivation of art." Potts, 47. Also see: Yvonne Luke: "Quatremère de Quincy" Grove Art Online. Oxford University Press, May 5, 2007, http://www.groveart.com/.

[142] David van Zanten, "Introduction and Overview," *Architectural Polychromy of the 1830's* (New York: Garland Publishing, Inc., 1977): 8.

[143] *Gazette médicale de Paris* (1832, série 1, n° 03).

Color had the potential to inflect the dead with life. But this challenged the very notion of the ideal, and the Greek statuary used to conjure it.

In order to demonstrate every detail in the cavity of the torso, not only did the picture of the sympathetic nervous system require a variety of colors so that the viewer could distinguish one organ or nerve from another, it also needed more space so that each organ could be more fully articulated. The plate became one of the few foldouts of the treatise. And the effect was that the totality of details became near-exhaustible. The tight-rope tension of the nerves between the spinal cord and the digestive tract, or even the care taken with the sliced ribcage were accounted for. But it is precisely the vibrant cataloguing of innards that collides with the stated intentions of constructing an ideal man. What Bourgery and Jacob offer a body as complete as possible, and which cannot be mentally re-constructed. Even when bones have been cut away, the vestiges of where they have been – the marrow that still dots the edge of the skin – are still on view. Even if the image does not offer frayed edges of skin and fat, or a lumpy kidney, it depicts a body that seems to hover between life and death, and one that was never statuesque.

As he outlines his own theory about the sympathetic and cerebral nervous systems, Bourgery further detracts the image from the ideal. He describes the plate as the depiction of a network of processes that help support life:

> Here is all of the vast ensemble of the visceral nervous system, whose details are figured elsewhere larger than nature or made larger by the microscope, on a great number of plates, and this is more particularly *the great sympathetic* [nervous system] in itself and in relation to its neighbors, the *nerves mixed pneumo-gastric and trigeminal,* and with the spinal nerves, which make the particular object of this figure. This which precedes suffices beforehand for the understanding at the point of view theoretical declaration of a double, intermediary chain of communication, of the relationship and mutual incitation between the nervous system of the organs and the cerebral-spinal nervous system, but because of? its texture appertaining to the first more than the second. The more essential

> fact of this figure is now independent of strings of the grand sympathy itself, of showing the double series of these anatomies? With each of two nervous systems.[144]

With sympathies extending throughout this body, Broussais's theories return to the fold. And yet, Bourgery's text and Jacob's cornucopia of a picture have patently ignored "sympathies" as causes for irritation; instead, all organs are balanced in relationship to one another, there is no hierarchy, the stomach (Broussais's beginning and end of irritations) is part and parcel of this matrix of organs. Bourgery is interested in networks of relationships, one after the other. His research corresponded to such a building of numerous points of contct. He had presented some related work to the *Académie des sciences* in 1845. Going into specific detail about how he had grouped the nerves into different segments of the nervous system: 1. The visceral and organic nerves; 2. the well-known ganglion clusters ; 3. the extra-visceral plexus; 4. the grand sympathetic nervous system; 5. the last part, composed of knots of ganglion nerves with the peripheral extremities of the cerebral-spinal nerves.[145] This system of correspondence apparently did nothing practical – neither for Bourgery himself (it never won him membership to the *Académie*) nor for those who might apply it to either explorations or treatments of the body. This undulating, knotted, and complex system was a description of the body Bourgery had conjured based on how he believed the body functioned. In other words, it relied not simply on the anatomical description, but on grouping parts by their mechanical use. Bourgery had premised his system on the life of the body, not just its death.

One might say that Quatremère was also attempting to describe lived experience, specifically how the ancients had put color to use on their sculpture and architecture. He linked his treatise on polychromy

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[144] Bourgery, *Traité* vol. 3, pl. 100: Explication. Also see: *Archives générales de médecine* (Series 4, Vol. 8): 118-119.
[145] Bourgery, *Traité* vol. 3, pl. 100.

to his philosophical tenets of the ideal, the recovery of authentic descriptions of Periclean masterpieces, and the processes by which fractured classical sculptures could be reconstituted. In his elaborate, hand-painted illustrations, Quatremère gave new life to stone that, though molded into dynamic forms, had been passed down as frozen, cold, lifeless. He was making a point about those who had carelessly erased historical accuracy in favor of their ideals.[146] The idea that classical sculptures – along with temples and monuments – were originally fashioned with bold, colorful strokes on top of such pristine musculature strained the well-rehearsed, Winkcelmannian-influenced interpretation of classical dignity and propriety. Here was the toreutic impulse writ large. That the ancients wanted – or even would have wanted – all this *stuff* on top of these smooth bodies seemed, at first, strange. But by 1830, Quatremère's theories were being taken up by archaeologists, antiquarians and architects, and architects, in particular, – such as Jacques-Ignace Hittorff, Félix Duban and Henri Labrouste – also began to apply toreutic schema to their contemporary designs. And embossing, sculpting, and coloring also began to influence sculptors such as Pradier, Canova and Cicognara.[147]

The toreutic – in all its saturation and texture – is taken to lengthy extremes in Bourgery and Jacob's chromolithographic plate. It would be a mistake to characterize this particular image as typical of the treatise. Previous to it in the same volume, many of the nerves are rendered in isolation, or as attached to other organs. They appear as parts that will eventually build up a whole. But this final image of

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[146] He sees Winckelmann's histories as a disservice to the original form of ancient art. "Winckelmann a le premier sur lire, dans les ouvrages de l'art antique à Rome, les caractères plus ou moins effaces de ces titres précieux. Il est céritablement le premier qui, par l'analyse des différents styles, des différentes époques, des diff''rentes écoles de l'art, par le secours des écrivains, de leurs descriptions, de leurs observations, par le parallèle des notions historiques, des apercus spéculatifs, avec les monuments de tout genre don't Rome a conserve les restes, soit parvenu à remettre ensemble le corps motile des arts de l'antiquité, à le restaurer, si l'on peut dire; à lui redonner une sorte d'intégrité." Quatremère, *Jupiter*, vii. And: "Si Winkcelmann donna un grande impulsion à l'étude de l'antiquité; si, par la seule conception synthétique de son ouvrage, il porta l'ensemble et la vie dans les parties decomposées de l'art des anciens, il faut dire aussi que, comme historien, il eut un grand désavantage auprès de tous ceux qui traitent des choses passées." Quatremère, *Jupiter*, vii.

[147] van Zanten, , 1-29.

the third volume – Bourgery and Jacob's lasting impression of the nervous system – is one that so tightly packs and overlaps all these elements in with one another. Jacob has lavished detailed attention to each part, each cavity, and each fiber. Far from a visceral mess, every internal object is distinct from every other internal object; and, yet, each is built one on top of the other, connected to one another to form a continual sequence, in which each organ is dependent on everything that surrounds it. Such specificity subverts the idealized body, and what unfolds over the page is a corpse carefully carved open and put on display. No individual could possibly survive such a gouging cut. But the head does not quite conform to these expectations; it has not been drained of all life. Perhaps he is sleeping. And, on second thought, the organs themselves do not seem to have decayed: the nerves continue to remain extremely taut and rightfully positioned, each part – kidney or liver – is turgid, robust.

Returnin for a moment to Quatremère's hand-colored *Jupiter* frontispiece, here too is an image of an arrested past, colored in to revivify the Temple of Zeus. [**Fig. 6.5**] Moving outward from the floral embroidery of Zeus's gathered drapery to his hardened, segmented torso, to the long, eagle-topped scepter in one hand and a winged goddess in the other, to the gilt, over-carved throne upon which he sits, the space is in use. Specks of toga-wearing worshippers, in bright reds and saturated blues, stand in comic miniscule under the bottom of Zeus's lion-supported footrest. In the lower-left corner of the plate, one individual, so taken with the glory of the sculpture, has thrown himself into submission and lies prostrate on the floor. Smoke from a funerary offering wafts through the air towards the back of the temple. And a curtain, in luminescent red, has been mysteriously drawn back to reveal the staid inner-workings of the monumental interior.

In highlighting their shared work of revealing interiors, of building up and coloring something that they claim to be ideal, I do not mean to detract from the stark difference between Quatremère's

frontispiece and Bourgery and Jacob's compiled sympathetic nervous system. The reconstruction of the pillars and interior of a lost temple is one thing, but the structure of the human body and its insides – the splaying of its innards, and its grotesque web of stuff – is quite another. Composed mostly of contour lines, Quatremère's image is meant to show the brilliance of the past, and to serve as a corrective to that which has been papered over by modern expectations of classical sculpture. Antiquity has been revivified. But a quiet stillness overwhelms the picture. Its coloring, though shocking, is systematic, the people are orderly, the gilded accoutrements of the monolithic sculpture are all in their right place. We still understand this to be a culture that has been lost. Fragments are necessary for its reconstruction. As Jean-Pierre Mourey puts it, such leftover pieces are simply "the residuum of a lost body or of a past time, which the form *still allows to be imagined.*"[148] The picture's task is to create an altogether different historical imaginary. But it does not delimit the possibilities of how a viewer might be able to reconstruct and complete the image. Because it reads as flattened, less sculptural than pictorial, there is still much work to do to the image to make it supple, to imagine the past that Quatremère proposes. The image does not detract from the fragment as an activator of the imagination. Anyone happening on a fragment of the Olympian Jupiter could continue to reinvest it with narrative and meaning.

And yet, however colorful Bourgery's image seems to be, bodily experience – and life and death – persistently inhabit the picture because the reader is not allowed to do very much in the way of imaginary completion. One cannot easily ignore how the man's profile quickly becomes a cutaway, or how, in the middle of his torso, a scythe-like hook pulls at the skin, fat, and muscle of an excoriated arm the better to offer more parts of the interior; or, more disturbing, that one arm has been entirely cut off for a better view. In contrast to Quatremère's sparse, navigable temple, Bourgery and Jacob prioritize every last bit of

[148] Mourey as quoted in Adrian Rifkin, *Ingres Then and Now* (London: Routledge, 2000): 18.

information about the body's internal cavity – every last striation of the muscles, the brownish-yellow of that fat just below the skin, or the rounded reddish-brown of the kidney. The shock of seeing the entirety of the torso cut open – and the insides out – is disorienting, as is the realization that underneath the skin is a network of organs and parts, all made in relation to one another, all working – or, rather, having worked – to make the body function. The image is primed to reveal the interconnectivity of parts, and provide, perhaps, a field guide or map to the abundance of that which lay underneath the skin. But even as its parts become distinguishable thanks to Bourgery's text, the picture riots against any orderly ideal. Quatremère's project of coloring the past was entirely different from ripping the body open and re-presenting its insides.

In our current 21st-century moment, it perhaps seems counterintuitive that the ideal body would not suffer from being reproduced, that, somehow, the original classical Greek sculptures that captured Winckelmann's ideal would go unscathed after being made over and over again on the printed page. Any discussion of copies, especially of those issued from mechanical reproduction, would seem bold (or lacking) without some talk about Walter Benjamin's "The Work of Art in the Age of Mechanical Reproduction" (1936), and I refer to the now-canonical work here to cover necessary ground but, perhaps more to the point, to highlight how the Greek ideal – and how it was perceived in 19th-century French culture – was already subsumed in a culture of reproduction, both artistic and mechanical. Already acknowledged were different phases of classical art, and how Roman copies had been passed down to convey the Greek ideal. But even in this initial phase of disinterring, there were Renaissance artists who obsessively drew and completed the fragmented body. They were not only interested in perfecting their draughtsmanship, but also in figuring the past. Several hundred years later, classical statuary remained

central for artists testing ideas – and for their quests to *figure* ideas out.[149] Popular contemporary philosopher Victor Cousin described the work of art in *Du vrai, du beau et du bien*: "[T]he foundation of art is the idea; what makes art is above all the realization of the idea, and not the imitation of such and such a form in particular."[150] This, of course, resonated with the ideal – that a pure form could only be found in the abstract. Because both art and the ideal pivoted around the immaterial, one might also be inclined to say that painters like David, Girodet, and Ingres, who were continually looking back towards antiquity and refashioning and re-equipping it for their own purposes, were searching for forms with which to convey ideas, just as Cousin described. And as we have seen in the previous section, the measured conception of the ideal – its proportions and the use of these proportions was an idea that could continually be remade, the better to describe the body, the more fully to understand why the Greek ideal was so ideal.

Had Bourgery and Jacob's depictions of the body been limited to the first plate of outlines they would seem lockstep with their thinkers like Cousin and Quatremère. But, like Vesalius, the bodies they described were not simply based on sculpture; live bodies and stiff cadavers were integral to the making of such pictures. For all their conceptual intents and purposes, or Bourgery's cautionary tale about surgeons who had not gotten a good glimpse of correctly represented anatomy, Bourgery and Jacob had assigned themselves the task of looking into the body, and figuring out how to represent what was inside. While Vesalius boasted of having looked into the cavities of dead bodies, of having dissected with his bare hands, van Calcar's pictures tempered the act of evisceration. Rendered in monochromatic hatching and outline, his torsos read as gouged antique fragments rather than cadavers. This is not quite the case with

[149] Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," *Illuminations*, trans. Harry Zohn (New York: Schocken Books, 1969): 217-242; For more on Roman copies, see: Elaine Gazda, "Roman Sculpture and the Ethos of Emulation: Reconsideration Repetition," *Harvard Studies in Classical Philology* (vol. 97): 121-156.
[150] Victor Cousin as quoted in Bann, *Parallel Lines*, 28.

Bourgery and Jacob's sympathetic nervous system. The white drapery cushioning the bottom of the body referred the reader back to a classical past; but it was mere accessory. The sheer magnitude of information on the plate – inside the body, really – overwhelmed any subtle signs or symbols. Marble has been exchanged for flesh; crumbling fragmentation has been replaced with the surgical slice (exposing fat, marrow, and muscle); and the hollow vessel has become a cornucopia turned inside out. Even in Quatremère's push for antique brilliance, the ideal had never been portrayed in quite this way – with such a multitude of stuff, such a succession of plates and images, and such a wide array and systematic use of colors.

One of the major reasons for both the brilliance and profusion of such an image was that the technology of lithography allowed it and, one might say, encouraged it. As opposed to the woodcut, the engraving, or the woodblock print, the lithographic press aided artists in fixing a drawing into something more permanent and more distributable, a print ready for quick multiplication and broad dissemination. The arduous process of cutting into a copper plate or gouging out wood to form a potentially uneven line had been replaced with an expeditious technology; even the key component of drafting an image onto a sturdy stamp-able plate had been turned into a series of chemical processes.[151] The artist only had to worry about making an image. Like other kinds of prints, the wonder of the lithograph was its ability to reproduce, its ability to somehow take something that was already in the world – whether it was a painting, a view, a curiosity, a political position – and turn it into something that more people could see (or see differently), buy, and possess. But lithography was quicker and less expensive than the woodcut or the

[151] The making of a lithograph consists of a few simple steps: typically, the artist puts an oil crayon down on the stone, and begin mark-making. Once the drawing is complete, the artist (or lithographer) will pass an ink-soaked roller over the plate, and the ink will glom onto the oily parts (i.e. the artist's drawing), and then a piece of paper, dampened with water, is laid down onto the stone, necessitating the ink to adhere to the paper. After the paper is lifted off of the stone, the result is a mirror image print of the initial oil-on-stone drawing. W. M. Ivins, *How Prints Look* (New York: The Metropolitan Museum of Art, 1943): 15.

engraving; so much quicker and so much cheaper, in fact, that a cartoonist's drawings could be ready for daily or weekly newsprint in a matter of hours. The status of lithography as an artistic medium, as taken up by the Academy, however, is still in doubt.[152]

Czech-born, Munich-based playwright and actor Aloys Senefelder invented lithography in 1798. (He had been experimenting with different kinds of printing techniques in the hopes of offsetting the cost of printing his plays.) While the color combination process would come a bit later, many automatically registered the possibilities that the medium offered. The typical lithographic process included the direct drawing of a mirror-image of the intended picture onto the lithographic stone, but it was not too long before practitioners discovered that if artists simply drew their image onto special lithographic paper printers could transfer the images to stone and run a number of a prints. Even at its earliest moments, the encyclopedic potential of the medium was not lost on the artists under Napoléon's employ. During their tours to Egypt, Napoléon's artists used lithography to describe and catalogue the conquered landscapes of the Orient, the numerous technologies employed in and out of battle, and the possible spoils of war, eventually publishing this organized, classified collection in the 22-volume *Descriptions de L'Egypte.* And the popular *Voyage Pittoresque de Dauphiné,* published in 1828, captured and anthologized the landscapes of the far-flung reaches of the world issued in series.[153] Lithographs, then, could reproduce the world in easily portable and economically distributable form.

The medium's popularity crested between 1830 and 1848, during the July Monarchy[154] – just as Bourgery and Jacob were publishing their atlas. While it is typically remembered through Honoré Daumier's gritty wit and sharp commentary for journals such as *Le Charivari* and *La Caricature,*

[152] Bann, "Ingres in Reproduction," 57.
[153] Harrison C. White and Cynthia A. White, *Canvases and Careers: Institutional Change in the French Painting World* (New York: John Wiley & Sons, 1965): 79-83.
[154] Bann, 60.

lithography was efficient enough to be put to many other uses: to miniaturize and croppopular Salon paintings, to catalogue picturesque views; to illustrate books; and, like Napoleon's *Descriptions de L'Egypte,* to lay out and account for artifacts, tools, wares, and possessions. The status of lithography was somewhat betwixt and between, and so was that of the lithographer. T. J. Clark has eloquently identified the medium's potential to destabilize the aura of a work of art: "[L]ithography, even more than the photograph, was the first step in industrializing the arts, the beginning of the age of mechanical reproduction. Working the stone, he was not quite an artist any longer, and not quite a worker. So he would remain an artisan[.]"[155] This is not say, however, that prestigious painters were not attracted to the medium – although they were not about to tip the hierarchy of genres in favor of lithography. (Cheaper to produce and less labor intensive, lithography was generally deemed lower on this hierarchy than engravings.)[156] While it seemed useful for artists – initially Ingres, Gros, Pierre-Narcisse Guérin and Géricault and Charlet, as we have already seen –, many were also attracted to the experimental possibilities of the medium. But most who were occupied with lithography were engaged in the realm of copying, comment, or illustration. But this did not mean that it could not be identified with the fine arts as well. By 1817, lithographs were being presented at Salon, and Jacob first presented his own work there in 1819. Five years later, lithography became its own category in the Salon *livret,* and the practice continued during the rest of the Restoration-era Salons.[157]

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[155] T. J. Clark, *The Absolute Bourgeois: Artists and Politics in France 1848-1851* (Berkeley, CA: University of California Press, 1999): 101.

[156] This is not to say that other kinds of prints were not on display. As Stephen Bann notes, in the Salon *livret* of 1831, lithographs were "sandwiched between engravings proper and architectural drawings." Bann, 66; and Bann 62-66. Also see: Johnson, *French Lithography...*, 7.

[157] Jacob himself was well aware of the lithography's multiple practices of cataloguing, copying, and as a novel medium of artistic expression. In 1819, Jacob exhibited lithographs for the first time at the Salon, offering six plates in total, and all somewhat disparate in content. One plate, "The Genius of Fine Arts Encouraging Lithography," was the frontispiece for Senefelder's book, *A Complete Course of Lithography*, published in London in 1819. The work was an allegory in praise of the medium and all those who had contributed to its technology and artistry. Packed into the middle of the frame is a faceless, delicate, very curly-haired woman

Bourgery and Jacob exploited the potential of the lithograph, and the different kinds of publics that might find their *Traité* of interest. But the hand coloring of its most expensive editions aided the *Traité* in defining a profoundly new vision of corporeality for the anatomical atlas – one that eventually unraveled the ideal tenets on which the treatise was initially based. Vesalius's flayed men and antiqued torso fragments had seemed apart from the actually embodied body, a bit distant from the reader experiencing the mechanisms of his or her own body. Because there was no skin to speak of or to observe, such representations could remain within the realm of the pictured. Even D'Agoty's mezzotint of the torso – with its serpentine intestines and branches of veins that appear to have been painted onto the muscles – help the reader understand that this is a depiction of the body. Cropped only to show the torso, and made with such painterly marks, the image confirms itself as an image. But Bourgery and Jacob's , hand-colored, lithographic plate of the nervous system portrays the body with entirely different formal techniques. Not only did it feature a body splayed out as a specimen – we do not read the man as a vessel, but, implicitly, as a man who has been carved open –, it also asserted itself as a drawing in the way that only

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whose loose-fitting clothes slide off her shoulder as she picks up a text-heavy print from her press. Backed into a corner between the press and a table is "Arts" – the winged male deity with curly light hair, a necklace whose text has been obscured, and a look of encouragement. The allegory includes an honor roll of celebrated lithographers, including Isabey and Vernet (and potentially Bougareau). Above the scene, Jacob has inscribed a hovering tribute to Senefelder's invention, and a celebration of Offenbach's importation of the invention into Paris in 1810, taking care not to smite either Engelmann or de Lastére's continued engagement with the technology. But even as these names nearly overcrowd the piece, Lithography – whether embodied by the woman who practices it, or by the lithographic press and print themselves – is set distinctly apart from art himself, but, of course, they remain very close, in the same frame, and in an implicit (and perhaps teetering on explicit) relationship with one another. The medium's status remains tenuous and faceless; it is worth celebrating but not necessarily all by itself. Alongside his tribute to Senefelder at the 1819 Salon were four other prints, two of which I want to take especial note of here, for they evince the cultural range that lithography tread. One was a portrait of A. C. J. Panckoucke, the editor of the *l'Encyclopédie methodique* (the mid-19th-century version of Diderot's *Encyclopédie*), whose son, Jacob notes an inscription below, was the editor of the *Dictionnaire des Sciences medicales*. One of his other lithographs on display was a reproduction of Girodet's *Les Funerailles d'Atala*.[157] While both lithographs are quite different, what seems worth keeping in mind is not their disparity, but that, together, they evidence both Jacob's attentive draftsmanship and his expert sense of the medium, and his ability to deal with many different kinds of subject matter. This was not simply a matter of Jacob's flexible hand, but also a sign of how lithography's freedom from genre. At its very core, lithography was reproduction and distribution; and the subjects that lithographers took up had to fulfill a public interest. Johnson, 58-59.

lithographs could. The ear and the neck are good examples: the crayon has the flexibility to lightly shape and shadow the ear, or, just a few centimeters over, describe dendrites with fine, spindly lines. With the wide range of drawing techniques that lithography allowed, Jacob and his lithographic assistants could build a more comprehensive and detailed pictorial description of the body. By giving the kidney a bruised, brownish red, the heart a healthy, pink rouge, and the veins that spread to cup the stomach a silvery gray hue, a vivid deathliness – and, deathly vividness – pervaded throughout the body. While the transverse cuts of the skin exposed the body's innards, they detracted from the body's classicized, smooth skin and re-emphasized this image as a representation of a dissected man. Even as each detail was rendered as a perfect specimen, taken all together, they subverted the statuesque shell of the body. Drawing with color, inscribing each organ with volume and turgidity: these contributed to an unprecedented seemingly hyper-naturalism in anatomical illustration.

Consequently, as soon as Bourgery and Jacob attempt to uphold the ideal through color – through polychromy –, the ideal began to collapse; it could no longer be abstract. Martin Bressani points out that Etienne-Jean Delécluze, a prominent art critic for the *Journal des débats* and former student of David's, was particularly interested in the palpable materiality of the bodies described throughout the atlas. Delécluze argued that "[o]ne who studies [the *Traité complet de l'anatomie*] is confronted and seized by two of his auxiliary organs, mind and sight, whose functions when operating simultaneously, render, as it were, truths palpable."[158] But even as he links Viollet-le-duc's exploded gothic structures with Delécluze, and Paillot de Montabert, Bressani overlooks how Bourgery and Jacob risked the ideal, the very foundation of their publication. The architectural historian rightfully cites the "ideal of an exhaustive

[158] Delecluze as quoted in Martin Bressani, "Viollet-le-Duc's Optic," *Architecture and the Sciences*: Exchanging Metaphors, ed. Antoine Picon and Alessandra Ponte (Princeton: Princeton Architectural Press, 2003): 118-139, 128. The main task of Bressani's discussion is to link Bourgery's volumes with the architectural cutaways and analyses of Viollet-le-Duc.

description" that riddled the eight volumes of the treatise;[159] and, yet, all this cataloguing of minutiae is meant to be contained and disciplined by the first plate. The palpability – and the sensing of the body, as prompted by these pictures – punctured of the ideal. Quatremère could color the brilliant past precisely because it no longer existed. Within his contour lines, blocks of color summoned the idea of the classical age, but because these were only outlines and abstractions evidenced by fragments, the ideal could continue to persist in the mind of the beholder. Indeed, the viewer could fill out the details of the past – and of the ideal – knowing full well how distant the past was. But Bourgery and Jacob's ideal was continually faced with the problem of living bodies themselves. Any image that they presented, any part that they idealized, immediately invoked the experience of the body, and, quite frankly, the strangeness of seeing its insides spilling out. Though they continued to strive for truth-to-nature, and an idealized description of each organ on display, this ability to feel the image, and to merge the represented body with the one living and lived in, ruptured the abstracted, idealized whole. Simultaneously, the ideal confused the image for being somewhere between living and dead, blurring the boundaries of what could be descriptive and practicable. This much was clear: here were pictures that showed too much.

[159] Bressani, 128.

Conclusion

Bourgery and Jacob's adherence to their project demonstrated a deep conviction that their ideal could bear all the body's contours, all its organs, and a full catalogue of surgical operations. Such a strict, relentless vision could appear to further enhance the encyclopedicism of the treatise: the anatomist and artist seem to have been objective because their work never strayed from its pre-determined course. It is perhaps an obvious point – but one, I believe, still worth making – that even when they have been sealed off from their immediate context these images retain the specters of their history. Much as Bourgery and Jacob would have liked to see their images apart from their historical moment – indeed, as monuments that could last above and beyond their publication date – they were marked, first and foremost, by the text that Bourgery had written about them, by these ideal expectations that this text had placed on them. The anatomy dated them to the rise of pathological anatomy in the Paris Clinical School, and a moment during which surgery had enjoyed the benefits of practice, as necessitated by war. And that Jacob's images were emphatically wedded to a style – classical, linear, systemic – situated them within a discursive sphere that always held the fragment in check.

As the *Traité* continued to be published over 23 years, the ideal would eventually break down because its combination of text and images oscillated between life and death. The content of the eight volumes demanded that the ideal do a multitude of tasks: extract a living essence from dead bodies preserved for the purpose of description; smooth over the seams of surgery and any history that has led up to the need to operate; mask pain, suffering, and the sensations experienced in and by the lived body; and

convince the doctor that the ideal could describe some of the more gruesome cases he faced in the clinic. Even today, these pictures ask that the viewer put her understanding of the anatomical enterprise on pause. They present themselves not as simple, a-historical descriptions of the body and surgical operations, but as historically-situated paragons of reference for a general knowledge about the body as well as the products of cultural accumulations deeply contingent upon 19th-century medicine and art. And yet, the weight of the ideal constantly places these images between life and death.

Beyond the ideal, there are a good many questions that the *Traité* still raises. Many of them fall under the umbrella of book history: a more detailed investigation could offer answers about particular editions and the publishing houses that printed the *Traité* in translation, in addition to giving more exact descriptions of the various anatomical preparators and the lithographers under Jacob's watch who helped produce the book. Alongside these is also the question of readership: who owned and annotated the book? And how did these readers interpret the text and pictures it contained? Indeed, how – if ever – did they put the treatise to use? It would also be appropriate to scour more periodicals for reviews of the *Traité*, in all its translations and editions, to see how critics put this text in relief against other anatomical atlases of the period, such as Henry Gray's *Anatomy: Descriptive and Surgical* (1858).

But what I hope to have stressed here is that throughout the *Traité* the ideal not only lost definition but suffered this loss because it tried to carry too many definitions. Over the course of eight volumes, a multitude of body parts and surgical situations contradicts that first description of the ideal, 33 year-old man to which Bourgery and Jacob pinned their description – and from which they had initially gained their descriptive authority. The ideal clouded the capacity to see the dead as dead and the living as living. And what the *Traité* proved was that this ideal man could never exist on material terms; that flesh and blood could never be the equivalent of marble. But the wish for so easy an exchange between the

human and the sublime also speaks to the capacious generosity of representation. Pictures could foster the hope that everything and all could be contained – indeed, that everything and all could be ideal. And for Bourgery and Jacob, these were the optimistic grounds on which something like bodily knowledge might thrive.

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humain: ensemble les figures entieres tant d'hõmes, que de femmes, & de petits enfans: veües de front, de profil, & de dos, auec les proportions, mesures, & dimãsions d'icelles, & certaines regles pour racoucir par art toutes lesidites figures: fort vtile & necessaire aux peintres, statuaires, architectes, orfeures, brodeurs, menuisiers, & generalement a tous ceux qui ayment l'art de peinture. Paris: Jean Leclerc, 1600.

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Figures

Fig. 2.1: Jean-Marc Bourgery, *Traité complet de l'anatomie de l'homme,* (1831-1854), Frontispiece. (see p. 28)

Fig. 2.2: Andreas Vesalius, *De humani corporis fabrica* (1543), Title-page.

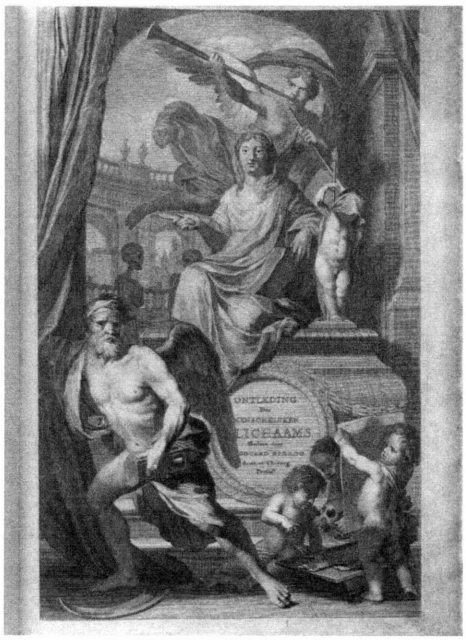
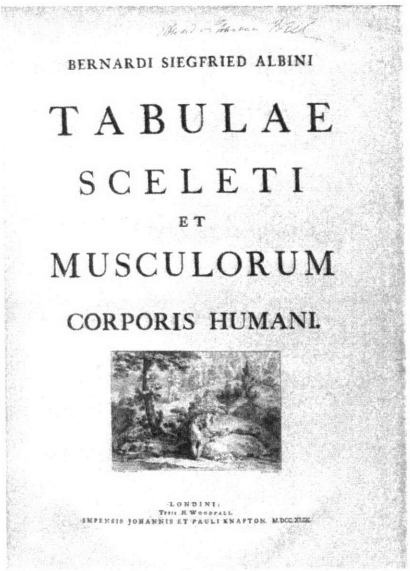


Fig. 2.3: Govard Bidloo, *Ontleding des Menschelyken Lichaams* (1690), Title-page.


BERNARDI SIEGFRIED ALBINI

TABULAE

SCELETI

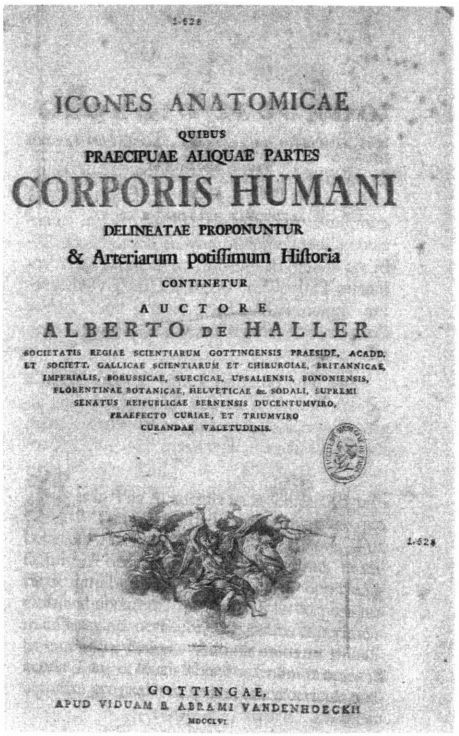
ET

MUSCULORUM

CORPORIS HUMANI.

LONDINI:

Fig. 2.4: Bernard Siegfried Albinus, *Tabulae Sceleti et Musculorum Corporis Humani* (1749), Title-page.


ICONES ANATOMICAE

QUIBUS

PRAECIPUAE ALIQUAE PARTES

CORPORIS HUMANI

DELINEATAE PROPONUNTUR

& Arteriarum potiſſimum Hiſtoria

CONTINETUR

AUCTORE

ALBERTO DE HALLER

GOTTINGAE,

Fig. 2.5: Albrecht von Haller, *Icones anatomicae quibus praecipuae aliquae partes corporis humani delineatae proponuntur..* (1756), Title-page.

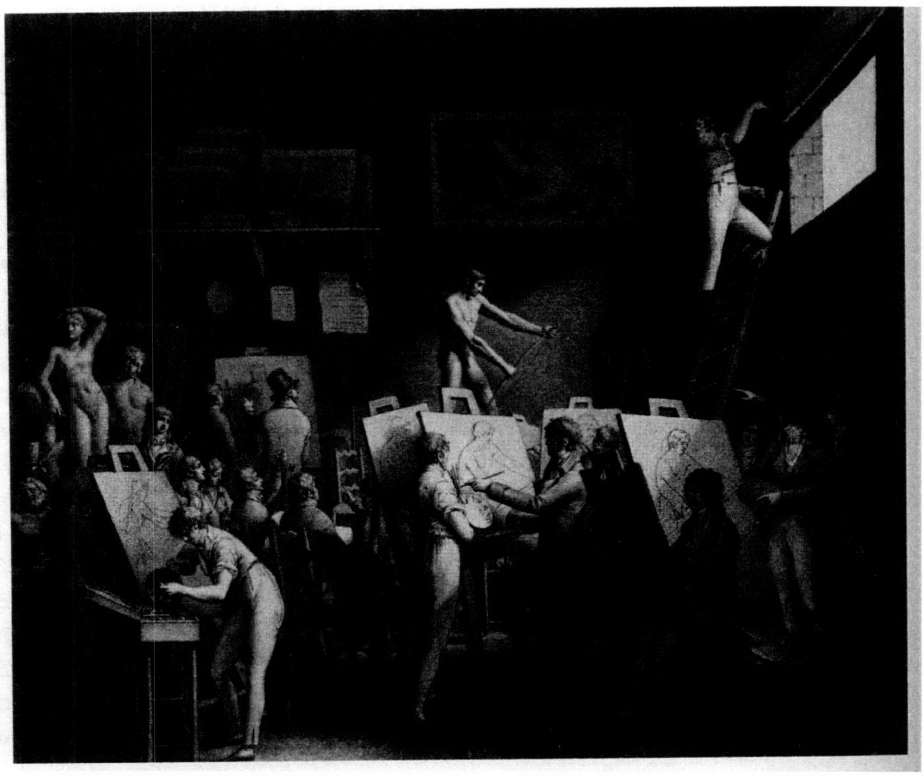


Fig. 2.6: Jean-Henri Cless, *L'Atelier de David*, drawing, c. 1804, Musée Carnavalet, Paris.

Fig. 2.7: Théodore Géricault, *Raft of the Medusa*, oil on canvas, 1819, Musée du Louvre, Paris.

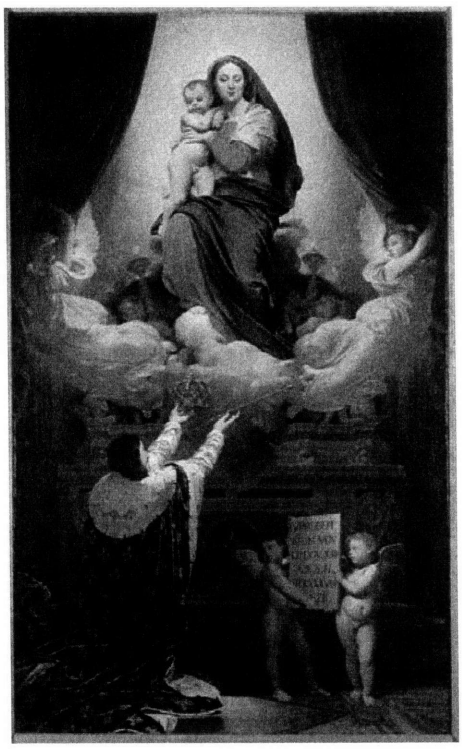


Fig. 2.8: Jean-Auguste-Dominique Ingres, *Vow of Louis XIII*, oil on canvas, 1824, Cathédrale Notre-Dame, Montauban.

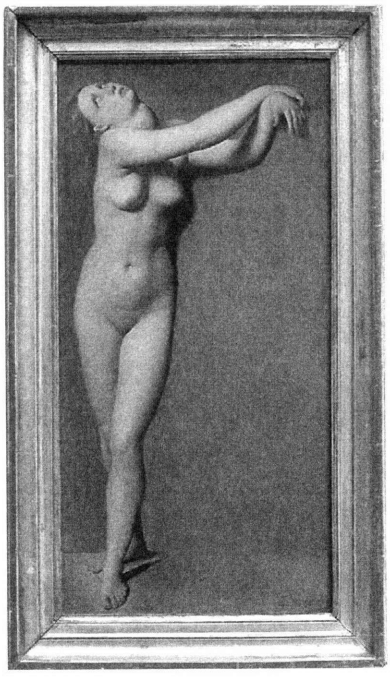


Fig. 2.9: Jean-Auguste-Dominique Ingres, *Angélique*, oil on canvas, 1819, Musée du Louvre, Paris.

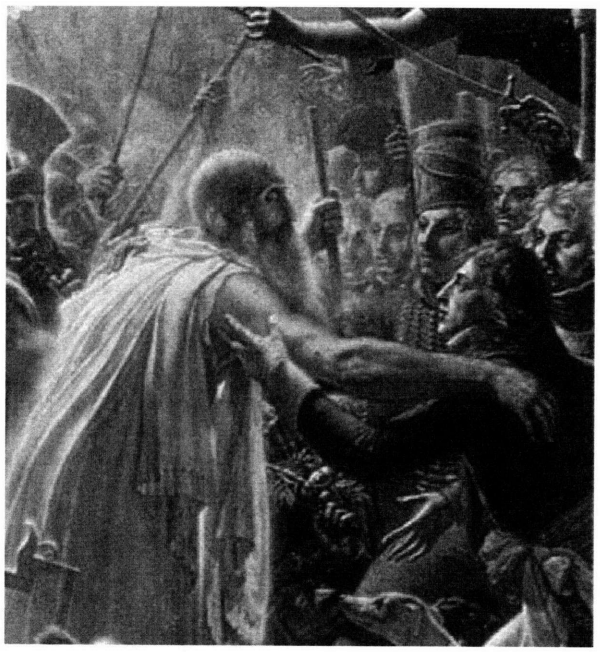


Fig. 2.10: Detail of Anne-Louis Girodet-Trioson, *The Apotheosis of the French Heroes Who Died for their Country During the War of Freedom*, oil on canvas, 1802, Mailmason, Rueil-Malmaison.

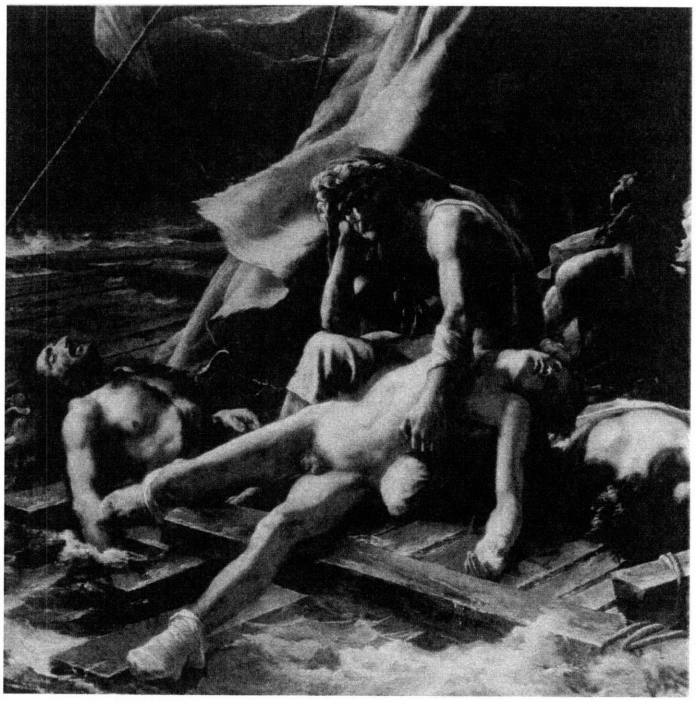


Fig. 2.11: Detail of Fig. 2.7

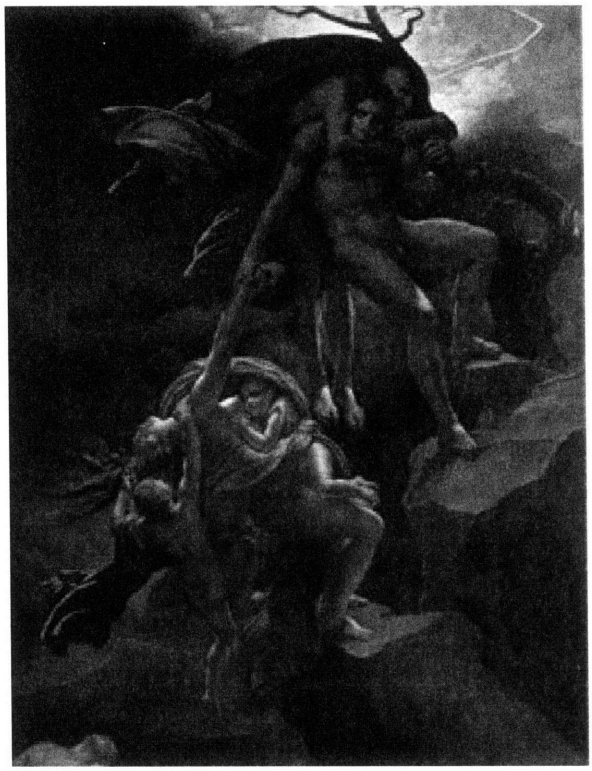


Fig. 2.12: Anne-Louis Girodet-Trioson, *Scene du Deluge,* oil on canvas, 1806, Musée Girodet, Montargis.

Fig. 2.13: Jacques-Louis David, *Intervention of the Sabine Women,* oil on canvas, 1799, Musée du Louvre, Paris.

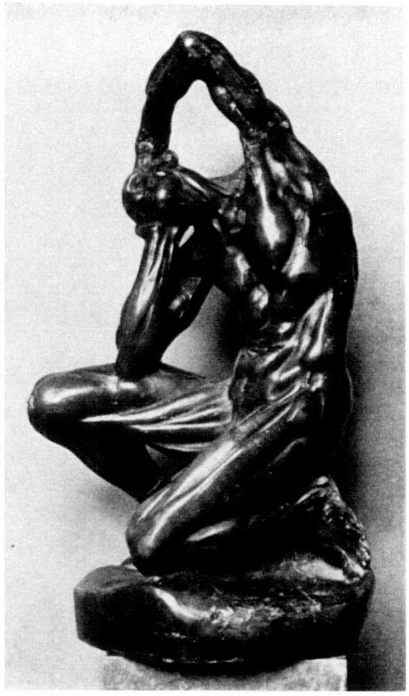


Fig. 2.14: Attributed to Michelangelo's, *Écorché*, n.d.,. Kaiser Friedrich Museum, Berlin.

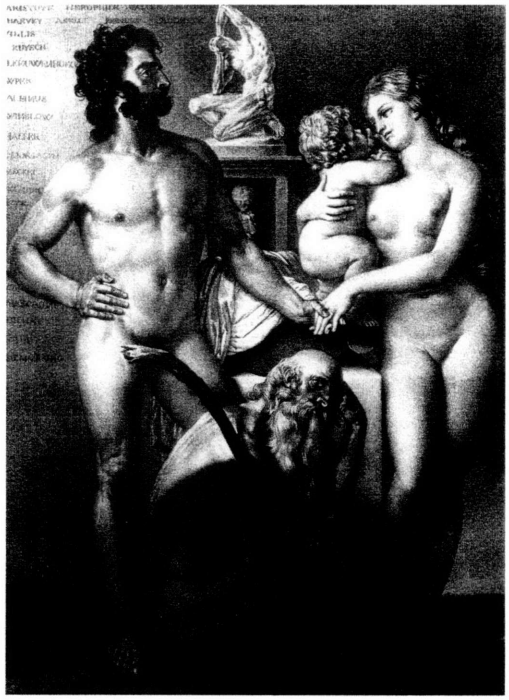


Fig. 2.15: Modified version of Fig. 2.1.

Fig. 3.1: Bourgery, *Traité*, Vol. 1., Pl. 1. (see p. 50)

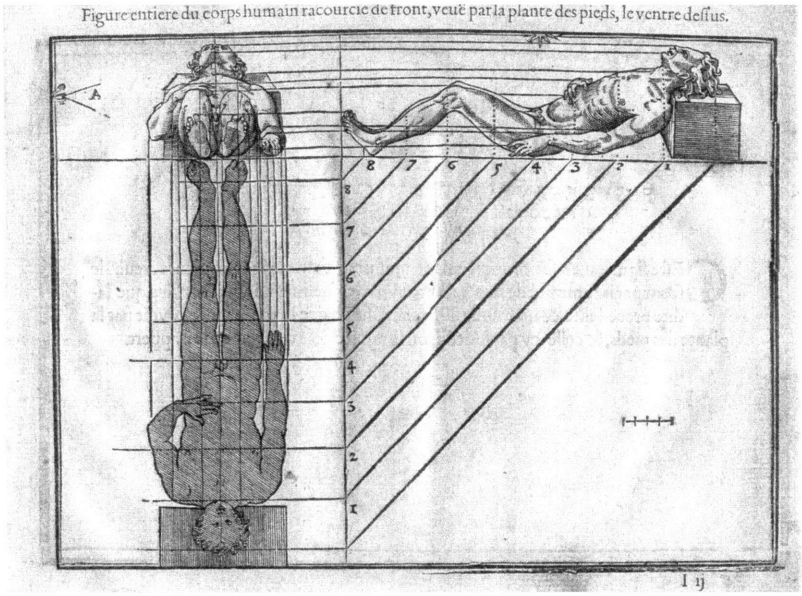


Fig. 3.2: Jehan Cousin, *Livre de Portraiture* (1600), p. 63.

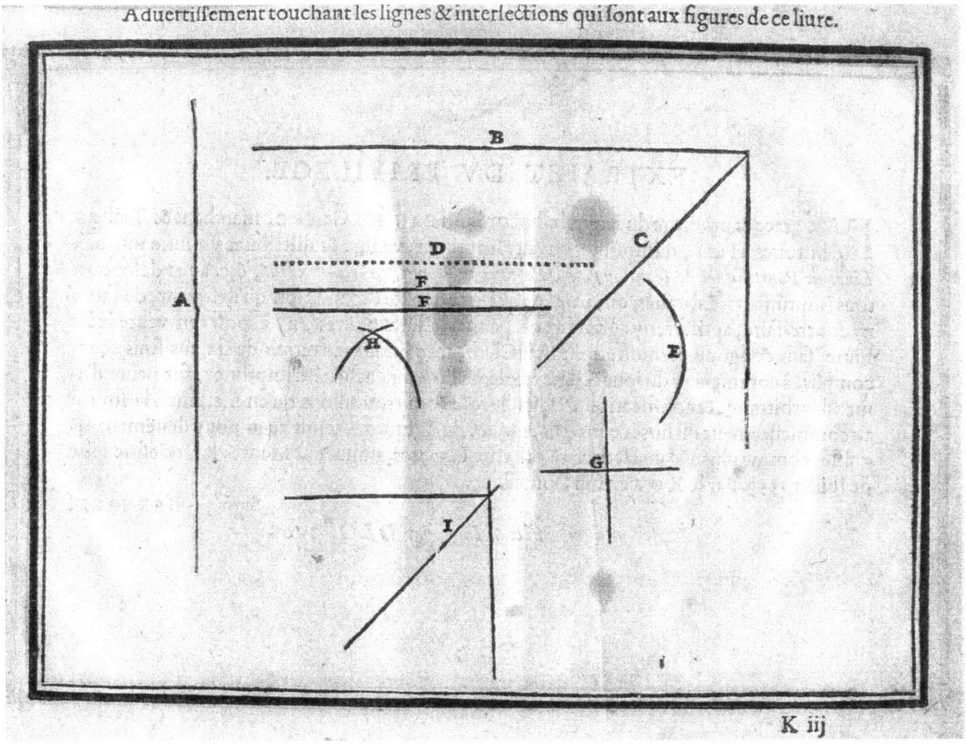


Fig. 3.3: Cousin, *Livre*..., 73.

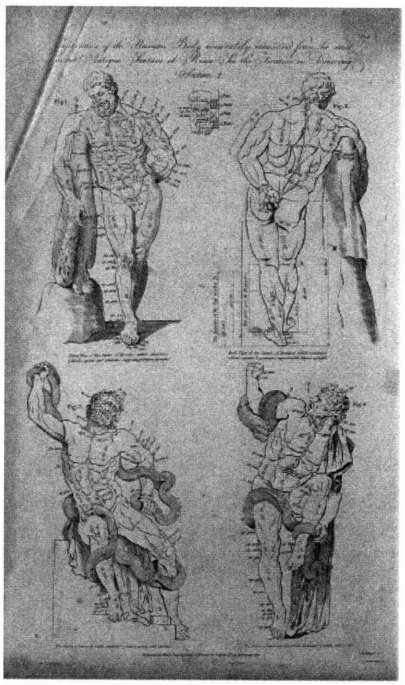


Fig. 3.4: Gérard Audran,
Les proportions du corps humain, mesurées sur les plus belles figures de l'antiquité (1683), Pl. 1.

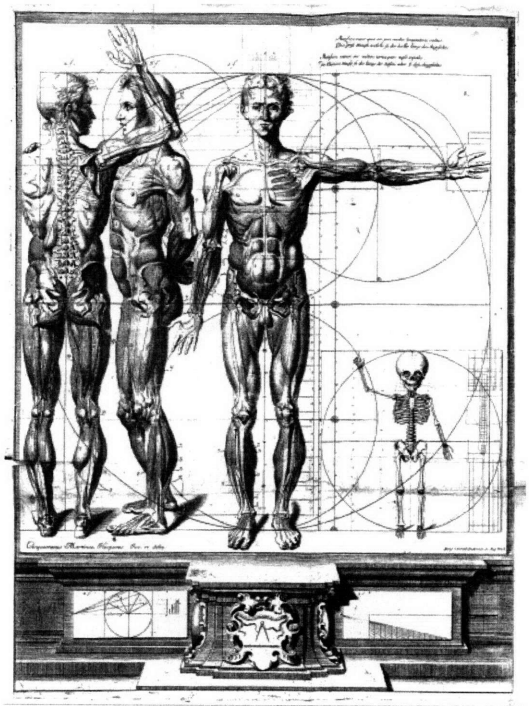


Fig. 3.5: Crísostomo Martinez, Anatomy of 3 male figures and child skeleton, engraving, late 17th-c in Johann Remmelin, *Catoptrum microcosmicum ... visionibus splendens, cum historia, et pinace, de novo prodit* (1660): facing p. 28.

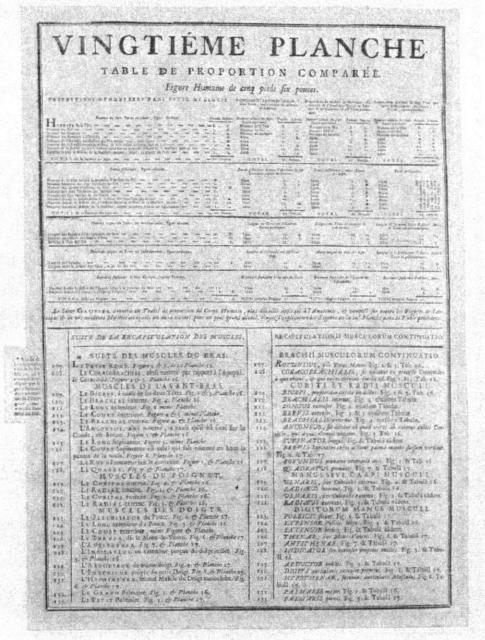


Fig. 3.6: Jacques Fabien Gautier d'Agoty and Joseph-Guichard Duverney, *Myologie complete en couleur et grandeur naturelle, composée de l'"Essai" et de la "Suite de l'Essai d'anatomie en tableaux imprimés"...* (1746), Pl. 20.

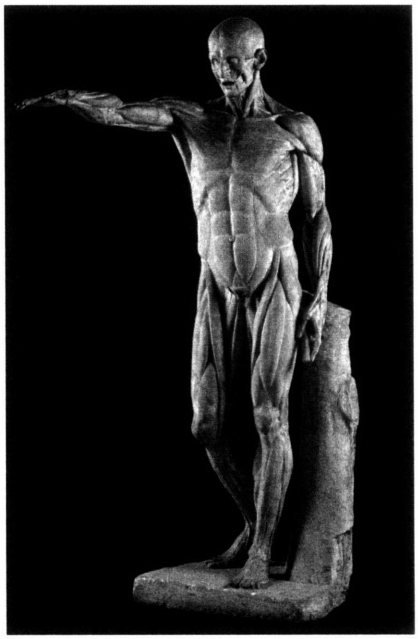


Fig. 3.7: Jean-Antoine Houdon, *L'Écorché,* white plaster with self-base, 1767, Académie de France, Rome.

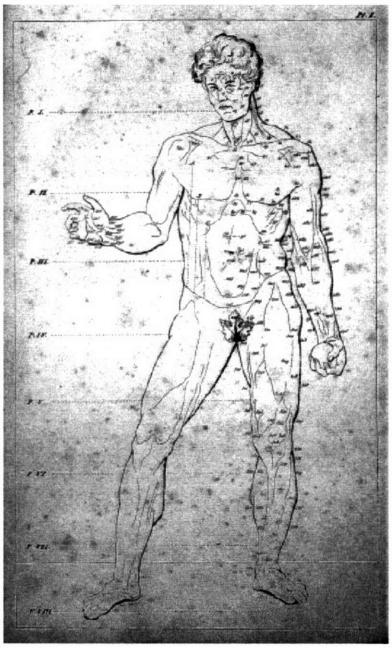


Fig. 3.8: Pierre Nicolas Gerdy, *Anatomie des formes exterieures du corps humain appliquee a la peinture a la sculpture et a la chirurgie* (1829), Pl. I

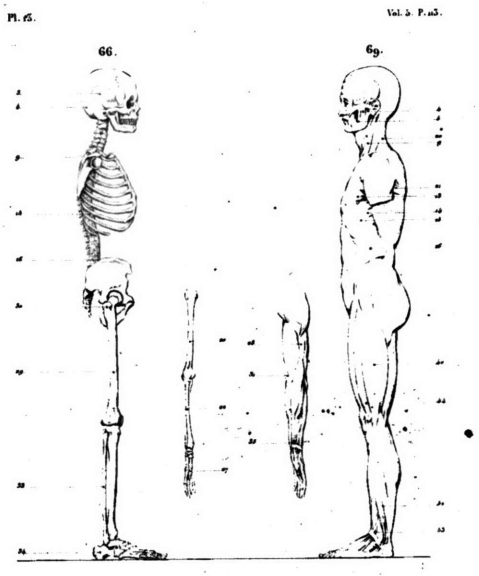


Fig. 3.9: Jacques Nicolas Paillot de Montabert, *Traité complet de la pienture* (1829-1851), Pl. 13.

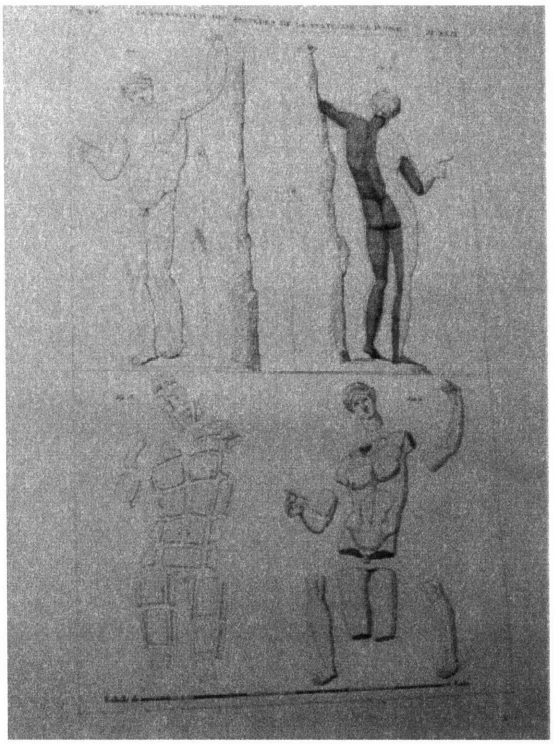


Fig. 3.10: Antoine-Chyrsostome Quatremère de Quincy, *Le Jupiter Olympien*... (1815), Pl. 29.

Fig. 4.1: Bourgery, *Traité*, Vol. 6, pl. 83bis. (see p. 76)

Fig. 4.2: Jean-Auguste-Dominique Ingres, *Studies for the Apotheosis of Homer*, oil on canvas, 1826-27, Musée du Louvre, Paris.

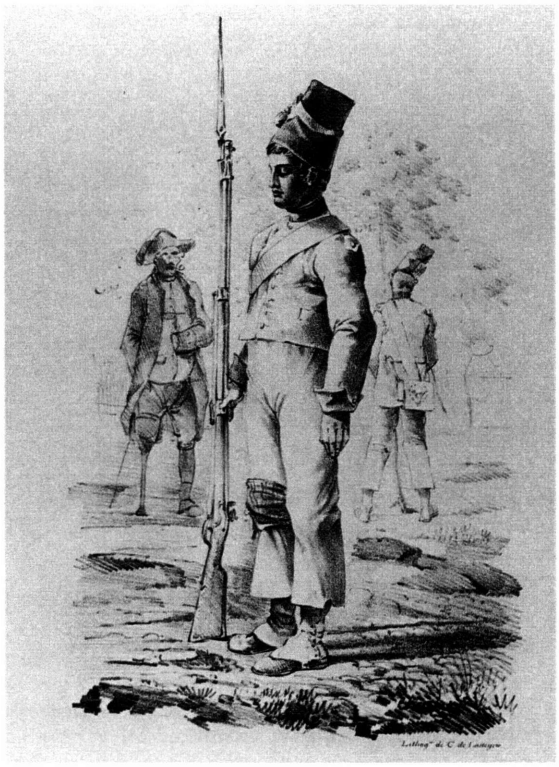


Fig. 4.3: Nicolas-Toussaint Charlet, *Recrue à l'exercice*, lithograph, 1817.

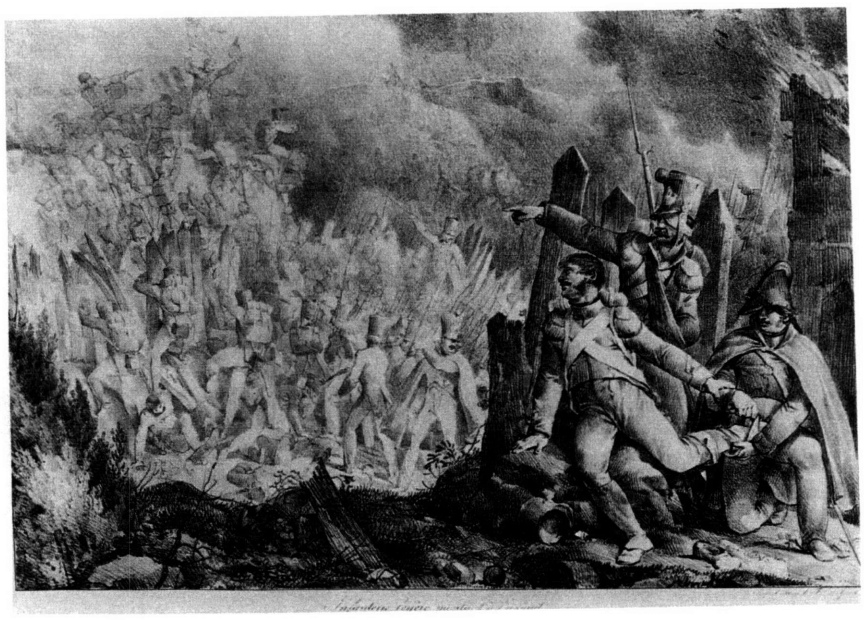


Fig. 4.4: Nicolas-Toussaint Charlet, *Infanterie légère à l'assaut*, lithograph, 1819.

Fig. 4.5: Théodore Géricault, *Return from Russia*, lithograph, 1818.

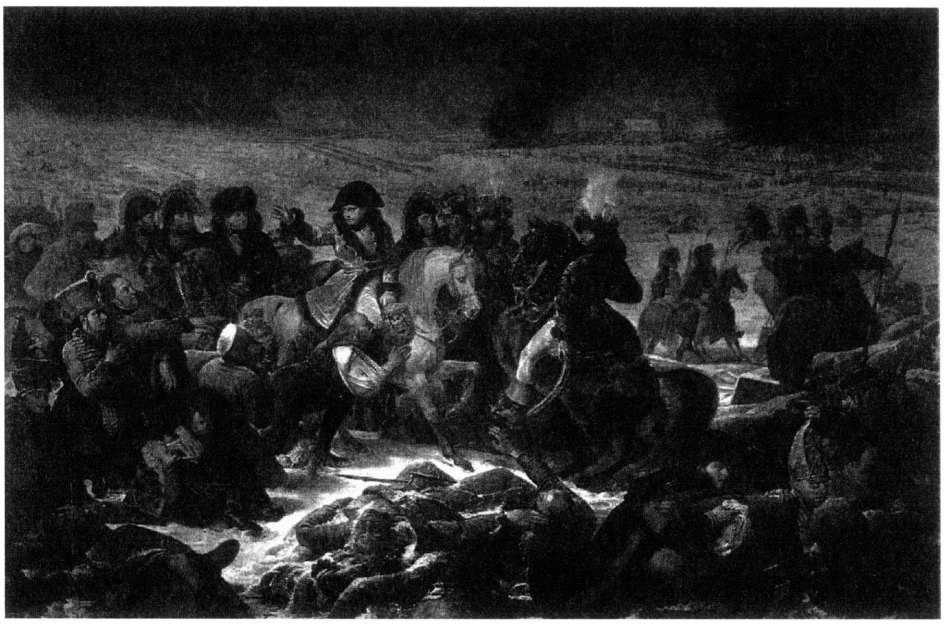


Fig. 4.6: Antoine-J. Gros, *Napoleon in the Battlefields of Eylau on 9 February 1807*, oil on canvas, 1807, Musée du Louvre, Paris.

Fig. 4.7: Théodore Géricault, *Wagon of the Wounded*, lithograph, 1818.

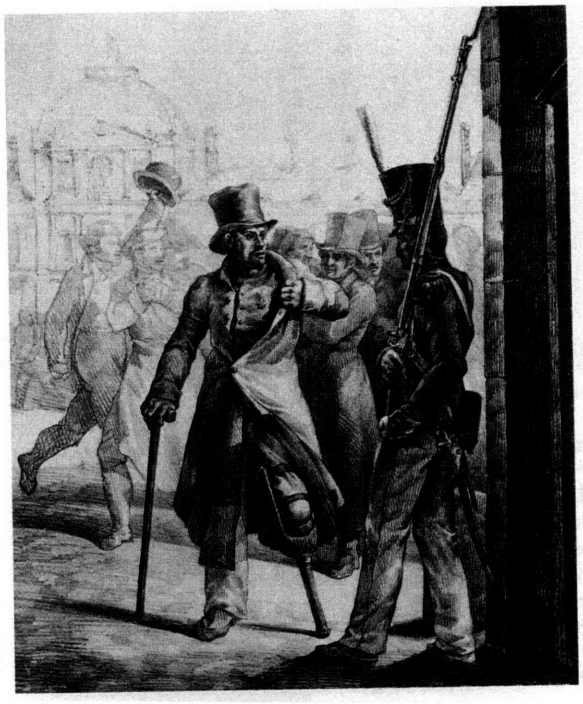


Fig. 4.8: Théodore Géricault, *The Swiss Guard*, lithograph, 1819.

Fig. 4.9: Théodore Géricault, *Severed Limbs*, oil on canvas, 1818, Musée Fabre, Montpellier.

Fig. 5.1: Bourgery, *Traité*, vol. 7, Pl. O. (see p. 96)

Fig. 5.2: *Torso Belvedere*, marble, 100BCE-ca. 1CE, Vatican Museum, Rome.

Fig. 5.3: Rear view of Fig. 5.2.

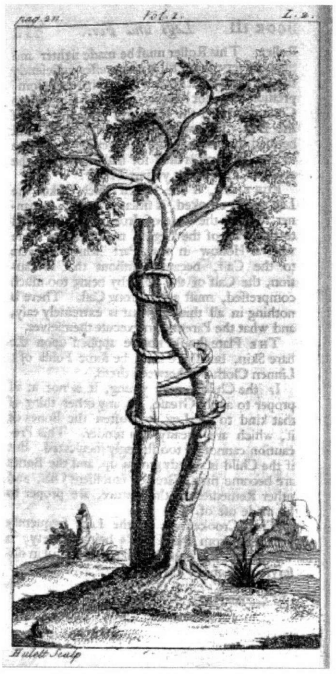


Fig. 5.4: Nicolas Andry de Boisregard, *Orthopedia*, trans. James Hulett (London: 1743) Vol. 1, p. 211.

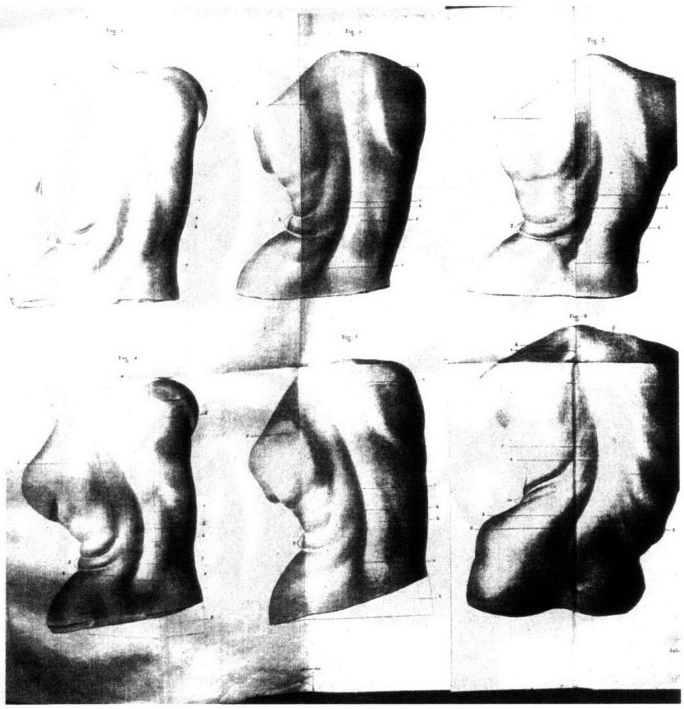


Fig. 5.5: Jules Guérin, *Premier mémoire sur le traitement des deviations de l'épine par la section des muscles du dos* (1843), Pl. 1

RAPPORT. 3

DIFFORMITÉS.	NOMBRE des cas.	GUERISONS complètes.	AMÉLIORATIONS.	PAS d'amélioration.	MORTS.	NON TRAITÉS ou en traitement.
Strabisme	153	100	8	»	»	47
Fausse ankylose de la mâchoire inférieure	1	1	»	»	»	
Torticolis	46	25	8	2	1	
Déviations de l'épine	155	24	28	4	1	98
Excavations tuberculeuses	112	4	46	46	2	14
Difformités rachitiques du thorax et des membres	344	66	56	»	2	210
Courbures des membres par cal vicieux	46	8	13	2	»	23
Difformités du coude (flexions permanentes, etc.)	9	2	1	1	»	5
Flexions permanentes de la main et des doigts	14	5	4	»	»	7
Luxations congénitales des fémurs	58	2	»	1	»	53
Difformités de la hanche sans luxation	58	10	22	6	»	»
Difformités des genoux	263	85	73	9	5	124
Pieds-bots	157	61	49	6	7	34
Flexion permanente des orteils	1	1	»	»	»	»
Totaux	1549	328	287	77	18	800

En outre de ces difformités, 34 abcès froids ou par congestion et 11 épanchements articulaires ont été traités par la méthode sous-cutanée. En voici les résultats :

Abcès froids	20	7	4	»	2	7
Abcès par congestion	14	4	2	»	3	5
Épanchements articulaires	11	8	3	»	»	»
Totaux	45	19	9	»	7	10
Totaux réunis	1594	347	296	77	25	619

Les résultats mentionnés dans ce tableau étaient, par leur nombre et leur importance, de nature à frapper vivement l'attention du public et des médecins; et bientôt ils soulevèrent dans la presse médicale une polémique ardente et une critique agressive. La pratique de M. Guérin ne fut pas seulement accusée d'être illusoire, stérile, dangereuse, mais l'on révoqua en doute la réalité et la possibilité même des succès qu'il avait annoncés. Ne voulant pas rester sous le coup des accusations dont il était l'objet, M. Guérin adressa au conseil, à la date du 9 août 1845, une lettre par laquelle il lui demandait de vouloir bien nommer une commission parmi les

Fig. 5.6: *Rapport adressé à M. le délégué du Gouvernement provisoire sur les traitements orthopédiques de M. le docteur Jules Guérin, à l'hôpital des enfants, pendant les années 1843, 1844 et 1845* (1848), p. 3.

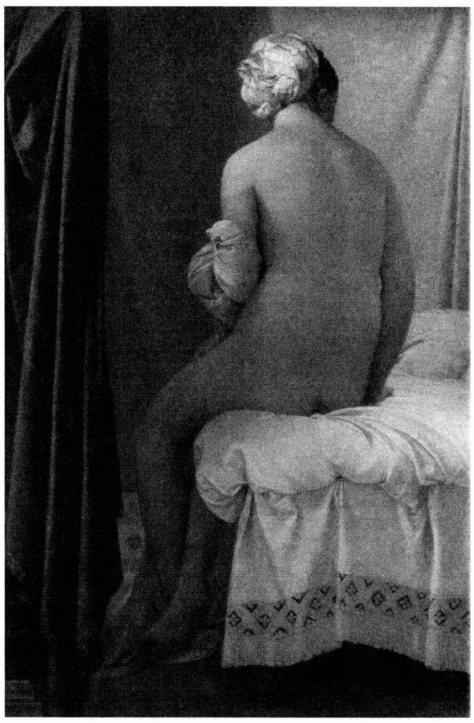


Fig. 5.7: Jean-Auguste-Dominique Ingres, *Bather of Valpinçon*, oil on canvas, 1808, Musée du Louvre, Paris.

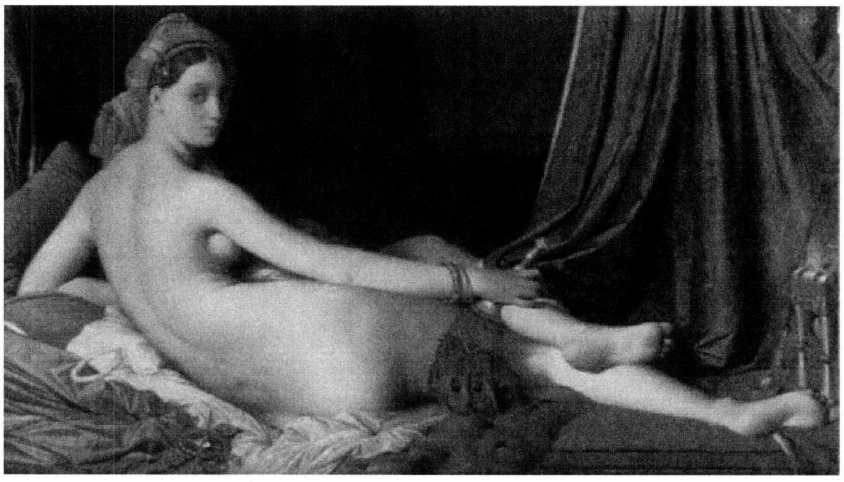


Fig. 5.8: Jean-Auguste-Dominique Ingres, *Grande Odalisque*, oil on canvas, 1814, Musée du Louvre, Paris.

Fig. 6.1: Bourgery, *Traité*, Vol. 3, Pl. 100. (see p. 112)

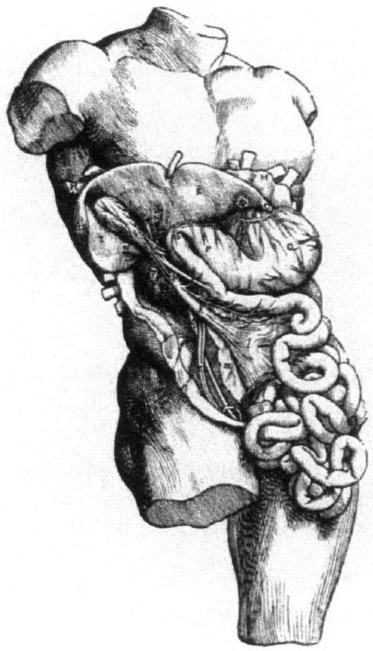


Fig. 6.2: Vesalius, *Fabrica* 5.12.

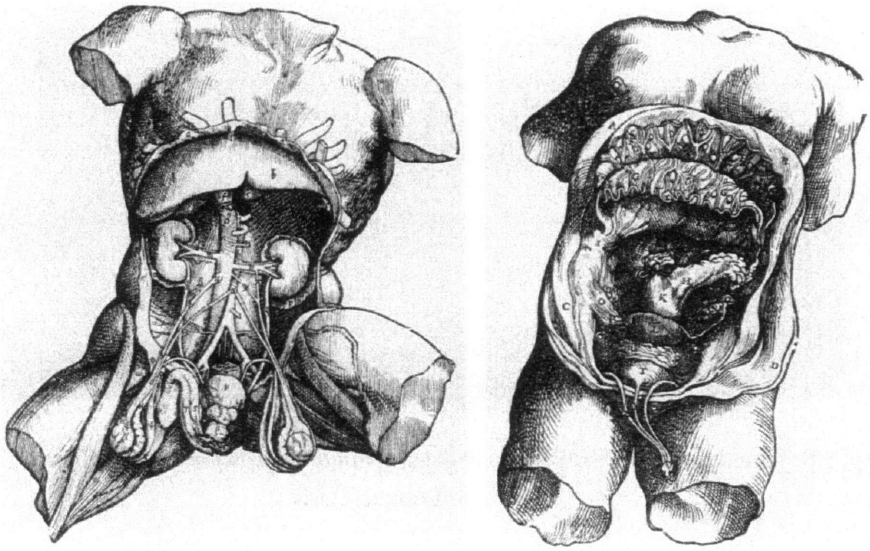


Fig. 6.3 (Left): Vesalius, *Fabrica*, 5.22.
Fig. 6.4 (Right): Vesalius, *Fabrica*, 5.24.

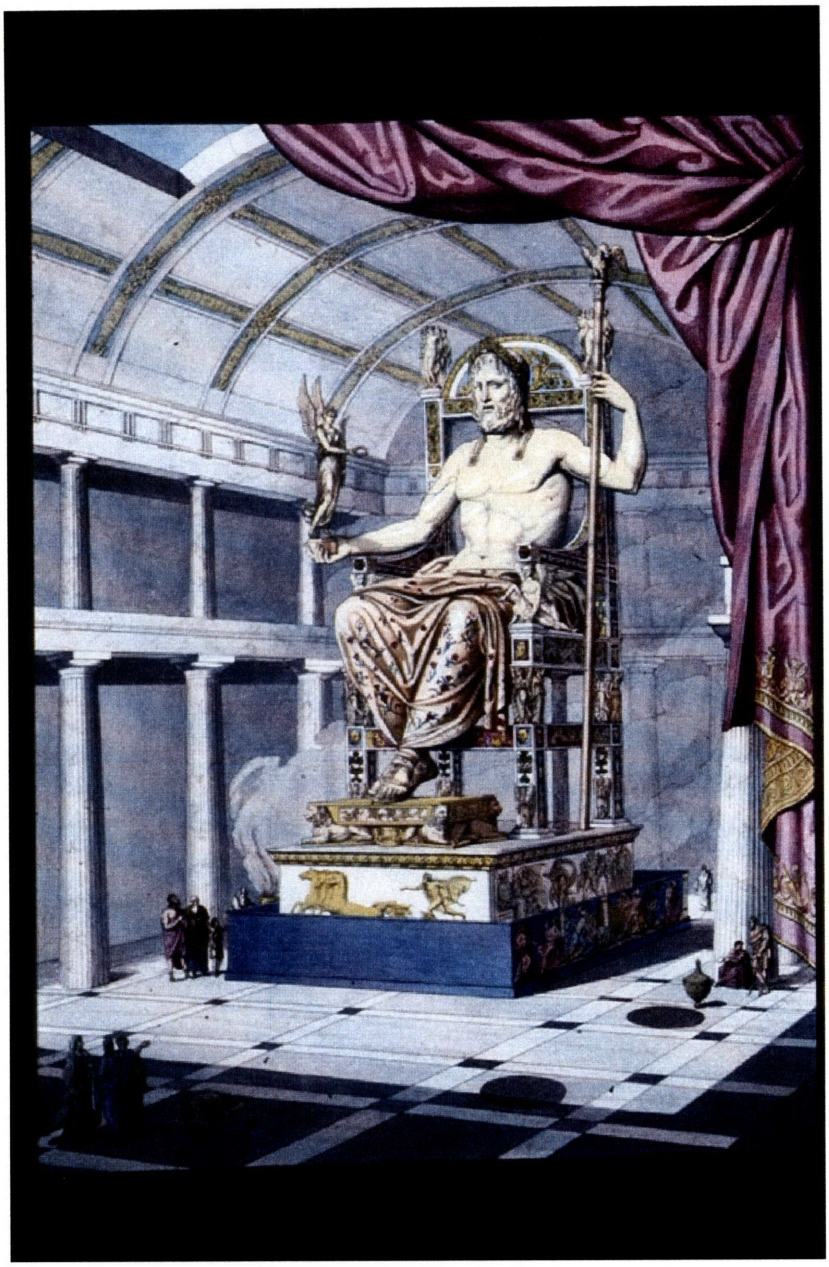


Fig. 6.5: Quatremère, *Jupiter*, frontispiece.

Sources of Illustration

Abbreviations for credits:

BIUM: Bibliothèque Interuniversitaire de médecine et d'odontologie
http://www.bium.univ-paris5.fr/medecine/debut.htm

Louvre: Atlas Database of Works on Display at the Louvre
http://cartelen.louvre.fr/

NLM: National Library of Medicine, National Institute of Health, *Historical Anatomies on the Web*:
http://www.nlm.nih.gov/exhibition/historicalanatomies/

Rotch: MIT Rotch Visual Collections
http://dome.mit.edu

Wellcome: Wellcome Images:
http://images.wellcome.ac.uk

** See bibliography for complete bibliographic information.

Fig. 2.1: Hardin Library of Health Sciences, University of Iowa: http://www.lib.uiowa.edu/hardin/news_bourgery.html
Fig. 2.2: NLM: http://www.nlm.nih.gov/exhibition/historicalanatomies/Images/1200_pixels/Vesalius_TitlePg.jpg
Fig. 2.3: NLM: http://www.nlm.nih.gov/exhibition/historicalanatomies/Images/1200_pixels/bidloo_title_01.jpg
Fig. 2.4: NLM: http://www.nlm.nih.gov/exhibition/historicalanatomies/Images/1200_pixels/Albinus_title.jpg
Fig. 2.5: BIUM: http://web2.bium.univ-paris5.fr/livanc/?cote=01628&p=1&do=page
Fig. 2.6: Grigsby, *Extremities*, 252.
Fig. 2.7: Rotch.: http://hdl.handle.net/1721.3/4503
Fig. 2.8: Rotch: http://hdl.handle.net/1721.3/15191.
Fig. 2.9: Louvre: http://cartelen.louvre.fr/cartelen/visite?srv=car_not_frame&idNotice=15333
Fig. 2.10: Rotch: http://hdl.handle.net/1721.3/4108
Fig. 2.11: Rotch: http://hdl.handle.net/1721.3/15674
Fig. 2.12: Metropolitan Museum of Art website:
http://www.metmuseum.org/special/Girodet/view_1.asp?item=6&view=l
Fig. 2.13: Rotch: http://hdl.handle.net/1721.3/25903
Fig. 2.14: E. Tietze-Conrat, "A Lost Michelangelo Reconstructed," *The Burlington Magazine for Connoisseurs*, Vol. 68, No. 397 (April 1936) – pp. 163-170, p. 168.
Fig. 2.15: Center for the History of Medicine at Countway Library at Harvard University. Call No: 1.Mw.1831.B.
Fig. 3.1: BIUM - http://web2.bium.univ-paris5.fr/livanc/?p=201&cote=02083x01&do=page
Fig. 3.2: NLM: http://www.nlm.nih.gov/exhibition/historicalanatomies/Images/1200_pixels/cousin_p34.jpg
Fig. 3.3: NLM http://www.nlm.nih.gov/exhibition/historicalanatomies/Images/1200_pixels/cousin_p38.jpg
Fig. 3.4: Wellcome: V0008003
Fig. 3.5: Wellcome: L0018961
Fig. 3.6: BIUM - http://web2.bium.univ-paris5.fr/livanc/index.las?cote=00768x03&p=77&do=page
Fig. 3.7: Poulet, Houdon, 64.
Fig. 3.8: Wellcome: L0026678
Fig. 3.9: Jacques Nicolas Paillot de Montabert, *Traité complet de la pienture* (1829-1851), Pl. 13.
Fig. 3.10: Author's photograph of Quatremère, *Jupiter* (1814): Courtesy of Harvard Fine Arts Library.
Fig. 4.1: BIUM: http://web2.bium.univ-paris5.fr/livanc/?p=456&cote=02083x06&do=page
Fig. 4.2: Louvre: http://cartelen.louvre.fr/cartelen/visite?srv=car_not_frame&idNotice=15336
Fig. 4.3: Bann, *Parallel Lines*, 68
Fig. 4.4: Bann, *Parallel Lines*, 72
Fig. 4.5: Rotch: http://hdl.handle.net/1721.3/17861

Fig. 4.6: Rotch: http://hdl.handle.net/1721.3/13653
Fig. 4.7: Grigsby, *Extremities*, 179
Fig. 4.8: Grigsby, *Extremities*, 178
Fig. 4.9: Rotch: http://hdl.handle.net/1721.3/23820
Fig. 5.1: BIUM: http://web2.bium.univ-paris5.fr/livanc/?p=611&cote=02083x07a&do=page
Fig. 5.2: Bryson, *Tradition and Desire*, p. 4.
Fig. 5.3: Bryson, *Tradition and Desire*, p. 4.
Fig. 5.4: Wellcome: L0018019
Fig. 5.5: Countway Center for the History of Medicine, Call No. 1.Mw.1838.G
Fig. 5.6: BIUM - http://web2.bium.univ-paris5.fr/livanc/index.las?cote=08602&p=4&do=page
Fig. 5.7: Louvre website for "Ingres: 1780-1867": http://mini-site.louvre.fr/ingres/1.4.2.1_en.html
Fig. 5.8: Louvre: http://cartelen.louvre.fr/cartelen/visite?srv=car_not_frame&idNotice=22520
Fig. 6.1: BIUM: http://web2.bium.univ-paris5.fr/livanc/?p=621&cote=02083x03&do=page
Fig. 6.2: Glenn Harcourt, "Vesalius and the Anatomy of Antique Sculpture," *Representations* (No. 17: Winter, 1987): 28-61, 33.
Fig. 6.3: Harcourt, 33.
Fig. 6.4: Harcourt, 33.
Fig. 6.5: Harvard VIA (http://via.harvard.edu): olvwork171978