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# From Apprentice to Master: Social Disciplining and Surgical Education in Early Modern London, 1570–1640

*Celeste Chamberland*

Due to its ascendancy as the administrative and commercial center of early modern England, London experienced sustained growth in the latter half of the sixteenth century, as waves of rural immigrants sought to enhance their material conditions by tapping into the city's bustling occupational and civic networks. The resultant crowded urban landscape fostered mounting demand for medical services, since injuries and ailments, ranging from consumption to contusions, proliferated within the city's teeming streets and markets.<sup>1</sup> Due to consistently strong patient demand and the conventions of English common law, which stipulated that legal authorization to practice medicine was solely contingent upon patient consent, peddling medical services to the city's ill and infirm became an increasingly appealing—and potentially lucrative—venture. Consequently, London's largely unregulated medical marketplace—characterized by competition for patients, the mounting influence of print culture, and the emergence of small commercial networks—attracted a diverse array of practitioners, including university-educated physicians, who focused on treating ailments of the inner body by prognosticating and prescribing medicine; guild-licensed surgeons, who treated ailments ranging from broken bones to venereal disease through direct manual manipulation of the body; and a medley of specialist and itinerant practitioners, who were neither licensed by city authorities nor affiliated with established livery companies.<sup>2</sup>

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<sup>1</sup> See Judi Loach, "Architecture and Urban Space: London," in *Urban Achievement in Early Modern Europe: Golden Ages in Antwerp, Amsterdam, and London*, eds. Patrick O'Brien, et al. (Cambridge: Cambridge University Press, 2001); David Harris Sachs, "London's Dominion: The Metropolis, the Market Economy, and the State," in *Material London, ca. 1600*, ed. Lena Cowen Orlin (Philadelphia: University of Pennsylvania Press, 2000), 20–21; *London, 1500–1700: The Making of the Metropolis*, eds. A. L. Beier and Roger Finlay (London: Longman, 1986); Steve Rappaport, *Worlds Within Worlds: Structures of Life in Sixteenth-Century London* (Cambridge: Cambridge University Press, 2002).

<sup>2</sup> Harold Cook developed the concept of a "medical marketplace" in which the College of Physicians sought to retain a position of authority, but found its prestige

In the absence of effective institutional regulation, distinctions between medical practitioners and modes of treatment were often difficult to discern due to a lack of clearly defined legal demarcations. In response to such occupational fluidity, the Barber-Surgeons' Company—London's largest body of licensed medical practitioners and the city's only guilded branch of medicine before the advent of the Apothecaries' Company in 1617—endeavored to maintain exclusive control over the practice of surgery within the city.<sup>3</sup> To prevent the encroachment of interlopers and foreign practitioners ineligible for guild membership, Company members devised an array of semiformal educational networks that reinforced their desire to train surgeons as proficient artisans, morally upright representatives of their occupational group, and agents of intellectual traditions ostensibly inaccessible to those excluded from the Company's ranks.

Drawing inspiration from Andrew Abbott's notion of jurisdiction in the control of occupational skill and knowledge, this study argues that surgical education in early modern London was characterized by a synthesis of theoretical, experiential, and moral components that enabled members of the Barber-Surgeons' Company to bolster their expertise and erect occupational boundaries.<sup>4</sup> By emulating prevailing paradigms of social disciplining—processes through which civic and guild authorities upheld order and stability within their communities by prescribing conventions of propriety and etiquette—the Company's self-conscious efforts to establish standards of occupational decorum and repress deviance not only mitigated the encroachment of interlopers, but also reinforced the nascent pre-professionalization of London's surgeons.<sup>5</sup>

Although the Company's burgeoning corporate social status ostensibly parallels the emergence of modern professions, the relative

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increasingly threatened by rival medical practitioners over the course of the seventeenth century. *The Decline of the Old Medical Regime in Stuart London* (Ithaca: Cornell University Press, 1986); "Good Advice and Little Medicine: The Professional Authority of Early Modern English Physicians," *Journal of British Studies* 33 (1994): 1–31; cf. Mark Jenner and Patrick Wallis, "The Medical Marketplace," in *Medicine and the Market in England and its Colonies* (Hampshire: Palgrave MacMillan, 2007), 1–12. Wallis and Jenner assert that economic interpretations of the medical marketplace should also be broadened to include medical pluralism and the complex cultural transformations effected by print and public culture.

<sup>3</sup>For a general overview of the Apothecaries' Company, see Juanita Burnby, *A Study of the English Apothecary from 1660–1760* (London: Wellcome Trust, 1983) and Charles Raymond Booth Barrett, *The History of the Society of Apothecaries of London* (London: Stock, 1905).

<sup>4</sup>Andrew Abbott, *The System of Professions: An Essay on the Division of Expert Labor* (Chicago: University of Chicago Press, 1988).

<sup>5</sup>On the concept of social disciplining, see Kathy Stuart, *Defiled Trades and Social Outcasts: Honor and Ritual Pollution in Early Modern Germany* (Cambridge: Cambridge University Press, 1997), 4–6; Lyndal Roper, *Oedipus and the Devil: Witchcraft, Sexuality and Religion in Early Modern Europe* (London and New York: Routledge, 1994), 145–67.

ambiguity associated with the term “profession” during the early modern period renders such comparisons anachronistic.<sup>6</sup> Rather than distorting the occupational identity of Elizabethan surgeons through the lens of presentism, the concept of jurisdiction—defined by Abbott as the way in which an occupational group asserts control over its knowledge and expertise, and claims the right to oversee the training, licensing, and discipline of its members—more appropriately epitomizes the Barber-Surgeons’ Company’s efforts to erect occupational boundaries and trumpet the exclusivity and prestige of their work.

In delineating the relationship between sites of surgical knowledge and pedagogy, the methodological framework of this study employs Gunther Kress’ concept of multi-modal education as a point of departure.<sup>7</sup> Based on Kress’ assertion that educational practices are rarely limited solely to linguistic and visual modes of communication, this study explores the intersection of experiential, practical, and text-based learning within the four principal loci of surgical education as follows: household shops, the Company’s lecture hall, the print market, and casualty-strewn battlefields. By attending semiweekly lectures at Barber-Surgeons’ Hall, reading and writing vernacular manuals, treating traumatic combat injuries, and acquiring skills within the shops of London, surgeons received their education within multiple sites of knowledge that bolstered their legitimacy and transcended the preclusive confines of the university. Although universities served as centers of medical education for physicians in early modern Europe, they were not a viable option for most surgeons. Due to their restricted class size and exclusive entrance requirements, such as Latin literacy, university medical faculties represented a small component of the protean avenues for medical education and scholarship in London’s medical marketplace.<sup>8</sup>

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<sup>6</sup>Noel Parry and Jose Parry associate professionalization with factors such as autonomy, control of training, organized occupational structure, and a sense of vocation. See *The Rise of the Medical Profession: A Study of Collective Social Mobility* (London: Croom Helm, 1976), 48. However, as Rosemary O’Day and Wilfred Prest have asserted, prior to the nineteenth century, the professions did not represent a standardized set of characteristics or uniform identity, and cannot be classified using modern criteria. See Wilfred Prest, “Introduction: The Professions and Society in Early Modern England,” in *The Professions in Early Modern England*, ed. Wilfred Prest (London: Croom Helm, 1987), 8; Rosemary O’Day, *The Professions in Early Modern England, 1450–1800: Servants of the Commonwealth* (New York: Longman, 2000), 4.

<sup>7</sup>Gunther Kress, et al., *Multimodal Teaching and Learning: The Rhetorics of the Science Classroom* (London: Continuum, 2001), 1–3.

<sup>8</sup>See Peter Murray Jones, “Reading Medicine in Tudor Cambridge,” in *The History of Medical Education in Britain*, ed. John Harley Warner (Amsterdam and Atlanta: Rodopi, 1995), 153–83. Physicians viewed the use of vernacular in professional conversations as a sign of inferiority. Margaret Pelling, “Knowledge Common and Acquired: The Education of Unlicensed Medical Practitioners in Early Modern London,” in *The History of Medical Education in Britain*, ed. John Harley Warner (Amsterdam and Atlanta: Rodopi,

In recent years, medical education in early modern England has garnered renewed attention from scholars seeking to delineate the intellectual traditions and theoretical foundations of medical practice. Margaret Pelling, Andrew Wear, and Harold Cook, in particular, have shed much light on the relationship between physicians and surgeons in the licensing, regulation, and training of medical practitioners.<sup>9</sup> Inasmuch as such studies have illuminated the intellectual foundations of surgical practice and fostered renewed interest in the central roles played by surgeons in London's medical marketplace, they tend to privilege the university over other sites of learning and focus less on the artisanal foundations of surgical education. In her recent work on artisans of the body in early modern Italy, Sandra Cavallo advances the proposition that surgeons possessed a complex occupational identity and inhabited a unique artisanal social space that distinguished them from other medical practitioners.<sup>10</sup> Like their Italian counterparts, London's surgeons developed a sophisticated mode of experiential instruction independent of the physicians that transcended the traditional dichotomy between the workshop and the university.

Based on an analysis of printed surgical texts and extant records of the Barber-Surgeons' Company of London, this study explores the ways in which the company employed educational strategies to reinforce jurisdictional claims by attempting to maintain uniformity in pedagogical practices, establish standards of decorum, and procure protection from external interference. Whereas the Court records and apprenticeship registers of the Barber-Surgeons' Company render clues about the ways in which educational strategies reinforced the Company's rules of moral and ethical conduct, and transgressions thereof, printed surgical

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1995), 230–49. For an overview of the education of early modern English physicians, see Frederick Noel Lawrence Poynter, "Medical Education in England Since 1600," in *The History of Medical Education in England Since 1600*, ed. Charles Donald O'Malley (Berkeley and Los Angeles: University of California Press, 1970), 235–50. Hugh McDonald Sinclair, "Oxford Medicine," in *Medicine in Seventeenth-Century England*, ed. Allen Debus (Berkeley: University of California Press, 1974); Vern Bullough, "Education and Professionalization: An Historical Example," *History of Education Quarterly* 2 (1970): 160–69, and Charles Donald O'Malley, "Medical Education During the Renaissance," in *The History of Medical Education*, ed. by Charles Donald O'Malley (Berkeley and Los Angeles: University of California Press, 1970), 89–102.

<sup>9</sup>See Margaret Pelling, *Medical Conflicts in Early Modern London: Patronage, Physicians, and Irregular Practitioners 1550–1640* (Oxford: Oxford University Press, 2003); Margaret Pelling, *The Common Lot: Sickness, Medical Occupations and the Urban Poor in Early Modern England* (London: Longman, 1998); Andrew Wear, *Knowledge and Practice in English Medicine 1550–1680* (Cambridge: Cambridge University Press, 2000), and Harold Cook, *The Decline of the Old Medical Regime* (Ithaca, NY: Cornell University Press, 1986).

<sup>10</sup>Sandra Cavallo, *Artisans of the Body in Early Modern Italy: Identities, Families and Masculinities* (Manchester: Manchester University Press, 2007), 245.

manuals offer insight into the Company's epistemological foundations and the public image they wished to convey.

Drawing inspiration from recent scholarship in the history of print culture in early modern England, notably Mary Fissell's important article on the marketplace of print, this study explores the ways in which surgical authors availed themselves of the increasingly influential medium of print to distinguish themselves from other medical practitioners. As Fissell asserts, the printed word, which represented a significant component of London's medical marketplace, enabled practitioners to expand the scope of their practice beyond their household shops and market stalls.<sup>11</sup> Rather than serving the practical needs of a lay audience, however, the authors of surgical texts intended their books to showcase their expertise and serve as instructional aids for junior Company surgeons and apprentices. Although the thorny question of readership and the difficulty of determining literacy rates among surgical practitioners obscure attempts to determine the audience of surgical texts, the authors of such manuals tended to identify the instruction of fledgling surgeons as the primary goal of their work. John Woodall, an esteemed surgical author and senior Company officer, for example, understood that his work would attract a lay audience, but describes the "better furtherance and knowledge" of "young surgeons" as the principal objective of his 1617 text, *The Surgion's Mate*.<sup>12</sup> Woodall, like most surgical authors, envisioned his printed work as a complement to, rather than a substitute for the multifaceted training program established by the Barber-Surgeons' Company.

Inasmuch as surgical texts exemplify the pivotal role played by print culture in the transmission of surgical knowledge, they did not serve as the *sine qua non* of surgical education, since printed manuals could not supplant experiential modes of training.<sup>13</sup> In creating a network of semiformal educational opportunities, members of the Barber-Surgeons' Company attained a high degree of functional literacy that reflected the impermeable boundaries between oral, literate, and

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<sup>11</sup>Mary Fissell, "The Marketplace of Print," in *Medicine and the Market in England and its Colonies, c. 1450–1850*, eds. Mark S. R. Jenner and Patrick Wallis (Houndsmills and New York: Palgrave Macmillan, 2007), 110.

<sup>12</sup>John Woodall, *The Surgion's Mate* (London: Edward Griffin, 1617), ¶3r.

<sup>13</sup>David Cressy contends that most of London's apprentices and servants were "extraordinarily literate." *Literacy and the Social Order: Reading and Writing in Tudor and Stuart England* (Cambridge: Cambridge University Press, 1980), 129. Cressy interprets the ability to sign one's name on official documents, such as the Protestation Returns, as a measure of literacy. Margaret Ferguson argues that Cressy's statistics are unreliable and may in fact underestimate literacy rates. *Dido's Daughters: Literacy, Gender, and Empire in Early Modern England and France* (Chicago: University of Chicago Press, 2003), 77.

visual culture.<sup>14</sup> Reading ability was but one component of a surgeon's training, which consisted of pedagogical techniques grounded in visual demonstration, imitation, formal lectures, and the use of mnemonic devices.<sup>15</sup> Such nontextual techniques of surgical instruction were particularly indispensable within the household setting of the apprenticeship, which mirrored the daily rhythms of the surgeon's shop and required the fledgling surgeon to be an active participant in the hands-on treatment of patients rather than a passive scholar.

### Apprenticeships

As evidenced by the lamentable case of a disgruntled surgical apprentice named Henry Cleere, the quality of surgical education was a matter of serious concern within the Company. Stymied by his master's abuse and neglect, Cleere solicited the assistance of the Barber-Surgeons' Company Court of Assistants in 1612. As the Company's main regulatory body, this group of senior officials oversaw the training and licensing of fledgling surgeons, and resolved the grievances of apprentices like Cleere, who alleged that his master, Nicolas Heath, had been tormenting him with "unlawfull correction" and refused to provide adequate instruction in surgery.<sup>16</sup> After considering Cleere's plea, the Court of Assistants ordered Heath to cease mistreating his charge and, thenceforth, to provide proper guidance in "the booke and arte" of surgery. Cleere, in turn, pledged unwavering obedience and agreed to act "dewtifully towarde his master."<sup>17</sup> In concluding their deliberation, Company officials warned Heath that if he did not amend his behavior, they would place Cleere in the home of a more suitable mentor. Heath's refusal to train Cleere was not a matter to be taken lightly, since his behavior impeded the transmission of knowledge that formed the central core of surgical education. Through his negligence, Heath failed to prepare Cleere for the delicate and complex procedures he would perform as a surgeon and the larger roles and responsibilities he would accept as a member of the Company, future householder, and citizen of London.

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<sup>14</sup>Defining literacy in early modern England is fraught with controversy, since it privileges the text over the word and does not account for the varying degrees of reading and writing ability that existed. See Adam Fox, *Oral and Literate Culture in England, 1500–1700* (Oxford: Oxford University Press, 2000; reprint, 2005).

<sup>15</sup>Pamela Smith defines the transmission of productive knowledge through imitation and manual labor as "artisanal literacy." See *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago: University of Chicago Press, 2004), 8.

<sup>16</sup>Court Minutes of the Barber-Surgeons' Company of London 13 July 1612; London, Guildhall Library, MS5257/4, fol. 186r; hereafter GL Court Minutes followed by date and MS number.

<sup>17</sup>GL Court Minutes 20 October 1612; MS 5257/4, fol. 196v.

Like other artisanal groups in early modern London, the Barber-Surgeons' Company deemed apprenticeship an essential rite of passage that conveyed to novitiates the mysteries of their trade, ensured they achieved occupational competency, and reinforced social legitimacy and respectability within London's credit-oriented cultural milieu.<sup>18</sup> Although they faced the stigma of manual labor common to most crafts and trades, surgeons' association with the divine architecture of the body differentiated them from other artisans, like the pewterers or bakers, who produced materials goods or services rather than the ability to restore bodily health.<sup>19</sup>

Although extant records of Henry Cleere's grievance reveal little about the particular skills he failed to learn while under Heath's tutelage, the Company's response underscores the core principles and goals that shaped the education of fledgling practitioners within the Barber-Surgeons' Company. By ordering Heath—in exchange for the boy's deference—to treat Cleere properly, the Company's officials reinforced ideals of patriarchal authority, mentorship, and mutual obligation that characterized the formative years of surgical training.<sup>20</sup> Moreover, by directing Heath to ensure that Cleere received adequate instruction in the “book and arte” of surgery, the court of assistants laid emphasis on the inseparable experiential and intellectual foundations of surgical education. Rather than denoting a clear-cut distinction between theory and practice, the book and art implied a synthesis of experience, wisdom, moral propriety, and technical skill that transcended such rigid

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<sup>18</sup>With the expansion of the market in the late sixteenth century, social relations in London were increasingly defined by a culture of credit that placed great emphasis on reputation as a measure of trustworthiness. Craig Muldrew, *Economy of Obligation: The Culture of Credit and Social Relations in Early Modern England* (New York: St. Martins Press, 1998).

<sup>19</sup>Sandra Cavallo asserts that despite traditional assumptions about the polluting nature of surgeons' contact with bodily effluvia, humoral theory depicts bodily excretions as positive, because they maintained corporeal health. *Artisans of the Body*, 42–43; cf. Roy Porter, *Bodies Politic: Disease, Death, and Doctors in Britain, 1650–1900* (London: Reaktion Books, 2001); Stuart, *Defiled Trades*, and Mary Douglas, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (London: Routledge and Kegan Paul, 1966; reprint, 1979).

<sup>20</sup>Ian Archer describes the early modern household as a model for the “maintenance of order.” *The Pursuit of Stability: Social Relations in Elizabethan London* (Cambridge: Cambridge University Press, 1991), 76–78; cf. Rappaport, *Worlds Within Worlds*, 217–219. Concepts of work in early modern Europe were tied to notions of obedience and servitude that also defined the household setting of apprenticeships. James Farr, *Artisans in Europe, 1300–1914* (Cambridge: Cambridge University Press, 2000). For a delineation of the typical pattern of apprenticeship training in early modern London, see William Kahl, *The Development of London Livery Companies* (Boston: Harvard University Press, 1960); George Unwin, *The Gilds and Companies of London* (London: Frank Cass, 1963); Jessie Dobson and R. Milnes Walker, *Barbers and Barber-Surgeons of London* (Oxford: Blackwell, 1979); and Sidney Young, *Annals of the Barber-Surgeons of London* (New York: AMS Press, 1891; reprint, 1978).



categorizations. The Barber-Surgeons' Company intended this mode of training to bolster their occupational legitimacy and distinguish surgeons from the predominantly manual domain of other artisanal groups while differentiating them from physicians, whose training was exclusively rooted in the theory-based university medical curriculum.

Under the auspices of the London Barber-Surgeons' Company, apprenticeships offered the most formalized system of surgical education in the late sixteenth and early seventeenth centuries.<sup>21</sup> Intended to provide direct experience of the daily tasks and duties integral to the practice of surgery and prepare apprentices for membership within the Company, apprenticeships required fledgling practitioners—ranging in age from fourteen to twenty—to receive at least seven years of training in the household shop of a senior surgeon.<sup>22</sup> This mode of instruction offered prospective surgeons rudimentary practical training and instilled in them the obligations and responsibilities associated with company membership.

In exchange for obeying and respecting his master's authority, the apprentice would receive instruction in "the book and arte"<sup>23</sup> of surgery and "sufficient meate, drynck and apparell."<sup>24</sup> This binding reciprocal agreement ensured that the master received monetary compensation and a helping hand with his surgical duties, while the apprentice received a surgical education and lodging in the master's household. The period of apprenticeship also served the vital purpose of socializing young boys and conveying to them the occupational identity they would assume as surgeons, company members, and householders.<sup>25</sup>

Extant records of the Barber-Surgeons' Company provide general information about the apprentice's duties within his master's service, but are less forthcoming regarding the specific procedures or skills he would acquire during his period of apprenticeship. Because the Company's officers wished to preserve the "mysteries" of the guild, which comprised the skills and knowledge particular to their occupation, they

<sup>21</sup>Mastership was the goal of such arrangements. See Farr, *Artisans*, 34. Girls ineligible for guild membership could receive their training through informal apprenticeships that were tacitly approved by the Barber-Surgeons' Company.

<sup>22</sup>See Steven R. Smith, "The London Apprentices as Seventeenth-Century Adolescents," *Past & Present* 61 (1973): 149–61 and Doreen Evenden Nagy, *Popular Medicine in Seventeenth-Century England* (Bowling Green: Bowling Green State University Press, 1988). Although most masters were Company members, the Barber-Surgeons' Company recognized training provided by the wives and widows of surgeons who were ineligible for admission to the Company livery, but were nevertheless deemed suitable instructors.

<sup>23</sup>GL Court Minutes 20 October 1612; MS 5257/4, fol. 196v.

<sup>24</sup>GL Court Minutes; MS 5257/3, fol. 108v. In 1611, London's Court of Common Council decreed that "no apprentice . . . shal . . . during the time of his apprenticeship weare any apparel, but of his master's cost, provision, or appointment." Court of Common Council, 21 January 1611, London, Guildhall Library.

<sup>25</sup>Rappaport, *Worlds Within Worlds*, 294.

maintained a veil of secrecy over the specific content of instruction.<sup>26</sup> This, they hoped, would protect the guild's exclusivity, prevent the encroachment of unaffiliated practitioners—such as the notorious itinerant healer, Valentine Russwurin—and maintain their practical *raison d'être*.<sup>27</sup> To that end, the Company's officials threatened to fine any master who taught “any parte of his arte to any other person then his apprentice.”<sup>28</sup>

Judging by the range of injuries and illnesses described in sixteenth- and seventeenth-century manuals, surgical apprentices encountered conditions that ran the gamut from broken bones to venereal disease. Whereas some ailments entailed performing tasks that required brute physical strength, such as amputation and bone-setting, more delicate procedures, including suturing and trepanning, required precision and manual dexterity. By observing and imitating their masters in the treatment of such conditions, surgical apprentices acquired both procedural competence and a solid grounding in medical theory.<sup>29</sup> In his treatise on the French Pox, for example, William Clowes reminded novice surgeons that the practice of letting blood not only required nimble hands, but also the ability to recognize larger holistic concerns, such as the “strength of the bodie, the constitution of the ayre, and the . . . place of the planets.”<sup>30</sup>

Along with the transmission of technical skills that incorporated instruction in physiology, pathology, and the semiotics of disease, the surgical apprenticeship was designed to uphold prevailing norms of patriarchal authority and ensure that both parties respected ideals of social order, standards of etiquette, and the corporate ethos the company's officers wished to uphold.<sup>31</sup> As members of a sizeable livery company, surgeons did not practice within an isolated medical landscape, but rather interacted with and defined themselves against other livery companies that were also subject to the influence of reputation in Elizabethan

<sup>26</sup>Farr, *Artisans in Europe*, 39.

<sup>27</sup>Russwurin's conflict-ridden relationship with members of the Barber-Surgeons' Company is explored in great detail by Deborah Harkness, *The Jewel House: Elizabethan London and the Scientific Revolution* (New Haven, CT: Yale University Press, 2007).

<sup>28</sup>“Briefe of Authority,” 1604, MS Sloane 1445, London, British Library, fol. 14v; hereafter BL Sloane followed by MS number.

<sup>29</sup>Treating even the most routine surgical procedures required some grounding in medical theory. See Christopher Lawrence, “Democratic, Divine, and Heroic: The History and Historiography of Surgery,” *Medical Theory, Surgical Practice: Studies in the History of Surgery*, ed. Christopher Lawrence (London and New York: Routledge, 1992) *Wear, Knowledge and Practice*.

<sup>30</sup>William Clowes, *A Briefe and Necessary Treatise* (London: Thomas Cadman, 1585), B3r.

<sup>31</sup>See Celeste Chamberland, “Honor, Brotherhood, and the Corporate Ethos of London's Barber-Surgeons' Company, 1570–1640,” *Journal of the History of Medicine and Allied Sciences*. Advance access, published on 1 April 2009 DOI 10.1093/jhmas/jrp005.

and Stuart London.<sup>32</sup> As a measure of merit based on the opinions of others, reputation served as the primary marker of social worth and credibility in London's competitive artisanal hierarchy. Like other city freemen, members of the Barber-Surgeons' Company fervently fought to maintain their social legitimacy by ensuring that master-apprentice relationships upheld the company's integrity and adhered to principles of patriarchal authority and social propriety.<sup>33</sup>

Although their authority was never complete, Company officials sought to ensure that the formative years of surgical training adhered to standards of practice and propriety by imposing fines, terminating apprenticeships, and reprimanding inattentive masters. Transgressions often involved some form of neglect, as evidenced by the complaint of Robert Wallis, a disheveled and malnourished apprentice, who, in 1601, lamented that his "master did not mayntayne him [with] sufficient meate, drynck and apparell."<sup>34</sup> The Court of Assistants subsequently terminated Wallis' indenture and permitted him to seek a more benevolent master.

Conversely, apprentices occasionally appeared before the court for disobeying their masters' orders or disregarding the terms of the apprenticeship agreement. These offences typically ranged from theft to sexual impropriety, but the most common complaints lodged against apprentices involved some sort of insolence. In 1601, for example, George Langton was censured "for his unreverent behaviour towards his master."<sup>35</sup> Some particularly impudent and lascivious apprentices even made sexual advances on women living in the master's household. The apprentice of John Staples, for example, was reprimanded by the Court of Assistants in 1573 for the "evyll behavior by hym comytted with his masters mayde."<sup>36</sup>

In seeking to remedy such misbehavior, the Company authorized masters to "impart moderate punishment upon apprentices that are . . . disobedient, and of evill behaviour."<sup>37</sup> The Court of Assistants

<sup>32</sup>See Rappaport, *Worlds Within Worlds*, 277–80.

<sup>33</sup>Cf. Kahl, *Development of London Livery Companies*; Unwin, *Gilds and Companies*; Valerie Pearl, "Change and Stability in Seventeenth-Century London," *London Journal* 5 (1979): 3–34; I. G. Doolittle, *The City of London and its Livery Companies* (Dorchester: Gavin Press, 1982); Patrick Wallis and Ian Anders Gadd, "Introduction," in *Guilds, Society and Economy in London, 1450–1800*, eds. Patrick Wallis and Ian A. Gadd (London: Centre for Metropolitan History, 2002), 1–14; and Christopher Lawrence, "Medical Minds, Surgical Bodies: Corporeality and the Doctors," in *Science Incarnate: Historical Embodiments of Natural Knowledge*, eds. Christopher Lawrence and Steven Shapin (Chicago: University of Chicago Press, 1988), 156–201.

<sup>34</sup>GL Court Minutes 1601; MS 5252/3, fol. 108v.

<sup>35</sup>GL Court Minutes 1601; MS 5257/3, fol. 60v.

<sup>36</sup>GL Court Minutes 13 October 1573; MS 5257/2, fol. 82v.

<sup>37</sup>BL Sloane MS 1445, fol. 15r.

typically disciplined wayward apprentices by exhorting them to replace any stolen property and to behave “well and honestly” or risk termination of their apprenticeship.<sup>38</sup> On occasion, however, they resorted to flogging as a means of mitigating the threat of disorder and restoring the apprentice’s submissiveness to senior Company officials. The mere sight of the cloak worn by the court-appointed flogger was enough to cause George Tether, a particularly unruly apprentice, to acquiesce with the humble promise “of his better service” in 1627.<sup>39</sup>

By emphasizing the moral upbringing of young apprentices and punishing impudence or “lewd and bad service,” the Company self-consciously conveyed an image deserving of respect and honor.<sup>40</sup> The setting of the apprenticeship was ideally suited for social disciplining and inculcating in young boys the importance of responsibility and obedience due to the prevalence of paternal authority and the juxtaposition of occupational and domestic space within the master’s household.<sup>41</sup> It was within this environment that the apprentice became a de facto member of the master’s family and developed a sense of self. This exercise not only prepared him for his own future paternal duties, but, more importantly, imparted to him larger social concerns with order and stability.<sup>42</sup> Rather than an independent kinship alliance in early modern Europe, the family was a microcosm of the larger social order due to its association with attributes of obedience and deference.<sup>43</sup> By integrating apprentices into their masters’ homes, the Barber-Surgeons’ Company not only trained novitiates to become proficient practitioners, but also molded them into obedient citizens and arbiters of social order.

The terms of the apprenticeship agreement implied that the apprentice owed his master filial obedience and respect, since their relationship was based on the deferential dynamic of the early modern father and son relationship. To that end, apprentices were treated like children regardless of age or background. For those trained by their

<sup>38</sup>GL Court Minutes 1601; MS 5257/5, fol. 60v.

<sup>39</sup>GL Court Minutes 7 August 1627; MS 5257/5, fol.

<sup>40</sup>GL Court Minutes; MS 5257/4, fol. 168v. Apprenticeship “was a moral and political socialization as much as it was an initiation to the trade.” Farr, *Artisans in Europe*, 34.

<sup>41</sup>See Steven R. Smith, “The Ideal and Reality: Apprentice-Master Relationships in Seventeenth-Century London,” *History of Education Quarterly* 4 (1981): 449–59.

<sup>42</sup>James Farr’s assertion that early modern society was “theoretically structured on the microcosm of the family” serves to underscore the connection between household and occupational affairs. Farr, *Artisans in Europe*, 33.

<sup>43</sup>See Robert Jutte, “Household and Family Life in Late Sixteenth-Century Cologne: The Weinsberg Family,” *Sixteenth Century Journal* 27 (1986): 165–82; Elizabeth Foyster, *Manhood in Early Modern England: Honour, Sex, and Marriage* (London and New York: Longman, 1999), and Helen Berry and Elizabeth Foyster, eds. *The Family in Early Modern England* (Cambridge: Cambridge University Press, 2007).

own fathers, this may not have been overly difficult.<sup>44</sup> For others, however, maintaining the façade of the dutiful child presented a serious challenge.<sup>45</sup> As evidenced by the frequency of masters and apprentices complaining about each other's misbehavior at the Barber-Surgeons' Company Court of Assistants, pledges of obedience and mentorship could be difficult to maintain. Within the Company's records, for example, is the case of William Webbe, an apprentice who became married and fathered children while still indentured to his master. Because apprentices were expected to adopt the role of obedient child and remain chaste and unmarried while in their masters' care, Webbe's behavior flouted the traditional hierarchy and code of conduct upon which the company built its authority and social legitimacy.<sup>46</sup> Webbe's affront was so egregious that Company officials discharged him from his apprenticeship and severed his ties to the company.<sup>47</sup>

### Ongoing Education: Barber-Surgeons' Hall

Inasmuch as Webbe's case reveals the severe repercussions of violating codes of apprenticeship conduct, his situation was exceptional and did not reflect the experience of most apprentices who completed their indenture and advanced to Company membership. Yet, the surgeon's education did not end with the conclusion of his apprenticeship. Budding practitioners who successfully completed their seven-year indenture were required to attend anatomical lectures offered four times a year and semiweekly surgical lectures organized by the Company in conjunction with the College of Physicians. Though typically delivered by university-educated physicians, the lectures afforded surgeons the opportunity to bolster their training and enhance their knowledge of "the booke and arte" within a setting that served as a viable alternative to the university.<sup>48</sup>

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<sup>44</sup>Roughly 8–10 percent of apprentices approved for Company membership were officially trained by their fathers. Some apprentices admitted through patrimony to the Barber-Surgeons' Company were trained in other occupations and gained admission to the Company by virtue of their family connections. See Young, *Annals*.

<sup>45</sup>Smith "Ideal and Reality," 452.

<sup>46</sup>According to Steve Rappaport, twenty-four was widely viewed by contemporaries as the age at which a man became an adult capable of marrying and fathering children. Rappaport, *Worlds Within Worlds*, 325.

<sup>47</sup>GL Court Minutes; MS 5257/3, fol. 83r.

<sup>48</sup>The Barber-Surgeons' Company made some attempts to entrust seasoned surgeons with the task of presenting the lectures after the death of erstwhile lecturer, Dr. Matthew Gwinne in 1627. The Company's control of the lectures, however, was relatively short lived when in 1632, Charles I ordered Dr. Andrewes, a physician, to perform the duty. See Young, *Annals*, 334.

Presented in English at Barber-Surgeons' Hall, the lectures conveyed to surgeons medical theories, procedural knowledge, and practical information about pathology, physiology, and the semiotics of disease "for the better performing of [their] duties" according to Alexander Read, a physician dually licensed as a surgeon who was appointed lecturer in 1632.<sup>49</sup> While improving standards of practice and building on the foundation acquired during the novitiate years of apprenticeship remained central goals of the surgical lectures, the lectures also served to buttress surgery's occupational esteem by reinforcing its antiquity and dignity, and bolstering homogeneity and uniform standards of practice among Company members.

In seeking to assert their authority over the surgeons, physicians viewed the lectures as an opportunity to enhance the theoretical foundations of surgical knowledge while reinforcing boundaries between the two medical occupations. Edward Edwardes, a seventeenth-century physician, exhorted surgeons not to become complacent in their training or "rest satisfied, as too many doe only what they have learned, by tradition from their masters."<sup>50</sup> He maintained, moreover, that lectures enabled surgeons to "persevere with the light of true knowledge," but reminded them not to venture into the "thrise worthy learned faculty of physick," which could only be officially performed by university-trained practitioners approved by the College of Physicians.<sup>51</sup>

In recent years, Harold Cook, Margaret Pelling, and Christopher Lawrence have explored the strained relationship between surgeons and physicians over the provision of internal medicine.<sup>52</sup> While surgeons strove to become more learned in the late sixteenth century, they occasionally transgressed the blurred boundaries between internal and external medicine and provoked the ire of the College of Physicians. Although physicians did not dispute that surgical education necessitated a breadth of theoretical training, they sought—with limited success—to restrict surgeons' work to the treatment of external conditions and prohibit them from prescribing internal remedies, which required advanced knowledge of physiology and disease theory.

As Margaret Pelling persuasively explains, even though surgeons regularly applied Galenic principles in their daily practice,

<sup>49</sup>Alexander Read, *Workes* (London: Richard Thrale, 1650), B1v.

<sup>50</sup>Edward Edwardes, *The Whole Art of Chyrurgery* (London: William Sheares, 1639), A2r-v.

<sup>51</sup>*Ibid.*

<sup>52</sup>For an overview of the organization and structure of the College of Physicians, see George Clark, *A History of the Royal College of Physicians of London 2 vols.* (Oxford: Clarendon Press, 1964). Margaret Pelling builds on the foundations established by Cook by exploring the emergence of conflict between the College of Physicians and so-called irregular practitioners. See *Medical Conflicts*.

physicians—who did not occupy any real political roles—defined themselves as the only legitimate interpreters of Galenic medical theory.<sup>53</sup> By prosecuting so-called irregulars who ventured into the physicians' territory of internal medicine, the College sought to sustain its identity and "keep up appearances" as the premier representative body of learned medicine.<sup>54</sup> Maintaining control over the surgical lectures enabled physicians, who drew rigid distinctions between the theory and practice of medicine, to assert their intellectual authority over the Barber-Surgeons' Company.

Notwithstanding squabbles over occupational boundaries, however, surgeons had little interest in usurping the intellectual authority of the physicians, who, similarly, did not seek to challenge the surgeons' expertise in external medicine or the civic status of the Barber-Surgeons' Company. Firmly rooted within the artisanal landscape of London, surgeons were far more interested in protecting their place within the guild-dominated civic hierarchy, training competent surgeons, and fighting the encroachments of unlicensed practitioners than butting heads with the physicians, who had little involvement in the city's public life or artisanal hierarchy.

While analyses of the relationship between knowledge, practice, and occupational boundaries between surgeons and physicians have shed much light on the complexities and contradictions of the competitive medical landscape in early modern London, they tend to be less clear about the specific ways in which the Barber-Surgeons' Company's pedagogical approaches and post-apprenticeship training strategies reflected larger concerns with identity formation and the intricacies of experiential learning. Rather than being solely indicative of tensions embedded within the physicians' efforts to assume control of surgical training and the surgeons' desire to further the cause of learned surgery, the lectures reveal that surgeons remained committed to asserting their occupational legitimacy independent of the physicians and building their expertise in both the book *and* the art of surgery. By distinguishing their skill from "common practisers" dependent "on the pleasure of fortune" and reinforcing standards of practice and comportment for member surgeons, the Barber-Surgeons' Company sought to erect distinct occupational boundaries and reinforce the inseparable theoretical, practical, and experiential elements of their training.<sup>55</sup> As William Crow, a senior Company surgeon, asserted in praise of his

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<sup>53</sup>See Pelling, *Medical Conflicts*, 55.

<sup>54</sup>*Ibid.*, 55.

<sup>55</sup>George Baker, *The Composition or Making of the Most Pretious Oil Called Oleum Magistrale* (London: John Alde, 1574). See Chamberland, "Honor, Brotherhood and the Corporate Ethos."

colleague William Clowes, “reason with experience joined, a perfect artist make.”<sup>56</sup>

Open only to members of the Barber-Surgeons’ Company, the surgical lectures represent one of the fundamental ways in which guild-sanctioned surgical education diverged from other artisanal training programs, which typically lacked formal educational requirements beyond apprenticeships and the cultivation of technical skill within the shops of London. Because the lectures communicated to surgeons the preciously guarded mysteries of the trade and affirmed the distinction of surgical knowledge, attendance was compulsory for all freemen, and the Company took great pains to restrict access to the lectures and deny entrance to any “woman practiser or mountebank.”<sup>57</sup> In 1606, Company officials furthermore prohibited the attendance of unqualified practitioners who, they contended, “have little or noe skill at all in the arte of surgerie and thereby comit maney errours to the great disparagement of the worthie and experienced professors thereof.”<sup>58</sup> This measure provided a means of restricting access to Company members and underscoring the exclusivity and prestige of the surgical lectures, which served to bolster the foundational knowledge achieved through apprenticeship.

Whereas imitation and hands-on training formed the focus of the apprentice’s training, the lectures employed pedagogical strategies involving oral instruction and visual demonstration, and generally focused on vernacular translations of ancient medical texts, anatomical commentary, or discussions of specific ailments surgeons would encounter in their daily practice. In the case of the four annual anatomical lectures, instruction was based on the dissection—over the course of three days—of a “public body,” a term which referred to the corpse of an executed criminal.

Described by Horatius Morus as “an arte which teacheth an artefiiall dissection of mans bodye,” anatomy was an integral component of a surgeon’s education in the sixteenth and seventeenth centuries.<sup>59</sup> Since their duties necessitated contact with and manual manipulation of patients’ bodies, surgeons were privy to the body’s inner mysteries. In particular, accurate knowledge of the body’s structure was crucial in the treatment of wounds and fractures. Alexander Read, for example, placed great emphasis on the importance of anatomical knowledge in the treatment of gunshot wounds, which had been unknown to the ancients. Read claimed that “the chirurgeon [should] be a good anatomist

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<sup>56</sup>William Crow, “Dedicatory” in William Clowes, *A Short and Profitable Treatise* (London: Thomas East, 1579), sig. A7v.

<sup>57</sup>GL Court Minutes; MS 5257/5, fol. 118r.

<sup>58</sup>GL Court Minutes; MS 5257/3, fol. 282r.

<sup>59</sup>BL Sloane MS 759, fol.1r.



and know the name of the part: for so hee shall bee able to know which way weapons, or such extraneous bodies are to be drawne out.”<sup>60</sup> Due to the profusion of naval battles during the late sixteenth century, such knowledge proved to be an increasingly important component of the surgeon’s repertoire.

Whereas the anatomical lectures, which were dependent on the provision of available corpses, emphasized knowledge of the body’s structures, more frequent, semiweekly surgical lectures provided further grounding in the etiology and treatment of specific conditions, such as ulcers, tumors, or wounds. Read’s *Treatise of Wounds*, a compilation of his lectures delivered at Barber-Surgeons’ Hall in the early 1630s, included thirty-three separate lectures concerning wounds. Ranging in complexity from “the means of staying an immoderate flux of blood” to “wounds made by a poisoned weapon,” Read’s lectures covered the full spectrum of causes, treatments, and complications drawn from sources of contemporary and ancient medical knowledge, including Galen, Hippocrates, Vesalius, and Paré.<sup>61</sup> In his lecture on treating injuries “in the muscous part” caused by bullet or arrowhead, Read advised surgeons to consider the patient’s temperament and draw on their anatomical expertise in determining “how deeply the weapon hath pierced” before detailing the procedure for removing the offending object with “a blume-hook to lift up a vein, artery or nerve.”<sup>62</sup>

Although they served to further surgeons’ technical training and proficiency, lectures also emphasized the ancient heritage and intellectual foundations of surgical practice. Most lecturers underscored the authority of ancient and medieval masters while intimating and critiquing the achievements of contemporaries like Ambroise Paré.<sup>63</sup> Read, in particular, frequently made reference to the Hippocratic aphorisms and, in the process, reminded pupils of the “antiquity and dignity of chirurgery.”<sup>64</sup> Edward Edwardes, moreover, exhorted Company members to behave in a manner befitting the “thrice worthy, excellent

<sup>60</sup>Alexander Read, *Treatise of the First Part of Chirurgery* (London: Richard Thrale, 1638), 21.

<sup>61</sup>*Ibid.*, A4r.

<sup>62</sup>Read, *The Whole Practice*, 248–50.

<sup>63</sup>Alexander Read, in particular, was especially critical of Paré’s use of ligature following the amputation of limbs, which he deemed inferior to the practice of cautery. “[T]he second is the deligation of the vessell which sendeth forth blood, whether it be veine or artery: this is to be used when great vessels are wounded. Ambrose Parey lib I l.c.20 would have this meane to be used after the amputation of a member, whom you may reade: but in my judgment his practice is but a troublesome and dangerous toy.” Read, *Treatise of the First Part*, 12. This footnote requires more explanation for the reader.

<sup>64</sup>Read, *Treatise of the First Part*, 2. The lectures reflected the influence of the “anatomical renaissance” of the sixteenth century, which was based on the desire to return to original sources as a mode of reforming medicine “according to ancient Greek

and needful faculty of chyrurgerie.”<sup>65</sup> By reinforcing the honorable dimensions and intellectual heritage of surgery, the lectures enabled the Barber-Surgeons’ Company to differentiate the training of member surgeons from those who lacked a solid grounding in the book and art. This practice also afforded Company officials the opportunity to erect occupational boundaries and assert—at least in theory—some control over the transmission of surgical knowledge.

### The Booke of Surgery

In spite of the Company’s efforts to limit and regulate surgical education, the printed word fostered the unfettered transmission of surgical knowledge beyond the semiprivate space of the Barber-Surgeons’ Hall and the household shops of London’s surgeons. In the sixteenth and seventeenth centuries, a wealth of surgical and anatomical texts authored by English and Continental surgeons emerged from presses in London, particularly during an upsurge of medical publishing in the 1580s.<sup>66</sup> Such texts may have represented a small component of the printed material in circulation, but they played no small role in cultivating the distribution of surgical knowledge.<sup>67</sup>

Although general literacy rates in the sixteenth and seventeenth centuries are difficult to determine, they are particularly problematic in the case of surgeons.<sup>68</sup> Due to wide disparities in educational opportunity, reading and writing competence varied tremendously among

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principles.” Andrew Cunningham, *The Anatomical Renaissance: The Resurrection of the Anatomical Projects of the Ancients* (Hants: Scolar Press, 1997), 3.

<sup>65</sup> Edward Edwardes, *The Analysis of Chyrurgerie* (London: F. Constable, 1636), A2r.

<sup>66</sup> See Elizabeth Lane Furdell, *Publishing and Medicine in Early Modern England* (Rochester: Rochester University Press, 1992).

<sup>67</sup> Mary Fissell asserts that “vernacular medical books became a stable category of publication” after 1640. See Fissell, “The Marketplace of Print,” 112–13. According to Elizabeth Eisenstein, print increased accessibility of information and transformed channels of communication. *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe* (Cambridge: Cambridge University Press, 1979) and “Unacknowledged Revolution,” *American Historical Review* 1 (2002): 87–105. Adrian Johns contends that Eisenstein’s assertions are overstated and do not adequately take into account shared practices of reading and the difficulty of conveying experimental skills through print. “How to Acknowledge a Revolution,” *American Historical Review* 1 (2002): 106–25 and *The Nature of the Book: Print and Knowledge in the Making* (Chicago: University of Chicago Press, 2000).

<sup>68</sup> Some scholars argue that the ability to sign one’s name serves as an “intermediary indicator between ability to read and ability to write.” See Roger Schofield, “The Measurement of Literacy in Pre-Industrial England,” in *Literacy in Traditional Societies*, ed. Jack Goody (Cambridge: Cambridge University Press, 1968): 323–24. Based on this assumption, David Cressy contends that the illiteracy rate hovered around 70 percent among men in mid-seventeenth-century England. “Literacy in Seventeenth-Century England: More Evidence,” *Journal of Interdisciplinary History* 8 (1977): 149; and “Levels of Illiteracy.” Margaret Ferguson argues that Cressy’s methodology excludes women

London's surgeons. The Company attempted to enforce standards of literacy from time to time, but generally recognized that requiring Latin literacy would render most apprentices and Company freemen ineligible for membership. Some surgeons, such as William Clowes and John Woodall, were fully literate in Latin and English and authored influential surgical texts, but others could neither read nor write, particularly those who specialized in particular procedures.<sup>69</sup> Despite—and partially in response to—the existence of unlettered practitioners, the Barber-Surgeons' Company encouraged vernacular reading competence among its members.

Published in the vernacular “because every one hath not the gift of languages,” printed surgical manuals further stimulated the circulation of medical ideas beyond the exclusive domain of the universities and the College of Physicians. Rather than assuming the authority of contemporary Latin authors, however, most surgical writers adamantly defended their use of the vernacular. Thomas Vicary, for example, asserted that his work lacked “the sugred eloquence of the Latine and Greeke tongues,” but was nevertheless “onely grounded upon reason and experience which are two principall rootes of physicke and chyrurgeryie.”<sup>70</sup> Like Vicary, the Company's masters clearly recognized the valuable educational potential of vernacular surgical texts, as evidenced by Edward Caldwell's presentation of “the bookes of Horatius Morus tables translated into English” to the Company in 1640 “to be distributed amongst the professors of chirurgery freemen of this company.”<sup>71</sup> Inasmuch as some members of the Company never learned to read or write, the distribution of Morus' *Tables* suggests that many were in fact literate enough to read or participate in shared reading practices.

Circumscribed in scope by matters of accessibility and practical limitations, print was not the sole or the primary means of conveying surgical knowledge in the sixteenth and seventeenth centuries; medical knowledge could be communicated far more cheaply through word of mouth and manuscript collections.<sup>72</sup> Despite obstacles such as literacy and cost, however, books offered an effective complement to the hands-on practical instruction of apprenticeships and the weekly lectures. Surgical authors envisioned their work as a means of obtaining public recognition and improving standards of surgical care, but in penning treatises, they encountered a tension between their goal of enhancing

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and nonelites for whom the absence of a signature was not necessarily due to illiteracy, but a more complex set of social factors. See *Dido's Daughters*.

<sup>69</sup>Wear, *Knowledge and Practice*, 231.

<sup>70</sup>Thomas Vicary, *The Englishman's Treasure* (London: Thomas Creede, 1596), A3r.

<sup>71</sup>GL Court Minutes 1604; MS 5257/3, fol. 194v.

<sup>72</sup>Wear, *Knowledge and Practice*, 50.

the education of Company surgeons and the unfettered transmission of surgical knowledge to a much wider lay audience. Because they viewed their printed work not as a replacement for, but as an extension of the skills and knowledge attained through lectures and apprenticeships, surgical authors tackled this thorny issue by balancing claims of public utility with clear assertions about the inseparable practical, experiential, and intellectual cornerstones of surgical education. Thomas Vicary, for example, directed his treatise to “the studious reader” to “reape singular commodity,” but reminded his audience that “for all things belonging to chirurgerie may not be written, nor with letters set foorth.”<sup>73</sup> In his treatise on the struma, William Clowes likewise advised his readers that they could not presume to become surgeons simply by reading his book. He contended that it was “unpossible in the whole course of man’s life . . . that hee is able without great care, study and much diligence, to labour commendable . . . in the vineyard of chirurgery.”<sup>74</sup> In explaining his intentions, Clowes asserted that he penned his treatise neither for experienced senior surgeons nor ignorant empirics, but for the “benefit of all young students in the art.”<sup>75</sup>

Like Clowes, George Baker made it clear that his surgical manual was intended to complement the foundational training of surgeons already versed in the medical theory of Hippocrates and Galen, without which they would “never understande what they reade nor make any perfecte worke.”<sup>76</sup> John Bannister further expounded on the great damage caused by the “idle idiots and erroneous asses,” who practiced “this arte of greate difficultie” without knowledge of “the nature and names of diseases, simples, rootes, plantes, partes of mans bodie and a thousand things more.”<sup>77</sup> Clement Hooper, likewise, linked the practice of surgery to “the saying of the wise philossipher Plato that things good are difficult” and further maintained that “there is nothing harder than chirurgery,” since it required technical expertise, a mastery of anatomical knowledge, and a solid grounding in medical theory.<sup>78</sup>

Most late-sixteenth-century and early-seventeenth-century surgical texts offered general descriptions of the surgeon’s duties, and, like surgical lectures, incorporated anatomical and theoretical knowledge based on Galenic principles. Galen, who Vicary described as “the

<sup>73</sup>Vicary, *Englishman’s Treasure*, 4.

<sup>74</sup>William Clowes, *A Right Frutefull and Approved Treatise* (London: Edward Alde, 1602), B4v.

<sup>75</sup>Clowes, *A Prooved Practice* (London: Thomas Orwyn for Thomas Cadman, 1588), B1v.

<sup>76</sup>George Baker, *The Newe Iewell of Health* (London: Henrie Denham, 1576), \*3r.

<sup>77</sup>John Banister, *A Needefull, New and Necessarie Treatise* (London: Thomas Marsh, 1575), \*6r-v.

<sup>78</sup>BL Sloane MS 364, fol. 4r.

lanterne of all chyrgions,” provided the voice of ancient authority for *The Englishman’s Treasure*.<sup>79</sup> In addition to anatomical knowledge, Vicary’s treatise also provided readers with a list of instruments, herbs, and medicines necessary “for every chirurgion to have in a readinesse” and a delineation of maladies commonly faced by surgeons and the best course of treatment.<sup>80</sup> In the case of a bleeding wound, for example, Vicary offers the following instructions:

First, stitch the wound close, then cast thereon man’s blood, and binde it somewhat hard, so let it remained foure and twenty houres: and when you unbind it, take heed you remove nothing, and cast thereon more dried blood, and annoynt it round about.<sup>81</sup>

Although it provides detailed advice for the completion of fundamental surgical procedures, Vicary’s text reveals the limitations of print and underscores the necessity of practical training. His instructions assume the reader possesses sufficient knowledge to perform the task of stitching a wound, a skill communicated more successfully through the experiential training of the apprenticeship.

Whereas printed surgical manuals facilitated the transmission of procedural knowledge and served as useful reference tools, they also afforded surgical authors an opportunity to reinforce the moral standards to which, they contended, young practitioners should aspire. Thomas Vicary remarked that every surgeon ought to be “well-mannered; and that he be no spousbreaker, nor no drunkarde . . . likewise a chirurgion must take heede that he deceive no man with his vayne promises . . . Amongst other things they maye neither be flatterers, nor mockers, nor privy backbiters of other men.”<sup>82</sup> William Clowes furthermore exhorted fellow surgeons to treat their patients with dignity and respect in accordance with tradition. He asserted that “it is not our functions or callings . . . to reveale the secrets of our patients, as we are taught by the ordinances of our elders.”<sup>83</sup> For Clowes and Vicary, the moral instruction of junior surgeons was inseparable from other components of their education and served to bolster the esteem and honor of their occupation by preventing transgressions of propriety or decorum.

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<sup>79</sup>Vicary, *Englishman’s Treasure*, A4r.

<sup>80</sup>Ibid.

<sup>81</sup>Ibid., 74.

<sup>82</sup>Ibid., A3v.

<sup>83</sup>Clowes, *Prooved Practice*, P2v.

## Experience in the Wars

Like his seasoned colleagues, John Woodall, erstwhile naval surgeon and senior Barber-Surgeons' Company official, sought to uphold standards of propriety and technical competence among junior members of his occupation by publishing surgical texts for those who had "received their first rudiments as apprentices, yet nevertheless . . . were wanting of some further helpes for their proficiencie."<sup>84</sup> This endeavor, Woodall claimed, was of particular benefit to young surgeons pressed into military service who "by reason of their youth and lacke of practise have not attained to that perfection of knowledge that were requisite, yet nevertheless are employed in the East India and other voyages."<sup>85</sup> As evidenced by the case of Richard Hallyday, the presence of a surgeon's mate lacking adequate training or experience could prove particularly disastrous at sea. Hallyday, a "mariner," complained to the Court of Assistants in 1598 that "hee was dismembred of his arme and . . . in great danger of life" due to the actions of an insufficient man not approved to serve as a surgeon at sea.<sup>86</sup> Woodall contended that such tragedies could be prevented by ensuring that sea surgeons received adequate provisions and training in the treatment of traumatic injuries.

Though typically renowned for their association with the emergence of Paracelsian chemical medicine, Woodall's surgical writings underscore the existence of a significant yet widely overlooked site of surgical knowledge and experiential training for English surgeons far beyond the shops and households of London.<sup>87</sup> With the expansion of England's naval fleet and the profusion of war casualties during the various battles of the sixteenth and seventeenth centuries, ships and battlefields provided ample practical training opportunities for young surgeons, who were increasingly pressed into service in the Elizabethan and early Stuart era.<sup>88</sup> It stands to reason that within combat settings, surgeons encountered and developed the skills to treat a range of traumatic injuries they might rarely see in the shops of London.<sup>89</sup> Although

<sup>84</sup>John Woodall, *The Surgion's Mate or Military and Domestique* (London: Nicholas Bourne, 1637), A3v.

<sup>85</sup>John Woodall, *Surgion's Mate*, ¶35.

<sup>86</sup>GL Court Minutes March 1598; MS 5257/3, fol. 6r.

<sup>87</sup>See Allen Debus, *The Chemical Promise: Experiment and Mysticism in the Chemical Philosophy, 1550–1800* (Sagamore Beach: Science History Publications, 2006); *The English Paracelsians* (New York: F Watts, 1966).

<sup>88</sup>See James D. Alsop, "Sea Surgeons, Health, and England's Maritime Expansion," *The Mariner's Mirror* 76 (1990): 215–22; James Watt, "Surgeons of the Mary Rose: The Practice of Surgery in Tudor England," *The Mariner's Mirror* 69 (1983): 3–19.

<sup>89</sup>Lorraine White, "The Experience of Spain's Early Modern Soldiers: Combat, Warfare and Violence," *War in History* 9 (2002): 1–38, John Hale, *War and Society in Renaissance Europe 1450–1620* (London: Sutton, 1985), and John Keevil, *Medicine and the Navy, 1200–1900* (Edinburgh: E & S Livingstone, 1987).

the accomplishments of esteemed French military surgeon Ambroise Paré undoubtedly laid the foundations for naval and military medicine in the sixteenth and seventeenth centuries, English surgeons who began their careers in the wars and at sea built on Paré's innovations by penning treatises reflecting their personal experiences treating wounded soldiers and sailors and the hands-on training such circumstances warranted.<sup>90</sup>

According to William Clowes, who began his career in 1563 in the Earl of Warwick's expedition to Normandy, "wounds received in the wars" were so complex that they were often "geven over and forsaken of very good surgeons." Clowes asserted that even the most seasoned London surgeon had little experience treating the "intricate fistulas . . . with corruption of the bones" that often accompanied gunshot wounds.<sup>91</sup> In *A Prooved Practice*, a surgical manual inspired by his forays into military medicine, Clowes describes in graphic detail the injuries he encountered, the failures of less experienced surgeons, and the knowledge and expertise in treating traumatic injuries gleaned through his years of front line experience. In the case of two men grievously burned by gunpowder, for example, Clowes asserts that after he was summoned by a "gentlewoman" who was "fearfull to meddle" with their condition due to her lack of experience, he successfully restored them to health with an unguent of his own creation that he had "infinite times approved in many cures . . . burned with gunpowder."<sup>92</sup> In some respects, Clowes' account clearly exposes his desire to gain public recognition by trumpeting his own success and fashioning a heroic identity, but it also reveals that his own experiential training was directly enhanced by his duties in combat.<sup>93</sup>

With the intent of improving the training and equipping of surgeons destined for naval or military service, Woodall, like Clowes, reflected on his experiences on the battlefields of Normandy and his duties as Surgeon-General of the East India Company in writing his treatises, *The Surgeon's Mate* and *Woodall's Viaticum: the Path-Way to the Surgions Chest*. Though naval and military surgeons ordinarily received basic training as apprentices prior to their ventures at sea and on the battlefield, their initial duties as surgeons' mates required further instruction in the treatment of injuries typically sustained in combat

<sup>90</sup> See Laurence Brockliss and Colin Jones, *The Medical World of Early Modern France* (Oxford: Oxford University Press, 1997).

<sup>91</sup> William Clowes, *Profitable and Necessarie Booke* (London: Edm. Bollifant for Thomas Dawson, 1596), 22.

<sup>92</sup> *Ibid.*, D1v.

<sup>93</sup> See Celeste Chamberland, "Between the Hall and the Market: William Clowes and Surgical Self-Fashioning in Elizabethan London," *Sixteenth Century Journal*, 41 (2010): 69–89.

settings, particularly “the curing of wounds either with Gun-shot or other casualties.”<sup>94</sup> For Woodall, gaining expertise in the treatment of such infirmities enhanced surgeons’ practical and procedural knowledge and contributed a necessary “utilitie . . . to the Common-wealth for the saving of the lives and limbs of his Highnesse subjects in time of warre.”<sup>95</sup>

Though the advancement of technical and experiential skill formed the focus of Woodall’s advice to sea surgeons and surgeons’ mates, he recognized that standards of decorum and hierarchy remained cornerstones of their education. Like apprenticeships, the training of sea surgeons’ mates reflected larger social concerns with order, obedience, and the rhetoric of patriarchal authority. Inasmuch as the settings of military and naval surgery existed far from the streets of London and the jurisdiction of the Barber-Surgeons’ Company, the relationship between the surgeon’s mate and his master mimicked the domestic partnership of surgical households. Woodall exhorts the surgeon’s mate to behave “wisely, lovingly and diligently” toward his master, and likens his duty to the obligations of “the wife to her husband.”<sup>96</sup> Just as training networks in Barber-Surgeons’ Hall and the household shops of London’s surgeons emphasized principles of mentorship, obedience, and mutual obligation, so too did the instruction of surgeons’ mates reflect the Company’s goal of educating practitioners who were proficient in technical skill, mindful of surgery’s esteemed intellectual heritage, and dutiful representatives of their occupation.

## Conclusion

By exploiting the medium of print to enhance the occupational competence and comportment of his young colleagues, John Woodall sought to reinforce the legitimacy of his occupation and bolster the educational goals of the Barber-Surgeons’ Company. Though Woodall understood that wisdom, experience, and technical expertise remained cornerstones of surgical education, he also recognized that the training program envisioned by the Barber-Surgeons’ Company reflected the distinct needs of an artisanal group that derived its identity from “the booke and arte,” a convergence of textual tradition, practical experience, and the unique role of treating—through direct manual manipulation—diseased and injured bodies. Although scholarly work in the history of medicine traditionally has studied surgeons exclusively in relation to the university-based traditions of their physician counterparts, such

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<sup>94</sup>Woodall, *The Surgion’s Mate*, C2r.

<sup>95</sup>Ibid., B4v.

<sup>96</sup>Ibid., B6r.



approaches have failed to acknowledge the rich, multimodal training program that became a signature of the Barber-Surgeons' Company's occupational identity. From the shops of London to the battlefields of Normandy, surgical education was an amalgam of pedagogical methods rooted within a social and cultural context in which occupational success was inextricably linked to prevailing principles of duty and propriety.

Because the Company's officials sought to retain social legitimacy, improve standards of care, and prevent the encroachments of unskillful and unlicensed practitioners that would infringe on their authority, they endeavored to erect occupational boundaries by restricting access to privileged knowledge and imbuing fledgling surgeons with the roles and responsibilities they would adopt as members of the Company. Though the Company's records reveal that these educational goals were, to a certain extent, hindered by disobedient apprentices, negligent masters, and the diffusion of surgical knowledge through the printed word, they also demonstrate that in the era of surgery's nascent pre-professionalization, the development of semiformal training networks played a central role in the identity formation of the Barber-Surgeons' Company and served as an important matrix through which Company officials asserted jurisdictional claims over their occupation. Their efforts to regulate and standardize the training of member surgeons by integrating social disciplining practices in tandem with practical and experiential pedagogical strategies not only enabled them to maintain occupational legitimacy and stability within the Company's ranks, but also to attain a considerable degree of autonomy and assert an emergent corporate social status within London's theretofore largely unregulated medical landscape.