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# The Anatomical Renaissance

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#### The Anatomical Renaissance

The mystical element of the human cadaver has long determined how people would interact with it. Ancient cultures often feared the wrath of a higher power arising from an investigation into the sanctity of the human corpse, a fear that for the most part stemmed from religious traditions. While sporadic autopsies offered rare glimpses of the body's inner cavities, people generally avoided the cadaver altogether so as not to disrupt the spiritual elements at work in the afterlife.<sup>1</sup> Without ever directly saving so. The Roman Catholic Church was one of the leading authorities in discouraging the practice of anatomical dissection, and its power and resources spread that notion quickly throughout Europe. The Church firmly positioned itself against those who heralded such exploration of the body, bound by the belief that it was sacrilegious to explore what God had deliberately masked from the naked eye. As early as the third century A.D. the Christian author Tertullian proclaimed his disgust for the practice of anatomical exploration. Throughout his work *de anima*, he refers to the anatomist as a "lanius," the Latin word for "butcher." His usage of this word to describe the imminent profession established exploration of the body as abhorrent and ignominious, portraying a sentiment that the Clergy would largely adapt and perpetuate throughout the next twelve centuries.<sup>2</sup> It was not until the dawn of the Italian Renaissance that human anatomical dissection even came to be considered an allowable and beneficial exercise for increasing knowledge of medicine and

<sup>&</sup>lt;sup>1</sup> Carlino, Andrea, *Books of the Body: Anatomical Ritual and Renaissance Learning*, trans. John Tedeschi and Anne C. Tedeschi (Chicago: University of Chicago Press), 156.

<sup>&</sup>lt;sup>2</sup> Ibid., 169.

understanding of the body. The widespread thirst for a more scientific understanding of the natural world that underscored the Renaissance brought about an increase in secular authorities. The rise of new scientific necessities, universities, scholastic movements, and artistic expressions allowed for scholars, particularly those in Northern Italy, to explore the subject of anatomy with greater freedom. Each of these factors contributed to the proliferation of anatomical dissection throughout the Italian medical field, and the accompanying acceptance of the cadaver as an important component in understanding the body's functions.

The teachings of the empiricists contributed greatly to the hostile sentiment towards anatomy in early centuries, as the Greek philosopher Celsus showed in his second century text *De Medicina*. Celsus recorded the empiricist's arguments against anatomy, which arose from their beliefs in its inherent foulness (*foeditas*) and inefficacy.<sup>3</sup> The empiricists condemned dissection and called for its elimination from medical practice because it could not be categorized as useful in studying the course of disease. More importantly, the empiricists believed that once death set in the organs immediately underwent changes that made them too different from live organs to be pertinent for observation.<sup>4</sup> While the empiricists never assigned the word "disgust" to human dissection as Aristotle did in his work *De Partibus Animalium*, they did agree on the "repugnance" of dissection and referred to the entire practice with great unease.<sup>5</sup> Their only understanding of anatomy was gained from encounters with seriously injured men whose organs were visible as a result. Because the men were still breathing, these experiences were deemed useful since observation of the living organs could give important anatomical awareness of diagnostic and therapeutic procedures that could potentially benefit others.<sup>6</sup> Despite

<sup>5</sup> Ibid., 156.

<sup>&</sup>lt;sup>3</sup> Ibid., 163.

<sup>&</sup>lt;sup>4</sup> Ibid., 157-159.

<sup>&</sup>lt;sup>6</sup> Ibid., 160.

this rudimentary knowledge, the empiricists offered the fundamental arguments against anatomical dissection that later Christian writers would expound in terms of their religious views.

Many Christian writers cited the moral and ethical arguments against anatomy first penned by the empiricists. In his fourth and fifth century works De civitate Dei and De anima et eius origine, St. Augustine wrote that anatomists "have not humanely, but in human flesh, explored every secret place in order to gain new information about such parts and the kind of treatment to employ, and in what place."<sup>7</sup> This statement was accompanied by many assertions of the uselessness of dissection because its goal was to elucidate divine secrets, and such goals are never achievable.<sup>8</sup> St. Vindicianus similarly added his voice to the denunciation of anatomy, reporting that, "humanity itself prohibits doing [dissection], since all things would be manifest and fully open to those conducting the examination."<sup>9</sup> Both Augustine and Vindicianus, representing the wider Christian community, reasoned that all which could not be visibly seen on the body had been purposely hidden by God from human eyes and therefore humans did not have the right to interfere.<sup>10</sup> Many Christian leaders in the early centuries felt that dissection transgressed universal human codes that dealt with the sacredness of the dead, the virtue of the body, and the contagion that resulted from contact with blood or death.<sup>11</sup> Despite these arguments against anatomy, the Christian writers never formally prohibited it; rather their works

<sup>&</sup>lt;sup>7</sup> Autustine of Hippo, *De civitate Dei contra paganos*, 22: 24. Taken from Saint Augustine, *the City of God Against the Pagans…with an English Translation by William M. Green*. The Loeb Classical Library, 417. (Cambridge, MA, and London, 1972) p. 33.

<sup>&</sup>lt;sup>8</sup> Ibid., 7.

<sup>&</sup>lt;sup>9</sup> Vindicianus, *Gynaecia*, in K. Sudhoff, *Archiv fur Geschichte der Medizin* 8 (1915): 417-18 (cited by H. von Staden, *Herophilus*, T64a, p. 189).

<sup>&</sup>lt;sup>10</sup> Carlino., 166.

<sup>&</sup>lt;sup>11</sup> Ibid., 169.

delineated the cruelty and inefficacy of dissection and its inherent repugnance.<sup>12</sup> Ultimately, the study of anatomy in the early centuries was hindered because:

medicine had not yet succeeded in providing a sufficiently convincing theory and a paradigm to justify the study of anatomy based on the direct observation of the whole human body. The limits of knowledge, mentioned with regard to the Christian texts, could not be pushed forward in such a way as to circumvent moral and anthropological obstacles.<sup>13</sup>

For the most part, people shied away from dissecting the body because cultural taboos set forth the idea that such mutilations would follow the person into the afterlife.<sup>14</sup>

Though the Roman Catholic writers exhibited a strong aversion to study of the body, it could not be avoided altogether. The need for autopsy in large part prevented encounters with human organs from becoming extinct. Usage of the autopsy proved the most important model for the establishment of dissection's efficacy. Since autopsy was necessary for unequivocally establishing cause of death, it was thus lacking the "cruelty" that plagued simple dissections.<sup>15</sup> In the beginning of the fourteenth century, autopsy came to be acknowledged as a practice that was beneficial both for determining mysterious causes of death, but also for reasons that benefitted the public. Historian Katharine Park points out that the first recorded case of autopsy to determine cause of death occurred in Italy in 1286. An epidemic of deaths was occurring in both humans and hens, and a physician called for both the hens and a human to be opened for study. It was found that both had a vesicular aposteme on the tip of their heart, and thus the physician issued a warning against eating chicken and eggs.<sup>16</sup> In this case, autopsy and investigation of the body served as tool to aid public health and preserve the lives of others. By

<sup>&</sup>lt;sup>12</sup> Ibid., 168.

<sup>&</sup>lt;sup>13</sup> Ibid., 170.

<sup>&</sup>lt;sup>14</sup> Roger French, *Dissection and Vivisection in the European Renaissance* (Ashgate: Aldershot, 1999), 8.

<sup>&</sup>lt;sup>15</sup> Ibid., 178.

<sup>&</sup>lt;sup>16</sup> Katharine Park, "The Criminal and the Saintly Body: Autopsy and Dissection in Renaissance Italy," *Renaissance Quarterly* 47, no. 1 (1994): 4.

the time of the fifteenth century, autopsy had become so common that patients often asked their physicians to perform autopsies on them postmortem, implying a trust in the fact that opening the body would not correspond with a supernatural wrath. This was the case of the Florentine patrician Bartolomea Rinieri in 1486. She struggled for months with a diseased womb, and upon her autopsy it was discovered that her womb was completely calcified.<sup>17</sup> Park points out that "Bartolomea's story was typical; a patrician who could afford the best in medical care, she requested her own postmortem. In many such cases, the initiative came from the patient or his or her family, and the reason most commonly invoked was the fear of hereditary disease."<sup>18</sup> This suggests that people were acknowledging the body as an important tool in understanding illness and afflictions. Autopsy was also used for other purposes. Throughout the fourteenth century it became increasingly common, especially in Bologna, to use autopsy for forensic purposes as well. Often, a judge would order the opening of a body to determine if poison or another substance was the underlying cause of death in questionable cases. In 1302, the autopsy of Azzolino degli Onesti became the first case in which such a practice was recorded. The two physicians and two surgeons who performed the autopsy at the judge's command determined that Azzolino died not from poison but because of natural causes.<sup>19</sup> Autopsy was proving to be useful in ameliorating public health and in matters of justice too; applications whose advantages the authority figures could no longer overlook. In the process, those who oversaw the postmortem autopsies accumulated more anatomical knowledge. In this sense, autopsy provided the necessary bridge between viewing dissection as a worthless practice and finally acknowledging it as useful. Autopsy was performed on the corpse for a specific purpose and to acquire specific information, and was therefore exempt from the inefficacy that empiricists

- <sup>17</sup> Ibid., 8. <sup>18</sup> Ibid., 9.
- <sup>19</sup> Ibid., 5.

assigned to dissections.<sup>20</sup> Once autopsy broached the cloak of mystery surrounding the body, a renewed interest in anatomical dissection was able to flourish.

With autopsy becoming increasingly popular, doctors and surgeons became receptive to using the more comprehensive and invasive dissection in order to complete more accurate autopsies. Doctors needed a conception of human norms that would enable them to discern anatomical and physiological anomalies or normalities that occurred during an autopsv.<sup>21</sup> Though autopsy was considered much more important than dissection, the doctors and surgeons came to realize that in order to perform an realistic autopsy, they had to be aware of the fluctuations that occurred between the organs from one body to the next. They needed to establish an accepted range of what should be considered normal in an autopsy, and it is for this reason that in the same early years of the fourteenth century when autopsy became a popular practice, there was also a documented rise in the number of dissections performed.<sup>22</sup> These dissections were most likely used for teaching purposes at the University of Bologna, and because dissection was increasingly believed to have a specific purpose, if only to establish norms of the body, it began to be used as a didactic instrument as well. There was a marked difference still in autopsy and dissection, and people in the academic world again had to readjust their pre-existing prejudices against dissection in order for it to be used as a teaching method. Park illustrates how:

the anatomy differed in purpose and completeness from the civil or forensic postmortem. Rather than explaining the spiritual or physical state of a single individual, it aimed to illustrate to medical students general anatomical and physiological principles. And unlike the more limited autopsies, it involved the complete or near complete disaggregation of the body including the face.<sup>23</sup>

<sup>&</sup>lt;sup>20</sup> Ibid., 6.

<sup>&</sup>lt;sup>21</sup> Ibid., 6.

<sup>&</sup>lt;sup>22</sup> Ibid., 7.

<sup>&</sup>lt;sup>23</sup> Ibid., 8.

The existence of autopsy allowed universities to recognize that knowledge of anatomical structure was an instructive method necessary to the study of medicine, and provided the fundamental framework for accepting human dissection.<sup>24</sup>

At first, anatomies for teaching purposes took place mostly in the private homes of the university masters with a few students selected to observe. Very few cases were recorded, except for one that appears in the public record concerning the stealing of the criminal Paxius' body. On November 20, 1319, four medical students under the supervision of Master Alberto of the University of Bologna stole the body of the criminal Paxius from his grave in the churchyard of St. Barnabus and transported it to Alberto's home for a private dissection. They were caught and prosecuted for the crime, but they were never accused of actually stealing Paxius' body.<sup>25</sup> Instead, they were convicted of "nocturnal intrusion in the Church of St. Barnabus" and therefore of "committing a sacrilege and violating a grave situated in a holy place."<sup>26</sup> Based on this conviction, it seems that the act of cutting into and mutilating a human corpse was no longer considered a crime worthwhile of punishment, that even a judge considered dissection at that point in time a permissible activity.<sup>27</sup> The case also implies that the physician-anatomists at the University of Bologna must have had enough experience handling cadavers by the early fourteenth century to be comfortable enough to steal one from its grave for a private anatomy.<sup>28</sup> As evidenced by the situation of Paxius, it was becoming increasingly evident that scholars wished to incorporate dissection into the University's teachings, and would go as far as risking arrest to do so.

<sup>&</sup>lt;sup>24</sup> Carlino, 180. <sup>25</sup> Carlino, 172.

<sup>&</sup>lt;sup>26</sup> Ibid.

<sup>&</sup>lt;sup>27</sup> Carlino, 173.

<sup>&</sup>lt;sup>28</sup> Ibid.,7.

Renaissance citizens throughout the fourteenth century began expressing a widespread thirst for more accessible knowledge. Out of the belief that university studies would serve society well, the clergy provided the impetus for higher learning. Pope Boniface IX in particular spurred the rise of many new universities by issuing on March 4, 1391 a bull to establish a university in Ferrara. Many more bulls like this were issued throughout Europe to increase knowledge of the arts and sciences, and from 1400-1625, 73 new universities were created throughout Europe.<sup>29</sup> Such bulls indicate that the clergy was itself more open-minded to discovering secular based knowledge as well as what was considered God's divine truth. Anatomy was able to gain traction indirectly because the clergy no longer sought to dominate what people learned and instead was willing to delegate that authority to the lay universities.

Universities in Southern Europe, mainly Italy, differed markedly from the predominately German and English universities in Northern Europe. In the South, the Italian Universities lacked the strict organization of those in the North, as they had no faculty senate or even a rector that had power over the faculty. For the most part, the professors worked individually, exercising almost complete autonomy over their curriculums and because of this were able to produce much of their own original research.<sup>30</sup> More importantly, Italian universities focused their studies mainly on law and medicine. Public dissections, though sporadic, were practiced in Italian universities as early as 1300, but the first known dissection of a human body at the University of Paris did not occur until the late 1470s.<sup>31</sup> One reason perhaps for the legal and medical clout of the Italian universities lies in the fact that, though sanctioned by the Pope's bulls, they remained free of many religious ties. At the University of Bologna in the 1520s, the

<sup>&</sup>lt;sup>29</sup> Paul F. Grandler, "The Universities of the Renaissance and Reformation," *Renaissance Quarterly* 57, no. 1 (2004): 2.

 $<sup>\</sup>frac{1}{30}$  Ibid., 11.

<sup>&</sup>lt;sup>31</sup> Ibid., 6.

faculty included forty-five law professors, twenty-eight medical professors, twenty-five professors in the arts, and no professors in theology.<sup>32</sup> Historian Paul F. Grandler further notes that, "Italian universities did not have institutional links with religious orders. Indeed law and medicine professors often viewed with condescension the one or two members of the regular clergy from local monasteries who taught theology in the university."<sup>33</sup> With the lack of cohesion between faculty and curriculum, and the secular autonomy provided by limited association with religious authorities. Italian universities were able to become the birthplace of legal and accepted anatomical dissection.

The University of Bologna, heralded as one of the most prominent Italian universities dealing with dissection, set the standard for anatomical studies in the fourteenth century. According to Roger French, the medical professors of the University of Bologna did in fact organize themselves more than the rest of the faculty. They had established themselves independent enough of the lawyers of the University by 1296 to be able to elect their own rector to the studium of arts and medicine. French asserts that, "by the very act of agreeing to collaborate in teaching rather than compete, doctors had agreed what should be taught and hence what the essential nature of medicine was."<sup>34</sup> By the time the *studium* was confirmed in 1316, a man named Mondino dei' Luzzi had just finished his course teaching human anatomical dissection.<sup>35</sup> The fact that the doctors organized themselves indicates that separate departments were increasingly given the power to determine their own curriculum. Mondino's being hired independently by the newly organized medical department to teach an anatomy class reflects

<sup>32</sup> Ibid., 5. <sup>33</sup> Ibid., 11.

<sup>35</sup>French, 35.

<sup>&</sup>lt;sup>34</sup> French, 35.

how doctors together were coming to recognize dissection as important for medical studies, if for nothing more than a visual study tool.

Mondino was a Bolognese physician and, while a teacher of anatomy, he still used dissection only as a way of reinforcing already printed works on anatomy. In his book Anatomia, where he described in detail the dissections he performed, he based his practices strictly on what Galen and Avicenna wrote of dissection in their books.<sup>36</sup> While Mondino was the first real person to use dissection for teaching purposes, he followed almost exactly the descriptions Galen set forth in De Juvamentus Membrorum and De Interioribus and Avicenna in his *Canon*.<sup>37</sup> In large part because of Mondino's penchant for using dissection as a visual aid. anatomical dissection came to be accepted at the University of Bologna for its didactic elements. The only way it was taught was by adhering to the works of the classical authors Celsus, Rufus, Galen, and Avicenna to complement their anatomical texts.<sup>38</sup> Though Mondino never deviated from what the classic authors had set forth, he was an important character in establishing dissection as a way of teaching medical students, of introducing it into the university curriculum in the first place. Although "the anatomist's unconditional acceptance of Avicenna and especially of Galen, and his obtuseness in regard to the cadaver, will characterize the discipline until the time of Vesalius," Mondino proved important in implementing anatomical dissection in the university curriculum.<sup>39</sup>

Once anatomy became an accepted part of the university curriculum in Bologna, it was only a matter of time before anatomists started to question if the ancient authorities on anatomy, mainly Galen and Avicenna, possessed absolute knowledge. By the second quarter of the

<sup>38</sup> Carlino, 175.

<sup>&</sup>lt;sup>36</sup> Carlino, 171. <sup>37</sup> French, 41.

<sup>&</sup>lt;sup>39</sup> Ibid., 171.

fifteenth century, a new wave of Italian humanists had been accepted to professorships in Italian universities. The training that humanists received imbued in scholars the historical, linguistic, and philological skills necessary for a more critical and contextual understanding of the work.<sup>40</sup> For the medical community, this wave of humanism translated to a search for ancient texts and the utilization of the Greek language to translate the texts into more accurate Latin. For years, professors of anatomy had been confused by unclear and differing translations of Galen concerning the naming of various parts of the body. With the medical humanists more critically analyzing the original texts, by the sixteenth century nearly the whole body of Greek anatomy texts had been re-translated in a way that offered consensus about term usage.<sup>41</sup> No longer were the ancients thought to be the absolute authorities on the matter of anatomy. The humanists worked to reaffirm what Galen had written of through their own dissections, and eventually they came to discover some of the discrepancies and inadequacies of Galen's report through their own observations.<sup>42</sup> This is not to say that the medical humanists now disregarded the ancient texts, rather they approached the subject with a spirit of criticism and a desire to augment the observations of ancient writers.<sup>43</sup> In many ways, it was this environment of scholastic analysis that allowed for the advancement of anatomy beyond a strictly informative practice.

By the beginning of the sixteenth century, anatomical dissection had become a firmly entrenched class in the Italian medical schools, and was widely accepted throughout the academic community as a useful and pertinent field of study for becoming a physician. With the help of medical humanism, anatomists were also beginning to advance dissections by forming their own observations and theories independent of the ancients. The community of medical

<sup>&</sup>lt;sup>40</sup> Grandler, 12.

<sup>&</sup>lt;sup>41</sup> Charles Singer, "How Medicine Became Anatomical," The British Medical Journal 2, No. 4904 (1954) 1503.

<sup>&</sup>lt;sup>42</sup> Grandler, 13.

<sup>&</sup>lt;sup>43</sup> Nancy G. Siraisi, "Medicine and the Renaissance World of Learning," *Bulletin of the History of Medicine* 78.1 (2004) 3.

humanists was however split in their beliefs on how to handle ancient works. Some sought "to make the ancient world live again, assuming its undimmed relevance and unproblematic accessibility," while others worked "to put the ancient texts back into their own time, admitting that reconstruction of the past is difficult and that success may reveal the irrelevance of ancient experience and precept to modern problems."<sup>44</sup> In this environment, the Paduan physician Andreas Vesalius rose to prominence, himself believing that the ancient texts belonged in ancient times, and it was time for the medical community to form its own anatomical discoveries. Vesalius worked as the chair of surgery and anatomy at Padua in the mid sixteenth century.<sup>45</sup> It was Vesalius who truly pioneered the anatomical renaissance, disregarding Galen's writings on anatomy and publishing his own text in 1543, *De humani corporis fabrica*, on how to properly dissect and identify the organs of a human cadaver.

It was not just Vesalius's willingness to work outside of the realm of the ancient authorities, or even the fact that he published his own text on anatomy, that made his work so prolific. Most likely stemming from his humanist education, Vesalius drew on many different facets of knowledge to inform his text. As historian Nancy G. Siraisi asserts, he wrote his text so that, "its splendid physical production and illustrations, its elaborate Latinity, it appeal to a readership of "erudite men" and its imperial dedication-suggests that it was intended not only to present the author's innovative work and advance his career, but also to raise the status of its subject."<sup>46</sup> Vesalius changed the face of anatomical dissection with his book. His modern account of anatomy was all the more important because it was published and used for teaching at the esteemed University of Padua. It also served as an example to anatomists everywhere that there was room in the field of anatomy for them to contest and supplement the observations of

<sup>&</sup>lt;sup>44</sup> Nancy G. Siraisi, "Vesalius and the Reading of Galen's Teleology," *Renaissance Quarterly* 50, No. 1 (1997) 2.

<sup>&</sup>lt;sup>45</sup> Singer, 1503.

<sup>&</sup>lt;sup>46</sup> Siraisi, Medicine and the Renaissance World of Learning, 7.

the ancients with their own findings. Vesalius further elevated the study of anatomy through the mere fact that he used scholarly language and ornate drawings to illustrate his observations. He was an anatomist who was saturated with humanist knowledge and a comprehension of other facets of academia, qualities which, when incorporated into his *Fabrica*, established dissection as a more formidable and accessible practice. Vesalius also attempted to ameliorate his profession by referencing anatomy three times in his preface as a branch of "natural philosophy."<sup>47</sup> In Vesalius's time, natural philosophy was thought to be the most eminent type of knowledge of the natural world, and Vesalius's comparison of the two was clearly meant to demonstrate the practical and impressive nature of anatomy.<sup>48</sup> His usage of illustrations in his text furthermore introduced a new method of representing dissection: that is, through the eyes of the artist.

During and before the time of Vesalius, artists had been attempting to more accurately portray the body. A movement of artists, headed by Leonardo da Vinci, was experimenting with the use of perspective in representations of the body. Since the fifteenth century, when modern printing methods allowed for the publication of more books with better illustrations, anatomists and artists had collaborated in representing the body. Artists were driven by a desire to more precisely portray anatomical relationships, and anatomists could use those representations in medical texts to more clearly illustrate their methods of dissection.<sup>49</sup> According to historian Charles Singer, "Vesalius was the first who commanded at once a knowledge of [Greek] texts, a wide practical experience of anatomy, and the services of artists trained in Leonardian perspective."<sup>50</sup> This interdisciplinary approach in large part paved the way for greater clarity in modern anatomical texts. The relationship between artists and anatomists further served to

<sup>&</sup>lt;sup>47</sup> Ibid.

<sup>&</sup>lt;sup>48</sup> Ibid., 8.

<sup>&</sup>lt;sup>49</sup> Giovanna Ferrari, "Public Anatomy Lessons and the Carnival: The Anatomy Theatre of Bologna," *Past and Present*, no. 117 (1987) 55.

<sup>&</sup>lt;sup>50</sup> Singer, 1503.

signify the importance of dissection in the artistic renaissance as well. Vesalius also accomplished this through his usage of anatomy theaters. These theaters played an important role in bringing anatomy out of solely the academic arena and into the public eye.

Anatomy theaters first rose to prominence in Padua. The first real anatomy theater was constructed there between the years of 1582 and 1584 and was referred to as the *theatrum publicum et perpetum*, translated to "a place for seeing that was public and permanent."<sup>51</sup> This name implies that anatomy by the sixteenth century was seen as such a staple in the university medical affairs that it was deserving of its own "permanent" theater. Before the theater was constructed, the yearly public dissections took place in makeshift rooms within "churches, hospitals, pharmacies, and sometimes classrooms."<sup>52</sup> While these places were all respected institutions in the community and represented a widespread compliance with the study of anatomy, the construction of the permanent theater signified an ever-increasing importance placed on dissection. The construction of the theater is also representative of the universities working "increasingly to establish a necessary relationship with anatomical inquiry and natural philosophy, and, in doing so, to raise the status of that inquiry in the disciplinary hierarchy of the university."<sup>53</sup> This mentality of the university, largely founded in the critical and interdisciplinary spirit of humanism, characterized the progression of dissection from a littleknown style of teaching into an interactive form of learning called for by the medical students.

Vesalius worked in the first anatomy theater of Padua, lecturing first on a specific part of the body and then explicating it very clearly through his dissection of the cadaver. The theater had been constructed on the first floor of the university and was therefore a central part of it, and

<sup>&</sup>lt;sup>51</sup>Cynthia Klestinec, "A History of Anatomy Theaters in Sixteenth-Century Padua," *Journal of the History of Medicine and Allied Science* 53, no. 3 (2004) 389.

<sup>&</sup>lt;sup>52</sup> Ibid., 406.

<sup>&</sup>lt;sup>53</sup> Ibid., 377.

contained a large seating area so that many medical students could be present but order could still be maintained.<sup>54</sup> Baldassar Heseler, a medical student at the University of Padua who attended one of Vesalius' public anatomies reported that Vesalius told the students, "'I do not want to give my opinion. You yourselves should feel with your own hands, and trust them.' "<sup>55</sup> Vesalius' teachings instilled in students a belief that they too had the authority to criticize and analyze the works of ancient anatomical writers, a teaching that the University chose to propagate even after Vesalius was gone. He left a legacy at the university that called for professors who clearly explained and demonstrated the dissection of each part of the body while at the same time authorizing the students to make observations and participate in the dissection.<sup>56</sup> The increasingly openminded university attitude allowing students to actively contribute, analyze, and observe dissections helped the academic field of anatomy widen its influence.

By the time the second anatomy theater was built in Padua, the nonacademic community was beginning to come observe the dissections occurring in the theater. Completed in 1595, the second theater was much more ostentatious and secure than the first.<sup>57</sup> For the most part chaired by Fabricius, a lecturer in surgery and professor of anatomy at Padua from 1565-1613, the second theater hosted dissections that soon morphed into lectures on natural philosophy and human nature as explained by the corpse.<sup>58</sup> Viewed as formal and scholarly, these demonstrations were increasingly attend by nonacademics embracing the renaissance ideal of self-education. In order to encourage attendance, Fabricius requested that the Venetian Senate subsidize the cost of admission so that "Jews, teachers, tailors, shoemakers, sandal-makers,

<sup>&</sup>lt;sup>54</sup> Ibid., 391.

 <sup>&</sup>lt;sup>55</sup> Badassar Heseler, Andreas Vesalius' First Public Anatomy At Bologna, 1540: An Eyewitness Report by Baldassar Heseler, ed. & trans. Ruben Erikkson (Uppsala and Stockholm: Alquist and Wiksells, 1959) 290-293.
<sup>56</sup> Ibid

<sup>&</sup>lt;sup>57</sup> Klestinec, 399.

<sup>&</sup>lt;sup>58</sup> Ibid., 381.

butchers, salted fish-dealers, and, lower than these, porters [perhaps funereal] and basket bearers," could be present.<sup>59</sup> By making dissection accessible to the public, and not just the public of Padua but of neighboring cities as well, Fabricius expanded knowledge of anatomy beyond the scholastic walls of the university and into the minds of the most common person. Perhaps as a result of this, only two years after the theater opened, the Venetian Senate in 1596 accepted all financial responsibility for the theater and its functions.<sup>60</sup> With that triumph, the study of anatomy was officially recognized by university, medical, governmental, and common persons, and had achieved a status of relevance and importance in the lives of both medical students and the public.

As the public continued to take an interest in dissection, the extravagance evident within the theater increased. In Bologna, the annual dissection became inextricably linked with the Bolognese carnival.<sup>61</sup> The anatomy theater was built in 1638 in the Palazzo dell' Archipinnagio, and the building was reported to be "a sumptuous and lordly anatomy theatre…One of the most renowned constructions in Italy, the constant amazement of foreigners, and the glory of the city wherein it was built."<sup>62</sup> By the seventeenth century, dissection had thus become a subject with such promise that the anatomy theater became a symbol of both success and true knowledge in the community. The study of anatomy had come a long way from the repugnant view the early Christian writers had taken toward it, corroborated by the fact that the celebration of dissection in Bologna now lasted around two weeks and featured professors and scholars in medicine and philosophy in addition to anatomy.<sup>63</sup> During the carnival time of year, the anatomy "theater

<sup>&</sup>lt;sup>59</sup> Ibid, 401.

<sup>&</sup>lt;sup>60</sup> Ibid., 402.

<sup>&</sup>lt;sup>61</sup> Ferrari, 50.

<sup>&</sup>lt;sup>62</sup> Bologna University Library, MS. 1300, A. Sabbatini, "Memorie del Decimo sexto secolo 1600: sino al principio del Decimo Settimo 1700," (8 vols., unpaginated), iii, Jan.-Feb., 1638.

<sup>&</sup>lt;sup>63</sup> Ferrari, 50.

would be magnificently decorated for the occasion: the walls were hung with damask, candlesticks illuminated the room, and two waxen torches at the head and feet of the cadaver lit up the dissection table."<sup>64</sup> Dissection in seventeenth century Italy now involved tradition, ritual. and celebration, presented to the people as something to look forward too. Yet the old spiritual taboos of the empiricists and early Christians, while diluted, had not been completely forgotten. Throughout the entire two weeks of celebration, at least a handful of people remained in a nearby chapel, praving devoutly for the souls of the dissected.<sup>65</sup>

The Italian Renaissance did not eradicate the deep-seated spiritual views engrained in people's minds concerning the sanctity of the human body. People still feared consequences in the afterlife as retribution for defiling a corpse, but this fear was tempered by the vast secular powers that arose during the fourteenth to seventeenth centuries. Anatomical dissection was finally acknowledged as an important subject of medicine during this time, as church restrictions which had previously prevented exploration of the body lost their potency. The new scientific attitudes, universities, and artistic movements were able to eclipse in influence the old sacred beliefs concerning the body. Furthermore, the acceptance of anatomical dissection literally led to a new body of discoveries. With the works of ancient anatomists being critically reviewed and revised, Italian anatomists added to medical knowledge in a way that allowed for the continued progression of anatomical study and acceptance in both academic and public circles. This had far-reaching implications in particular for the medical community, both in Italy, and, eventually, abroad. With the body now considered a valid study tool, medical students could greatly improve their awareness of organ location, function, consistency, and influence. More importantly, the acceptance of the cadaver's true worth led to major advances in surgery; an

<sup>&</sup>lt;sup>64</sup> Ibid., 51. <sup>65</sup> Ibid., 52.

application whose life-giving implications eradicated the empiricists portrayal of dissection as useless. Where once dead bodies were considered meaningless, they were now rendered valuable due to the truly anatomical renaissance.

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