

# “The Chamber of Your Virginitie does not have a Price”: The Scientific Construction of the Hymen as an Indicator of Sexual Initiation in Eighteenth-Century Spain

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## Introduction

In 1523, Valencian philosopher Juan Luis Vives wrote *De institutione feminae christianae* (The Formation of Christian Women) in Latin, for Catharine of Aragon’s daughter Mary. In 1528, Juan Justiniano translated *De institutione* into the Spanish language as *Libro llamado instruccion de la muger christiana: el qual contiene como se ha de criar una virgen hasta casarla*.<sup>1</sup> Justiniano highlighted Vives’s fixation on virgins and the importance of a lack of sexual initiation for young maidens directly in the title. Vives barraged young women, the intended audience of *De Institutione feminae christianae* and its Spanish translation, with teachings that virginity was one of the most important things a woman possessed and could offer a man. For example, the *Libro llamado* states, “I beg you to know your goods. Know that the chamber of your virginity does not have a price.”<sup>2</sup> Vives instructed affluent women that nothing was as delicate or tender on earth as the reputation and honor of women.<sup>3</sup> Surely, the importance of physical purity was nothing new to readers. Although not stated in *De Institutione feminae christianae*, readers probably knew that midwives might verify virginity when physical integrity was the key issue of a legal case. This was particularly important in cases where a *palabra de casamiento* (promise of marriage) was allegedly broken or in any other legal proceeding where the crux was a woman’s virginity. Usually surgeons or midwives inspected women’s bodies to ascertain their virginity. Women could seek marriage or monetary reparations if a man took their virginity and recanted on his *palabra de casamiento*.<sup>4</sup>

Historian Katharine Park has argued that in medieval Italy women had knowledge of the female body, especially regarding virginity and pregnancy. In the thirteenth century, Italian cities witnessed a boom in male medical experts that pushed women out of their control of the female body. These men were formally trained, and they became just as knowledgeable as midwives regarding the female body.<sup>5</sup> Spain has received little attention in this regard, and although it seems to have followed a similar trajectory to other European nations, Spain developed at a slower pace.

This essay explores how in eighteenth-century Spain, the hymen went from an empirical indicator of virginity used by midwives, to a bona fide scientific clue of sexual initiation among

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<sup>1</sup> Which translates as *The Book Titled the Instruction of Christian Women: Which Contains how a Virgin is to be Raised until her Marriage*.

<sup>2</sup> Juan Luis Vives. *Libro llamado Instruccion de la muger christiana. El qual cõtiene como se ha de criar vna virgen hasta casarla: y despues de casada como ha de regir su casa: y viuir prosperamente con su marido. y si fuere biuda lo que es tenuta a hazer. Traduzido agora nueuamẽte de latin en romance por Juan Justiniano criado del excelentissimo señor duque de Calabria. Dirigido ala serenissima Reyna hermana*. Los Angeles, CA: 1555. UCLA. Charles E. Young Research Library Special Collections. F. 12 v.

<sup>3</sup> UCLA. Charles E. Young Research Library Special Collections. 1555. F. 34 v.

<sup>4</sup> For a discussion on deflowering, virginity, and marriage in New Spain and Spain see, Patricia Seed, *To Love, Honor, and Obey in Colonial Mexico: Conflicts over Marriage Choice, 1574-1821* (Stanford, Calif.: Stanford University Press, 1988)., Asunción Lavrín, *Sexuality and marriage in colonial Latin America*, Latin American studies series (Lincoln: University of Nebraska Press, 1989)., and Renato Barahona, *Sex Crimes, Honour, and the Law in Early Modern Spain: Vizcaya, 1528-1735* (University of Toronto Press, 2003).

<sup>5</sup> Katharine Park, *Secrets of Women : Gender, Generation, and the Origins of Human Dissection* (New York: Zone Books, 2006), 92.

physicians.<sup>6</sup> Knowledge of the hymen and female virginity developed counterintuitively. Spanish anatomists in the first half of the eighteenth century staunchly discredited midwives and argued that the presence or shape of a woman’s hymen could not prove her virginity. Early eighteenth-century notions of the hymen were broad and more importantly they considered physical variation among women. Until the eighteenth century, the majority of attention devoted to the hymen had primarily been on its existence, and secondarily, its link to virginity. Conversely, by the end of the eighteenth century, the hymen was not only believed to be an anatomical phenomenon, specialists argued that there was a universal shape for the hymen and that it was a viable way to ascertain female virginity. Spanish doctors fashioned various types of virginities and reverberated Catholic notions of morality in their findings.

### Virginity and the Hymen Defined

In the late antiquity, men in the Christian Church began to officially investigate if women had engaged in vaginal sexual acts, however, many church writings focused more on purity of the soul, than on purity of the body.<sup>7</sup> Medieval tests for virginity sometimes relied on the hymen, but often pursued other avenues. In the thirteenth century, Guilielmus de Saliceto believed blood could be an indicator of virginity, depending on the color. He argued that menstrual blood was darker and more profuse, while the blood of the “corruption of virginity” was lighter and did not pour out. He also believed that the shape of the vagina or cervix could indicate sexual activity. If a man could penetrate a woman without any pain, the woman was not a virgin. Clear urine could also be an indicator of virginity, while sexually active women might have dark urine due to ruptured skin and “seed” from a man. Virgins were also believed to urinate with a light hiss, taking a long time to complete the process. In the fifteenth century, Italian Niccolò Falcucci believed that if a woman was covered with cloth, and then fumigated with coal, a virgin would not be able to smell the coal, while a sexually active woman would. If a sexually initiated woman drank coal, she urinated instantly.<sup>8</sup>

In the sixteenth century, as we shall see, doctors and anatomists began to search for scientific ways to examine and judge the female body. Men of science would inspect the membranes in the vagina to ascertain if a woman had been sexually initiated. Spanish anatomists, who joined the movement later than their Italian, British, Danish, and Flemish counterparts, continued to use moral terms such as “corrupted,” “suspicious of virginity,” and “integrity” when discussing women’s bodies well into the eighteenth century. Before we get into the specifics of the hymen in the early modern period, we will discuss what we know today.

*Homo sapiens* are not the only mammals with—what science has conceptualized as—hymens. Llamas, guinea pigs, bush babies, manatees, moles, toothed whales, chimpanzees, elephants, rats, ruffed lemurs, and seals have hymens as well. Nevertheless, unlike humans, among these

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<sup>6</sup> I use the term sexually initiated when referring to women and men that have had a sexual encounter. The difference between sexually active and sexually initiated people is subjective, since not all women or men have sex continuously throughout their life. Secondly, the term “sexually initiated” provides an objective locution to describe the opposite of “sexually uninitiated” persons (often referred to as virgins). As we shall see, sexually initiated women have often been framed as “corrupted,” and “sullied.” Sexually initiated avoids such biased terms. Lastly, though this paper discusses heteronormative views of women’s sexualities, it is worth noting the obvious fact that women and men can become sexually active and initiated via same sex relations.

<sup>7</sup> Kathleen Coyne Kelly, *Performing Virginity and Testing Chastity in the Middle Ages* (London: Taylor and Francis, 2002), 3-5.

<sup>8</sup> Kelly, *Performing Virginity and Testing Chastity in the Middle Ages*, 28-31.

animals hymens serve a clear protective function.<sup>9</sup> The fact that humans have not ascribed any importance to the existence of hymens among nonhuman animals highlights the socially constructed nature of virginity in Western culture. In humans, the hymen is a thin lining that surrounds the vaginal opening and can take various shapes, and in some women, it might not exist at all. Often, a woman's first sexual experience can tear this lining and produce bleeding; however, the hymen can also be damaged or weakened during non-sexual physical activities or injuries.

There are two convincing hypotheses as to why female humans have hymens. 1) The hymen is a useless residual product of development. 2) The hymen serves as a protective layer for infant females preventing fecal matter and other harmful matter from entering the vagina and thus reducing instances of infection.<sup>10</sup> The hymen seems to serve no biological purpose in the female human body after infancy. Nonetheless, Iberian kingdoms, like other Western cultures, have focused their attention on the hymen and ascribed it with great social importance.<sup>11</sup> In Spanish, *himen*, like its English cognate hymen, is named after the Greek god of marriage, Himeneo (also Himen). The word *virgen* (virgin) first appears in a Spanish dictionary in 1495, in Antonio de Nebrija's *Vocabulario español-latino*.<sup>12</sup> Nebrija's entry for *virgen* states "*virgen o donzella. virgo.*"<sup>13</sup> This illustrates that virgin and *donzella* (maiden) were synonyms in the early modern period, something that remains true in the modern Spanish language. It was not until 1611 when the lexicographer Sebastián de Covarrubias Horozco published his *Tesoro de la lengua castellana española* that *virgen* was clearly defined. Covarrubias' entry begins with Latin and moves to Spanish, stating:

*Virgo puella intacta a viridiori, id est, validiori aetate appellata est* [A maiden untouched by youthful vigor, that is to say, she shall be called worthiest of her age]. We also know her by the name of *donzella*: of this state, and of virginity, and its chastity there was much to be said, but it is commonplace: and so I am happy with what is said, and refer the curious reader to an emblem of mine, whose figure is a lily surrounded by a broken fetus, and it is cut from the stem with the words *Nulla reparabilis arte* [No art can restore]. Virginity, a thing that belongs to virgins.<sup>14</sup>

Covarrubias did not define the word hymen nor did he include a separate entry for *donzella*. The word *himen* is not formally defined in Castilian until the eighteenth century, in Esteban de Terreros y Pando's *Diccionario castellano con las voces de ciencias y artes y sus correspondientes en las tres lenguas francesa, latina e italiana* (1786).<sup>15</sup> Terreros y Pando's entry for hymen reads:

<sup>9</sup> Hanne Blank, *Virgin : the untouched history*, 1st U.S. ed. (New York: Bloomsbury : Distributed to the trade by Holtzbrinck Publishers, 2007), 23.

<sup>10</sup> A. J. Hobday, L. Haury, and P. K. Dayton, "Function of the human hymen," *Medical Hypotheses* 49, no. 2 (1997): 172.

<sup>11</sup> Many cultures have ascribed a social significance to the hymen or virginity, however, this study only focus on Spain.

<sup>12</sup> This is a Spanish-Latin dictionary, not a lexicographic dictionary with a full analysis of language. The first actual dictionary to define Castilian words in the Castilian language was published in 1611, by Sebastián de Covarrubias.

<sup>13</sup> Antonio De Nebrija, *Vocabulario español-latino* (Madrid, Spain: Real Academia Española, 1989), F. 202.

<sup>14</sup> Sebastián de Covarrubias, *Tesoro de la lengua castellana, o española* (por Luis Sanchez, 1611), 75 v.

<sup>15</sup> This title translates as "Castilian Dictionary with Voices of the Sciences and Arts and its Cognates in the French, Latin, and Italian Languages."

In Anatomy, a certain fabric, which midwives call *virjinea*, and they believe is the door to the womb.... Modern anatomists deny the existence of this fabric, even in female children, and in the fetus; and consequently that virginity rests in the offense of the rupture of said fabric.<sup>16</sup>

Terreros y Pando’s entry for *virjinea* simply includes, “*tela*” (fabric).<sup>17</sup> Furthermore, his passage for *himen* pits anatomists against midwives, i.e., male v. female and science v. empiricism. This suggests that men were not only encroaching on the domain of women over the female body, they were contesting the validity of women’s knowledge of the female body as well. Furthermore, according to Terreros y Pando, at that moment in history, at least in Spain, scientists refuted the existence of the hymen, a fact that anatomy books corroborate below. Terreros y Pando also included another entry related to the hymen—*cururculas*: which he defined as “*tela virjinea*” or “virgin fabric.”<sup>18</sup> What Terreros y Pando describes as *Cururculas* is probably *curunculas*, or caruncle, something discussed at length by later anatomists. Ostensibly, it seems that anatomists had disproven the hymen by the late eighteenth century. However, as we shall see, a vehement debate regarding the nature of the hymen raged well into the 1750s.

It was not until the mid-nineteenth century that dictionaries fully accepted the existence of the hymen, but anatomists once more questioned the hymen’s connection to virginity. Vicente Salvás’ 1846 lay dictionary listed *himen* as “*La membrana virginal*” (virginal membrane).<sup>19</sup> In 1853, Ramón Joaquín Domínguez’s *Diccionario Nacional* had an entry for *himen* as:

A type of membranous fold that is typically found in the entrance of the vagina in maidens, and is ripped in the defloration [sexual initiation]. Although the presence of the hymen is a sign of virginity, its disappearance is not, as is commonly believed, an indication of unchastity.<sup>20</sup>

These dictionaries reveal that science continued the patriarchal pattern that privileged male definitions of female bodies, in this case the hymen, virginity, and virgins. Moreover, at times these definitions conflicted with popular views, the ideologies of female medical practitioners, and with those of other male specialists. Spanish dictionaries also demonstrate that science continued the long tradition of fixating on women’s bodies to confirm “purity” and “completeness.” Dictionaries seldom mentioned men in definitions of virginity. In a similar moral vein, science never allocated the male body a marker of virginity. This might have more to do with the fact that male virginity was less socially useful than a lack of physiological

<sup>16</sup> Esteban de Terreros y Pando, *Diccionario castellano con las voces de ciencias y artes y sus correspondientes en las tres lenguas francesa, latina e italiana*, vol. Tomo Segundo, (Madrid: Viuda de Ibarra, Reproducido a partir del ejemplar de la Biblioteca de la Real Academia Española, 1786), 291.

<sup>17</sup> *Diccionario castellano con las voces de ciencias y artes y sus correspondientes en las tres lenguas francesa, latina e italiana*, Tomo Segundo, 807.

<sup>18</sup> *Diccionario castellano con las voces de ciencias y artes y sus correspondientes en las tres lenguas francesa, latina e italiana*, Tomo Segundo, 372.

<sup>19</sup> Vicente Salvá, *Nuevo diccionario de la lengua castellana, que comprende la última edición íntegra, muy rectificada y mejorada del publicado por la Academia Española, y unas veinte y seis mil voces, acepciones, frases y locuciones, entre ellas muchas americanas* (Paris: Vicente Salvá; Reproducido a partir del ejemplar de la Biblioteca de la Real Academia Española, 1846), 587.

<sup>20</sup> Ramón Joaquín Domínguez, *Diccionario Nacional o Gran Diccionario Clásico de la Lengua Española (1846-47)*, Fifth ed. (Madrid, Paris: Establecimiento de Mellado; Reproducido a partir del ejemplar de la Biblioteca de la Real Academia Española, 1853), 935, 2.

existence. As Kathleen Coyne Kelly has pointed out, most medieval chastity and fidelity tests were created by men, for the female body.<sup>21</sup>

### Scientific Books Generated Outside of Spain

While dictionaries provide general definitions of key terms, and an idea of how they worked in Spanish society, Spanish anatomy books provide concrete examples about the hymen in Spanish thought, alternative membranes, and their use as indicators of virginity. In Spain, like other parts of Europe, there were three main early modern ideological positions regarding the hymen. 1) There was no hymen. 2) The hymen was a thin membrane with a hole in the center that lead to the vaginal cavity. 3) There was an alternative membrane (sometimes also called hymen) composed of four caruncles—a fleshy eminence or tag— connected by a thin membrane.

Early modern European knowledge of the human body was deeply rooted in antiquity and the female body was no exception. *Gynaikeia* (c. 100 CE) by Soranus of Ephesus sparked the written discussion of the hymen in Western culture. Ephesus recommended that women be virgins until menarche (the first menstrual period), roughly around the age of fourteen. According to Soranus, this would prevent pregnancy before the uterus was fully developed. Soarnus stated that although humans became interested in sex once they were sexually mature, virgins that were poorly educated or ill raised might develop “premature appetites.”<sup>22</sup> Soranus also refuted the existence of a “thin membrane” (likely the hymen although he did not use the term) that covered the vaginal opening and bled during “defloration.”<sup>23</sup> Soranus rejected the existence of the hymen and by extension any of its diseases, such as, imperforate hymen (when the hymenal membrane does not have an opening and menstruation cannot exit the vagina).<sup>24</sup> Though Soranus’ ideas were far from today’s understandings of the female reproductive organs, he did not place moral judgments on women’s sexual activity. Something that would change as other aspects of Western culture took shape. Soarnus’ treatise was modified and adapted throughout Europe from the middle ages to the Early Modern period.

Muscio, whom we know little about, translated and enriched *Gynaikeia* into Latin in the sixth century.<sup>25</sup> Eucharius Roesslin translated Muscio’s treatise on gynecology into German in 1513 under the title *Der Swangern Frauwen unt Mebammen Rosengarten* (“The Rose Garden for Pregnant Women and Midwives”) commonly known as *Der Rosengarten*.<sup>26</sup> By the late 1530s *Der Rosengarten* had been translated into Latin, French, Dutch, and Czech.<sup>27</sup> *Der Rosengarten*’s Latin translation was published in 1532 under the name of *De Partu Hominis* (“The Birth of

<sup>21</sup> Kelly, *Performing Virginity and Testing Chastity in the Middle Ages*, 2.

<sup>22</sup> Soranus of Ephesus, Owsei Temkin, and Societies American Council of Learned, *Soranus' gynecology*, vol. Softshell Books (Baltimore: Johns Hopkins University Press, 1991), 31.

<sup>23</sup> *Soranus' gynecology*, Softshell Books, 15.

<sup>24</sup> David .M. Halperin, John .J. Winkler, and Froma .I. Zeitlin, *Before Sexuality: The Construction of Erotic Experience in the Ancient Greek World* (Princeton University Press, 1991), 356.

<sup>25</sup> Helen King, *Midwifery, Obstetrics and the Rise of Gynaecology: The Uses of a Sixteenth-Century Compendium* (Ashgate Pub., 2007), 3.

<sup>26</sup> Emidio Campi, *Scholarly Knowledge: Textbooks in Early Modern Europe* (Librairie Droz, 2008), 320-21.

<sup>27</sup> Eucharius Rößlin et al., *The Birth of Mankind: Otherwise Named, The Woman's Book : Newly Set Forth, Corrected, and Augmented : Whose Contents Ye May Read in the Table of the Book, and Most Plainly in the Prologue* (Ashgate, 2009), xvi.

Man”).<sup>28</sup> *De Partu Hominis* was later translated into English as *The Byrth of Mankynd* by Richards Jonas in 1540.<sup>29</sup>

The many times translated and altered English version of Soranus’ work had a profound impact on Spanish scientific knowledge of the female body. The Spanish translation, *Libro del parto humano, en el cual se contienen remedios muy vtiles y vsuales para el parto dificultoso de las mugeres, con otros muchos secretos a ello pertenecientes, y a las enfermedades de los niños* was published in 1638.<sup>30</sup> Like Soranus’ *Gynaikeia*, *Libro del parto humano* did not mention the hymen in any capacity. *Libro del parto humano* went a step further, it did not even refute the existence of the hymen or any similar membrane. Moreover, this was one of the last non-Iberian books on the female human body translated into Spanish. This suggests that the ideas that were officially transmitted in Spanish scientific books were different than those in other parts of Europe, though surely Spanish scientists might have had access to non-Iberian books written in other languages. As we shall see, Anatomists in other countries were in dialog with other scientists directly in their texts, and they acknowledged the existence of other theories directly.

In an attempt to keep Protestant belief out of Spanish intellectual circles, in 1558 Phillip II banned Spanish students (including medical students) from studying in foreign universities and foreign students and professors from studying in Spanish universities, effectively barring Spain and its universities from the scientific revolution.<sup>31</sup> Historian Henry Kamen has argued that the 1559 recall of Spanish scholars was not as effective as some historians have believed. Kamen contends that for one, it only affected the kingdom of Castile, not all of Iberia. In addition, the importation of foreign books was only restricted and policed in Castile, leaving Aragon, the Basque country, and Navarre open to trade.<sup>32</sup> Kamen further argues that students in Bologna, Rome, Naples, and Coimbra were granted exceptions and were allowed to remain abroad.<sup>33</sup> Furthermore, Kamen maintains that Iberia had free cultural and commercial contact with the Netherlands and Italy, which would have allowed the free flow of knowledge.<sup>34</sup> Nonetheless, Iberian scientific knowledge did not advance at the same rate as its European counterparts. The answer might not be simple isolation, but instead a general lack of interest in Science. John Gascoigne has demonstrated that Iberia dedicated the least amount of interest in Science when compared to the rest of Europe; especially in the seventeenth and early eighteenth centuries. From 1450 to 1550 Spain had only eighteen scientists of Spanish origin listed in the Dictionary of Scientific Biography, compared to Italy’s pack-leading sixty-two. From 1551-1650 Spain’s number dropped to five, an anemic figure when compared to Britain’s leading seventy-seven. Perhaps the most distressing figures are the rates in which permanent scientific teaching posts were held in Spain, only three from 1450-1550 and one from 1551-1650. This compared poorly to Italy’s trend leading thirty-seven from 1450-1550 and thirty-three from 1551-1650.<sup>35</sup> The

<sup>28</sup> *The Birth of Mankind: Otherwise Named, The Woman's Book : Newly Set Forth, Corrected, and Augmented : Whose Contents Ye May Read in the Table of the Book, and Most Plainly in the Prologue*, xviii.

<sup>29</sup> *The Birth of Mankind: Otherwise Named, The Woman's Book : Newly Set Forth, Corrected, and Augmented : Whose Contents Ye May Read in the Table of the Book, and Most Plainly in the Prologue*, xviii.

<sup>30</sup> Which translates to English as “Book of the Human Birth, which Contains Very Helpful and Common Remedies for Women’s Difficult Labor, Along with many Other Secrets Pertaining to it, and the Illnesses of Children.”

<sup>31</sup> Juan Riera, *Protomedicato, humanismo y medicina en Castilla* (Valladolid, Spain: Universidad de Valladolid, 2000), 36.

<sup>32</sup> Henry Kamen, *The Spanish Inquisition : an historical revision* (London: Weidenfeld & Nicolson, 1997), 105.

<sup>33</sup> *The Spanish Inquisition : an historical revision*, 104.

<sup>34</sup> *The Spanish Inquisition : an historical revision*, 135.

<sup>35</sup> John Gascoigne, "Reappraisals of the Role of the University in the Scientific Revolution," in *Reappraisals of the Scientific Revolution*, ed. David C. Lindberg and Robert S. Westman (Cambridge University Press, 1990), 250.

void in Spanish anatomical production was so stark that when the *Anatomia: galenica-moderna* (1733) was published in Spain, president of the Royal Protomedicato and professor of the School of Medicine of Paris, Doctor Don Claudio Burllet, commended the book and noted the deficiencies in Spanish science and the lack of medical advancement in Spain.<sup>36</sup>

Jorge Cañizares Esguerra has argued that in the mid-eighteenth century the Spanish crown attempted to strengthen its place in the European pecking order by tightening its hold on its colonies and expanding the previously weak role of science.<sup>37</sup> This seems to have worked because there was indeed a spike in scientific production in Spain in the mid-eighteenth century. However, once Spaniards started publishing on the human body and the hymen, they did not cite or refer to their European counterparts in print. This could be because they were not reading foreign books, or anatomists avoided drawing attention to the fact that they had read foreign books. Ostensible isolation played a vital role in the development of anatomical knowledge of women's bodies in the Spanish kingdoms.

With the exception of *El Parto Humano*, no other works related to the female body were translated and published into Castilian in the sixteenth and seventeenth centuries. Examples of such work include Jacques Guillemeau's *De l'heureux accouchement des femmes* (1609), its English translation *The Happy Deliverie of Women* (1612), and Scipione Mercurio's *La Comere o Riccogliatrice* ("The Godmother or Gatherer") (1596). Spanish anatomists and scientists were primarily in dialogue with Flemish and Italian scholars, at least openly via citations and references.

Perhaps this explains the lack of interaction eighteenth-century Spanish anatomy books had with the oldest extant anatomically correct diagram of the hymen, which was attributed to Danish anatomist Thomas Bartholin (1616-1680). Spanish anatomists do not cite or mention his work, though they might have been influenced by it. Bartholin followed in the footsteps of the many doctors in his family, and became the chair of the *Domus anatomica* (Anatomy House). He studied at the University of Copenhagen, the University of Leiden (South Holland), the University of Padua (Venice), and the Collège Royal in Paris.<sup>38</sup> In 1655, Bartholin published *Anatomia*, which included a diagram of the vagina and the hymen. In 1668, *Anatomia* was translated into English and published in London as the *Bartholinus Anatomy*.

Bartholin's first book, "Of the Lower Belly," discusses the hymen and virginity. Bartholin noted that the hymen was synonymous with *eugion*, and others might refer to the membrane as the closure or flower of virginity, because of its indication of sexual initiation. Bartholin believed that sexual initiation could be determined physically, he stated that all men who married virgins found it difficult to enter their wives, as if something was hindering their member. He believed a woman's first act of vaginal intercourse would be painful, accompanied with blood and great pain, which he attributed to the tearing of the hymen. Bartholin added that younger virgins would bleed less, because of the dryness of their hymen and their small blood vessels. On the other hand, older women would be more likely to bleed more profusely but have less pain. He noted one exception, if women were menstruating during their first act of vaginal intercourse their vagina would become relaxed and thus there would be little or no pain and

<sup>36</sup> Manuel de Porras, *Anatomia galenico-moderna* (a costa de Don Pedro Joseph Alonso y Padilla, 1733), 28.

<sup>37</sup> Jorge Cañizares Esguerra, "Spanish America: From Baroque to Modern Colonial Science" in *The Cambridge History of Science*, ed. Roy Porter, ed. (Cambridge University Press, 2003), 730.

<sup>38</sup> Thomas Bartholin, Caspar Bartholin, and Johannes Walaeus, *Bartholinus Anatomy: Made from the Precepts of His Father, and from the Observations of All Modern Anatomists* (John Streater, 1668), 18.

blood. It was for this reason that Bartholin advised that women not wed during their menstruation, to avoid any doubts about virginity.<sup>39</sup>

Bartholin gave six different theories on what the hymen was, and how it “hindered” the male member from entering a woman’s vagina when she lost her virginity. The first, held by “Arabians,” was that the hymen was “a piece” formed of veins. The second, championed by French scientist Jean François Fernel (1497-1558) and Italian scientist Antonius de Monte Ulmi (?-1396), stated that the neck of the womb (cervix) grew together, and thus broke open during intercourse. Bartholin clearly refuted this idea because he believed it went contrary to observations that in little girls, the neck of the womb already had a cavity that was not stuck together. The third theory claimed that it was a transverse membrane across the cervix, which Bartholin agreed with to a degree. He believed this theory was misguided because it also claimed that the hymen had perforations like a sieve, for urine to pass through it. The fourth opinion, which Bartholin stated was the newest, belonged to French anatomist Séverin Pineau (?-1619). Pineau believed that the hymen was composed of four myrtle-shaped caruncles connected by a small membrane. Bartholin claimed that many believed this theory to be true; however, he had not been able to find such hymen in in any young girls. The fifth theory, which Bartholin also endorsed, was that the hymen was a membrane that extended across the neck of the womb, slightly above the neck of the bladder (Skene’s gland), and impeded the entrance of the penis during a woman’s first vaginal sex experience. Among the supporters of this theory was the renowned Flemish anatomist Andreas Vessalius (1514-1564). The neck of the bladder is a term that is not presently used for women’s bodies, but in 1863 Henry Savage wrote, “The neck of the bladder is a mere infundibulous contraction of the bladder at its anterior angle.”<sup>40</sup> It is very likely that what Bartholin referred to as the female “neck of the bladder,” is now known as Skene’s gland, which is near the urethral opening and is homologous to prostates in males.<sup>41</sup> Bartholin claimed that on various occasions he was able to find a hymen, and so did Flemish anatomist Adriaan van den Spiegel (1578-1625). Bartholin staunchly defended the position the hymen was always present; he believed that the hymen existed among virgins except for extraordinary circumstances. The final theory belonged to German anatomist Melchior Sebisch (1539-1625), who claimed that virginity should be deduced holistically, by looking at various parts of the vagina for signs of intercourse. For example, if the lining of the hymen was missing, then the observer should check the straightness of the cervix, and ascertain if any stretching had occurred from sexual contact.<sup>42</sup>

Bartholin then gave his opinion on the hymen, which he situated on the neck of the womb, just behind the neck of the bladder. He believed that there was little variation in terms of how the membrane covered the neck of the womb. Bartholin stated that the hymen had a hole like a ring, and once a woman was fully developed, the top of a finger could be passed through the hymen, this was how menstruation flowed. He noted that Sebisch and Girolamo Fabrizio (1537-1619) had reported varying shapes and varying degrees of narrowness in the opening of the hymen. Bartholin believed that it was rare for the hymen to lack an opening, and if the hymen

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<sup>39</sup> *Bartholinus Anatomy*, 73.

<sup>40</sup> Henry Savage, *Illustrations of the Surgery of the Female Pelvic Organs: In a Series of Plates Taken from Nature : with Physiological and Pathological References* (J. Churchill & sons, 1863), Section 5, Plate VI.

<sup>41</sup> Jeannine Foster, Gary Lemack, and Philippe Zimmern, "Skene’s gland cyst excision," *International Urogynecology Journal* 27, no. 5 (2016): 817.

<sup>42</sup> Bartholin, Bartholin, and Walaeus, *Bartholinus Anatomy*, 73.



did not have a hole (imperforated hymen), disease and death could occur once menstruation began.<sup>43</sup>

Bartholin firmly believed that blood was the result of sexual initiation for women. Lack of blood, according to Bartholin, could be caused by one of the following eight reasons: 1) Accidental breaking of the hymen, which could result in the hymen being sewn back together in some cultures; 2) The woman was menstruating during or right before the act; 3) The opening of the hymen was long and thus tearing did not occur, only dilation; 4) The neck of the womb was very wide, and the woman's partner's penis was not sufficiently thick; 5) "If the man thrust in his yard [penis] cleverly;" 6) The woman's womb had fallen down and the hymen broke; 7) The woman was too young; 8) The woman suffered from continuous fluxes of sharp humors that eroded the hymen. Bartholin wrote, "1) The use of the hymen is, to defend the internal parts from external injury. 2) To testify a maids [sic.] virginity."<sup>44</sup> There was no doubt in Bartholin's writings that under "normal" circumstances the hymen existed, that it was a viable way to ascertain sexual initiation, and that bleeding occurred on a woman's first vaginal sexual encounter.

The *Bartholinus Anatomy* includes a separate chapter dedicated to the "Myrtle-Shaped Caruncles."<sup>45</sup> Bartholin claimed the caruncles were particles of flesh opposite each other in a quadrangle located after the "wings" (labia minora). He believed that one caruncle was above the urethral opening to prevent air and foreign objects from entering the urethra. This type of growth is called a "urethral caruncle" by modern doctors and is perceived as an inflammatory lesion more commonly found among elderly women that can cause pain, dysuria, and bleeding.<sup>46</sup> According to Bartholin, the shape of the caruncles resembled myrtle berries and they were connected by a fleshy membrane, which could have holes of various sizes leading to the vaginal cavity. The caruncles were "obliterated" during birth, and returned once the vagina was straightened and it returned to its "normal" form. He believed that the caruncles served two purposes: 1) to protect the vaginal cavity from air, dust, etc.; and 2) to pleasure the penis, "especially in young lasses." Bartholin noted that others believed the caruncles were joined by a conical membrane and served as a true mark of virginity.<sup>47</sup> Bartholin did not believe specialists could ascertain a woman's virginity by observing her caruncles. From a modern perspective it seems that Bartholin and other anatomists had conceptualized two different anatomic phenomena for what we now know as the hymen.

Bartholin included an illustration of the vagina (**Error! Reference source not found.**), stating that it, "...comprehends the sheath of the womb, the body of the clitoris, and the external Female Privity [vulva], both in virgins and such as are defloured [sic]."<sup>48</sup> Figures II, III, IV, and V are of interest to this essay because they relate to the hymen. Figure II depicts a vagina without a hymen, along with a stretched and wrinkled labia minora typical of a woman that had given birth according to Bartholin. Figure III, though unlabeled, likely presents the vagina of a woman that had not had vaginal intercourse according to Bartholin. EE are two myrtle-shaped "productions" and FF is the membrane that connects them. Figure IV depicts the "privity of a girl," with e, f, and h illustrating myrtle shaped caruncles. E was the uppermost caruncle, which

<sup>43</sup> *Bartholinus Anatomy*, 73.

<sup>44</sup> *Bartholinus Anatomy*, 74.

<sup>45</sup> A caruncle is a small fleshy eminence, oftentimes a lesion or scar.

<sup>46</sup> Stephan Mose, "Urethral Caruncle," in *Encyclopedia of Radiation Oncology*, ed. Luther W. Brady and Theodore E. Yaeger (Berlin, Heidelberg: Springer Berlin Heidelberg, 2013), 932.

<sup>47</sup> Bartholin, Bartholin, and Walaeus, *Bartholinus Anatomy*, 75.

<sup>48</sup> *Bartholinus Anatomy*, 76.

shut the passage of the ureter. G was the hole of the hymen, and H is the lowest caruncle. Figure V, according to Bartholin, shows a member that traversed the vaginal opening, which he claimed some believed to be the hymen.<sup>49</sup>

Bartholin entertained the theories regarding caruncles. One that placed four caruncles in direct competition with the hymen slightly inside of the vaginal cavity. The second, placed four caruncles on the vaginal opening, and the hymen slightly inside of the vaginal cavity. Bartholin claimed that he had not been able to find a hymen composed of caruncles in a girl, but seemed to endorse the theory that four caruncles existed on the vaginal opening. In **Error! Reference source not found.**, Figure “IV,” “g,” the opening of the hymen is high, and “h” which Bartholin titled the “lowest caruncle” is in the location where one would expect to find a hymen, and its opening. Aside from noting the “hymen’s hole,” Bartholin did not label any part of the illustration as “the hymen.” Moreover, Bartholin discussed Pineau’s four-caruncle theory in the hymen section, which he dismissed, but then Bartholin went on to discuss the “four caruncles” in a separate section. In modern medicine, what Martínez identified as *carunculas mirthiformes* are known as *myrtiform carunculae*, *hymenal carunculae*, or colloquially as “hymen tags.”<sup>50</sup> According to Bartholin and his contemporaries, the hymen and the caruncles had different functions: the hymen protected the vaginal cavity and marked virginity; and the four caruncles pleased a woman’s partner during sex, and protected the vagina from dust and air. Bartholin described a female body that by design marked sexual activity, and pleased a man’s body.

Bartholin carefully tiptoed around the topic of Immaculate Conception. Stating that women could become pregnant without jeopardizing their virginity, such as Amerigo Vespucci had reported in the Indies, and of course Jesus Christ who was conceived without sexual contact. He did not believe that women could conceive without the seed of a man, that is to say, in order to become pregnant women required the touch of a man, or a strong imagination.<sup>51</sup> Bartholin made sure that his cutting edge theories did not conflict with Christianity, and that it maintained that men were an important part of reproduction.

Marie H. Loughlin found that in the *Microsmorgraphia: a Description of the Body of Man* (1615) Helkiah Crooke described the hymen as a thin ring shaped membrane that could seal the cavity of the neck of the womb (cervix). In adult virgins, the top of a pinky finger could slide through the ring, and this was where menstrual blood exited the vagina. Crooke gave another description of the hymen, which noted that it was composed of four “caruncles” with four membranes joining them together.<sup>52</sup> Loughlin pointed out that Johannes Vesling illustrated the vagina, influenced by Bartholin’s earlier work, with representations of the hymen. Vesling claimed “VI” was a “vulgar” understanding of the hymen, which depicted what modern anatomists would call an imperforate hymen, since the hymen sealed the vaginal opening. He then presented two other images, which he deemed to be “correct.” “VII” showed essentially the same thing as “VI,” but with a narrow opening to allow menstrual blood to exit. Loughlin noted that “V” showed what Vesling called the fleshy skin that covered the vaginal opening “guarded” with caruncles. Loughlin saw this as epistemological uncertainty regarding the hymen, and Western culture’s fixation on the material existence of the hymen.<sup>53</sup>

<sup>49</sup> *Bartholinus Anatomy*, 76.

<sup>50</sup> Astrid H. Heger et al., “Appearance of the Genitalia in Girls Selected for Nonabuse: Review of Hymenal Morphology and Nonspecific Findings,” *Journal of Pediatric and Adolescent Gynecology* 15, no. 1 (2002): 27-29.

<sup>51</sup> Bartholin, Bartholin, and Walaeus, *Bartholinus Anatomy*, 74.

<sup>52</sup> Marie H. Loughlin, *Hymeneutics: interpreting virginity on the early modern stage* (London;Cranbury, NJ;Lewisburg,: Bucknell University Press, 1997), 35.

<sup>53</sup> *Hymeneutics: interpreting virginity on the early modern stage*, 36.

### Knowledge of the Hymen in Spain

The surge of medical production and curiosity in the eighteenth century was spearheaded and overseen by members of the Real Tribunal del Protomedicato (The Royal Tribunal of the Protomedicato), the Spanish Crown's mechanism for medical regulation. The Protomedicato was the governing body that oversaw medical education, inspected apothecaries, suppressed quackery, prevented false or dangerous publications, tried medical cases and examined and licensed doctors.<sup>54</sup> This tribunal did not simply police the medical profession; it also created instructional manuals, anatomy books, and disseminated medical knowledge. This was especially true in the eighteenth century. The first version of the Royal Protomedicato was created during the reign of Alfonso the Learned (1252-84).<sup>55</sup> In 1477 Ferdinand and Isabella reformulated the Royal Protomedicato into a tribunal empowered to examine and prosecute physicians, surgeons, midwives, bonesetters, apothecaries, aromatic drug dealers, and any other person who partook in vocations related to treating people's bodies.<sup>56</sup> Subsequent Royal Protomedicatos were typically composed of three physicians, with the "*protomedico*" serving as the chair of the tribunal.

In 1716 doctor Don Manuel de Porras penned the *Anatomia Galenico-moderna*. Porras was the surgeon of his majesty, the royal hospitals of the court, and examiner of the Royal Protomedicato. Unlike later works associated with the Royal Protomedicato, *Anatomia* was commissioned by the vicar of Madrid and approved for publication by Fray Miguél de San Joseph, an instructor of theology at the Universidad de Alcalá de Henares (the same institution where Terreros y Pando studied).<sup>57</sup> After passing religious inspection, Doctor Don Diego Matheo Zapata, the president of the Regia Sociedad Medica de Sevilla, approved *Anatomia*.<sup>58</sup>

Following a similar format to other anatomy books of the eighteenth century, Porras divided *Anatomia* into eight treatises, each parceled into chapters. The third treatise is titled "*de las partes continentes, y contenidas del vientre inferior*" (on the parts of the excretory system, and those contained in the lower abdomen).<sup>59</sup> Its nineteenth chapter is called, "*de las partes genitales externas de la muger*" (on the external genitals of women). This chapter contains information on virginity and the hymen. Like subsequent Spanish anatomists, Porras focused on the hymen's role in determining female virginity.

Unlike Bartholin, Porras was much more explicit about the definition of virginity. He defined *virginidad* as the integrity of the genitals (*partes pudendas*) that have not been violated by *congresso venereo* (venereal meeting i.e., sexual intercourse). He divided virginity into two categories: material and formal. According to Porras, material virginity was when a woman's orifice had *natural estrechez* (natural tightness) that a penis, even of proportionate dimensions, could not enter without difficulty. Porras differentiated natural tightness from the tightness that

<sup>54</sup> John Tate Lanning and John Jay TePaske, *The Royal Protomedicato : The Regulation of the Medical Professions in the Spanish Empire* (Durham, NC: Duke University Press, 1985), 11.

<sup>55</sup> *The Royal Protomedicato : The Regulation of the Medical Professions in the Spanish Empire*, 15.

<sup>56</sup> Sherry Lee Fields, *Pestilence and Headcolds : Encountering Illness in Colonial Mexico* (New York: Columbia University Press, 2008), 52.

<sup>57</sup> de Porras, *Anatomia galenico-moderna*, 19.

<sup>58</sup> *Anatomia galenico-moderna*, 28.

<sup>59</sup> I translate *partes continentis* as excretory parts. In English (and Spanish) the most common definition for continent is a land mass, which does not make sense here. Other definitions include sexual restraint and chastity, which is a translation I use elsewhere in this paper, and the ability to control defecation and urination. Based on the content of the chapters in this treatise, I believe the latter translation is the most appropriate.

sexually initiated women achieved artificially through medications.<sup>60</sup> According to Porras, formal virginity was the absolute deprivation of *congresso con el varon* (meeting with a male, i.e., sexual intercourse).<sup>61</sup> This leads the reader to interpret that sexually initiated women could be “material” virgins depending on their “tightness.” On the other hand, only women that had never had sexual relations with a man were deemed “formal” virgins. Porras did not comment on same-sex sexual relations between women, nor masturbation. Furthermore, it is important to note that chapter thirteen “*del meimbro viril*” (“on the male member”), following Western tradition, did not contain any discussion on any anatomic part that might symbolize male virginity. In fact, *Anatomia* did not associate virginity with men in any way. This section suggests that in Spain, morality shaped scientific thought, and how science reinforced social norms of female sexuality. Martínez continued to use medieval language such as, “corrupt” for sexually initiated women, and *donzellas* (maidens, virgins) for sexually uninitiated women.

Porras identified three schools of thought on the hymen, very similar to those discussed by Bartholin. One conceptualized the hymen as *corrugaciones membranosas* (wrinkled membrane). The second group believed the hymen were *carunculas myrtiformes* (caruncle myrtiformes); this is probably what Terroros y Pando defined as *cururculas*. The third camp believed the hymen was a “virginal hymen.” Porras noted that the diverse views on this part of the female body stemmed from differences among women. He believed that this was likely due to not only age, but other circumstances as well, principally diverse shaping and structuring amongst humans.<sup>62</sup> This last theory, perhaps inadvertently, was a sophisticated approach to the human body that took human variation into account.

Porras relied on the work of Phillip Verheyen (1648-1710), a Flemish anatomist, who studied the hymen in the cadaver of a twenty-five year old “virgin.” The woman’s hymen ran along almost the entirety of her vaginal orifice, and Verheyen deemed it no more than the vagina’s internal tunica (a membranous sheath lining an organ). Verheyen argued that the wrinkles, or the *curunculas myrtiformes*, were this very same membrane, which is dilapidated and stretched to form the membranous veil that is called the hymen. He noted that not all women, even of “proper” age had the said caruncles or dilapidated wrinkles. Thus in some women the *curunculas myrtiformes* could be found and in others that had “achieved” the needed expansion, only “the veil” (i.e., hymen) was found.<sup>63</sup> Following Verheyen, Porras accounted for physical variation and did not standardize the shape or parts of the vagina.

Bartholin and Porras came to similar conclusions regarding the effusion of blood during the first act of vaginal intercourse. Porras ended his section on virginity’s anatomic parts by answering a question that he posed: does the first act of copulation produce blood? His short answer, no. Porras explained that firstly, pungent humors could have corroded the hymen. Alternatively, perhaps an injury could have torn the hymen. Secondly, a man’s penis could be too small and a woman’s vagina too wide (because of her excessive height or old age), or perhaps she had menstruated shortly before copulation. According to Porras, menstrual blood could lubricate and widen the vaginal area therefore preventing vascular ruptures. Porras made it clear that the effusion of blood in the first act of copulation was not necessary to prove virginity.<sup>64</sup> Porras did

<sup>60</sup> de Porras, *Anatomia galenico-moderna*, 180.

<sup>61</sup> *Anatomia galenico-moderna*, 180.

<sup>62</sup> *Anatomia galenico-moderna*, 180.

<sup>63</sup> *Anatomia galenico-moderna*, 181-82.

<sup>64</sup> *Anatomia galenico-moderna*, 182.

not offer a more “accurate” way to ascertain the status of a woman’s virginity, perhaps because he did not believe one existed.

*Anatomia galenico-moderna* included an image of female reproductive organs titled “*lamina trece que manifesta la partes que sirven á la generacion en las mugeres.*”<sup>65</sup> (Figure 2) This image illustrates the clitoris, the urinary opening, and the uterus, along with other anatomic parts related to the female reproductive system. Unlike later anatomy books, Porras did include the hymen, labeled “V” in Figure 2 titled: “*las quarto carunculas myrtiformes.*”<sup>66</sup> This suggests that perhaps Porras was and ideological supporter of the caruncle, in the hymen debate.

Building on many of the notions found in Porras, in 1745 doctor Don Martin Martínez published his *Anatomia completa del hombre con todos los hallazgos, nuevas doctrinas, y observaciones raras hasta el tiempo presente, y muchas advertencias neccessarias para cirugia: Segun el methodo con que se explica en nuestro teatro de Madrid.*<sup>67</sup> Don Martinez was the widely respected honorary doctor of the king’s family, the examiner of the Royal Protomedicato, professor of Anatomy, and two-time president of the Regia Sociedad Médico-Química de Sevilla.<sup>68</sup>

Much like Porras’s *Anatomia*, Martínez divided *Anatomia completa* into three treatises, each split into lessons that branched into chapters. He titled his first treatise, “*del vientre inferior*” (the lower abdomen). The fifth lesson in this treatise is titled, “*de los organos de la generacion en la muger*” (on the reproductive organs in women). The second chapter in this lesson is named, “*de las partes externas,*” (the external parts). This section contains information on the genitals, including the vulva, pubes, clitoris, labia, and urethral opening. In the twenty-nine years after the publication of *Anatomia*, it seems that the “hymen question” was now only split into two camps—*carunculas* (wrinkles or membranous lumps) and the *himen* (a hymen).

Martínez named the first section, “*Carunculas mirthiformes.*” Here he stated that upon opening the labia, four *carunculas*, called *mirthiformes*, could be found. According to Martínez, the “tags” received their name from their resemblance to the leaves of the *arrayan* or *myrtho* (myrtle) bush. A slight variation from Bartholin’s belief that these caruncles received their name from the berries of the myrtle plant. Martínez went on to say that in *doncellas* the caruncles were connected with a small membrane that was torn during sex, thus they were found separated among “corrupted” women. Like Bartholin, Martínez stated that the function of the caruncles was for the reciprocal pleasure of the penis, and during birth, the caruncles retracted to allow passage of the fetus. Martínez reconciled missing caruncles by stating that after birth, they hid and they never remerged until the vagina restored itself to its “natural” state, a process he did not describe.<sup>69</sup>

<sup>65</sup> “Plate thirteen, which shows the parts that serve in female reproduction”

<sup>66</sup> de Porras, *Anatomia galenico-moderna*, 166.

<sup>67</sup> This title translates as “The complete Anatomy of Man with all of the Findings, New Doctrines, and Rare Observations until the Present, and Other Necessary Warnings for Surgery: According to the Methods Used in Madrid to Teach”

<sup>68</sup> Don Zenon de Somodevilla, *Libro segundo, en que se continuan las ideas extractadas de los pronosticos con sus prologos, y dedicatorias, que empiezan desde el ano de 1745 hasta el de 1753, y al fin otros papeles sobre los mismos asuntos* (1798), 211.

<sup>69</sup> Martín Irala Matías de Martínez, *Anatomia completa del hombre : con todos los hallazgos, nuevas doctrinas, y observaciones raras hasta el tiempo presente, y muchas advertencias neccessarias para la cirugia : segun el methodo con que se explica en nuestro teatro de Madrid* (En Madrid: Por los herederos de Don Miguèl Francisco Rodriguez : Se hallará en la libreria de Francisco Lopez ... 1752), 189.

In Europe, the myrtle bush was strongly associated with fertility, especially in the Mediterranean region. Art from said region often associated the myrtle plant to Venus, the Roman goddess of beauty, sex, fertility, and desire. Couples used myrtle garlands during their wedding feasts. The delicate attributes of the myrtle’s white flower were associated with the Virgin Mary, highlighting her purity and humility. The myrtle plant itself had a strong connection to fidelity as well.<sup>70</sup> In early modern Italy, families and friends gifted *deschi da parto* (birthing plates) to women to commemorate their successful births.<sup>71</sup> A myrtle garland is a motif found in several plates, such as a trencher and bowl created by Nicola da Urbino circa 1533.<sup>72</sup> The trencher (lid) for Urbino’s bowl depicts a woman giving birth in a birthing chair with the help of a midwife and other women. To her right, an astronomer (male) gazes out the window of the birthing room, an area that was almost exclusively a female space. Urbino decorated the periphery of the trencher with a garland made out of myrtle, somewhat resembling the description of the hymen by many anatomists in and out of Spain. These wider culture links could explain why the myrtle leaf or berry was used to describe the skin “tags” on, or left by, the hymen.

Martínez also presented a second theory held by some anatomists of the time; the flesh in question was a hymen, not caruncles. According to this theory, the hymen extended across the vagina with a hole in the middle so that menstruation could pass through. Martínez went on to write that this membrane was torn during the first act, and therefore, it was reputed as a symbol of virginity. He acknowledged that this notion directly contradicted the caruncle theory, and he noted that believers in the hymen refuted the existence of caruncles in the vagina except for the urethral opening. Any other tags were torn and corrugated remnants of the hymen. Thus, according to these individuals, caruncles did not exist among virgins. Unlike Bartholin’s era, Spanish anatomists in the mid-eighteenth century were much more rigid regarding the theories on hymen and the four-caruncle.

Martínez argued that although scientists had made observations and contentions for both camps, his belief was that virgins did have caruncles that were “narrow” and linked by a membrane. Martínez believed that the “narrowness” of the membranous links varied among women. He also argued that neither caruncles nor the hymen could be a clear measure of virginity. He attributed this to the fact that menstruation’s humidity and harshness could corrode the fibrils in that area.<sup>73</sup> This perhaps explains why the *Anatomia completa*’s image of the female reproductive organs (Figure 3) did not include the hymen or caruncles. This is a notable difference to Brothlin’s (Figure 1) and Porras’ (Figure 2) diagrams.

Another striking difference between *Anatomia* and *Anatomia completa* is that Martínez did not discuss “material” or “formal” virginity. Nevertheless, in 1750 he published a series of lectures on anatomy that he presented in Madrid. During his seventeenth lecture, he was asked to clarify the difference between a *virgen material* and a *virgen formal*. His answer was that a material virgin was a woman whose vagina is naturally tight, even after sex. Conversely, a woman with a dilated vagina could not be regarded as a material virgin. He clarified that a

<sup>70</sup> Lucia Impelluso, *Nature and its symbols*, Guide to imagery (Los Angeles: J.P. Getty Museum, 2004), 55.

<sup>71</sup> Jacqueline Marie Musacchio, "The Medici-Tornabuoni Desco da Parto in Context," *Metropolitan Museum Journal* 33 (1998): 137-38.

<sup>72</sup> Various images and details of the trencher and bowl can be seen on the Victoria and Albert Museum’s website: <http://collections.vam.ac.uk/item/O122034/trencher-and-bowl-nicola-da-urbino/>

<sup>73</sup> Martínez, *Anatomia completa del hombre : con todos los hallazgos, nuevas doctrinas, y observaciones raras hasta el tiempo presente, y muchas advertencias necesarias para la cirugia : segun el methodo con que se explica en nuestro theatro de Madrid*, 189-90.

formal virgin had never experimented with sex.<sup>74</sup> Martínez's answer corroborated with Porras' assessment of virginity, and suggested that this notion still existed in the scientific community.

"The hymen question" seems to have been settled by 1785, when the *Cartilla Nueva, util, y necesaria para instruirse las matronas, que vulgarmente se llaman Comadres, en el oficio de Partear*<sup>75</sup> was published. Written by Doctor Don Antonio Medina, a man who held a similar resumé to Porras and Martínez. Medina was the physician of the Royal Hospitals, the Royal Family, and examiner of the Royal Protomedicato. Unlike the previously mentioned books, the *Cartilla Nueva* was commissioned by the tribunal of the Royal Protomedicato. The *Cartilla Nueva* is a short, didactic textbook or primer designed to teach women the medicalized craft of midwifery. The book used rhetorical questions posed and answered by Medina.

The hymen is first mentioned on page nineteen, when the *Cartilla Nueva* asks: "*Qué otras partes se consideran en la vulva?*" (What other parts are considered in the vulva?) The associated answer states: the clitoris, urethra, labia minora (nymphas), and the hymen.<sup>76</sup> This is followed up by: "what is the clitoris?" The answer given by Medina links the clitoris to virginity. He states that in *doncellas* the clitoris is not very noticeable, but with the "fervors of venus" (i.e., sexual arousal) it is enlarged, to the point that sometimes it protrudes from the vulva. Medina noted that this could lead to the erroneous belief that a woman had transformed into a man.<sup>77</sup> Medina believed that the vagina could change by desire, without the necessity of sexual contact. Harkening back to Realdo Colombo's sixteenth-century "discovery" of the clitoris and its alleged likeness to the male penis, to a degree that Colombo believed the clitoris could eject semen during intercourse.<sup>78</sup>

After progressing through the different parts of the vulva, Medina arrived to, "*Qué es Hymen [sic]?*" (What is the hymen?) Medina's answer did not acknowledge any contentious beliefs regarding the hymen. He stated that the hymen was a thin, round fabric with a thin opening in the middle and it comprised the orifice of the vagina. In the first act of intercourse, the hymen ripped, and blood effused, leaving three or four tags similar to the myrtle leaf.<sup>79</sup> The *Cartilla nueva* no longer provided multiple views and hypothesis on the hymen, but used similar elements to theories that came before. Unlike Porras and Martínez (and most modern anatomists) the *Cartilla Nueva* did not account for variation and diversity among women. Positing that all women had a uniform hymen that always ripped during sexual initiation that resulted in bleeding. Moreover, contrary to Porras and Martínez, Medina viewed the hymen as a viable way to discern if a woman was a virgin.

After discussing the hymen, the *Cartilla Nueva* asked, "Besides being necessary for teaching the art of midwifery, to what other ends should midwives have knowledge of these parts?" Medina's answer was simple; midwives should be familiar with the vulva and its components in order to testify in the court of law before a judge in cases regarding "suspicious virginity," rape, and *impotencia* (erectile dysfunction). Medina complained that midwives made errors on a daily

<sup>74</sup> *Noches anatómicas ó Anatomia compendiosa* (Madrid, Spain: Complutense University of Madrid, 1750), 65-66.

<sup>75</sup> The title translates as, *The New Primer, Useful and Necessary for the Instruction of Midwives, in the vocation of Midwifery*.

<sup>76</sup> A Medina, *Cartilla nueva, util, y necesaria para instruirse las Matronas, que vulgarmente se llaman Comadres, en el oficio de Partear* (Kessinger Publishing, 1785), 19.

<sup>77</sup> *Cartilla nueva, util, y necesaria...* 19-20.

<sup>78</sup> Thomas Walter Laqueur, *Making Sex: Body and Gender from the Greeks to Freud* (Cambridge, MA: Harvard University Press, 1992), 66.

<sup>79</sup> Medina, *Cartilla nueva, util, y necesaria...* 21.

basis due to a lack of anatomic knowledge. The solution Medina offered was that midwives should learn all of the pertinent parts and consult physicians, before testifying or presenting their depositions in writing.<sup>80</sup> This further established the fact that according to Medina, and by extension the Royal Protomedicato, the hymen and other parts of the vulva presented information on habits and physical evidence of sexual activity. Furthermore, Medina also asserted male superiority over knowledge of the female body. By insisting that physicians, who were exclusively male at the time, had to verify the midwife’s assessments, he implied that men had better training and superior knowledge of the female body.

All three of these sources, like Soranus, failed to acknowledge any hymen related ailments. Nonetheless, scientists in other parts of Europe knew and discussed illnesses of the hymen. For example, Edinburg surgery professor Alexander Hamilton’s *Outlines of the Theory and Practice of Midwifery* (1787), noted one of the most common complications of hymen that was excluded from Iberian literature—the imperforated hymen. Like modern medicine, Hamilton defined this as a disease in which the hymen did not have an opening. An unperforated hymen did not become an issue until puberty, since menstruation could not exit the vagina. To remedy this problem, Hamilton recommended an incision that would allow menstruation to flow freely.<sup>81</sup>

### Closing Thoughts

In eighteenth-century Spain, virginity continued to be a female matter officially discussed by men. Virginity’s chamber remained valuable, and like other phenomena of the human body, men of science could determine its integrity. Beginning in the eighteenth century, Spanish men of science began to make a clear anatomical link between the hymen and virginity. Physicians paid little attention to the hymen’s physiology and pathology, focusing on the hymen’s association to female virginity. Notions of the hymen changed throughout the eighteenth century, from Porras who presented three different theories on vulva’s inner lining (caruncles, wrinkles, and the hymen) to Medina who presented a singular theory of the hymen and solidified its role as a demarcation of virginity.

Early modern Spanish dictionaries and scientific books demonstrate the great emphasis that medicine placed on virginity when discussing the vulva. In Spain, instead of focusing on the hymen’s physiology and pathology anatomists were fixated on its role in ascertaining female virginity. Often ignoring male virginity or methods of verifying lack of sexual inanity by scrutinizing male genitals.

Without a concrete understanding of what women knew about the female body, particularly the reproductive organs, in the late medieval or early modern period it is hard to say how much eighteenth-century science agreed or disagreed with women’s knowledge. As the scientific discussions and dictionaries suggest, midwives believed the hymen was a membrane, noting no competing theories or ideas. One thing is clear, by the late eighteenth century, men were formally educating women on how to deal with female bodies, and most importantly, men were the final say in assessing the female body.

Although eighteenth-century anatomists gained a perspective on the hymen’s anatomy that is closer to that of modern medicine, they also began to standardize the woman’s vulva and the hymen’s shape. Porras (following Verheyen) and Martínez expressed variation among

<sup>80</sup> *Cartilla nueva, util, y necesaria...* 21-22.

<sup>81</sup> Alexander Hamilton, *Outlines of the Theory and Practice of Midwifery* (printed for Charles Elliot and GGJ & J. Robinson, London, 1787), 114-15.



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women based on the findings of other anatomists who had mixed results when they searched for hymens. Medina on the other hand, implied that all virgin women had hymens that were uniform in appearance and bled during sexual initiation. This is problematic because a standard hymen shape does not exist, and some women never have hymens irrespective of sexual activity. Moreover, the hymen can be broken or injured in non-sexual acts that can result in a bloodless sexual initiation. We can clearly see the dangers of treating women's bodies as a monolith in Francisco A. Flores's *El Himen in Mexico* (1885). Similar to Medina, Flores believed the Hymen was a promising tool that doctors could use to determine sexual abuse in cases of rape. He sought to establish a clear test that could help doctors testify in legal cases. Flores found four distinct shapes for the hymen including a shape that he claimed only existed among Mexican women—the horseshoe shaped hymen. This gave criminal and civil cases that were hinged on virginity a false scientific approach to ascertaining sexual initiation, and increased the value of women's chamber of virginity.

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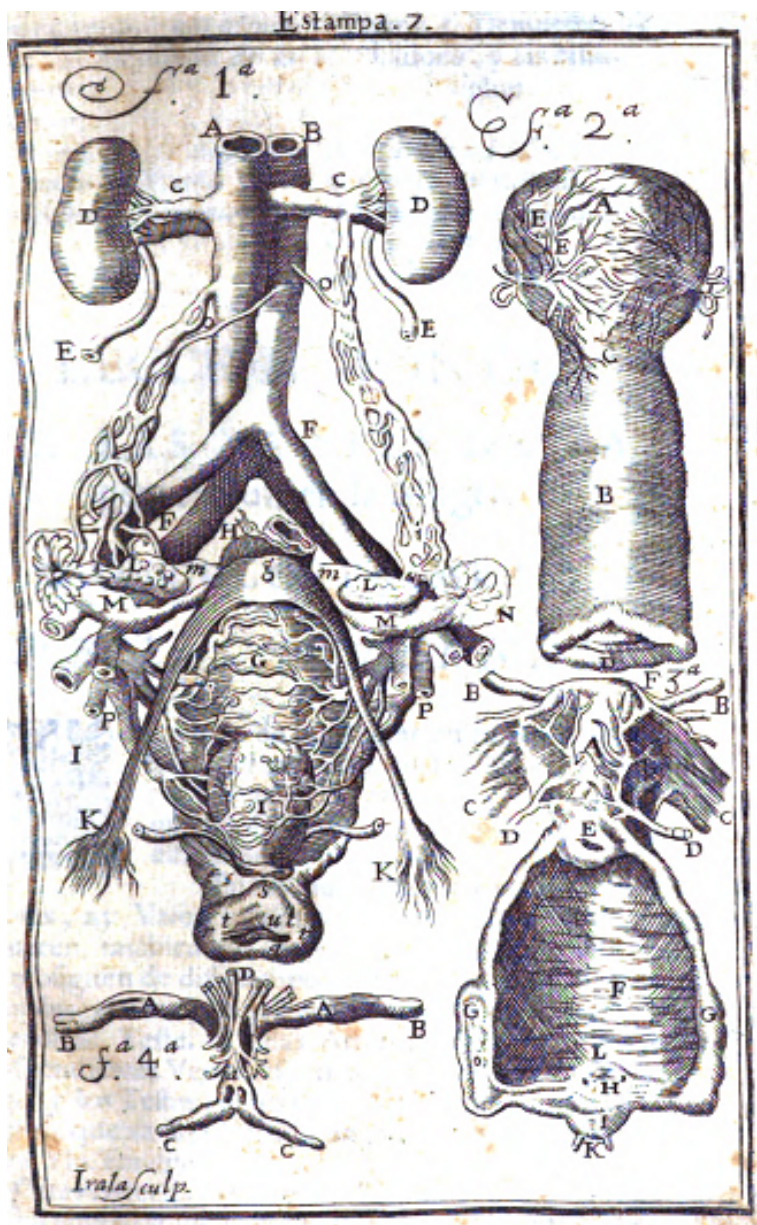


Figure 3 -Image of the *Anatomia completa*'s female reproductive system.