

texts, which reached Western Europe in a piecemeal fashion from the late eleventh to the late thirteenth century, transformed the intellectual atmosphere of Western Europe. Latin scholars delved into the new naturalism, absorbing its lessons on sex and sexuality and, along the way, drawing their own conclusions.

SEX DIFFERENTIATION IN LATIN EUROPE

As we have seen, medieval Muslim scholars operated within a multilingual, multi-faith urban milieu that allowed for easy engagement with contemporary and ancient sources. Medieval scholars in the Latin-speaking West, in contrast, had little direct knowledge of the core writings of Aristotle and Galen on the human body up until the late eleventh century. Decentralized political authority and social organization in the West, along with a lack of direct contact with the Greek-speaking East, had contributed to an overall decline in familiarity with the Greek language and with Greek naturalist ideas. Scholars in Western Europe were forced to contend with a relatively small number of Greek writings that had been translated into Latin during late antiquity and the early Middle Ages, along with some eclectic synopses and compilations. In comparison to their Muslim counterparts, Western European scholars developed only a rudimentary knowledge of Greek anatomy and physiology. All of this changed, however, with the arrival of the new translations.³²

In the last decades of the eleventh century, while living at the Italian monastery of Monte Cassino, the North African monk (and likely native Arabic speaker) Constantine the African translated al-Majūsī's *Complete Book of the Medical Art* (*Pantegni*) and Johannitius's *Isagoge*, along with other soon-to-be influential works. Constantine's compositions and translations, together with those of Gerard of Cremona, Burgundio of Pisa, and other translators, provided a ready stimulant to naturalist thinking across Latin Europe.³³ As the historian Joan Cadden notes, Latin analyses of sex thereafter became more explicit, more complex, and more complete than ever before.³⁴ Christian views of sex, formerly dependent on the likes of Soranus and Isidore of Seville, were transformed by the new translations, which taught the fundamentals of Hippocratic- and Galenic-influenced theories on sexual difference, including the belief that men and women had different complexions, different physiologies and psychologies, and that both men and women emitted procreative "sperm" during conception.³⁵

In the twelfth and early thirteenth centuries, Latin scholars drew heavily on the new, chiefly Galenic-Arabic theories (Aristotle's natural philosophical texts

were not yet available, although Galenic-Arabic texts were infused with Aristotelian precepts), as well as older versions of Hippocrates and Galen that were already available in Latin Europe. Scholars copied manuscripts and authored new works on the structure and functions of the human body, including its sexual generation and its fetal development. As the texts explained, the sex of a fetus, in general, derived from the relative dominance and heat of both male and female “sperm” at the moment of conception, along with the location in which an embryo implanted in the uterus.³⁶ Such texts tended to theorize sex, not as a binary, but as a spectrum, anchored by masculine men and feminine women at the poles, but with several additional categories—including feminine males, masculine females, and individuals “of both sexes”—in the middle.

The pseudonymous tract *On Sperm* (*De spermate*, attributed falsely to Galen but perhaps a real translation of Constantine the African) provides a good example. The text circulated in England and southern France in the mid-twelfth century before becoming widely disseminated across Europe in later decades.³⁷ *On Sperm* emphasized the continuity of the sexes rather than their vast difference, which resulted from natural variables at the time of conception:

Note that if the seed falls into the right-hand part of the uterus, the child will be male. . . . However, if the man’s weak sperm falls in the right part [of the uterus] and there is combined with a woman’s sperm stronger than itself, then [the infant], although male, will be feminine. And the man’s seed can come to be so weak that the infant will be of both sexes. If, however, the sperm falls into the left part [of the uterus], it will transform into a female nature . . . and if the man’s sperm prevails over the woman’s seed in the left part, [the infant] will turn into the female sex but retain certain masculine traits, such as hairiness, a beard, a deep voice, etc. And the female sperm can be so weak that a child of both sexes is created.³⁸

Another text, the *Prose Salernitan Questions* (c. 1200), a series of natural-philosophical questions that may have originated in Salerno, offers a similar view of fetal sexual development, along with an etiology of nonbinary sex:

If more of the womanly sperm is set in the right part [of the womb], a manly woman [*femina virago*] will be generated. If more in the left than the right, and there is more of the manly seed than the womanly, an effeminate man [*vir effeminatus*] will be born. If [the sperm is] in the middle chamber, so that it is subject to the impression of both parts, there will be a hermaphrodite, since it will have and produce the equipment of the body of both one [sex] and the other.³⁹

According to these texts, sex existed across a spectrum that encompassed masculine men, feminine women, and “hermaphrodites,” the latter of which balanced male and female sexual traits in equilibrium.⁴⁰ A central contributor to sex development was the shape of the uterus, which was thought to have multiple chambers—medieval thinkers differed in whether these chambers numbered three, five, or seven—the middle of which produced an offspring with features of both sexes (see fig. 4.4). Both *On Sperm* and the *Prose Salernitan Questions*

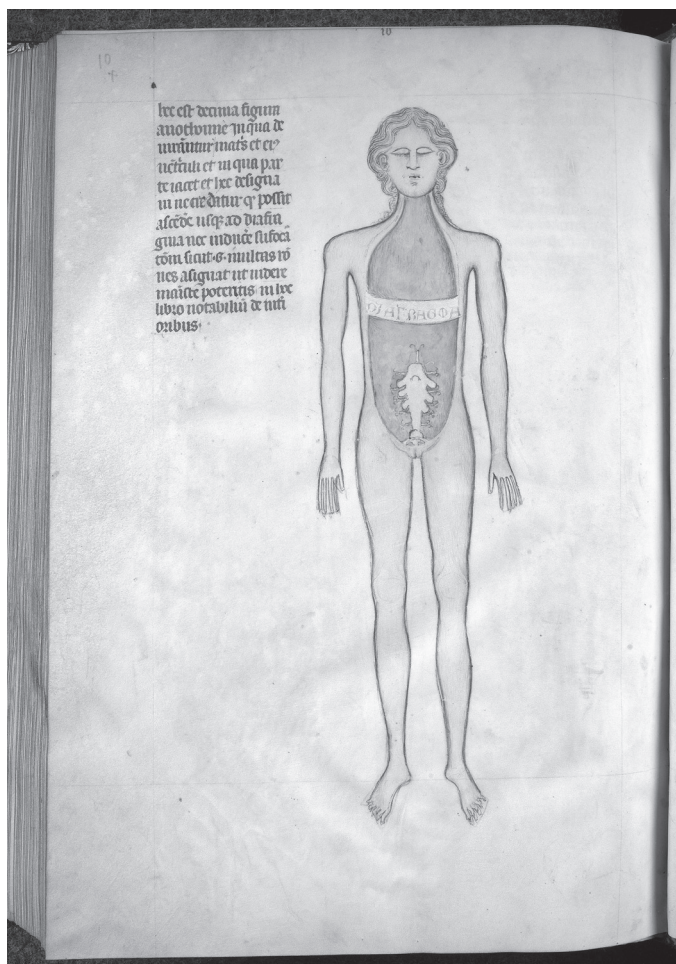


FIGURE 4.4 Seven-celled uterus. Guido da Vigevano, *Liber notabilium Philippi (VI) regis Francorum*. Chantilly, Bibliothèque du musée Condé, MS 003 (0569), fol. 267v (c. 1345). © Cliché CNRS-IRHT.

also described sexual difference in terms of right-left and hot-cold polarities: that is, the left side of the body was colder, favoring the creation of females, while the right side was warmer, favoring the creation of males.⁴¹ Classical Greek and Islamic teachings on “sperm” were complex, but the two previous passages focused on the relative quality and quantity of male and female sperm, which battled for dominance at the moment of conception.⁴² For instance, if a man provided a greater quantity of sperm than a woman, the offspring would be male; if the opposite, then the offspring would be female. If the two sperms were present in equal proportions, then an infant with “both sexes” would be born. In these and other writings, we also find musings about the “disposition” of the testicles, the age of the father, and the position of the stars, which interacted with these conditions to further influence an infant’s sex.⁴³

For these authors, the important difference between male and female was a matter of continuity and degree, rather than of bipolar distinction, and a number of intermediate sexual categories could result from natural variables during conception and gestation.⁴⁴ Analyses of this type were for the most part neutral; they did not express any moral outrage about nonbinary sexes, and they did not use the language of monstrosity.

As additional Arabic and Greek texts became available in the thirteenth century, however, new ideas began to extend and challenge these Galenic-influenced anatomical and physiological theories. Ibn Sīnā’s *Canon*—itself a synthesis of Galenic medicine, Aristotelian natural philosophy, and other texts—was translated into Latin by Gerard of Cremona during the second half of the twelfth century (although it took several decades before it was fully absorbed by medical scholars). Aristotle’s biological theories also became available in Latin, indirectly, through Muslim summaries and, directly, through Michael Scot’s translation of Aristotle’s *On Animals*, completed around 1220. All of this activity complicated ideas about sexual difference—including analyses of nonbinary sex—from about the mid-thirteenth century on.⁴⁵

A rapid shift in social organization in Western Europe, along with the arrival of new institutions of learning, facilitated this activity. During the twelfth century, a revival of scholarly activity was in full swing in Western Europe. Towns and courts—both secular and ecclesiastic—were fast becoming increasingly vibrant. In Italy, secular urban schools were grappling with the new translations, while in the north, cathedral schools (formed under the auspices of bishops) were multiplying, and new scholastic methods were quickly gaining influence.⁴⁶ From these beginnings, the foundation of universities around 1200 soon followed, and scholastic masters and students became intensely engaged with Greco-Arabic

naturalist works, developing from them new theories and new modes of textual analysis.⁴⁷ After the foundation of the mendicant orders in the thirteenth century, members of the Dominican Order, initially advocates of itinerancy and preaching, became leading schoolmasters. This cascade of changes allowed for greater personal mobility for scholars, who—now no longer cloistered in monasteries—were able to disseminate their ideas more widely. One would not want to overstate the distinction between rural monastic and urban scholastic circles, however; the Italian city of Salerno saw both monks and medical practitioners (not mutually exclusive groups) using the new texts in innovative ways.⁴⁸ Even before the advent of the mendicant orders, certain monks traveled or lived at court and participated in a relatively wide exchange of ideas.

Yet the specific transformations of the thirteenth century focused the bulk of intellectual activity on the universities, where scholars interpreted classical texts, including the biological works of Aristotle, with great care and precision. By the 1250s, university masters at Paris were required to cover Aristotle's *On Animals* in lecture (although Aristotle's natural philosophical works were also technically banned by church authorities anxious to suppress their pagan content).⁴⁹ As we have seen, Aristotle's *On the Generation of Animals* stressed the asymmetry of male and female generative contributions (only males contributed formative sperm), as well as the inferiority of females (who were defective or failed males).⁵⁰ Aristotle also regarded a truly intermediate sex among humans as an impossibility. In higher creatures, any individual with the apparent characteristics of both sexes was merely a case of doubled or superfluous genitals, a redundancy with no bearing on the individual's actual sex.⁵¹ Aristotle tended to view human sex in binaries and not continuities—a conceit that would prove formative for new Latin writings on sexual difference. But Arabic naturalist texts—so central to scholastic innovation—also combined theories from diverse and even contradictory sources, conveying to audiences multifaceted views about sex and gender.⁵²

Latin Christians were thus recipients of a tradition that allowed for both complexity and dissent. As Lorraine Daston and Katharine Park point out, Hippocratic- or Galenic-influenced “medical” theories recognizing a continuum of sexes and Aristotelian-influenced “philosophical” ones asserting only two sexes, continued to coexist in tension, complicating any definitive ruling on human sexual difference for centuries. But the binary model—favored by the Aristotelian camp—became increasingly influential after the 1250s.⁵³ According to the group of Latin European writers I turn to next, sex was no longer believed to encompass a range of diverse points on a continuous spectrum. Nonbinary sex was, instead, deemed a “monstrosity” that lay outside of nature's order.

The image is a detail from Sandro Botticelli's painting 'Primavera'. It shows two female figures in the foreground, likely Venus and Psyche, and the winged Cupid figure above them. The figures are rendered in a soft, painterly style with visible brushstrokes. The background is a mix of blue and green tones.

The Shape of Sex Leah DeVun

Nonbinary Gender from Genesis to the Renaissance

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