

INTRODUCTION

He was certainly a loud-mouthed and often drunk and boastful mystic; but he probably did much to deflect alchemy towards improving medical chemistry. His theoretical ideas were too clouded in mysticism to be useful, but in practical medicine he was more effective. He was one of the first to study occupational diseases and he recognized silicosis as a hazard for miners. He realized that goitre and cretinism are related; and he used morphine, sulphur and lead in medicine, and mercury, with which he treated the then new disease of syphilis. He gave good descriptions of several types of mental disease, which he saw as an illness and not as due simply to demons. However, he firmly claimed that it is possible to create human life in the laboratory and gave full experimental detail on how to achieve this, starting with the fermentation of a sample of semen.

Paracelsus (Lat.), Theophrastus Bombastus von Hohenheim (Ger.) (1493–1541)
The Cambridge Dictionary of Scientists (2002).¹

The above excerpt gives a glimpse of the way Paracelsus's contribution to the field of medicine is usually assessed. Other reference sources call him 'the father of modern chemistry' or the 'father of modern pharmacology'. His character flaws: drunkenness and abrasiveness, usually serve as qualifiers to his absurd contention that he could create human life in a laboratory. There are two major problems with this assessment. On the one hand, his drunkenness was documented by a student of his named Johannes Oporinus (1507–68) which raises the question of how accurately the student described his mentor.² On the other hand, the authenticity of the tract on creating human life (*Liber de humonculus*) has been questioned by compliers of Paracelsus's works.³ Contrary to popular belief, Paracelsus firmly believed in the sanctity of human life and spent many years contemplating the degree to which God played a role in forming human bodies.

The bizarre and inaccurate descriptions of Paracelsus did not begin in the modern era, but rather are part of a legacy tied to his quest to define himself as a new and different kind of doctor. He vehemently opposed scholastic medicine that relied on the teachings of Aristotle and instead focused on observing nature and reflecting on Biblical teachings to understand the human body. His detrac-

tors, like Oporinus, T. Erastus and others, never cared for his approach to the body and, as the above passage makes clear, they seem to have succeeded in marring his name and his profound influence on modern medicine.⁴

Because I began reading Paracelsus's writing long before I ever consulted a reference work that provided a condemnation of his character, I encountered a Paracelsus who was profoundly interested in understanding the meaning of human bodies and how (or if) the physical body related to the divine. Paracelsus proclaimed his place as a revolutionary in the field of medicine, and in particular in the field of reproductive medicine, even though he is most often associated with chemistry. While his influence in chemical-based medicine has received a great deal of attention, I wondered why Paracelsus's interest in understanding conception and gestation was limited to the myth of creating life in a laboratory. He writes extensively about human birth in his vast oeuvre, but this aspect of his work is scarcely mentioned. To me his theories of human birth seemed intricately tied to his chemical approach to medicine, his understanding of the patient, his quest to define himself as a new and radically different kind of doctor, and his philosophical quest to understand the meaning of the human body. Why would histories of medicine and science not investigate his theory of understanding the human body if he was advocating a new approach to medicine? To answer this question, I began combing the scholarship on Paracelsus.

I learned a great deal about how Paracelsus understood the chemical balances of the body based on mercury, sulphur and salt and that he supposedly made connections between the body and astrological powers. However, the studies I initially consulted tended to gloss over how he understood the human body and reduced his understanding to a contemplation of the parallels between the human body as a microcosm of the larger world (the macrocosm). I suspected that Paracelsus's chemical philosophy altered the way physicians thought about the physical body. Yet what I learned from Allen Debus's research was that Paracelsus's chemical philosophy changed the way scientists performed laboratory work and that Paracelsus used medieval alchemical philosophy as the basis of his highly influential chemical philosophy.⁵ The work of Walter Pagel and Allen Debus solidified the idea that Paracelsus revolutionized science by changing laboratory methods and introducing chemically-based pharmaceuticals. Earlier research (that is before 1980) on Paracelsus articulated his place in the field of medicine and specifically chemical medicine, but it did not tie in his theological interests. I realized that the scholarship was highly dependent on the way Paracelsus's writing had been collected. Until recently, only the medical tracts were collated and most of the theological writing remained difficult to find. It is no wonder then that early research focused only on Paracelsus's medical and chemical philosophy.⁶

When more of Paracelsus's oeuvre became available to us and people realized that his theological interests were vast, the research topics likewise expanded. During this time period feminist scholars investigated Paracelsus's theological writing and pointed out some of the more complimentary ways that Paracelsus wrote about women in comparison with many of his sixteenth-century contemporaries. Generally, these studies focused on the social status of women as revealed in his theological writing and therefore were not necessarily concerned with the female body.⁷ However, in the context of witchcraft and understanding the biblical figure Mary, Paracelsus's writing on the composition of the body gained some attention.⁸ Paracelsus opposed the idea that women became witches because of a contract with the devil (a widespread assumption at the time) and instead argued that evil entered the body at the moment of birth, similar to the way illness or disease entered the body.⁹ Feminist scholars concluded that Paracelsus was an early advocate for women. The question of how Paracelsus interpreted women's social roles seems to have been answered in these studies, but I got the sense that there was more to how Paracelsus understood the female body.¹⁰ However, research turned away from the feminist inquiry I just described and demonstrated the need to understand Paracelsus's writing in the context of his overlapping interest in medicine and theology. In these works I found recognition of Paracelsus's theory of embodiment: the idea that humans consist of two bodies, one physical and one spiritual, but no discussion of the practical ramifications of understanding the physical body as sexed.¹¹

My assessment of secondary literature on Paracelsus made clear that research has not been specific about how this theory of embodiment emerged. In addition, scholarship on Paracelsus's understanding of the body overlooked an aspect that I found central to Paracelsus's writing, namely how it grew out of his desire to explain conception. Furthermore, it seemed obvious to me that Paracelsus believed that recognition of sex difference was necessary for proper medical treatment of the patient. I could not figure out why this important aspect of Paracelsus's medical theory lacked recognition. Only after years of research did I stumble upon an article written in the 1960s by one of the foremost Paracelsus scholars, Walter Pagel. He wrote: 'A principle fundamental to Paracelsus' view of the world and man is that of *sexual duality*. It is a principle that he finds operative even in disease. Epilepsy in the female is a different disease from epilepsy in the male. A drug effective in men, may fail in women.'¹² Much to my dismay, Pagel's recognition of sex-differentiation was left out of future histories of Paracelsus.¹³ This was a topic that I needed to research further. I wondered how Paracelsus came to the conclusion that humans consisted of two bodies and how he decided that men and women should receive different sex-specific medical treatment. Since I did not find detailed discussion of this topic in research devoted to Paracelsus, I turned my attention to scholarship on the history of the

body and history of women's health and found that even there Paracelsus was barely noticed.

I knew that Paracelsus invited his readers to consider that some aspects of the body were physical and natural, while other aspects of the body were invisible and divine. He also insisted that physicians recognize the core difference of male and female bodies and treat patients accordingly. He focused on the significance of the female body, not as a lesser version of a male body; but rather as deeply connected to the divine realm. Paracelsus's profound analysis of the female body and the idea of a natural body separate from the spiritual self did not seem to resonate with those who aimed to understand the history of the body. For example, Thomas Laqueur declared that, 'Sometime in the eighteenth century, sex as we know it was invented'.¹⁴ He explained that prior to the eighteenth century, people thought of male and female bodies as versions of each other: the sex organs of women were inverted versions of the sex organs of man; and the way sex was represented and understood was primarily influenced by social expectations. Before the mid-eighteenth century, he argued, there was but one sex and that was male, the female was simply a lesser version. What changed in the eighteenth century, Laqueur argued, was that sex organs themselves began to signify social status, the idea of natural law emerged from the notion that one's sexed-body determined ability. Unlike earlier periods the evidence in nature was perceived to dictate an idea that male and female were not versions of each other, but rather different sexes entirely. Sex as we know it emerged in the eighteenth century? But, Paracelsus did evaluate 'natural' difference between men and women. Furthermore, I was under the impression that modern understanding of sex difference rested, in part, on understanding hormonal differences. Paracelsus insisted on chemically-based difference of male and female bodies, a point that did not enter into Laqueur's assessment of the sixteenth century. How could the 'father of modern pharmacology' not matter? This is one question my book seeks to answer, but I soon realized that I was not alone in doubting the time frame for the emergence of a two-sex body.

Historians of medieval and early modern Europe were sceptical of Laqueur's claim. Because he focused heavily on anatomy, they focused on visual representations of the body and the act of dissection to disprove the idea that the two-sex body was an invention of the eighteenth century.¹⁵ At first, most of the research on the history of the body in medieval and early modern Europe focused on the writings of university-educated physicians. The source material was therefore written in Latin for the educated class.

Because Paracelsus wrote in German, rather than Latin, I was drawn to research on vernacular medical texts and particularly those focusing on human birth. The work of Mary Fissell caught my attention. She explored English vernacular texts and articulated the importance of studying how people wrote

about female bodies as ‘maps of gender relations’. Fissell argued that men’s writing about women’s bodies in the latter half of seventeenth-century England used the female body to articulate gendered hierarchical ideals. She studied low-cost vernacular (English) prints concerning human reproduction and explained how writing about reproduction was widespread in England in the second half of the sixteenth century. In arguing that perceptions of the body were local, she distinguished the viewpoint of the English from Continental gender expectations based on the writing of Thomas Raynalde. She explained how Raynalde adapted the German midwifery text by Eucharius Rösslin to make it more sympathetic to female practitioners of medicine and to honour the role of women in childbirth. Fissell also drew on the sermons of exiled Anabaptists, like Martin Bucer, to explain the Continental influence on thinking about Mary’s role in reproduction and reproduction in general in England. Fissell invited us to consider how the Reformation in England instigated a change in the way people thought about reproduction.¹⁶ Her research draws on the transformation of German texts, which leaves open the question of how reproduction was understood in Germany and how the body’s sex was articulated in German vernacular texts. Fissell’s astute observation about the local nature of how bodies were understood begs the reconsideration of Paracelsus’s writings on the topic. Paracelsus influenced future writing on the workings of the female body that resonated in the works consulted by writers in Reformation England.

Paracelsus’s writing on embodiment that emerges from his theories of conception and gestation broadens our perspective on how the body was interpreted on the European continent from a different perspective. Paracelsus played a significant role in advocating a German approach to medicine.¹⁷ Even though research has shown that the people of early periods represented the physical body of women as anatomically different to men’s bodies and that women’s bodies were understood in different physical ways, we still lack information on how people theorized the body in the early modern Germany (1500–1700). What I mean by this is that the scholarship available interprets the way people read the physical body in medieval and early modern Europe, but we lack a first person account that reveals an intellectual engagement with understanding the body.

The writings of Paracelsus offer a glimpse into this important aspect of understanding human bodies in early modern Europe and helps explain the transition in thinking that Laqueur assumed began in the eighteenth century and that Fissell recognizes in British vernacular texts on human birth. The influence of Paracelsus in this field has been undervalued. I argue that the idea that male and female bodies were quantifiably different emerged in the writings of Paracelsus and his followers helped usher in the idea of a chemically-based difference in the sexes. Paracelsus’s writing demonstrates that it was not empirically-based science that solidified this idea, but rather his contemplation of the

meaning of the physical body through comparison to his understanding of the bodies of holy Christian biblical figures: Christ, Mary, Adam and Eve. Furthermore, Paracelsus's quest to understand the physical body grew out of his desire to carve out a niche for himself in the ever-expanding field of medicine. Current scholarship demonstrates that discourses about human birth (conception and gestation) often anchored discussions about the meaning of the body and of the soul in Reformation Germany, although most references to this phenomenon cite works composed after Paracelsus's writing.¹⁸ Paracelsus may have contributed to the widespread discussion about human birth and the origins of the soul. He develops a theory of embodiment, the idea of the physical body and soul as separate, in the course of thinking through birth.

This book explains Paracelsus's philosophy of the sexed-body and shows how his ideas were disseminated by his followers in the latter half of the sixteenth century to the end of the seventeenth century. Through close readings of several of his tracts on conception and gestation, I show how his theory of the natural body as separate from the spiritual self emerged. Paracelsus defined the human body as partially a product of the natural world, with nature understood as an entity separate from the divine realm. He came to this conclusion after many years of contemplating divine involvement in human conception.

Current writing on the topic of how we understand sex difference still assumes a parallel development between the emergence of empirical science, the foundations of natural law and the idea that there are only two sexes. For example, Anne Fausto-Sterling implores us to recognize the way we have socially constructed a sex-binary based on the false belief that human biology is limited to two sexes. She argues that the contemporary scientific approach to the body has led to widespread cultural assumptions that sex, gender and sexuality can be understood on a microscopic or chromosomal level. Throughout her book she articulates that this understanding of the body is a thoroughly modern one that is based on quantifiable evidence-based science and/or medicine.¹⁹ Fausto-Sterling's research does not in any way contradict Laqueur's statement because she focuses entirely on twentieth-century science. However, her book underscores the idea that the modern concept of the two-sex body, also called the sex binary, is based on the notion that science provides us with indisputable facts or quantifiable evidence that we use to reinforce the social idea of man and woman. In the twentieth century, Fausto-Sterling argues, hormones (i.e. chemical difference) took centre stage in research aimed at understanding sex-difference and homosexuality. This study makes clear that such thinking existed as early as the sixteenth century, even if the terminology differed.

The writings of Paracelsus reveal how this social construction of scientific facts about sex is rooted in Christian theology and how it emerged not from the highest medical authority of the day, but rather from medical writers seeking

the approval of general (possibly uneducated) readers. It also demonstrates that Paracelsus considered that the body's sex could be understood on a microcosmic scale.²⁰ Although Paracelsus did not have the technology or the vocabulary to explain hormonal or chromosomal differences, he did, in fact, think about the articulation of sex as a natural physiological difference. His writing reveals that it was not laboratory experiments or hands-on dissection that led to his conclusions, but rather thinking through the meanings of the human body in comparison and in contrast to biblical figures and thinking through the limits of divine acts on the human body.

We know that Paracelsus played an important role in the development of pharmaceutical medicine, but there is much more to the story of how Paracelsus influenced the future of medical and popular discourse concerning the body and the body's sex. His writing reveals the emergence of theorizing the body as a scientific object, his personal struggles to come to terms with his religious ideas about the physical body and his suspicion that some aspects of the human body may not be divinely willed. Understanding Paracelsus's theory of embodiment, or the way in which he concluded that humans have both divine and natural qualities within them, clarifies a period of medical intellectual thought that has heretofore not gained enough recognition. It is time to consider the way that Paracelsus engaged with the topic of human birth, rather than to perpetuate the myth of Paracelsus as the drunken, loud-mouthed, mad scientist who concocted human life in a laboratory.

Copyright