*Book Review*

**Long, Kathleen, ed. *Gender and Scientific Discourse in Early Modern Culture*. Farnham: Ashgate, 2010. 330 pp. $119.95.**

*Gender and Scientific Discourse in Early Modern Culture*, a recent addition to the *Literary and Scientific Cultures of Early Modernity* Ashgate series, includes eleven essays that examine two early modern scientific fields, alchemy and obstetrics, as they relate to "women and questions of gender" (1). The collection aims to consider how these fields, which have been traditionally marginalized by the mainstream scientific establishment, provided early modern female practitioners realms in which they could pursue scientific inquiry, perfect their skills, and foster vibrant intellectual communities. The scope of the volume includes a breadth of methodologies: the first essays of the collection examine theoretical implications of early modern alchemists who contemplated concepts of gender and difference as they relate to the pursuit of perfectibility, a goal commonly pursued by alchemists. Other contributions to the volume consider the significance of gender ambiguity in alchemical imagery of early modern emblem books and travel narratives. Still other essays profile early modern women who deftly operated outside the boundaries of traditional scientific inquiry as alchemists in both literary and scientific endeavors. The final two essays shift to a focus on obstetrics in the early modern period and examine how midwives were eventually supplanted by the medical establishment.

A rich collection, worthy of close attention from early modern scholars, the volume may, in fact, be a bit too ambitious; the vast majority of this collection, nine of the eleven essays, attests to a burgeoning scholarly interest in early modern alchemy. With such a preponderance of the volume focused on alchemy, the examination of midwives operating amidst an increasingly hostile environment receives short shrift.

Midwifery, as both an intellectual community of practitioners and a site of female creativity, warrants further exploration. Also, for a reader uninitiated in early modern alchemy, the essays may at times veer into arcane territory. Despite these shortcomings, however, the volume is more than worthy of careful examination. The collection, though wide-ranging in scope, reflects scrupulous research and a challenging analysis of the intersection of early modern scientific exploration and notions of gender identity.

Editor Kathleen Long's introduction familiarizes readers with alchemical nomenclature and recent scholarship that has "rehabilitated" alchemy as a legitimate scientific pursuit, warranting close critical attention (1). Building on recent work by Allen Debus, among others, Long persuasively asserts that the social importance of alchemy, in particular, demands closer examination. With this aim in mind, the first essays of the volume aim to elucidate how the pursuit of perfectibility, a foundation of alchemy, challenges the traditional male/female binary. Essays by Elliott Simon and Alain Ekorong offer an examination of the role of the feminine in alchemy through both astral magic and Christian Kabbalah practices, respectively. Simon's essay offers an insightful analysis of Giovanni Pico della Mirandola, Philippus von Hohenhinm, (known as Paracelsus), and John Dee, three alchemists particularly interested in astral magic. Just as alchemy aimed to acquire perfection in the material world through acts of purification, astral magic focused on the imagination's role in the pursuit of human perfectibility. While Pico, Paracelsus, and Dee differed in their methodologies, each of these men believed that the pursuit of perfectibility necessitates the deconstruction of oppositions, such as the male/female and celestial/earthly binaries, which hinder creative potential. Simon's essay clearly examines the complex nuances of these philosophers' approaches—and suggests that both male and female aspects are essential to a perfect human state. Ekorong analyzes the work of Guillaume Postel, a French scholar and Christian kabbalist of the early modern period. Postel's hopes for world peace hinged on the pursuit of a unity of opposites, symbolized by the alchemical rebis (androgynous man). Alchemy, seen through this lens, is a means of reconciling conflicts between opposing factions. Though Postel has been summarily dismissed by some for his controversial and even eccentric opinions, Ekorong convincingly

demonstrates that this early modern scholar in fact praised women's intellectual and spiritual capacities in a time when women were consistently viewed as inferior, even pernicious.

The next few essays of the volume consider the power of alchemical imagery in a variety of manifestations. Kathleen Long contemplates how early modern alchemy emblem books, such as Michael Maier's *Atalanta fugiens*, feature corporeal images of women, the disabled, and/or hermaphrodites—unlike contemporary medical treatises that show almost exclusively healthy male bodies. While conventional anatomical depictions contributed to the idea of bodily "normalcy," alchemical treatises challenged such a designation. Incorporating Michel de Montaigne's analysis of the "double body," Long asserts that such "odd bodies" of alchemical emblem books may also communicate religious and political theory (81). Long concludes her essay with a moving lament: had alchemy not been "discredited by moderns" (85), perhaps its notions of bodily difference would have contributed to a greater acceptance of physical diversity in contemporary society. Sean Teuton offers a compelling examination of illustrations within Johann Theodor de Bry's travel narrative America and alchemical treatises including Maier's *Atalanta fugiens*. Riveting illustrations from these works supplement Teuton's analysis, and reveal depictions of the monstrous—creatures who inspired both horror and fascination in many early modern Europeans. Paralleling alchemical practices that constantly challenged traditional boundaries in the pursuit of refinement, these texts and their accompanying illustrations forced readers to question the liminality of the man/female, normal/abnormal binaries. Such works manifest the anxiety Europeans felt about the savage New World--and at the same time reveal a fascination, and at times even an admiration, for the "cultural Other" (114). Simone Pinet's essay continues a consideration of the monstrous with her insightful examination of the early modern Spanish chivalry book. Though thoughtfully rendered, the piece seems ill-suited for the collection as a whole, as it only tangentially relates to alchemy or early modern scientific inquiry.

The collection takes a more germane shift with its turn toward the practices of early modern female alchemists. Meredith K. Ray posits that Caterina Sforza, an Italian noblewoman known for her political acumen

and military grit, was deeply invested in alchemical experiments as well. Sforza's *Experimenti* anticipates later well-known female authored receipt books such as *Secreti della Signora Isabella Cortese*, and demonstrates that the author used alchemy not only to provide pharmacological and household solutions but also as a means to preserve her political power. Sforza was not alone in her alchemical ventures; her epistolary exchanges with fellow practitioners speak to a burgeoning community. Some female alchemists, as Penny Bayer's essay reveals, operated under pseudonyms. Bayer's meticulous research of early modern manuscripts penned by or referring to female alchemists in France and the Swiss Cantons provides fascinating insights. While anonymity may have provided women with freedom to practice their skills, pseudonyms have obfuscated their identities. *Discours Philosophical* by Madame de la Martinville, the assumed name of a highly skilled French female alchemist, depicts a woman proficient in both the literal and metaphoric aspects of the Paracelsian movement of alchemy. The identity of the author of *Quercitan's Daughter's Letters* is similarly uncertain, but the work reveals an accomplished female alchemist and humanist scholar, especially fascinated by alchemical depictions of "sexual generative power" (181).

Jayne Elisabeth Archer considers how the early modern housewives' receipt book, a repository of secret recipes often handed down from mother to daughter, included not only formulas for myriad items traditionally associated with "women's work"—such as sweetmeats and cosmetics--but also evidence of sophisticated scientific experimentation. Archer asserts that housewives' everyday tasks frequently involved the practice of "chymistry," a term coined by Lawrence Principe to refer to the "total of alchemical/chemical topics of the seventeenth century" (192). Englishwoman Sarah Wigges's early modern manuscript demonstrates, in particular, how housewifery and chymistry naturally intersected as Wigges frequently aimed to act as both a "housewife and healer" (215). Distilled waters were especially crucial in many housewives' tasks, and Archer convincingly argues that the "stillroom" (or "distillatorie") and receipt book were sites of verdant female creativity. Dorothea Heitsch's essay concludes the collection's focus on the relationship of alchemy and gender. Marie de Gournay, a French writer best known for her work as Montaigne's editor, found in alchemical imagery emblems that valued the

androgynous aspects essential to the pursuit of perfectibility. Alchemy afforded her an "intellectual framework" from which to challenge the traditional status of women (10). Heitsch convincingly illuminates how Gournay exploited alchemy's transformative powers through both scientific and literary engagement.

With Bridgette Sheridan's essay, the volume pivots from a focus on alchemy to an examination of obstetrics in early modern France. Though surgeons and midwives were frequently patronized by women in childbirth, these practitioners were also traditionally marginalized by the medical establishment (physicians dismissed surgeons' training, which focused on practice rather than medical theory, as inferior to their own). Sheridan considers three figures, Jacques and Charles Guillemeau, surgeons who were father and son, and Louise Bourgeois, an accomplished midwife. These three practitioners challenged the medical establishment's notions of surgeons and midwives' perceived shortcomings by establishing themselves within both aristocratic and royal households and penning childbearing treatises of their own. Unfortunately, while the Guillemeaus' accomplishments further legitimized the surgeon's role in obstetrics, Bourgeois and other midwives battled discrimination from both surgeons and physicians who insisted they lacked necessary scientific learning. Ultimately, midwives were "contained outside of the medical hierarchy" (258).

The collections final essay by Kirk Read is the most compelling in the volume. Read offers a brilliant juxtaposition of two early modern interpretations of the Agnodice myth as an entree into the surgeon/midwife debate of early modern France. According to legend, Agnodice was an Athenian woman who disguised herself as a man in order to assist women in childbirth. In French poet Catherine des Roches's retelling of the story, Agnodice emerges as a heroic liberator of female bodies and minds; she empowers the women she serves through the cultivation of a vibrant female community. Surgeon Jacques Guillemeau's rendition of the story uses the myth of Agnodice instead to document the historic meddling of midwives since antiquity; he discourages their claims on the profession despite the strict modesty mores that often required male physicians and surgeons to attend to laboring women in darkened rooms without the benefit of touching their bodies. Read concludes his essay by

considering the arduous yet fulfilling act of "birthing" that both midwives and female writers undergo.

The volume concludes on this provocative note, prompting readers to consider how the collection might have been better served with a more balanced approach to obstetrics and alchemy. While the collection does not completely fulfill its promise of considering communities of midwives operating on the margins of a hostile medical establishment, it nevertheless provides the reader with significant lessons regarding the collision of gender and early modern scientific enterprise.

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