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Du Châtelet, Gabrielle Emilie Le Tonnelier de Breteuil. *Selected Philosophical and Scientific Writings*. Translated by Isabelle Bour and Judith P. Zinsser. Edited by Judith P. Zinsser. *The Other Voice in Early Modern Europe*. Chicago: University of Chicago Press, 2009. ISBN 978-0-226-16807-4.

Review by Matthew L. Jones, Columbia University.

In an introduction to her translation of Bernard Mandeville's *Fable of the Bees*, Emilie Du Châtelet explained, "Chance led me to become acquainted with men of letters, I gained their friendship, and I saw with extreme surprise that they valued this amity. I began to believe that I was a thinking creature." This realization almost came too late: "I only believed in earnest in my capacity to think at an age when there was still time to become reasonable, but when it was too late to acquire talents" (p. 49). Her self-deprecating claim is untrue. Talents she had, and she quickly developed more refined technical talents—in the infinitesimal calculus, Leibnizian metaphysics, and biblical criticism. No longer do serious scholars follow nineteenth and twentieth-century claims that her various male collaborators, especially Voltaire and Alexis-Claude Clairaut, wrote her most important work, or that she was a mere conduit for their ideas.[1] Recent scholarship has reattributed substantial texts to Du Châtelet and stressed her considerable contributions to a number of Voltaire's.

The translators of this volume offer a judicious selection of texts spanning the entire period of Du Châtelet's written production up to her tragic death. Short editorial prefaces, written for students unfamiliar with early modern France and enlightenment science, as well as generous excerpts from Du Châtelet's correspondence, bridge the major texts. Unavailable in any one volume in French, the originals of the translated texts can be found variously on Gallica, on the website "Women in Science," and on the powerful subscription website *Electronic Enlightenment*. [2] Like nearly all the volumes in the Chicago series "The Other Voice in Early Modern Europe," this selection of translations offers students a compelling introduction to a moment in European learned culture and the life of an extraordinary woman within the peculiar possibilities as well as the constraints of a patriarchal period. The translated letters and texts, fine examples of mid-century natural philosophy and moral thinking, will enrich and enliven any course on the Enlightenment or eighteenth century science. The generous selection of letters, with their varied styles and tone, can serve to introduce the epistolary conventions and intellectual sociability of the period, while her biblical criticism and the remarkable "Discourse on Happiness" convey the reader into the world of manuscript circulation of libertine and deist ideas. As many of Du Châtelet's natural philosophical works were intended to speak to a general educated audience, they welcome students to approach enlightenment science on its own terms.

In her introductory physics and metaphysics textbook, *Foundations of Physics*, Du Châtelet complained that she would not have needed to explain Newtonian physics anew, if "the illustrious author" of the *Elements of the Philosophy of Newton*, Voltaire, "had embraced a vaster terrain"; neglecting metaphysics, he "confined himself within such narrow boundaries that he made it impossible for me to dispense with my own exposition of this matter" (p. 119). The editor's prefatory materials seek to explain this gulf between Voltaire and Du Châtelet. "Du

Châtelet's writings," the introduction contends, "give a wondrous picture of the richness of 'natural philosophy,' the kind of science that began with rules governing the actions of the human mind, considered theology and metaphysics integral to any understanding of causation, and refused to accept mere descriptions of the universe" (pp. 14-15; compare the discussion at pp. 105-6).

Contestation around every aspect of these components of natural philosophy was central to the dynamism in science of Du Châtelet's time and to the distinctiveness of her work. The editor condemns a historiography of science—now long unfashionable, it should be said—that "made it seem as if science had always been separate from metaphysics and philosophy," in which those, "like Du Châtelet, who rejected this narrow definition were vilified, forgotten, or like Descartes, narrowly classified by subsequent commentators" (p. 15 n. 32). The editor casts this tradition as nothing less than "the path rejected by the fixed trajectories in our subsequent histories of both the Enlightenment with its leaps to the French Revolution and of modern science with its narrow, teleological definition of 'progress' from Galileo to Newton to Einstein" (p. 15). Rather than more neutrally contextualizing and rigorously describing the major competing stances over the scope and methods of natural philosophy, the editor oddly seems to side with the anti-Newtonians. "Note that Newton," a footnote explains, "never successfully explained the cause of attraction, only its observed effects in the universe" (p. 153 n. 74). True, but for many of Du Châtelet's contemporaries, one central stake of Newtonianism was nothing less than learning to refuse to speculate about the metaphysical and physical causes of gravitation and learning not to "feign" hypotheses. Du Châtelet herself moved gradually from a Newtonianism that counseled the avoidance of metaphysics and the search for physical causation through hypotheses. The prefatory material and annotations to the translation insufficiently explain the different merits attributed to Cartesianism, Newtonianism, and Leibnizianism and thus cannot evoke for students the varied ways they were intellectually attractive and not.[3] Readers new to the subject will find it difficult to grasp the motivations and excitement behind Du Châtelet's personal intellectual itinerary from a roughly Lockean-Newtonian position, skeptical of metaphysics and mechanical causation, to her innovative synthesis of a Leibnizian metaphysics with a Newtonian natural philosophy.[4]

At times, the prefatory remarks and footnotes take on a Whiggish character: "In fact, she came close to describing fire in much the same terms as our modern concept of 'energy,' an entity animating all subjects" (p. 54) or ". . . Du Châtelet describes simple beings similar to what we now call DNA. It is interesting to note how other aspects of her explanation in this chapter suggest our modern understanding of atoms" (p. 168 n. 92). While possibly useful heuristically in an undergraduate teaching text, such anachronistic claims distract from Du Châtelet's contributions in her own time and terms. They may lead students away from thinking historically about the views in question and from grasping the tissue of motivations that led Du Châtelet to her distinctive blend of Leibnizianism and Newtonianism or of Mandeville and natural sociability.

Some alterations in the selections of the texts translated would have better illustrated the texture of Du Châtelet's innovative mind. The valuable, little known selections of biblical criticism and of the dissertation on fire could profitably have been shortened to accommodate many of her most distinctive contributions: her crucial chapters on attraction in the *Foundations*, the omitted end of the discussion of *vis viva*, where the metaphysics returns, and her remarkable draft chapter "On Liberty"—a manuscript originally meant to be part of her *Foundations of Physics*, and long wrongly credited to Voltaire. Although the volume includes her wonderful preface to her translation and adaptation of Mandeville, it offers no example of her striking transformation and adaptation of the text—work that reveals her own talents rather

spectacularly, whatever her protestations to the contrary, as Zinsser showed a few years ago.^[5]

As with any translation, one will have quibbles. On p. 44 the phrase “et tacher de replier cet arbre desia [sic] trop avancé” is omitted; the term “consistence” is rendered “firmness,” which misses the place of “constancy” in moral discussions from Justus Lipsius onward. The phrases “force vive” and “force morte” are strangely left in French; in English, *vis viva* is almost always used and would have required no more explanation. On p. 187, the quantity in motion in question is mv^2 , not mv^2 —a distinction crucial to all that follows.

Although some of this volume’s explanatory and prefatory materials should be used with care, the welcome translations here should become a mainstay of courses in the Enlightenment, book history, the history of women in science, and the history of eighteenth-century science more generally.

NOTES

[1] A cross section of recent work can be found in Ulla Kölving and Olivier Courcelle, *Emilie Du Châtelet: éclairages et documents nouveaux* (Ferney-Voltaire: Publications du Centre international d’étude du XVIIIe siècle, 2008) and Judith P. Zinsser and Julie Candler Hayes, eds., *Emilie Du Châtelet: Rewriting Enlightenment Philosophy and Science* (Oxford: Oxford University Press, 2006). For the reassignment of authorship, see, for example, Andrew Brown and Ulla Kölving, “Qui est l’auteur du *Traité de métaphysique*?” *Cahiers Voltaire* 2 (2003), pp. 85-93; for her work as a translator, Judith P. Zinsser, “Translating Newton’s Principia: The Marquise du Châtelet’s Revisions and Additions for a French Audience,” *Notes and Records of the Royal Society* 55 (2001), pp. 227-245, Judith P. Zinsser, “Entrepreneur of the ‘Republic of Letters’: Emilie de Breteuil, Marquise Du Châtelet, and Bernard Mandeville’s *Fable of the Bees*,” *French Historical Studies* 25 (2002), pp. 595-624; the best, archivally based biography is the editor’s: Judith P. Zinsser, *La Dame d’Esprit: A Biography of the Marquise Du Châtelet* (New York: Viking, 2006); now retitled *Emilie Du Châtelet: Daring Genius of the Enlightenment*.

[2] <http://gallica.fr>; <http://womeninscience.history.msu.edu/> ; <http://www.enlightenment.com/> ; some texts remain only in Ira Owen Wade, *Studies on Voltaire, with Some Unpublished Papers of Mme. Du Châtelet* (New York: Russell & Russell, 1967), and much work remains to be done with Du Châtelet’s manuscripts in Paris and St. Petersburg. Only a few texts are available in modern scholarly editions, such as Gabrielle Emilie Le Tonnelier de Breteuil Du Châtelet, *Discours sur le bonheur* (Paris: Société de l’édition Belles Lettres, 1961).

[3] For the most astute recent reworking concerning the categories of Newtonian, Cartesian, and Leibnizian around Du Châtelet, see Mary Terrall, “Emilie du Châtelet and the Gendering of Science,” *History of Science* 33 (1995), pp. 283-310; Mary Terrall, *The Man who Flattened the Earth: Maupertuis and the Sciences in the Enlightenment* (Chicago: University of Chicago Press, 2002) and J. B. Shank, *The Newton Wars and the Beginning of the French Enlightenment* (Chicago: University of Chicago Press, 2008); see also André Charrak, *Contingence et nécessité des lois de la nature au XVIIIe siècle* (Paris: Vrin, 2006). For fine accounts of “natural philosophy” in the eighteenth century, see Simon Schaffer, “Natural Philosophy,” in G. S. Rousseau and R. Porter, eds., *The Ferment of Knowledge: Studies in the Historiography of Eighteen-Century Science* (Cambridge: Cambridge University Press, 1980), pp. 55-92, and John Heilbron, “Natural Philosophy,” in P. Harrison, R. L. Numbers and M. H. Shank, eds., *Wrestling with Nature: from Omens to Science* (Chicago: University of Chicago Press, 2011), pp. 173-199.

[4] For Du Châtelet's gradual movement toward various facets of Leibnizianism, the fundamental study remains Linda Gardiner Janik, "Searching for the Metaphysics of Science: The Structure and Composition of Madame Du Châtelet's *Institutions de physique*, 1737-1740," *Studies on Voltaire and the Eighteenth Century* 201 (1982), pp. 85-113; compare Sarah Hutton, "Emilie du Châtelet's *Institutions de physique* as a Document in the History of French Newtonianism," *Studies in the History and Philosophy of Science A* 35 (2004), pp. 515-531.

[5] See Judith P. Zinsser, "Entrepreneur of the 'Republic of Letters': Emilie de Breteuil, Marquise Du Chatelet, and Bernard Mandeville's *Fable of the Bees*," *French Historical Studies* 25 (2002), pp. 595-624.

Matthew L. Jones
Columbia University
mj340@columbia.edu

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