



*The Newton Wars
and the Beginning of the
French Enlightenment*

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By 1738, all the key theaters of the Newton wars had opened and were hot with conflict. Maupertuis' *Discours* and the discussions of Newtonianism that it triggered inside and outside the Paris Academy; the emergence of a coherent and publicly discussed Cartesianism that asserted itself against the Newtonian position; the isolation of a set of clear and concise "test cases"—the figure of the earth most prominently—that could serve to focus the war; a new critical, libertarian spirit manifest in English thought and Francophone journalism, as well as its increasing circulation within France; Voltaire's *Lettres philosophiques* and its scandalous adoption of this liberty in the name of English philosophy, science, and culture; the rise of the figure of the earth question as a central focus of the Paris Academy; Maupertuis' activities in this debate, and his perceived connection to the wider academic public that included Voltaire and du Châtelet; the controversies that continued to follow the two as they navigated the terrain of French public science: all of these factors led to the beginning of the public battles over Newton that erupted in full force after 1738, yet no one of them overdetermined the rest. Instead, they all converged to launch France into a bitter and consequential culture war over the nature and limits of true natural philosophy, one with transformative consequences.

The Newton Wars in France: The First Battles

Maupertuis' public assembly address in November 1737, just weeks after his return from Lapland, marks one milestone in this transformation. In the years leading up to this event, Maupertuis worked vigorously to sustain his views on the shape of the earth in a way that made his academic honor and scientific prestige rest upon this question alone.¹ The victory of his Newtonian position after

1. Maupertuis' conduct during the figure of the earth debate is analyzed in detail in Terrall, *Man Who Flattened the Earth*, chaps. 4–5. I will follow her account closely here.

1737 thus solidified his reputation and those of the other Newtonians in France who supported him. Yet because he and his closest allies had devoted themselves most intensively toward winning this battle inside the Royal Academy, the victory did not necessarily translate automatically into a victory for Voltaire as well. In fact, throughout these years, Maupertuis maintained a guarded distance from the rebel Voltaire and worked hard to restrain any equation of their public Newtonian identities. Maupertuis and the other academic Newtonians were also away on their various expeditions during the initial years when Voltaire was working hard to establish his Newtonian identity. This further separated them. It also allowed the newly self-conscious Cartesians aligned against each to enjoy a brief monopoly over academic discussions of terrestrial and celestial mechanics in France.

For Privat de Molières, this situation launched his career. After assuming Varignon's chair in mathematics at the Collège royal in 1723, he began delivering a set of annual lectures devoted to physics and mechanics.² Drawing upon his Oratorian training, he adopted Malebranche's vortical system as the mechanical basis for his explanations. There was nothing controversial or even noteworthy about this choice in 1723 since vortical physics remained the conventional framework for these topics in France. However, as the more strident polemicism about Newtonianism and Cartesianism began to emerge over the course of the 1720s, Privat de Molières found his position transformed. Fontenelle acknowledged the new situation in 1730 and 1731 when his public descriptions of Privat de Molières' avowedly "Cartesian" approach to mechanics were published in the academy's *histories* for 1728 and 1729. These presentations celebrated Privat de Molières' Cartesianism, while also framing it in terms of the anti-Newtonianism that was now assumed to be implicit in it.

Privat de Molières took this framework and ran with it. In his *Leçons de physique*, which appeared in four volumes between 1733 and 1738, the former Oratorian offered a complete account of terrestrial and celestial mechanics rooted throughout in the causal mechanisms of the Cartesian vortices.³ He also offered a methodological defense of this physics by presenting his *leçons* in a deductive arrangement, one that alleged synthetic, Euclidean certainty as the epistemological glue binding his demonstrations. The *Journal des savants* noted this orientation in its review of volume 1, writing that "one is accustomed to consider physical systems as conjectures that explain the natural effects." "Descartes himself spoke of his system as a romance (*roman*) of nature," and

2. Bonnardet, "Joseph Privat de Molières," in *Ac. Sci.*, dossier Molières.

3. Privat de Molières, *Leçons de physique, contenant les éléments de la physique déterminées par les seuls lois de mécanique, expliqués au Collège Royale*, 4 vols. (Paris, 1734–1738).

even “M. Newton, who proved that the system of Descartes is subject to contradictions, imagined his own built upon the principal qualities of matter without ever revealing the causes of them.” Privat de Molières hoped to advance the “progress of this science” by “substituting certain principles for the conjectures that have thus far been proposed.” Accordingly, the journal explained, he presented his lessons “in the same way that Euclid presented geometry” so as to “fix forever the number and the quality of the physical principles.”⁴

The reviewer praised the utility of Privat de Molières’ efforts while also noting the ambitiousness of his undertaking. In doing so, he also pointed to the way that philosophical method had become a key weapon in the battle against Newtonian physics. Leibniz had accused Clarke and the Newtonians of offering no explanation whatsoever for the theory of gravitational attraction, and in France the absence of such a causal, mechanical account became by the 1730s a key reason to reject universal gravitation altogether. Maupertuis had defended the contrary position in his *Discours*, arguing that philosophical considerations were irrelevant to the truth or falsity of attraction as a physical principle. Yet Privat de Molières spoke for many French savants when he rejected such a view, claiming that the only true and tenable physics was a philosophically rational and mechanical physics. He also buttressed this view by adopting the “Cartesian method” literally and polemically in the presentation of his own, anti-Newtonian mechanics.

The result was the construction of a rallying point for the newly energized French Cartesians. Desfontaines also spoke for many when he used his biweekly newsheet, *Observations sur les écrits modernes*, to praise Privat de Molières and his work. Stressing the confidence that the book’s “added rigor” provided, he further noted how Privat de Molières had not so much disproved Newton as isolated the true from the untrue in his system. Like many post-*Principia* vortical theorists, Privat de Molières was convinced that Newton’s quantitative inverse square relationship was indeed a law of nature, and he thus integrated this law into his rival vortical account of celestial motions.⁵ For Desfontaines, this was evidence that the Euclidean deductive method could reveal valid truths in an unprejudiced and nonpartisan way. For a man of letters like Desfontaines, such neutrality was particularly important, for it showed how proper philosophical method, rigorously applied, could remove the taint of party warfare that was already hovering over the Newtonian/Cartesian debate.⁶

4. Review of Privat de Molières, *Leçons de physique*, in *Journal des savants* (1734): 455.

5. On these further developments of the vortical theory of celestial mechanics in France, see Aiton, *Vortex Theory*; and Brunet, *L’introduction des théories de Newton*.

6. Review of Privat de Molières, *Leçons de physique*, in *OEM* 13 (n.d.): 305–312.

Desfontaines' review had a wide circulation, and his coverage of Privat de Molières on this and other issues attests to the celebrity that the former Oratorian and academician acquired after 1733 as a result of his Cartesian views. Privat de Molières' lectures at the Collège royal were also public events, and while no hard evidence exists about the size of his audience, one suspects that attendance surged during these years. His own assessment that he was, by 1739, a European scientific celebrity, was not wholly exaggerated. In fact, so long as one takes into consideration Privat de Molières' typically Paris-centered view of European opinion as a whole, he was indeed a well-known figure within it. In France, his work was much talked about, and this translated into a general elevation of his status inside the academy and in the wider public sphere. His celebrity perhaps reached its high point in 1741 when a man of letters named Prémontval began to host a set of free public courses devoted to mathematics and mechanics, courses that used Privat de Molières' *Leçons* as their core text. Another *mondain* periodical, *Nouveaux amusemens du coeur et de l'esprit*, ran an advertisement for the courses, noting the precise day, time, and location of the sessions.⁷ Prémontval also published his own accompanying texts, and while nothing more is known about the nature or success of these courses, they illustrate Privat de Molières' notoriety within Parisian society of the time.⁸

Inside the academy, Privat de Molières' position was also improved even if he never obtained the *pensionnaire* seat he so coveted. Supported intellectually and professionally by Dortous de Mairan, Fontenelle, and Cassini II, to name only three of the most powerful, he came to embody the Cartesianism that these academicians increasingly defended for themselves and for the academy as a whole. In 1732, Privat de Molières was joined in this camp by another outspoken Cartesian: Étienne-Simon de Gamaches. Gamaches' biography is rather obscure, but he first appeared in the academy registers in the spring of 1732 when he was already sixty years of age. Prior to that, he had served as the *chanoine régulier* at Sainte-Croix de la Bretonnerie and had authored three books, the first a work of philosophy (1704), the second a work on rhetoric and

7. "Sundays from 10–11:30 AM and 3–5 PM 'sharp' in the second apartment from the last on the rue Sainte Genieve, next to the Collège de la Marche." *Nouveaux amusemens du coeur et de l'esprit* (1734–1745), 9: 471–475. Prémontval published two works based on these courses, *Discours sur l'utilité des Mathématiques. Pronocée par Monsieur de Prémontval, à l'ouverture de ses conférences* (Paris, 1742) and *Discours sur la nature des quantités que les mathématiques ont pour objet* (Paris, 1742). But the advertisement in the literary journal indicated that the course was based on Privat de Molières' *Leçons de physique*.

8. On Prémontval, see his obituary in *Le necrologes des hommes célèbres de France, par une société de gens de lettres*, 18 vols. (Paris, 1766–1784), 5: 95–118.

grammar (1718), and the third a treatise on mechanics (1721).⁹ The last linked Gamaches to the ongoing debate about *vis viva* and the laws of impact, but it does not appear to have exerted much influence on these discussions.¹⁰ What role he saw himself playing in these debates, or in the scientific life of the period more generally, is similarly unknown.

In March 1732, however, he presented to the academy a work entitled *Physical Astronomy*, earning a favorable review from the academicians—Nicole and Réaumur—assigned to review the text.¹¹ The timing appears to have been perfect, for eight years later Gamaches published a similarly titled work with the added subtitle *General Principles of Nature Applied to the Mechanisms of Astronomy and Compared to the Philosophical Principles of M. Newton*.¹² If one assumes that this text in draft form was the manuscript that Nicole and Réaumur approved in 1732, then it was this treatise that won Gamaches a seat in the Royal Academy. Two months after the academy approved his text, he was admitted as an *associé libre*, a rare designation that gave the chair holder full academic privileges without assigning them to a particular class or creating a permanent seat for them.¹³ From this position, Gamaches became a very active presence at the academy sessions over the next decade, constantly presenting work in celestial mechanics.

In his first academic paper, delivered in June 1732 (one month before Maupertuis' *Discours* was approved for publication by the academy), Gamaches spoke on "the mechanism of the heavens."¹⁴ Similarly in August 1734, just two weeks after Maupertuis delivered his first paper on geodesy and the figure of the earth, Gamaches spoke on "physical astronomy."¹⁵ After the departure of Godin, Bouguer, and La Condamine for Peru in May 1735 and Maupertuis, Clairaut, and Le Monnier for Lapland in May 1736, Gamaches was even less constrained to use the academy to air his views. He read a variety of different

9. Étienne-Simon de Gamaches, *Système du coeur, ou Conjectures sur la manière dont naissent les différentes affections de l'âme* (Paris, 1704), idem, *Les agréments du langage réduits à leurs principes* (Paris, 1718), idem, *Système du mouvement* (Paris, 1721).

10. De Gamaches' *Système du mouvement* appeared as an appendix in Jean-Pierre Crousaz, *Essay sur le mouvement, ou l'on traite de sa nature, de son origine, de sa communication en général* (Groninge, 1726; 2nd ed., 1728).

11. PVARs, March 12, 1732.

12. Étienne-Simon de Gamaches, *Astronomie physique, ou Principes généraux de la nature, appliqués au mécanisme astronomique, et comparés aux principes de la philosophie de M. Newton* (Paris, 1740).

13. PVARs, May 17, 1732.

14. PVARs, June 14, 1732.

15. PVARs, August 18, 1734.

papers on issues relating to celestial mechanics, and during their absence he focused particular attention on the Newtonian theory of gravitational attraction as it related to *pesanteur*.¹⁶ On one interesting occasion in the winter of 1737, a series of academic sessions devoted to Gamaches' anti-Newtonian work on "the mutual attraction of the planets" was interrupted by the arrival and presentation of letters from Peru and Lapland. These included an important report by Bouguer and La Condamine that confirmed Picard's pendulum experiments showing that the mass of mountains exerted an influence on the force of moving bodies.¹⁷

Such interruptions, however, appear to have done little to hinder the increasing aggressiveness of Gamaches' Cartesian program. He also joined with Privat de Molières in the review of a Cartesian work in mechanics by a savant named Deidier, a work that was soon after reviewed favorably in the *Journal des savants* as well.¹⁸ None of this work was published in the academy's *mémoires*, but in March 1740 Gamaches asked the Academy to approve his *Astronomie physique* for publication.¹⁹ It appeared soon after, accompanied by a preliminary discourse that celebrated the Royal Academy of Sciences for its refusal to embrace any physical system. In the same text, however, Gamaches also alleged "to demonstrate that the principles of Cartesian philosophy are the only ones to be adopted in mechanical astronomy." Only Cartesianism, he contended, offered the appropriately clear and distinct foundations for explaining the natural complexity of nature.²⁰

The appearance of *Astronomie physique* coincided with the apotheosis of Privat de Molières in the French public sphere, and Gamaches' reception was equally favorable. The *Journal des savants* used its "Nouvelles de la republicque des lettres" section in March 1740 to announce the book's appearance, promising that "we will speak incessantly of this work in the journal."²¹ In September and October it published its promised reviews, continuing a trend of favorable

16. See PVARs, November 1, 1734; July 21, 1736, August 4, 1736, January 30, 1737; February 13, 1737; July 24, 1737. Interestingly, none of this work was published in the academy volumes for 1734, 1736, or 737.

17. PVARs, February 13, 1737.

18. L'abbé Deidier, *La mécanique générale* (Paris, 1741). The report of Gamaches and Privat de Molières is noted in PVARs, November 18, 1739. See also review of Deidier, *La mécanique générale*, in *Journal des savants* (1742): 490–493. Desfontaines also reviewed this work; see review of Deidier, *La mécanique générale*, in *OEM* 26 (n.d.): 37–46.

19. PVARs, March 9, 1740.

20. De Gamaches, *Astronomie physique*, i–ii.

21. "Nouvelles de la republicque des lettres," *Journal des savants* (1740): 191.

press for Cartesian mechanics in France.²² Three months earlier, the journal had also published a two-part review of volume 4 of Privat de Molières' *Leçons de physique*, and treated as a group these reviews echoed a number of common themes.²³ Newton, for example, was presented in each as a brilliant mathematician who erroneously let mathematical calculation stand in for rigorous, causal physics. As the journal declared through a citation from *Astronomie physique*: "[For Newton], a phenomena analyzed mathematically becomes a phenomenon explained. In this way, moreover, this famous rival of M. Descartes took great satisfaction in being a great philosophe, when in fact he was only a great mathematician."²⁴ This distinction between mathematical analysis and causal, mechanistic physics also supported another common claim: that both Privat de Molières and Gamaches accounted for the real innovations of the Newtonian system, namely, the inverse square law, while also providing the mechanical account of it that Newton's system lacked. As the journal expressed with respect to Gamaches, "the rules of Kepler are the laws of astronomy," and accordingly Gamaches' treatise "acquires its force only from its complete conformity with these laws."²⁵

The reviewers at the *Journal des savants* continually praised this mechanistic approach, and Desfontaines did as well in his account of Gamaches' work. "The immense riches that this famous rival of Descartes pulled from the most sublime geometry are prodigious beyond measure," the journalist wrote. Newton, by contrast, was a "dangerous philosopher" because he offered "a chain of principles that appear to subsume all of the phenomena of nature" but are in fact only "a seemingly harmonious chain" of empirical associations. "The geometrical analysis of Kepler's law confirms that the planets gravitate [*pese*] toward the sun, but this in no way proves that the sun must gravitate toward to the planets. To suppose it, as Newton has done, is simply to divine it."²⁶ Both Desfontaines and the *Journal des savants* also reinforced the nationalist categories that were increasingly central to this debate. The official French journal called Gamaches an "honor to the nation." It also quoted him in alleging that Newton, impatient with having to submit himself to the instruction of a foreign nation, had developed his philosophy in an effort to "liberate

22. Review of de Gamaches, *Astronomie physique*, in *Journal des savants* (1740): 547–563, 620–634.

23. Review of Privat de Molières, *Leçons de physique*, vol. 4, in *Journal des savants* (1740): 263–269, 387–393.

24. Review of de Gamaches, *Astronomie physique*, in *Journal des savants* (1740): 550.

25. *Ibid.*, 551–552.

26. Review of de Gamaches, *Astronomie physique*, in *OEM* 26 [1740]: 65–66.

his homeland (*patrie*) from the necessity of having to borrow from us the art of clarifying the steps of nature.”²⁷ For his part, Desfontaines called Gamaches’ *Astronomie physique* an honor to “the nation, the Academy, the religious house of the author, and the genius which led to its birth.”²⁸ He further expressed a debt of patriotic gratitude since “the honor of our nation and of philosophy is at stake in his demonstration that the founding principles of Cartesian philosophy are the only ones suitable to mechanical astronomy.”²⁹ “The systematic spirit, which since the time of Descartes has so advantageously characterized the genius of our nation, is rapidly making progress among those that emulate the illustrious savants of France,” Desfontaines enthused. Newtonianism, however, represented a threat to this French philosophical spirit, and Gamaches was to be praised for resisting its “degradation among those who allow isolated principles to stand in for the explanation of difficult phenomena.”³⁰

These same themes were echoed in other venues as well, and taken as a whole they allowed Privat de Molières and Gamaches to become prominent spokesmen for the newly clarified French Cartesianism that opposed itself to the French Newtonianism of Maupertuis and Voltaire. When Maupertuis and his Lapland team returned to Paris in September 1737, this Cartesianism had begun to assert itself more loudly and aggressively in the French public sphere; ironically, however, Maupertuis and his allies chose not to contest it directly but instead to focus on other battles instead. By 1737, the question of the figure of the earth had been posed in many people’s minds as a test between the two great natural philosophic systems. Nevertheless, this is not how Maupertuis pursued the matter, at least before 1740. Cassini II and the royal astronomers saw it as a simple question of empirical fact, and Maupertuis accepted this definition, while trying to establish his own credibility in the empirical sciences that mattered in this arena, namely, geodesy. He had worked hard between 1734 and 1737 to establish an authoritative reputation in this area, and when he returned from his arduous work in Lapland with a set of empirical findings that confirmed the thesis of a flattened, grapefruit-shaped earth, he expected to be rewarded with new prestige and glory within the academy. Instead, Cassini II and his allies questioned the credibility of Maupertuis’ work, drawing attention to the errors that may have been produced by Maupertuis’ new and untested instruments, not to mention the inexperience of the observers.³¹

27. Review of de Gamaches, *Astronomie physique*, in *Journal des savants* (1740): 547, 550.

28. Review of de Gamaches, *Astronomie physique*, *OEM*, 26 [1740]: 67.

29. *Ibid.*, 26: 63.

30. *Ibid.*, 26: 64.

31. See Terrall, *Man Who Flattened the Earth*, 130–142.

What ensued, therefore, was a bitter and increasingly personal debate within the academy about the true shape of the earth, but one that focused in no way on the hydrodynamical and other physical theories that had framed the question as a rivalry between Newtonian and Cartesian mechanics. Furthermore, while all indicators suggest that the battle itself was bitter and intense—Madame de Graffigny described it as “a civil war worse than one can say”—it was largely contained within the walls and gentlemanly decorum of the academy itself.³² Maupertuis reported his findings to Maurepas and his correspondents in September on the eve of the academy’s long fall break, and the *Mercure de France* reported them immediately to the wider public, saying that the team had determined “that the earth is a spheroid flattened at the poles as Mssrs. Huygens, Newton, and several other great astronomers had thought, based on theory.”³³ Other than that, however, discussion of the measurements or the conclusions that Maupertuis drew from them was absent from the public sphere until November, when Maupertuis used the academy’s public assembly to deliver an eloquent presentation of his team’s work.

The *Mercure* reported on the “marked interest of the most numerous assembly that there has ever been in any academic meeting,” and the journal further praised “the finesse and exactitude of the operations, and the clear and elegant manner in which M. de Maupertuis made everyone capable of judging it.”³⁴ Réaumur agreed. Writing to Bignon, who had only a year earlier retired from his position as the ministerial manager of the French learned establishment, he noted that “M. de Maupertuis’ report lasted more than an hour and a half, yet everyone in the audience found it too brief.” He further described the size of the crowd, writing that “the gallery was filled with those who were not able to enter into the hall.” Describing the combination of scientific sobriety and *bel esprit* that characterized Maupertuis’ discourse as well, he further observed that “had this account been printed just after these gentlemen arrived, many of the nasty comments made in the cafés during this vacation would not have been spoken.”³⁵

This reference to the wider public buzz regarding the trip and its conclusions is revealing of the broader notoriety that the figure of the earth debate had acquired by this time. However, in the more formal organs of public discourse such as the learned journals, discussion was far more subdued. Overall, an *honnête* tone characterized what little public discourse about the debate escaped from the academy. In his public address, Maupertuis treated the Cassinis and

32. Cited in *ibid.*, 147.

33. *Mercure de France* (1737): 2032.

34. *Ibid.*, 2462.

35. Cited in Terrall, *Man Who Flattened the Earth*, 134–135.

their work respectfully, noting simply that his team's findings revised theirs. Inside the academy's walls, by contrast, the arguments were no doubt vitriolic as Cassini II refused to accept Maupertuis' results and called instead for a new survey using more trustworthy instruments as the only means for resolving the question reliably. These rebuttals infuriated Maupertuis, who saw in them little more than an authoritarian use of academic power to thwart what he knew to be the truth. As he wrote privately at the time: "Cassini's paper [delivered inside the academy] dishonors him and the institution; it also does not make the earth any less flattened at the poles."³⁶

Cassini II was certainly defending a pet theory in these rebuttals, but in other ways he was also offering a reasonable scientific challenge to Maupertuis' alleged revisions to his work. As an empirical matter of fact, the precise shape of the earth could only be determined through a consensus about the empirical results in question. Cassini II had real reservations about the reliability of Maupertuis' work, and in this respect his caution about leaping to overly hasty conclusions was justified. Also legitimate was the assumption that Maupertuis contain his desire for immediate scientific glory until all the facts were in and confirmed. Maupertuis found this imperative difficult to live with, even if he largely respected it. As a result, while he privately made clear his utter frustration with Cassini II and his position, publicly he worked hard to overturn the arguments of his opponents according to the terms set by Cassini II and his epistemological assumptions.

Maupertuis continued to rebut Cassini II's critique of his measurements inside the academy, and in this effort he was joined by Clairaut among others. He also encouraged the acquisition of new geodesic measurements, working in particular to win royal financial support for new expeditions that would vindicate his earlier work. However, when called upon to speak publicly about the matter, either orally or in print, he maintained an *honnête* decorum with respect to Cassini II and his work. He did persuade the Swedish astronomer Anders Celsius, an assistant during the Lapland expedition, to publish a pamphlet critical of Cassini II and his work.³⁷ The French astronomer J. N. Delisle, who was struggling to stay abreast of the controversy from his position at the St. Petersburg Academy of Sciences, read Celsius's tract and found it to be "very rude." He hoped that Celsius would soften it before publishing it. Celsius replied that Cassini II "brought the attack on himself," and he published the text without emendations.³⁸ Yet since the pamphlet was written in Latin,

36. Cited in *ibid.*, 135.

37. Anders Celsius, *De observationibus pro figura telluris* (Uppsala, 1738).

38. Cited in Terrall, *Man Who Flattened the Earth*, 137–138.

it exerted little apparent influence on the debate outside the academy. None of the more accessible Francophone journals reported on its contents, and even though Cassini II devoted several academic sessions to a fierce rebuttal, publishing the result, in French, as a pamphlet of his own, it too appears to have generated no wider comment.³⁹

Meanwhile, at the public assemblies of the Royal Academy held in the spring of 1738, 1739, and 1740, respectively, the antagonists refrained from any open sparring even if they addressed the question of the figure of the earth in each of these sessions. Eventually new measurements conducted by Cassini II's son, Cassini de Thury, vindicated Maupertuis' position, and these results coincided with the retirement of the elder Cassini, a move that allowed the mantle of the elongated earth to pass to a new generation. Cassini de Thury proved more artful than his father in resolving the controversy, and in the spring of 1740 he conceded that the earth was indeed an oblate sphere, while also emphasizing that it was the accumulation of reliable, empirical evidence, especially through surveys that he and the other royal astronomers had conducted themselves, that ultimately resolved the question.⁴⁰ This allowed the Cassini family, and the dynasty that they still managed at the Royal Observatory, to lose the battle while winning the larger epistemological war. It also allowed the academy to escape from a bitter scientific battle with its *honnête* codes of nonpartisan independence and gentlemanly decorum intact.

Maupertuis benefited personally from this resolution and from his conduct overall throughout the controversy. After his arrival from Lapland but before his public assembly address of November 1737, he was offered a pension from the Crown in recognition of his service. He refused it. Du Châtelet called the award "mediocre" and thus supported Maupertuis' decision to decline this "demeaning" reflection of his real honor and status. She also insinuated that it was "the persecution" of "Cassini and his Jesuit allies" that had triggered the Crown to act in such a niggardly fashion.⁴¹ Whatever the real story behind the pension, the decision placed Maupertuis in a precarious position with respect to Maurepas, who had otherwise been a generous patron and supporter. As the controversy over the figure of the earth raged, Maupertuis also had reason to worry that his contentiousness on this matter would further alienate the minister.

In 1739, while Maupertuis was campaigning for royal support for his new geodesic measurements, Maurepas approved the Cassinis' request while ini-

39. PVARs, April 30, 1738, and May 3, 1738; *Réponse à la dissertation de M. Celsius* (Paris, 1738).

40. See Terrall, *Man Who Flattened the Earth*, 151–154.

41. Cited in *ibid.*, 134.

tially refusing Maupertuis' similarly conceived initiative. By August, however, Maupertuis had won over his ministerial patron, for during the academy's fall vacation of 1739, as the academician prepared a new paper defending the theory of the oblate earth, he was rewarded for his diligence. While visiting the royal court at Fontainebleau, Maupertuis was notified that he had been awarded a lucrative pension and an honorific office as the royal savant in charge of the perfection of navigation. "It is a position created expressly for me by M. de Maurepas," Maupertuis gushed to Johann Bernoulli. "Everything was done in the most gracious way. It makes me very happy and quite comfortable."⁴² This recognition preceded Cassini de Thury's concession with respect to the shape of the earth by over six months, and the reward thus acknowledged Maupertuis' honorable and office-worthy conduct in the dispute as much as any particular scientific theory or accomplishment he had made.

Outside the official institutions of French science, however, matters were perceived very differently. "You [M. Maupertuis] are extremely *à la mode*," announced the duchesse de Saint-Pierre from her residence with the royal court at Fontainebleau.⁴³ Such opinions were not entirely arrived at accidentally, for Maupertuis worked vigorously to create this favor, even if he also worked hard to craft an identity as a serious academician as well. One crucial moment in this wider campaign occurred in December 1738 when his frustrations with the Cassinis led him to flee the academy for a period. "Since I do not have the approval of the academy," he wrote to the younger Johann Bernoulli, "I am going to take advantage of this time to wander around and divert myself."⁴⁴ What precisely he did is not at all clear, but he certainly pursued a great many activities in *le beau monde*, and very few that involved Graham quadrants or detailed trigonometry, his weaponry in his academic battles. Whatever his recreations, his wanderings immersed him in the public discussion of the figure of the earth that was then raging, a discussion that made it a battle between Newtonian and Cartesian physics rather than over the instrumental prowess of French academicians. Within the terms of this public understanding, he was an avowed Newtonian challenging the narrow, Cartesian prejudices of Cassini II and the Royal Academy. This was, of course, a caricature of the actual debate inside the company, which never really operated as a battle between Newtonians and Cartesians or as a test case between these two rival physical systems. Nevertheless, since the debate was read in these terms in the wider public sphere, and since Maupertuis gained cultural capital by positioning himself as a defender

42. Cited in *ibid.*, 150.

43. Cited in *ibid.*

44. Cited in *ibid.*, 149.

of Newtonianism amidst an academy increasingly perceived as the slavish servant of Descartes, it is likely that he donned these costumes with little or no resistance.

Voltaire, though still living in exile in Cirey, had contributed enormously to creating this wider public understanding. He had also acquired notoriety as a Newtonian advocate as a result of his *Lettres philosophiques*. Voltaire captured perfectly the public perception of Maupertuis that went with his Newtonian identity when, with characteristic wit, he congratulated the academician for flattening the earth and the Cassinis with one blow. In his own *Eléments de la philosophie de Newton*, which appeared in the summer of 1738 and which will be discussed in detail below, Voltaire also devoted a chapter to the question of the figure of the earth, showing how Maupertuis' oblate earth followed naturally from Newton's theory of universal gravitation.⁴⁵ Within the context of Voltaire's own, increasingly aggressive Newtonianism, therefore, Maupertuis' triumph over the Cassinis would mean a victory for Newtonianism as a whole and a defeat for his and others' Cartesian enemies, this despite the very different framework for the debate inside the Royal Academy. Maupertuis, however, refrained from framing the debate in Voltaire's terms, at least in his public statements and his writings sanctioned by the Royal Academy. His book on the topic, which finally appeared in the summer of 1738 alongside Voltaire's differently oriented exposition of Newtonianism, illustrates well these differences.⁴⁶

Maupertuis' *The Figure of the Earth Determined by Observations* offered a detailed account of the empirical issues at stake and a defense of his own geodesic conclusions (and eventually those of the Cassinis as well). But it contained no wider Newtonian polemic. Bignon appreciated Maupertuis' efforts, and he praised both the text and the savant's overall conduct throughout the dispute. Writing to Réaumur, he expressed satisfaction that his "dear Académie" had enjoyed such great success with respect to this difficult and contentious matter. He especially praised the judiciousness of Maupertuis' public discourse and his tendency to "substitute facts that are accessible to everyone for overly profound discussions." At the same time, he also admired Maupertuis' detailed accounts of the operations, calculations, and observations since without them his work and that of the academy would earn neither the praise of "the true savants" nor justify "to the eyes of the entire universe the utility of such great expense on the part of the king." "Please send him a thousand compliments in

45. Voltaire, *Eléments de la philosophie de Newton*, ed. Robert L. Walters and W. H. Barber in *Œuvres complètes de Voltaire* (ed. Besterman), vol. 15 (Oxford, 1992).

46. Maupertuis, *La figure de la terre déterminée par les observations de MM. de Maupertuis, Clairaut, Le Monnier, Outhier, Celsius au cercle polaire* (Paris, 1738).

my name,” Bignon concluded.⁴⁷ In celebrating Maupertuis in this way he was also celebrating the wider values of *honnête* academicism to which Maupertuis, and most French academicians, still adhered throughout the 1730s.

In private, however, and especially during his circulation in *le beau monde*, Maupertuis conducted himself very differently. His decision to include a visit to Cirey among his wanderings during his absence from the academy was, therefore, deeply significant. During these years Voltaire lived in exile, but he did not remain isolated as a result. His life was in fact full of intellectual activity, but he pursued his work, including a number of different scientific projects, away from Paris and without any association with Maupertuis or any other French academician. For this reason, Maupertuis’ visit to Cirey in September 1738 was an important turning point.

“I thank you for the lessons in Newtonian philosophy,” Voltaire wrote to Maupertuis after his departure, his first substantive missive to the academician since the exchanges four years earlier in the wake of the scandal over the *Lettres philosophiques*.⁴⁸ These discussions occurred within the context of Voltaire’s own Newton war in response to the critics of his *Lettres philosophiques*, and the interesting thing about the letter is the way that it reconnects Maupertuis to the latter’s battles rather than summarizing some joint struggle. Maupertuis had in fact distanced himself from Voltaire after the academician had declined the offer to lead a Newtonian sect in 1734. Therefore, in 1738, when Maupertuis returned to Cirey, he was doing so as an outsider reconnecting with old friends. For his part, Voltaire had also been consumed since 1734 with the struggle to manage the scandal provoked by his *Lettres philosophiques*. His Newtonian pronouncements were not read as serious scientific interventions but rather as libertine scandal-mongering. This interpretation was further reinforced by the severity of the book’s persecution and by Voltaire’s departure into exile. In going to Cirey, therefore, Maupertuis was attempting to reconnect with a very different public, and in hosting him Voltaire was likewise doing the same.

The learned journals that arbitrated philosophical esteem within the Republic of Letters paid close attention to Maupertuis’ work throughout the 1730s while deeming Voltaire’s *Lettres philosophiques* unworthy for discussion. Other periodicals with different orientations certainly confirmed that the public sphere for science in France was not restricted to the serious organs of the learned establishment; yet the attention that Voltaire received in these works often hindered rather than helped his ambitions as an aspiring philosophe. Accordingly, Maupertuis represented for Voltaire a much sought-after intellectual authority. To acquire

47. Cited in Terrall, *Man Who Flattened the Earth*, 142.

48. Voltaire to Maupertuis, 1 October 1738, in Voltaire, *Corr.*, 88: D1622.

this authority for himself, Voltaire needed to secure his new identity in France—that of the independent yet authoritative philosophe. Yet in 1738, there was more work yet to be done on this project, even if the Newton wars that Voltaire entered into with new vigor gave him a perfect sphere within which to work.

Inventing the Enlightenment Philosophe

To stabilize his philosophe persona, Voltaire needed to reconcile two competing perceptions. One was articulated in 1727 by the playwright Marivaux in a prose work *L'indigent philosophe*. This text painted a portrait of the philosophe familiar to many eighteenth-century elites, and it was this conception that Voltaire set out to change through his own Newtonian campaigns.⁴⁹ Marivaux's indigent philosopher is a pauper who lives at the margins of society as well as a pariah who combines obsessive narcissism with nihilistic skepticism. As Jack Udank describes the character, "he seems to primp and compose himself in every utterance, to take his unsteady, equivocal bearing and identity from circumstantial and imaginary projections, from illusion itself—or from allusions to other texts." In short, the philosophe is a creature of fashion with "no place of grace, no true independent existence, except perhaps in the parodic rehearsal of what has found favor in the eyes his readers."⁵⁰ This negative and lowly image of the philosophe was widespread in early eighteenth-century France, as the *Dictionnaire de l'Académie française* attested in 1718. It characterized as "philosophical" any opinion or conduct that was "natural, shocking, irreligious, or self-concerned." The 1734 edition of the Jesuit *Dictionnaire de Trévoux* repeated the same, defining the philosophe as any man who is "surly, dirty, uncivil, and unconcerned with the duties and properties of social life."⁵¹

It became easy to associate Voltaire with this conceptualization of the philosophe in the wake of his own, self-titled *Lettres philosophiques*. The scandals over the alleged improbity and impiety of the work further triggered this perception, as did the eventual retreat of the author into a suspiciously adulterous (if in no way impoverished) exile away from the Parisian center of *le monde*. Not all of these characterizations were unfair, moreover, since the ideal of intellectual liberty that increasingly inspired Voltaire after 1730 was a key element of the

49. Pierre Carlet Marivaux, *L'indigent philosophe*, in *Marivaux. Journaux et oeuvres diverses*, ed. Frédéric Deloffre and Michel Gilot (Paris, 1969).

50. Jack Udank, "Portrait of the Philosopher as Tramp," in *A New History of French Literature*, ed. Dennis Hollier (Cambridge, 1989), 422.

51. Cited in *ibid.*, 423.

indigent philosophe persona as well. Indeed, what gave Marivaux's philosophe humanity, at least for those capable of sympathizing with him, was his ability to see through the hypocrisies, prejudices, and oppressions of the world. Also estimable was his refusal to submit to error under any circumstances. A critical spirit, therefore, and the willingness to use it, was often highly valued, as was the inclination to follow nature even when it seemed to contradict recognized authority. When carefully balanced with the Stoic values of self-control, sacrifice, and service, the critical, intellectual liberty of the philosophe could in fact become a central feature of the *honnête homme*.⁵² This meant that Marivaux's philosophe was less the "other" against which the *honnête homme* was defined, and more an extreme case that illustrated what happened when philosophical liberty reigned unchecked by the tempering virtues of honor and civility.

Voltaire struggled throughout his life to reconcile these conflicting principles of liberty and honnêteté. Two essays published around 1740 illustrated well the other pole toward which he strove after 1734. The first was published in two parts in 1739 in the *Bibliothèque britannique*. It used an English work entitled *The Moral Philosopher, or Le philosophe honnête-homme* as the editors translated it, to explore the nature of this combination.⁵³ The English work that triggered the essay was a dialogue that discussed natural religion through a conversation between a "Christian Deist" and a "Christian Jew." In its first installment, published in late 1737, the journal reviewed the book by citing the many criticisms that had been launched against it. "If our philosophe had limited himself to arguing modestly, then I would have found no reason to pick up the pen," wrote one pamphleteer. "But since he violates every law of truth, propriety, and *honnêteté*, he must suffer by being told so and by being proven guilty."⁵⁴ Another critic chastised the author for taking "great liberty with reli-

52. This theme is discussed at greater length in Marc Fumaroli, *L'âge de l'éloquence: Rhétorique et "res literaria" de la Renaissance au seuil de l'époque classique* (1980; reprint, Paris, 1994); Anne Goldgar, *Impolite Learning: Conduct and Community in the Republic of Letters, 1680–1750* (New Haven, 1995); Daniel Gordon, *Citizens without Sovereignty: Equality and Sociability in French Thought, 1670–1789* (Princeton, 1994); Lawrence Klein, *Shaftesbury and the Culture of Politeness: Moral Discourse and Cultural Politics in Early Eighteenth-Century England* (Cambridge, 1994); Peter Miller, *Peiresc's Europe: Learning and Virtue in the Seventeenth Century* (New Haven, 2000), idem, "Friendship and Conversation in Seventeenth-Century Venice," *Journal of Modern History* 73 (2001): 1–31; and René Pintard, *Le libertinage érudit dans la première moitié du XVIIe siècle* (Paris, 1943).

53. "Le philosophe honnête-homme," pt. 1, *Bibliothèque britannique* 10 (1739): 1–19. The English title was *The Moral Philosopher. In a dialogue between Philalethes, a Christian deist, and Theophanes, a Christian Jew* (London, 1738).

54. "Le philosophe honnête-homme," 5.

gious subjects” and for pleading “every day for the liberty to think and dispute on religious questions.”⁵⁵ Further critics were cited, and since their indictments throughout were vitriolic, the journal decided to appeal to those “whose curiosity about this topic has not been satisfied” by publishing its own reflections on the proper character of the *honnête philosophe*.⁵⁶

“By a moral philosopher,” the journal wrote, “one means a Sage, or one who studies wisdom; a philosopher for whom philosophy embraces the practical and the theoretical, and for whom theory informs his practice.” He is a philosophe who “has morals, and who recognizes the necessity of moral duties, not just toward men but also toward God.” Lastly he is one who “wants neither to be confused with those who move from philosophy into libertinage, or those for whom libertinage produces philosophy.” “In short,” the journal concluded, we are talking about “a *philosophe honnête homme*, or to say the same thing another way, an *honnête homme philosophe*.”⁵⁷ “Our *philosophe honnête homme* is not to be classed among the atheists,” the journal continued, because “his love of truth leads him directly to religion.” He knows that God created the world and that he governs it with his providential hand. As a result, “he combats, often heatedly, those who deny this fundamental truth of all religions.”⁵⁸ Yet the true philosophe also takes pride in being counted among the freethinkers [*Libres-Penseurs*], or even to be called a Skeptic or a Pyrrhonnien.” He in fact willingly adopts these identities “so long as these terms signify a man who seeks the truth, believes in nothing without reason, and, ceding nothing to prejudice, dares to reject the most authorized opinions until such time as a free and impartial examination of them has led him to conclude that they are reasonable, or at least probable.”⁵⁹ Building on this judicious balance between free thought and probity, the essay ultimately argued for reasonableness and moderation as the values most representative of the true philosophe.

Even more influential in defending the positive value of the philosophe was an article, written perhaps by Dumarsais, which was first published in 1742 in the anonymously edited collection *Nouvelles libertés de la pensée*.⁶⁰ This article

55. *Ibid.*, 10–11.

56. “Le philosophe honnête-homme,” pt. 2, *Bibliothèque britannique* 12 (1739): 331–40, quotation on 331.

57. *Ibid.*, 332–333.

58. *Ibid.*, 336–337.

59. *Ibid.*, 333–334.

60. This essay had a long and storied history, and the details of it are meticulously collected and analyzed in Herbert Dieckmann, *Le Philosophe: Texts and Interpretations* (St. Louis, 1943). Dieckmann also reprints the four most famous published versions of the

would eventually define the term “philosophe” in Diderot and d’Alembert’s *Encyclopédie*, and appearing in 1742 in this widely noticed collection it further supported the reconstruction of the philosophe persona that Voltaire was attempting. “[The philosophe] is an *honnête homme* who wishes to please others and render himself useful,” the brief essay declared in a representative passage.⁶¹ Overall, the work was full of quotable lines such as these, and the goal of the essay as a whole was to join such claims to an eloquent defense of how intellectual liberty could produce a socially beneficial human being rather than a destructive and antisocial skeptic.

Dumarsais’ philosophe was not a reckless libertine hell-bent on destroying revealed religion and its moral authority. Instead, he was a careful thinker who sought truth at all times, but with a full understanding of the limitations that must always restrain one in this quest. “A philosopher acts only after reflection, even in moments of passion; he walks through the night, but he is preceded by a torch.”⁶² The philosopher in particular forms his principles from “an infinity of particular observations. He esteems the science of facts,” and from this basis he “applies himself to understanding both the universe and himself.”⁶³ Likewise, the real sage has no interest in “vain speculations,” “the vain disputes of the schools,” or in “books that only explore vain questions.” He is shocked at “the wars and disorders caused by those who chase chimeras,” and he wishes that “subtle points of theory” were less central to intellectual discourse than “practical matters of utility.”⁶⁴

The sober, empirical search for knowledge in fact defines the essence of the philosophe in Dumarsais’ essay, but the philosopher also knows how to separate himself from those “very intelligent persons who are always judging.” “When we judge without having sound grounds for judgment, we simply

text in a convenient side-by-side presentation, making possible an analysis of the changes that the text underwent during its lifetime. My analysis is built on the earliest of the published versions, which appeared in Nicolas Fréret’s anonymously published *Nouvelles libertés de la penser* (Paris, 1742), 173–204. This version contains discussions excised in the later versions, and since it is chronologically most appropriate to this discussion, I have focused on this version in my analysis. Many of the translations are my own, but when passages from the 1742 version are replicated in the version of the article that appeared in Diderot and d’Alembert’s *Encyclopédie*, I have drawn upon the translation offered in John Lough, ed., *The “Encyclopédie” of Diderot and d’Alembert. Selected Articles* (Indianapolis, 1969), 284–289. My citations, however, will be to the French text found in Dieckmann, *Le Philosophe*, 30–65.

61. Dieckmann, *Le Philosophe*, 44.

62. *Ibid.*, 32.

63. *Ibid.*, 32, 36.

64. *Ibid.*, 42–44.

guess,” the essay stated. And since judges of this sort “do not know the reach of the human mind and think it can know everything,” the philosopher pursues a different agenda. “He accepts as true what is true, and false what is false, as doubtful what is doubtful, and as probable what is merely probable.”⁶⁵ He also contents himself with judging infrequently but judiciously, knowing that it is better “to judge and to speak less,” but to do the first “more accurately” and the second “well.” “When he does not have any proper basis for an opinion,” the text declared, “[the philosophe] knows when to suspend judgment, and this is his most perfect trait.”⁶⁶

Reasoned skepticism and judicious restraint were the hallmarks of the *honnête homme*, and here the article made disciplined philosophical inquiry compatible with this ethic. Equally important to this persona, however, were social norms regarding community, sociability, and service. “Reason demands that [men] know and study the qualities of sociability and endeavor to acquire them.”⁶⁷ Similarly the philosophe properly defined is not a “monster” who lives “in exile in this world.” “He wishes to find pleasure in the company of others,” and “he seeks to adapt himself to those with whom he lives.”⁶⁸ The real philosophe, in fact, wants nothing more than to serve his fellowman, for in the same way that grace is the principle that determines the actions of Christians, “civil society is for him like a divinity on earth.” An urge toward probity, therefore, is a natural feature of the true philosophe, for since “civil society is his unique God,” “he is concerned, far more than other men, with directing all his efforts toward achieving the ideal of the *honnête homme*.”⁶⁹ The debauched, the superstitious, even the devout: each of these men is a creature of passion. The philosophe, by contrast, finds constancy in his life since he knows himself and how to live with others. “Do not fear that [the philosopher] will engage in acts contrary to probity,” the text declares. “No! Such an action is not in accord with his makeup.” The philosopher is rather “filled with concern for the good of civil society,” and “his heart is nourished by religion, to which he has been brought by the natural light of reason.”⁷⁰ The philosophe, in short, is a model citizen and subject. He is “an *honnête homme* who follows reason in all his actions and who combines a reflective and precise mind with the manners and qualities of a sociable man.”⁷¹

65. Ibid., 38.

66. Ibid., 38.

67. Ibid., 42.

68. Ibid., 44.

69. Ibid., 52.

70. Ibid., 52–54.

71. Ibid., 58.

Dumarsais' essay (if in fact he wrote it) ultimately defined an ideal type, one that contrasted strongly with the negative image of philosophers prevalent in eighteenth-century France. This positive image, though widely influential, did not completely replace the negative image popularized by Marivaux and others; rather, it defined with it two rival positions in a complex field of cultural contestation. Voltaire entered this field after the publication of his *Lettres philosophiques*, and it was through his Newtonianism that he began to assert his understanding of philosophy and the philosopher. In Voltaire's mind, Dumarsais' ideal was his ideal as well, but to his critics he was either a failed philosophe, a disingenuous subversive, or perhaps a little bit of both. Also at issue in these struggles were the incompatibilities between Voltaire's dual identity as a poet and a would-be philosophe, the same tensions that Prévost pointed to in his discussion of Voltaire's letters on Locke and Newton. In the years immediately following Voltaire's exile at Cirey, this confusion plagued him, and it crystallized around his Newtonianism during his encounters with the Venetian man of letters, Francesco Algarotti.

Voltaire first met Algarotti when he visited Cirey during October and November 1735.⁷² Still in his early twenties, the Italian had made a name for himself in 1729 when he repeated Newton's optical experiments before a skeptical audience of Cartesian savants in Bologna. In 1733 he began to travel, meeting among others Martin Folkes, vice-president of the Royal Society during Newton's tenure as president. He also came to know Anders Celsius, the Swedish astronomer. In 1734, he accompanied Celsius to Paris, where he spent some time working with Maupertuis and Clairaut before accepting their invitation to join them on their trip to Lapland.⁷³ At the last minute, Algarotti chose not to make the journey, and it was in this context, perhaps through the recommendation of Maupertuis, that he found himself at Cirey instead.

"We have with us here the Marquis Argalotti [*sic*]," Voltaire wrote incorrectly to Thieriot on November 3, 1735. "He is a young man who knows the languages and mores of every country, who writes verse like Ariosto, and who

72. On this visit, see Vaillot, *Avec Madame du Châtelet*, 26–27. On Algarotti, see Paolo Casini, "Les débuts du Newtonianisme en Italie, 1700–1740," *Dix-huitième siècle* 10 (1978): 85–100; Vincenzo Ferrone, *The Intellectual Roots of the Italian Enlightenment: Natural Science, Religion, and Politics in the Early Eighteenth Century*, trans. by Sue Brotherton. (Atlantic Highlands, 1995); Massimo Mazzoti, "Newton for Ladies: Gentility, Gender and Radical Culture," *British Journal for the History of Science* 27, no. 2 (June 2004): 119–146; and Robert L. Walters and W. H. Barber, introduction, in *Voltaire. Eléments de la philosophie de Newton*, in *Œuvres complètes de Voltaire* (ed. Besterman), 15: 41–47.

73. Terrall mentions this invitation in *Man Who Flattened the Earth*, 104.

knows his Locke and his Newton. He is reading us some dialogues that he wrote concerning the interesting parts of philosophy, . . . and I am giving him my little course on metaphysics. . . . We have also been reading several stanzas from *Jeanne la pucelle*, a tragedy of my making, and a chapter from the *Siècle de Louis XIV*. From this we return to Newton and Locke, but not without a little champagne and our dearly beloved [*excellente chère*], since we are very voluptuous philosophes. . . . There in a nutshell is a fairly exact account of my life.”⁷⁴ The mix of sociability, poetry, and philosophy revealed in this account captures well the general framework of Voltaire’s intellectual orientation during these years. Especially revealing was the mention of Algarotti’s dialogues since these would become a trigger for Voltaire’s next major philosophical undertaking.

The dialogues in question were no doubt drafts of Algarotti’s widely read and discussed *Newtonianism for Ladies* that was first published in Milan, with a Naples imprint, in early 1737.⁷⁵ As early as spring 1736 Voltaire and du Châtelet were asking Algarotti for copies of the manuscript, for each admired Algarotti’s work. “It is full of intelligence, grace, imagination, and science,” du Châtelet wrote, and Voltaire honored the text by praising the “surety” of Algarotti’s capacity to “instruct and to please.”⁷⁶ Privately, Algarotti’s example also stirred Voltaire’s own ambition to publish a French work explaining Newtonian philosophy. “There are not even twenty Frenchmen who understand Newton,” Voltaire complained to his former teacher the abbé d’Olivet during Algarotti’s visit. “We incorrectly dispute against him without ever taking the time to read his geometrical demonstrations.” But referring to Algarotti, he also noted that “we currently have here a noble Venetian who understands Newton like the elements of Euclid. Would it be shameful for the French to do so as well?”⁷⁷

For many, Algarotti’s dialogue answered this need since it was learned, accurate, witty, and accessible to a broad public. Du Châtelet said in 1736 that she was working on her Italian with the goal of perhaps translating the work

74. Voltaire to Thieriot, 3 November 1735, in Voltaire, *Corr.*, 87: D935.

75. Francesco Algarotti, *Il newtonianismo per le dame ovvero dialoghi sopra la luce e i colori* (Naples, 1737). An excellent facsimile digital edition, edited and with an introduction by Massimo Mazzotti, is found at http://www.cis.unibo.it/cis13b/bsco3/intro_opera.asp?id_opera=32.

76. Du Châtelet to Algarotti, 20 April 1736, in Voltaire, *Corr.*, 87: D1065. Voltaire made his remarks in his 1736 dedicatory epistle to *Alzire, ou Les américains*, in *Œuvres complètes de Voltaire* (ed. Besterman), 14: 111–112.

77. Voltaire to Joseph Thoulier d’Olivet, 30 November 1735, in Voltaire, *Corr.*, 87: D950.

into French one day.⁷⁸ Voltaire too was clearly influenced by Algarotti in the creation of his own Newtonian exposition. The Italian had adopted the as yet unprecedented approach of using optics—particularly the Newtonian theory of refraction as a consequence of the attractive forces operative in dense media—as a vehicle for explaining Newton’s theory of universal gravitation more generally. Voltaire adopted the same focus in his exposition of Newtonianism, and in this way too he showed his debt to Algarotti. In other respects, however, Voltaire broke crucially with the example set by the Italian, defining as a result his very different understanding of what it meant to be a philosophe. Most significant was his decision to produce a prose work modeled on the example of Henry Pemberton rather than either a *mondain* dialogue or an expository poem. Each of these genre choices was available to Voltaire, and to a certain degree his choice was consciously deliberated. Gender played a key role in his deliberations. Algarotti’s dialogue mirrored Fontenelle’s *Conversations on the Plurality of Worlds*, with a learned man leading an aristocratic lady through a pleasurable discussion of the details of Newtonian philosophy. By adopting this approach, Algarotti positioned himself as a bridge between serious male learning and the feminized world of *le beau monde*, a stance that had become commonplace as a result of the success of Fontenelle’s text over the previous four decades.⁷⁹ Algarotti was exceedingly comfortable in this role, and accordingly his work earned wide esteem to the extent that it confirmed these preexisting expectations.

Desfontaines was in a position to recognize Algarotti’s achievement, and he showered praise on the work and its author in his biweekly newssheet. “Here is an Italian *bel esprit* who, wanting to credit the dogmas of [Newton] in his homeland, chose to impart them first to women since their vote is so important to the success of any novelty.”⁸⁰ The journalist then alluded to Fontenelle’s example, noting that Algarotti’s work possessed “the same taste and the same dialogue form, not to mention all the same gallantry, salt, and pretty details, as well as all the learning, science, and clarity of expression.”⁸¹ Arid science and

78. Du Châtelet to Algarotti, 20 April 1736, in Voltaire, *Corr.*, 87: D1065.

79. For an analysis of this relationship, see Mazzotti, “Newton for Ladies.” For a different interpretation of Fontenelle’s *Mondes*, see J. B. Shank, “Neither Natural Philosophy, nor Science, nor Literature: Gender and Natural Knowledge in Fontenelle’s *Entretiens sur la pluralité des mondes*,” in *Men, Women, and the Birthing of Modern Science*, ed. Judith Zinsser (DeKalb, 2005).

80. Review of Algarotti, *Il newtonianismo per le dame*, in *Observations sur les écrits modernes* 14 (n.d.): 217.

81. *Ibid.*, 14: 218.

belles lettres are rarely compatible, he concluded, which is why one rarely sees someone who possesses both “serious scientific learning and a delicate mind.” Nevertheless, “M. Fontenelle, and now M. Algarotti, show that the two can be allied,” and for Desfontaines this marriage was the achievement of Algarotti’s work.⁸² The Italian, Desfontaines continued, had the harder assignment, in fact, for whereas Fontenelle was charged with clarifying the Cartesian philosophy “recently perfected by M. Privat de Molières,” Algarotti had to explain the “abyss of the void,” the “chaos” of action at a distance, and the mysterious and unconscionable revival of the “long lost occult qualities of the Peripatitians.”⁸³ “The book offers a complete course in Newtonian philosophy,” the review declared, and even if it was surprising to Desfontaines to see “such an *homme d’esprit*” sympathetic to these philosophical abominations, the dialogue itself was an example of “philosophical gallantry par excellence.” The book, he recommended, should quickly be translated into French by a writer who is up to the task.⁸⁴

Voltaire also found his name mentioned among those who combine scientific learning with *bel esprit*, yet as much as the poet cum philosophe wanted to bring these two principles together, he wanted no part of the feminized, *mondain* approach to philosophy that Fontenelle and Algarotti personified. “Let Algarotti instruct the ladies,” he wrote. “Maupertuis can instruct the men, and I will instruct the children.”⁸⁵ In other letters, he was more assertive about his desire to speak directly as an authoritative, masculine philosopher. “I am going to work on a corrected edition of the *Eléments* of Newton,” he wrote to Thieriot in May 1738 after a faulty edition of the work had been published in Holland. “It will be neither for the ladies, nor for everyone, but in it one will find the truth expressed with method.”⁸⁶ In this first, unauthorized Dutch edition of Voltaire’s *Eléments de la philosophie de Newton*, an editor had added the subtitle “Accessible to Everyone.” Voltaire found this to be a gross misrepresentation of his text. “It is a book that one must study,” he explained to his friend Berger, not a book for everyone.⁸⁷ “When M. Algarotti read to me his dialogues on light, I gave them the praise that they merited since they spread an infinite quantity of *esprit* and *clarté* over this beautiful part of physics.” However, while “dialogues such as these are charming works,” as works of physics

82. *Ibid.*, 14: 219–220.

83. *Ibid.*, 14: 220, 227.

84. *Ibid.*, 14: 228–229.

85. Voltaire to Thieriot, 5 May 1738, in Voltaire, *Corr.*, 89: D1492.

86. *Ibid.*

87. Voltaire to Berger, 14 May 1738, in Voltaire, *Corr.*, 89: D1502.

they are “lightly researched and superficially developed.” “I chose to speak instead to a real philosopher,” Voltaire asserted, and from this perspective neither Algarotti’s imaginary marquise nor his address “to the ladies” was at all appropriate.⁸⁸

Voltaire’s *Eléments de la philosophie de Newton* was indeed a very different kind of work than Algarotti’s, and a key reason for the differences rested in Voltaire’s desire to be a true philosopher, as he understood the term, and not just a gallant popularizer who made austere philosophy palatable to the *mondain* public. “There are more truths in ten pages of my text than in all of [Algarotti’s] work,” Voltaire explained, and he constructed his text in such a way as to drive home these serious scientific ambitions.⁸⁹ His text opened, for example, with a pictorial frontispiece and two dedicatory pieces to the Marquise du Châtelet, one in verse and one in prose. Yet even these “artistic” flourishes announced a work very different than Algarotti’s. The frontispiece depicted an image of enlightenment radiating through the head of a cosmos-measuring Newton before bouncing off a mirror held by a female figure onto a table where a seated figure is writing. Visually, the work introduced the focus on light and its laws that formed one theme of Voltaire’s treatise. Symbolically, however, the image also set up the gender and genre reconfigurations that Voltaire was attempting as well. In the dedicatory poem and prose “Avant propos” that came after this image, Emilie du Châtelet was named as the female who reflected enlightenment onto Voltaire the writer. “You call me to you, vast and powerful genius/ Minerva of France, immortal Emilie/ Disciple of Newton, and of truth/You penetrate my senses with the fire of your clarity.”⁹⁰

In these presentations, du Châtelet was given a certain authority over Voltaire’s science, since she was the source of his knowledge and he merely the recorder of her enlightenment. Algarotti had also dedicated his work to du Châtelet, yet given the nature of his text, his dedication positioned her very differently. In the Italian’s work, du Châtelet merged with the marquise who receives instruction in the text. Yet as Voltaire retorted at the time, “she knows at least as much as him, and could well correct the presentations of his book.”⁹¹ Voltaire accordingly reconfigured this gendered relationship, presenting his “beloved and immortal Emilie” as a philosopher in her own right. Thus, writing to du Châtelet in the opening preface, he promised her “neither an imaginary marquise, nor an imaginary philosophy here. The solid study that you

88. Ibid.

89. Voltaire to Thieriot, 18 May 1738, in Voltaire, *Corr.*, 89: D1505.

90. Voltaire, *Eléments*, in *Œuvres complètes de Voltaire* (ed. Besterman), 15: 186.

91. Voltaire to Thieriot, 5 May 1738, in Voltaire, *Corr.*, 89: D1492.

have made of several new truths and the fruit you have taken from your respectable work is what I offer to the public for your glory, and that of your sex.” He also cautioned her against looking for *agréments* in the text. “Others know how to cover the nettles of science with flowers; I will limit myself to trying to fully understand the truths and to explaining them with order and clarity.”⁹²

Voltaire further emphasized the strong ties that bound his stylistic and genre choices with his veracity and credibility as a philosophe. His goal, as Voltaire stated it, was to follow Newton in as clear and precise a manner as possible. His *Eléments*, therefore, was “not a complete course of physics,” but a more limited work focused only on offering “a precise idea of [Nature’s] exceedingly delicate and powerful springs, and their fundamental laws,” to those who “only know Newton and his philosophy by name.”⁹³ Precision, accuracy, and clarity were thus his watchwords, and while Voltaire admitted that digressions might be required to understand certain particularities, his ultimate goal was to offer a clear and direct exposition free of any rhetorical flourishes or diverting digressions whatsoever. Just in case anyone still held hopes that Voltaire’s poetic side would be deployed, he ended his “Avant propos” by referring readers to “the excellent works in physics by ’sGravesande, Keill, Musschenbroek, and Pemberton” should further instruction be desired.⁹⁴

The text itself conformed to this program in both style and content. In managing its reception, moreover, both Voltaire and du Châtelet worked hard to insure that the book was read and received properly. The first appearance of the treatise in an unauthorized, error-filled edition in May 1738 created the first occasion for these efforts.⁹⁵ Less than two weeks earlier, the scientific authority of Voltaire and du Châtelet had been elevated when each was awarded honorable mention by the Paris Academy as a result of the essays on the theory of fire that each had submitted to the academy’s prize competition. The essays, though quite different, were the result of the scientific collaborations that the couple had pursued at Cirey since 1735. The announcement of their success, made at the academy’s spring public assembly, therefore created quite a stir. The academy took advantage of the occasion to emphasize its own admiration for the work of talented amateurs, including the work of learned ladies. The announcement also emphasized the institution’s openness to the worthy

92. Voltaire, “Avant propos,” in *Œuvres complètes de Voltaire* (ed. Besterman), 15: 547.

93. *Ibid.*

94. *Ibid.*, 549.

95. The critical edition of Voltaire’s *Eléments*, ed. Walters and Barber, in *Œuvres complètes de Voltaire* (ed. Besterman), vol. 15, chronicles the history of the text. I will follow the Walters and Barber edition closely, therefore, in my account.

philosophical aspirations of the wider public, while also reasserting its ongoing commitment to free philosophical inquiry and its stark refusal to embrace any single philosophical system.⁹⁶ Voltaire also presented himself as a sage and neutral arbiter of truth in his *Eléments*, and when, therefore, within days of his recognition by the Royal Academy, an uncorrected and unauthorized version of his text began to circulate, the author felt a strong urge to intervene.

He moved on several different fronts simultaneously.⁹⁷ Behind the scenes he worked to secure a *privilège* for a corrected French edition, a move that, if successful, would have allowed Voltaire's corrected explanations to carry the imprimatur of the French intellectual establishment. The text had originally been sent to the censor in June 1737, but in January 1738 the request was denied after the notoriously cautious and narrow-minded Chancellor d'Aguesseau personally read the text (a rare occurrence) and then vetoed the recommendation of two other censors (another rarity) who had both recommended publication.⁹⁸ Among the reasons for the refusal, beyond the chancellor's fussiness, were the theological views attributed to Newton in the final chapter; the great age that Voltaire assigned to the earth, in contradiction to orthodox Christian dating; and the overall anti-Cartesian tone of the work. The last in particular was seen as enflaming public debate in a climate that had already become far too contentious. Du Châtelet speculated that d'Aguesseau "feared a union of Voltaire and Maupertuis that would subjugate the world," and she wondered whether France would soon see "an *arrêt de Parlement* against Newtonian philosophy."⁹⁹ She also told Algarotti that Voltaire's real crime was "treating Descartes with insufficient respect."¹⁰⁰ Yet since d'Aguesseau granted a *privilège* to Algarotti's Newtonian dialogue while rejecting Voltaire's text, it is likely that Voltaire's tone and general reputation were the operative criterion in his censure far more than any conviction about Newtonian or Cartesian philosophy.

After the unauthorized Dutch edition of the *Eléments* appeared in May, Voltaire renewed these efforts using other contacts. In August, he succeeded in

96. The declaration is transcribed in PVARs, April 16, 1738.

97. In addition to Walters and Barber, introduction, see Vaillot, *Avec Madame du Châtelet*, 84–92.

98. Of d'Aguesseau, Condorcet wrote, "His superstition, his timidity, his respect for ancient practices, his indecision, these narrowed his views with respect to reforming the law and thwarted his activity." *Vie de Voltaire*, 213. Cited in Walters and Barber, introduction, 69, n. 21.

99. Du Châtelet to Algarotti, 10 January 1738, in Voltaire, *Corr.*, 88: D1421.

100. Du Châtelet to Algarotti, 2 February 1738, in Voltaire, *Corr.*, 89: D1441. On this history more generally, see Walters and Barber, introduction, 65–72.

getting an authorized French edition into print. In the interim, however, the Dutch edition began to sell wildly and stir up discussion in France and the wider Republic of Letters. Voltaire was, therefore, forced to respond to this edition despite his repudiation of it. In June, the *Journal des savants* noted the publication of the work under “Holland” in its “Nouvelles de la république des lettres” section.¹⁰¹ The journal also followed its announcement with “a note submitted to us by the author.” Overall, the missive emphasized the “very defective” character of the Dutch edition, stressing that “the number of errors was particularly problematic given the nature of the work.” Voltaire also distanced himself from his Dutch editor’s decision to add “*mise à la portée de tout le monde*” (put at the level of everyone) to his chosen title. These were not his words, he asserted, and echoing his many statements in his contemporary correspondence, he described his work as something much more substantial than a popularization.¹⁰²

Voltaire also offered a long defense, which the journal printed verbatim, of his use of the line about “imaginary marquises and philosophies” in his opening dedication. “I had no intention of criticizing the author of *La pluralité des mondes*,” he wrote, “and I declare here publicly that I regard [Fontenelle’s] book as one of the best that has ever been written. Its author is also one of the most estimable men that has ever lived.” Instead, he continued, it was Algarotti that he intended to target with this description. “When I had the honor,” he explained, “of hearing at Cirey the Italian dialogues of M. Algarotti, in which the foundations of Newtonian philosophy are established with great *esprit*, while those of Descartes are destroyed with force, I decided to engage myself in the same cause in France. . . . Since his work is a dialogue with an imaginary marquise written in the style of *La pluralité des mondes*, he addressed his work to M. Fontenelle. However, as M. Algarotti and the illustrious woman to which the book is dedicated can confirm, I was very annoyed [*tres fâché*] to see a phantom Marquise [*en air*] in his work, and I told him that he should not put an imaginary being at the center of solid truths. This is why I began my *Éléments* the way I did.”¹⁰³

In forcing Voltaire to focus less on the philosophical details of his position and more on his intellectual and literary style, these criticisms were harbingers of the battles to come. Nevertheless, Voltaire’s primary focus during the summer of 1738 was on the philosophical substance of his text. He thus worked

101. “Nouvelles de la république des lettres. “Letter from M. de Voltaire, author of the *Éléments de la philosophie de Newton*,” *Journal des savants* (1738): 381–382.

102. *Ibid.*

103. *Ibid.*, 382.

hard to ensure readers access to an accurate edition of his ideas. One strategy involved the circulation to various journals of a carefully prepared set of “necessary clarifications” in the hope that his correct views would reach the wider public. In July, the *Journal de Trévoux* complied, publishing the revisions along with Voltaire’s request that readers include them with any copy of the text.¹⁰⁴ In October, the *Journal des savants* again used its “Nouvelles de la république des lettres” section to further publish “a letter from M. de Voltaire” that the journal believed “could not be refused.”¹⁰⁵ Much of the letter (labeled “De Cyrey en Champagne”) was a response to the many criticisms of his text that Voltaire had received, and these will be discussed in detail below. But his *apologia* also began with a set of further corrections regarding his text. Concluding a long list of detailed corrections, he asked only that “the public be served with exactitude.” “My only concern is for the perfection of the arts to which we all aspire,” he stressed.¹⁰⁶

Voltaire especially emphasized the linkage between textual inaccuracy, misinterpretation, misunderstanding, and destructive disputation. Yet while Voltaire’s text certainly triggered a great deal of controversy, and while the author’s struggle to stabilize an accurate text was one theater for these battles, another involved stabilizing the book’s interpretation as well. This was a far more difficult proposition, and in his October letter to the *Journal des savants* he evaded this challenge, writing that “I will not respond at all here to the objections made in France about the truths contained in the *Eléments de Newton*.”¹⁰⁷ One reason he could dodge the debate here was because a response had already been made by one of his closest allies. In September 1738, the Marquise du Châtelet, undoubtedly supported by Voltaire, succeeded in publishing an anonymous letter in the same journal that presented Voltaire’s text in very sympathetic terms.¹⁰⁸

The letter was framed as an unsolicited and anonymous book review, and the editors published it “with pleasure” while explaining in a footnote the anomalous character of the submission.¹⁰⁹ To maintain the conceit of impar-

104. “Eclaircissements nécessaires donnez par M. de Voltaire,” *Journal de Trévoux* (July 1738): 1448–1470. They are also reprinted in *Œuvres complètes de Voltaire* (ed. Besterman), 15: 655–672.

105. “Nouvelles de la république des lettres,” *Journal des savants* (1738): 636.

106. *Ibid.*, 637–638.

107. *Ibid.*, 638.

108. [Marquise du Châtelet], “Lettre sur les *Eléments de la philosophie de Newton*,” *Journal des savants* (1738): 534–541.

109. *Ibid.*, 534.

tiality, du Châtelet did not shy away from criticizing Voltaire's text. "It seems to me that there would have been more order in the book had M. de Voltaire divided it into two parts," she wrote. Reiterating differences that were found in their respective essays on fire as well, she also accused Voltaire of going beyond the facts in attributing weight to light. Du Châtelet further sided with those critics who accused Voltaire of "speaking a bit too harshly" about "great men" such as Descartes and Malebranche. She attributed this fault to "an excessive zealotry for the truth" rather than any malignity of spirit, and "while the philosophes who have defended Descartes, not to mention Descartes himself, certainly deserve our respect," she wrote, "their errors deserve no courtesy. For as M. de V says, *the primary thing that must be respected is the truth.*"¹¹⁰ Du Châtelet likewise corrected Voltaire on several technical points regarding the reflection of light in mirrors and the nature of interparticle attractive forces. Overall these challenges established her as an honest reviewer.

Yet du Châtelet's review, despite its criticisms, was ultimately designed to praise Voltaire, not to bury him. Her arguments were most powerful in supporting her partner's claim to be explaining and defending the true philosophy of nature in a country that was both ignorant of and prejudicially biased against it. "The only glory that yet remains for Newton is to be more widely known," she wrote, for "while the largest part of the learned world rendered its praise onto him long ago, his philosophy, bristling with calculations and algebra, has nevertheless remained something of a mystery known only to the initiated. M. Pemberton, who tried to make Newton known to readers in England, is often harder to understand than Newton himself. But in a kind of miracle, it has been reserved to M. de Voltaire to change this. He has made Newtonian philosophy—the only philosophy worthy to be studied since it is the only one that is proven—accessible, not to everyone as the booksellers in Holland announced, but to any reasonable and attentive reader."¹¹¹

Du Châtelet also described the stylistic and genre choices that made Voltaire's miracle possible. In doing so, she reiterated publicly his intentions to write and argue like a true philosophe, and not like a poet who produced pretty philosophical romances. "Some have accused M. de Voltaire of a crime in writing that there was neither an imaginary marquise nor imaginary philosophy in his work," she wrote. "No matter whether he intended to refer to the author of *Des Mondes* with these words, all one has to do is to read his *Eléments* to know that M. de Voltaire has too much merit not to appreciate his as well." Du Châtelet also found it "important to remark" that "the style of *des mondes*,

110. *Ibid.*, 541.

111. *Ibid.*, 534.

as graceful as it is in the mouth of the Marquise, becomes strained when it is forced to become too long-winded. The judicious author of this charming book would, therefore, have adopted instead a clear and precise style had he wanted to descend into the profound details of his subject.”¹¹²

This formulation made Fontenelle’s style appropriate to the light and entertaining book he intended while legitimating Voltaire’s very different style as equally appropriate to his very different philosophical ambitions. Du Châtelet added a further sting to this formulation by drawing another distinction between the different philosophical contents of the two books. “I daresay also that the vortices, these offshoots of Descartes’ sublime and active imagination, seem to lend themselves to graceful style in ways that more severe truths grounded in mathematical calculation absolutely resist. I doubt, for instance, that anyone could make a good witticism out of the phrase *in inverse proportion to the square of the distance*.”¹¹³ This formulation distanced Voltaire from Algarotti and Fontenelle by making his clear, precise philosophical prose the only style worthy of Newton’s thoroughly veracious science. It also implicitly echoed the prevailing discourse of Newtonianism by implying a connection between the Cartesian vortices and the songs of *romanciers*.

In the subsequent discussions, the marquise built upon this position, making Voltaire’s *Eléments* not only the most authoritative account of Newtonian philosophy available but also the scientific book that France most needed. “In the countries where the philosophy of Descartes has already been abandoned, one might find it surprising that M. de Voltaire found it necessary to spend as much time as he did refuting it. But those who might make this critique should make a trip to France, for there they will see that the French, even some of the most respectable, are still very attached to this philosophy, and that M. de Voltaire cannot take too much care in refuting it.”¹¹⁴ Indeed, she continued, “it is the very goal of his work to demonstrate to the French—for it is to them alone that it is addressed—the impossibility of the plenum and the vortices and to introduce them to Newton, who is too little known.”¹¹⁵ She also made it clear that the stakes involved could not have been any higher. “We are currently experiencing a veritable revolution in physics, and consequently one must avow that it has become indispensably necessary for all Frenchmen who are interested in the glory of their nation and who wish the continuation of the gentle and happy government under which we currently live, to concern themselves with

112. *Ibid.*, 534–535.

113. *Ibid.*, 535.

114. *Ibid.*

115. *Ibid.*

it.”¹¹⁶ In a gesture of patriotic appeal, she also noted that France would benefit from such a turn. “We have long worked for the glory of Newton, but the time has come now for us to participate in it. . . . We should blush at being the last to render homage to this great man, which is rather little more than rendering homage to the truth.”¹¹⁷

Voltaire’s project, therefore, “was perhaps the greatest service that one could render to our nation in matters of philosophy.” Du Châtelet further noted the irony that it was “to one of our greatest poets that we owe the obligation of becoming philosophes.” “Yet is there any other way of being [a philosophe] than to abandon error for the truth?”¹¹⁸ This rhetorical question launched her into her own explication of the truths and errors that Voltaire had illuminated. She still had criticisms to offer about Voltaire’s presentation of optics, but the heart of her polemic began when she turned to “the second and most important part of the book.” Here Voltaire “attacked Cartesianism down to its very roots,” and du Châtelet found “nothing more clear, methodical, or forcefully reasoned than what he had to say about the plenum and the vortices.” She further offered her own technical yet abbreviated exposition of why mechanical impulsion could not account for the phenomena of terrestrial *pesanteur*, and explained why Newtonian attraction was the only reasonable theory that could be held.

Continuing her defense, she also emphasized that Newton had judiciously refrained from offering an explanation for gravity since no such explanation was available. She then staked out a more radical position than most when she added that no such explanation would ever be found since the goal of explaining gravity was as quixotic as trying to find a perpetual motion machine.¹¹⁹ She wished that Voltaire had drawn a clearer distinction between gravitation, or the force that exists between all bodies, and attraction, the effect that this force manifests to our senses. In drawing this distinction, she was both demonstrating her own scientific acumen, while improving upon Voltaire’s exposition. Nevertheless, the ultimate thesis of her discussion was clear: Newtonianism was the one and only true philosophy of nature, and those who denied its validity were either ignorant, prejudicial or both. Similarly, Voltaire’s *Eléments*, despite its faults (she likened them to “small stains on a Raphael painting”), offered an accurate and authoritative account of this philosophy.¹²⁰ To criticize Voltaire or his arguments, therefore, was to criticize truth itself.

116. *Ibid.*, 535–536.

117. *Ibid.*, 536.

118. *Ibid.*, 535.

119. *Ibid.*, 540.

120. *Ibid.*, 538.

Published prominently in the official journal of record in France, du Châtelet's letter was a powerful piece of advocacy on Voltaire's behalf. However, as if this was not challenge enough, she also concluded her letter with a direct and public (not to mention subtly protofeminist) challenge to the Royal Academy. "It is surprising given all the savant men in France that not one of them thought of giving to his nation the same service to theirs that Mssrs. 'sGravesande, Musschenbroek, Wolff, Keill, and others have given. It is true that the *mémoires* of our Academy of Sciences provide excellent materials, yet none of the learned men who compose this illustrious body has yet undertaken to construct a building from them." As if to explain this absence, but in no way making this connection explicitly, she then concluded her letter with the following observation: "Few of them have yet to shake off, at least openly, the yoke of Cartesianism, and the respect that they have for the opinions of Descartes works like a remora halting this great vessel in its course."¹²¹

Framed in terms of the nationalist discourse that permeated du Châtelet's letter throughout, this was a provocative charge. It attributed a parochial Cartesian bias to the French Royal Academy at a time when, du Châtelet claimed, a revolution in physics was occurring, one that was revealing the true system of the universe to savants throughout Europe. It also articulated public incredulity about the academy's stated ideology of philosophical neutrality, while drawing a clear institutional borderline between "official and prejudicial Cartesianism" on the one hand and "independent, outsider, and veracious Newtonianism" on the other. As we have seen, the academy was anything but a Cartesian monolith in 1738, but the effect of Voltaire's self-fashioning as a non-academic and nonauthorized defender of Newton in a country that, he and du Châtelet claimed, was prejudicially and institutionally attached to Cartesianism, worked to make this framework the operative one for discussions of his *Eléments*. As the Newton wars unfolded, it was this framework, invented as it may have been, that proved decisive.

Forging the Philosophe Persona: Voltaire's Newtonianism in the Public Sphere

Voltaire and du Châtelet were hosting Maupertuis at Cirey at the time that du Châtelet's letter appeared. The academician's reports about the "Cartesian" enemies of his Newtonian theory regarding the shape of the earth no doubt colored their thinking as they drafted their text. Maupertuis would soon ex-

121. *Ibid.*, 541.

plait this same public perception regarding French academic Cartesianism in ways that will be discussed shortly, but for Voltaire and du Châtelet his sympathy meant that they had the support, at least privately, of a senior French academician as they constructed their self-conception as heroically embattled Newtonian outsiders. As du Châtelet described the psychology in a letter to Maupertuis from early 1738: “We are philosophical heretics. I admire the temerity with which I say ‘we’ here, but the underlings of the army are saying that *we must fight the enemy*.”¹²²

Not that Voltaire or du Châtelet wanted to actually launch a rebellion against the Royal Academy or its science; quite the contrary, the image of the Newtonian army fighting the “enslaved Cartesian Academy” was simply a self-congratulatory trope that united them with those sympathetic to their view. When Réaumur, in the summer of 1738, began arranging for the official academic publication of the essays on fire produced by Voltaire and du Châtelet, the correspondence of the couple became filled with glowing and respectful commentary about the academician despite his well-known Cartesian leanings. The “Cartesian Academy,” therefore, was always a gross, polemical exaggeration, and the image never mirrored either the actual intellectual constitution of the institution or Voltaire and du Châtelet’s real perception of it. It did, however, serve the polemical agendas of the “Newtonian heretics” at Cirey, while also putting academicians into a difficult bind. For the latter, the trick was defending the academy and Cartesianism against the rival claims of the Newtonians in ways that evinced cosmopolitan disinterestedness with respect to the Newton war that was brewing. Voltaire espoused his own commitment to the same values in an important exchange of letters with Dortous de Mairan in August–September 1738.¹²³

Dortous de Mairan initiated the correspondence, offering a set of criticisms of the *Eléments* that stressed the philosophical and scientific inadequacies of the Newtonian system. Voltaire responded in kind and at much greater length, but his defense nevertheless stressed his deep respect for Dortous de Mairan, not to mention his gratitude at the respect shown to his work by the senior academician. Voltaire’s letter was also steeped in the language of gentlemanly *politesse*, even if his goal throughout was nothing less than the conversion of Dortous de Mairan to Newton’s attractionist physics. The academician was unmoved by Voltaire’s arguments, but the exchange reveals the shared bonds of *honnêteté* and sociability that still bound Voltaire to the Cartesians inside the

122. Du Châtelet to Maupertuis, 10 January 1738, in Voltaire, *Corr.*, 88: D1422.

123. Dortous de Mairan to Voltaire, 11 August 1738; and Voltaire to Dortous de Mairan, 11 September 1738, in Voltaire, *Corr.*, 89: D158, D1611.

academy even as he, du Châtelet, and Maupertuis were also beginning to define themselves publicly as the strident opponents of this very group.

The public discussion of the *Eléments de la philosophie de Newton* that erupted soon after its publication further complicated these negotiations. Most striking was how much more crowded, contentious, and attuned to questions of natural philosophy the French public sphere had become, a trend that had noticeably accelerated since the “bomb” of the *Lettres philosophiques* just four years earlier. At least seven different periodicals, including both the *Journal des savants* and the *Journal de Trévoux*, published discussions of Voltaire’s work, and to these were joined three widely noticed critical pamphlets that triggered responses from Voltaire as well.¹²⁴ It would have been hard for a literate French reader to have missed the intense public debate about Newtonianism that was raging by the fall of 1738, and while the impact of this discussion was anything but straightforward, it did work to cement Voltaire’s identity as a Newtonian with a powerful philosophical voice.

But even if the controversy ultimately established Voltaire as the credible Newtonian philosophe he aspired to be, it did so in ways that colored that identity as well. Most important was Voltaire’s inability to ever eradicate the dangers of irreligion, moral subversion, and intellectual dishonor from his Newtonian position despite his intense efforts to achieve this very end. Maupertuis had avoided this pitfall by adopting (at least publicly) a brand of Newtonianism that was safer and more chaste. He also took care not to overly provoke the *honnête* structures of the Royal Academy, or the public that supported this authority. Voltaire had no such reliable foundation, even if he did work hard to construct one for himself. Even when critics indulged in broader and more personal attacks on his character as a Newtonian, Voltaire often responded by restricting himself to the technical, scientific challenges while ignoring the larger polemics embedded in them. He also attempted on more than one occasion to frame the debate as a simple matter of philosophical truth, one to be determined by

124. In addition to the *Journal des savants* and the *Journal de Trévoux*, the other periodicals that devoted reviews to Voltaire’s work were Prévost’s *Le pour et contre*, Desfontaines’ *Observations sur les écrits modernes*; *Bibliothèque française*; *Refléxions sur les ouvrages de littérature* (a Parisian weekly edited by a friend of Desfontaines, l’abbé Granet); and d’Argens’ *Mémoires secrets de la république des lettres*. The pamphlets launched against Voltaire are listed in Walters and Barber, introduction, 81–82, n. 39. Voltaire’s published responses to this critical material, several of which will be discussed shortly, are conveniently collected and reprinted in the Walters and Barber critical edition of the *Eléments* in a section entitled “Rejoinders to Critics,” *Œuvres complètes de Voltaire* (ed. Besterman), 15: 633–762.

calm, unprejudiced reflection by *honnête gens*. In this way, he conveyed a sincere desire to become a famous Newtonian philosophe without becoming an infamous one.

The nature of the French public sphere and Voltaire's place in it, however, fought against such hopes. Consequently, the public Newton wars that he and others fought after 1738 established neither a dispassionate understanding of Newtonianism in France nor a calm consensus regarding Voltaire's relationship to it. The philosophical positions themselves were still treated most often with mockery and scorn in 1738, and thus the benefit of the doubt remained squarely aligned against Voltaire. "What is certain is that the doctrine of Newton is not having much success in Paris," the l'abbé Granet wrote in late 1738 in his *Réflexions sur les ouvrages de littérature*. "All the professors in the university, and among the Jesuits, and everywhere else, reject it out of hand [*hautement*], for they see no distinction between it and ancient Greek philosophy."¹²⁵ Voltaire was disparaged in this context as well, and even if the abbé Le Blanc reported a different reception—claiming that a prior at the Sorbonne had spoken before an audience of bishops and other respectable people in praise of Newton, his new philosophy, and even Voltaire and du Châtelet—Voltaire's was anything but an easy struggle.¹²⁶ Exacerbating such tensions was the questionable nature of Voltaire's authority to even address such questions. His attempt to defend Newtonian attraction, space, and empirical epistemology was very often rebuked not with philosophical rebuttals but through attacks on his character and integrity.

Most benign in this respect was the abbé Prévost, who devoted a section of *Le pour et contre* to a discussion of Voltaire's *Eléments* soon after it appeared. Prévost had earlier criticized Voltaire's attempts at philosophical discourse in the *Lettres philosophiques*, preferring instead the more overtly literary dimensions of the text. In the case of the *Eléments*, however, he was confronted with a text that made no concessions to the literarily inclined. Prévost nevertheless chose not to provoke further antagonism on this point. He instead called the book "estimable" and devoted most of his discussion to the controversies surrounding the two "London" and "Amsterdam" editions of the text, a discussion that supported Voltaire's claim to be a victim of malicious and greedy publishers. At the same time, he avoided altogether the substance of Voltaire's philosophical arguments, insinuating strongly that he was neither equipped nor inclined to comment on such matters. In the end, however, his review sided

125. L'abbé Granet, *Réflexions sur les ouvrages de littérature* (1738): 6: 200–201.

126. Cited in Hélène Monod-Cassidy, *Un voyageur-philosophe au XVIII^e siècle: L'abbé Jean-Bernard Le Blanc* (Cambridge, 1941), 317; and in Walters and Barber, introduction, 92, n. 59.

with Voltaire. He described Voltaire's treatment of Descartes and Malebranche as "measured and well-supported," and he left his readers with a positive impression of the author and his work.¹²⁷

Others did the same, including Father Castel, who devoted two long reviews to the work in the *Journal de Trévoux* in August and September 1738.¹²⁸ "Here is a work," Castel trumpeted in his opening line, "that well justifies our earlier declaration that this is the century of profound science, reliable arts, and useful discoveries, as opposed to the last century that was the century of the fine arts and belles lettres."¹²⁹ Eventually Castel settled into a thorough and celebratory account of the book, but even more important from Voltaire's perspective was how he framed his presentation. Picking up on one of his favorite themes—the exceedingly arcane nature of Newtonian mathematical philosophy—Castel used Voltaire to offer a few jabs at Cartesianism and Newtonianism alike. He noted first how Voltaire's conversion from a poet into a philosophe would have been less stunning had he been able to draw on the "taste for romance" inherent in Cartesian philosophy. Bashing Newtonianism as well, he then noted the difficulty of the Frenchman's project given the "abyss of difficulty" into which Newton forced his students to descend. "Newton measured, calculated, and weighed; he did not use words." This was to his credit, since there is nothing more dangerous and prone to misuse in philosophy than words. Nevertheless, by speaking only through the language of mathematics, Newton unduly restricted access to his truths. Moreover, even though mathematicians all over Europe have "descended into the abyss, pierced its shadows, and deciphered, commented upon, and knowledgably explained Newton," this knowledge was restricted to those who "speak using the signs *a*, *x*, +, −, etc." "Finally, however, M. de Voltaire spoke, and soon Newton was understood, or at least was ready to be."¹³⁰

Castel also offered a positive assessment of Voltaire's reception, writing that "all of Paris is trumpeting Newton, repeating Newton, studying and learning Newton." Accordingly, "there is nothing that is not praiseworthy about M. de Voltaire's effort to make himself into a philosophe, or to make, as much as is possible, the entire universe into Newtonians."¹³¹ Indeed, Castel continued,

127. Review of Voltaire, *Eléments de la philosophie de Newton*, in *Le pour et contre*, 15: 231–240.

128. Review of Voltaire, *Eléments de la philosophie de Newton*, in *Journal de Trévoux* (1738): 1669–1709, 1846–1867.

129. *Ibid.*, 1669.

130. *Ibid.*, 1673–1674.

131. *Ibid.*, 1674.

while many in the public were treating Voltaire's hybrid combination of talents inequitably, such "professional criticisms are always unjust, and always place things in the worst possible light." Such indictments, he suggested, were mostly made by those secretly nervous about their own intellectual inferiority. Castel also placed himself with Voltaire atop an intellectual pedestal above the small-minded savants who saw in the "Voltaire phenomenon" (his phrase) something dangerous and suspect. "To attack these new *Eléments*, one must attack Newton himself," Castel declared, and he further added that such critics "must also be skilled mathematicians and understand Newton themselves in order to be in a position to know what to critique." Those who attacked Voltaire did not possess this understanding, Castel implied, and accordingly they distracted attention from their own intellectual weaknesses by calling Voltaire "a poet who does not understand this great mathematician." "What a miserable spirit of chicanery infects our century and our nation," Castel lamented.¹³²

Castel's motivation in taking this precise, public stance was no doubt complex, but from Voltaire's perspective his statements, disseminated through a widely read organ of public science and sanctioned by the Jesuit order, marked the appearance of a powerful public voice on his behalf. Not surprisingly, Voltaire often made reference to the review in his correspondence, repeating with particular pleasure the Jesuit's claim that criticizing Voltaire meant criticizing Newton, an undertaking that was foolhardy for most. Yet Voltaire also found Castel to be predictably unpredictable. In June 1738, before Castel's review appeared, Voltaire complained to Maupertuis that he had sent Castel some of his optical writings, hoping to start an exchange with what he thought was a sympathetic Newtonian, only to see Castel publish "cruel and insulting" remarks about him in his journal. "I have known ever since that this crazy mathematician is your declared enemy," he wrote.¹³³ He had a different view three months later once Castel's review of the *Eléments* had been published, and overall one should not generalize about Castel's position or that of the Society of Jesus as a whole, since each continued to pursue a complex stance with respect to the unfolding Newton wars of the period.

Other Jesuits, for example, adopted different stances with respect to Voltaire, and one who was specially critical was Father Noël Regnault, the author of the *mondain* dialogues that did so much to fuse Jesuit empirical naturalism with literary *bel esprit* in France. Regnault published a pamphlet in the fall of 1738 entitled *Letter of a Physicist on the Philosophy of Newton* that addressed

132. *Ibid.*, 1675.

133. Voltaire to Maupertuis, June 15, 1738, in Voltaire, *Corr.* 89: D1519.

Voltaire's *Eléments* directly.¹³⁴ In it, he found Voltaire's philosophy and his manner of philosophical discourse equally suspect. He also exposed what he saw as the irreligious implications of the Newtonian theory of attraction and space. These same arguments were also echoed in another pamphlet published at roughly the same time by the abbé Machi.¹³⁵ Each of these critiques reinforced the then commonplace associations between Newtonian physics and either Spinozist, deist, or Epicurean materialism (the precise label did not really matter since all exerted the same charge). Moreover, since they did so while also rebuking Voltaire's "arrogance" in assuming to speak as philosopher, along with his blithe avoidance of these "obvious" philosophical problems, they also worked to impugn his character by associating his Newtonian convictions with his general proclivity for libertinism, immorality, and irreligion. Others with a less obvious religious or political agenda reinforced these associations in other ways.

Most difficult, perhaps, for Voltaire to deal with were those members of the public who shared Voltaire's intellectual agendas, including his commitment to liberty, but who nevertheless created problems for him by emphasizing these associations in ways that hindered his equally strong desire to become an authoritative and respected scientific thinker. Voltaire's decision to produce a prose work in the plain style of English experimental philosophy was intended to encourage *honnête* agreement about a complex philosophical problem, one grounded in the clear evidence of nature and the disinterested logic of empirical reasoning. Many accepted this overture and attempted to engage with it on its own terms, be it critically or not. Others, however, playing upon Voltaire's other recognized identity as a libertine poet, freethinker, and *esprit fort*, either rejected his prolix empiricism or found in it the fuel for further criticism. For some, Voltaire had simply taken a wrong turn in abandoning poetry for philosophy. "Leave it to Clairaut to trace the lines of the light rays that hit our eyes," wrote a certain M. de Clément in a poem that he addressed to Voltaire and published in *Nouveaux amusements du coeur et de l'esprit*. "You, of a more amiable delirium, listen to the lessons of another Muse. . . . Let go of the compass and pick up the lyre! I would give up every Pemberton and all the calculations of Newton for one sentiment of *Zaire*."¹³⁶

134. Regnault, *Lettre d'un physicien sur la philosophie de Newton* (n.p., 1738).

135. L'abbé Machi, *Réflexions sur la philosophie de Newton, mise à la portée de tout le monde* (n.p., 1738).

136. M. de Clément, poem, in *Nouveaux amusements du coeur et de l'esprit* 5 (1737–1745): 192–193.

Others found in Voltaire's Newtonianism a different articulation of the libertinism that defined his character. Most illustrative in this respect was the appearance of a set of poetic works that connected Newtonian attraction, libertinism, and materialism in ways that echoed Voltaire's non-Newtonian libertine poetry. One such work was entitled "Letter from a Lady Philosopher to One of Her Friends." It appeared in both *Nouveaux amusements du coeur et de l'esprit* and in Desfontaines' *Observations sur les écrits modernes* during the intense, post-1738 period of the Newton wars.¹³⁷ Through its conceit of a learned lady (du Châtelet was of course implied) responding to the philosophical inquiries of a lady friend, it articulated the libertine interpretation of Newtonianism while playing with the erotic and irreligious implications of this materialist conception of nature. Opening with a prose discourse that framed the letter as a response to those who attacked Newtonian attraction and space, the work then shifted into verse, offering a poetic celebration of Newtonian philosophy. "This attraction inherent in nature, to which the universe owes its structure," forms bodies through its "force" and then "unites them by making them friends." The whole is thus formed through a "joyful embrace of all of its parts." Beings find their wholeness in the same way, for this "contributes to the well-being [*bonheur*] of the assorted souls." "But from where does this complexity arise," the verses continued? "One need only recognize the universe for what it is: an animal animated by this general attraction." This was the pure language of Spinozist materialism, and further echoing it the poet ended by describing "this interior charm, this gentle instinct" as "the soul that constitutes its principle attribute."¹³⁸

Other poetic works of the period published in similarly *mondain* venues echoed this same understanding. In Robbe de Beauvest's ode "La Newtonique," published in *Nouveaux amusements du coeur et de l'esprit*, one read that Newton had "unveiled the archetype by which the world was formed." "I see by your fecund principle [universal gravitation] the entire universe animated. You force error into silence, . . . and I see repaired the disasters of the plenum that from error was adopted. The living light of the planets now passes to us in liberty, . . . and from the *Eléments* of Descartes you discover the fiction."¹³⁹ In

137. "Lettre d'une dame philosophe à une des ses amies," *Nouveaux amusements du coeur et de l'esprit* 6 (n.d.): 261–263 and in *Observations sur les écrits modernes* 19 (n.d.): 46–48. My citations will be to the latter version.

138. "Lettre d'une dame philosophe à une des ses amies," 47–48.

139. Robbe de Beauvest, "La Newtonique," *Nouveaux amusements du coeur et de l'esprit* 6 (n.d.): 284–286.

his letter to Dortous de Mairan, Voltaire had also likened the world to a great watch, suggesting that attraction, not impulsion, was the spring that animated the entire universe. "It's the great agent of nature," he wrote, "and an agent absolutely unknown until Newton came along. He discovered the existence of this agent, calculated its effects, and used it to illuminate elasticity, electricity, etc."¹⁴⁰ These were strong assertions about the validity and metaphysical universality of the principle of universal gravitation, and they were repeated publicly in the *Eléments* and Voltaire's other public pronouncements. However, articulated as they were in the idioms of judicious philosophy, and couched always within a discourse of skeptical empiricism and philosophical modesty, Voltaire's own statements about gravity carefully guarded against the explicit discourses of Newtonian materialism. This poetry, by contrast, spoke that language directly, and to the extent that Voltaire's own poetry, especially his libertine poems such as *La Pucelle* and *Le Mondain*, resonated with it as well, it fought against the philosophical redefinition that he was attempting.

The suspect nature of Voltaire's liaison with Emilie du Châtelet, already a source of titillating gossip thanks to Desfontaines' unauthorized publication of Voltaire's *Épître à M. Algarotti*, with its insinuations about du Châtelet's sexual indiscretions, only heightened this aura of scandal. Sexual libertinism and gender inversion were also strongly allied with the perceived immorality of materialist philosophy, and this made the erotic insinuations of the "Letter from a Lady Philosopher" all the more shocking. Overall, the poem emphasized rather than softened the erotic dimension of the materialism it articulated, even going so far as to suggest a connection between Newtonian attraction and erotic desire. "Oh yes, everything cedes to attraction, that charming passion!" the poet exclaimed. "It is constant and mutual," and "love, although always desperate and unfaithful, also bears a relationship to it." Consider the magnet, the poet wrote, using a pun that linked the French word for magnets [*aimants*] with the word for lovers [*amans*]. "Two *amans* at twice the distance desire each other four times less," the poet sang, and this law held for both magnets and love since "proximity gives [love] its greatest strength while separation weakens its power."¹⁴¹ The verses also emphasized the gender politics that was just as crucial to this libertine sexuality by issuing a call to women [*les belles*] to take up the defense of Newtonianism. "Newton, who the sages admire, is being attacked out of envy." It was up to women, therefore, to "avenge this injury! He has nature, calculation, and reason on his side, but rather than

140. Voltaire to Dortous de Mairan, 11 September 1738, in Voltaire, *Corr.*, 89: D1611.

141. "Lettre d'une dame philosophe à une des ses amies," 48.

searching for other weapons, he only needs your charms for attraction to be proven.”¹⁴²

Voltaire was certainly not averse to indulging in erotic play such as this in his correspondence and poetry, but when speaking about Newtonianism, either publicly or privately, he avoided it altogether. His desire to be taken seriously as an *honnête* philosophical thinker rather than as a libertine poet and *esprit fort* was, therefore, sincere. Yet the associations, be they accidental or intended, between his philosophical convictions and his other, more scandalous libertine writings nevertheless fought against his ambitions. Also problematic was the bias of those who found literary *bel esprit* of this sort far more estimable and worthy of Voltaire’s attention than knotty and contentious questions of physics and metaphysics. French elites in this period very often esteemed style, artistic grace, and *bon goût* more than scientific acumen or philosophical learning. Writing to Voltaire’s loyal patron, the Duc de Richelieu, du Châtelet found herself confronting this prejudice as she tried to explain why Voltaire’s *Eléments* was a superior work to Algarotti’s *Newtonianism for Ladies*. “Algarotti’s dialogues are full of wit [*esprit*] and learning,” she wrote, “but I must avow that I do not like this style in matters of philosophy. For I find the love of a lover decreasing in inverse relation to the square of the time and the cube of the distance a little hard to digest.”¹⁴³ Voltaire would express a similar sentiment when he called Algarotti’s text “a book perfectly suited to Cirey.” Yet statements such as these did not change the minds of those, like Président Bouhier, who belittled the public fame that Voltaire had attracted with his *Eléments* while claiming that “connoisseurs” like himself found Algarotti’s text “infinitely more worthy.”¹⁴⁴

Aesthetic preferences such as these fought directly against Voltaire’s transformation into a new kind of philosophe, and further thwarting these ambitions were those who used many of these same arguments to challenge Voltaire personally, either for reasons of sincere intellectual opposition or, more destructively, because of personal rivalry and animosity. Most influential in this latter respect was Desfontaines, whose long-brewing rivalry with Voltaire reached a public crescendo during the debates over Newtonianism. Relations were not

142. Ibid. In this spirit as well is *Épître Newtonienne sur le genre de al philosophie propre à rendre heureux. A Madame ****, in *Nouveaux amusemens du coeur et de l’esprit*, 9: 415–425.

143. Du Châtelet to duc de Richelieu, 17 February (or August?) 1738, in Voltaire, *Corr.*, 89: D1591.

144. Jean Bouhier, *Correspondance littéraire*, ed. Henri Duranton (Saint-Etienne, 1974–1988), 2: 185–186, cited in Walters and Barber, introduction, 94.

always bitter between the two men of letters.¹⁴⁵ In 1725, when Desfontaines was imprisoned for alleged sexual improprieties, Voltaire used his connections to help secure his release. The two men also exchanged cordial letters at times, trading manuscripts and discussing literary news. However, as Desfontaines increasingly devoted himself to journalism, and as he began, therefore, to develop what was fast becoming the journalistic norm of the day—a sharp, critical tone in his published writing—a bitterness began to grow between the two men. Voltaire also expressed a sense of betrayal when Desfontaines, driven by his journalistic need to find content, published works without his consent that Voltaire deemed inappropriate for public circulation.

At one level, their sparring was an unsurprising illustration of the critical jousting that all men of letters engaged in within the Parisian wing of the Republic of Letters. However, since critical, literary squabbles of this sort were anathema to anyone who aspired to be an *honnête* philosophe, Voltaire's ambitions with respect to the latter were perpetually challenged by his susceptibility to fall into the former. Privately, Voltaire also made clear his disdain for Desfontaines' intellect and character. He accused him of dealing in "invective," and called his journalism "miserable and malicious."¹⁴⁶ Personally, he found Desfontaines "an ignorant pedant who was incapable of writing, thinking, or understanding me."¹⁴⁷ "Monster" was an adjective that was further employed, as was the label "enemy."¹⁴⁸ Desfontaines was described on another occasion as "a malcontent who wants to violate all the little boys and outrage all the reasonable people," a direct reference to the sexual scandals that had placed Desfontaines in prison.¹⁴⁹ On still other occasions, he assumed bestial form in Voltaire's mind as he was called "a rabid cur that bites his master"; "a dog chased by the public who only returns to lick or bite it;"¹⁵⁰ and a bestial loner who "lives alone like a lizard."¹⁵¹ On one particularly bilious occasion, Voltaire "repented" his

145. M. H. Waddicor offers a thorough accounting of the long history of the Voltaire-Desfontaines relationship in the introduction to W. H. Waddicor, ed., *La Voltairomanie. Édition critique* (Exeter, 1983), vi–lviii.

146. Voltaire to Thieriot, 30 June 1731, in Voltaire, *Corr.*, 86: D417.

147. Voltaire to Thieriot, 24 September 1735, in Voltaire, *Corr.*, 87: 918.

148. Voltaire to Cideville, 25 March 1736, in Voltaire, *Corr.*, 87: D1044; Voltaire to Berger, 27 November 1736, in Voltaire, *Corr.*, 88: D1208. See also Voltaire to d'Argens, 20 December 1736, in Voltaire, *Corr.*, 87: D1228, where he pairs up Desfontaines with Rousseau as his "enemies."

149. Voltaire to l'abbé d'Olivet, 4 October 1735, in Voltaire, *Corr.*, 87: D923.

150. Voltaire to Berger, 2 February 1736, in Voltaire, *Corr.*, 87: D1000; Voltaire to Gilles Thomas Asselin, 3 March 1736, in Voltaire, *Corr.*, 87: D1028.

151. Voltaire to Thieriot, 18 November 1736, in Voltaire, *Corr.*, 88: D1202.

decision to rescue Desfontaines from the Bastille, writing that “it is better, all things being equal, to burn a priest than to bore the public, and if I had left him cooking I would have saved the public much foolishness [*sottises*].”¹⁵²

Overall, Voltaire showed little restraint when impugning Desfontaines’ character, at least in his private correspondence. Much of this vitriol can be attributed to the deep, personal disaffection that erupted between the two men after 1735, but more substantively it was also a product of the different relationship that each man held to the new critical journalism of the eighteenth century. Desfontaines had transformed himself after 1730 into a major public voice in French letters through his pursuit of critical journalism. Voltaire, by contrast, was attempting to assert an identity that made journalists potential allies to the extent that they supported him, or bitter enemies if they did not. Accordingly, as Desfontaines increasingly made Voltaire the subject of his otherwise commonplace critical, journalistic commentary, he found himself increasingly labeled a “malcontent,” a “monster,” and an “enemy” by Voltaire.

The fledgling philosophe was not so consumed in these personal struggles not to see and appreciate the wider forces that were driving them. In a letter to Cideville from September 1735, Voltaire labeled as “the autumn of good taste” the general trend that had “inundated the land of literature with pamphlets and newsheets. “*Le pour et contre* is more insipid than ever,” he complained, “and the *Observations* of abbé Desfontaines are a set of outrages that he issues once a week against reason, equity, erudition, and taste. It is impossible to adopt a more fulsome tone and to understand things less.” “In one, this poor student of English goes so far as to call an English work in support of religion an atheistic tract,” he wrote. “There is nothing in these sheets but a mess of errors.”¹⁵³ These last descriptions were directed at Desfontaines rather than Prévost, and even if Voltaire tended to generically treat all critical journalists as enemies of *honnête* discourse, he also used these two examples to construct a framework for judging good from bad journalism. Invoking Prévost, who increasingly became for him the figure of the “good journalist,” Voltaire wrote that “I am as grateful to [him] for his criticisms as for his praise. . . . However, to criticize with finesse and without inflicting wounds, one must have an exceedingly delicate and polite spirit. I may not agree with him on many things, but my esteem for him has been redoubled by the same things that render ordinary authors irreconcilable.”¹⁵⁴

152. Voltaire to Cideville, 20 September 1735, in Voltaire, *Corr.*, 87: D915.

153. *Ibid.*

154. Voltaire to Thieriot, 20 March 1736, in Voltaire, *Corr.*, 87: D1040.

Voltaire made it clear that Desfontaines did not measure up to Prévost in this respect: he had neither talent nor *esprit*, and his morals were anything but *honnête*. Consequently, he became the personification of all that was destructive and distasteful in contemporary letters. Since Prévost's journalism was typically far less critical of Voltaire than Desfontaines', it is easy to dismiss all this criticism as petty sour grapes. Yet in his letters, Voltaire did offer a cogent framework that defined good and bad journalism in ways that reinforced his larger conception of himself as an *honnête philosophe*. "When one attacks my work, I have nothing to say. It is up to them to defend themselves either well or poorly. However, when my person, my honor, and my morals are publicly attacked in twenty libels that have inundated France and abroad, one must oppose these calumnies with facts, and impose a silence on lies."¹⁵⁵ If Prévost was a superior journalist to Desfontaines, therefore, it was because he had both the learning and intellect to judge things properly, and the right manners and character to know the difference between *honnête* criticism and petty, destructive slander. Voltaire echoed this preoccupation with *honnêteté* in the same letter, writing of Prévost that "I do not know if he has said of me, or felt compelled to say, that I am an *honnête homme*, but I know that I owe it to say it about him."¹⁵⁶ Given this shared bond in morals and manners, Voltaire also found *Le pour et contre* to be a reputable public organ, while those of Desfontaines, Rousseau, and his other enemies were described as little more than dishonorable rags.

There was certainly an instability in this dichotomy since there was a tendency toward criticism and controversy inherent in the literary journalism that each of these men practiced. Accordingly, so long as Voltaire was dependent on the public sphere to authorize his status as an *honnête homme*, he could never fully trust journalism or journalists. As he wrote to Thieriot in February 1736, "If I was certain that *Le pour et contre* would speak as strongly as is necessary, I would stay silent, for my cause would be better handled by it than by me. But how can this certainty be found?"¹⁵⁷ Voltaire had few other resources to turn to, and thus with no small amount of frustration he began to engage publicly with the critics and journalists that were shaping perceptions of his Newtonianism in the French public sphere.

Desfontaines was at first quiet on the topic, but the appearance of the Jesuit Regnault's pamphlet and the equally religious work of the abbé Machi triggered Voltaire's response. In August he published a letter (perhaps not sur-

155. Voltaire to Thieriot, 26 February 1736, in Voltaire, *Corr.*, 87: D1023.

156. *Ibid.*

157. *Ibid.*

prisingly) in Prévost's *Le pour et contre* that responded to these criticisms.¹⁵⁸ Offering himself as a reader of Prévost's journal who wanted to clarify certain aspects of its previously published review of the *Eléments*, Voltaire began by issuing the usual instructions about which edition was correct, where to find the necessary *eclaircissements*, and how to read the text appropriately. He then used an example about the misunderstandings that arise from typographical errors such as these to launch into his real project, an attack on Regnault's pamphlet and a defense of his own work. "I would very much like to know," Voltaire wrote, "how a man who calls himself a *physicien*, and who is writing, he says, about the philosophy of Newton, can begin by saying that I apologized for the murder of Charles I? What relationship, if I may ask, exists between the tragic and unjust demise of this monarch and refraction and the square of the distances?"¹⁵⁹ The answer, Voltaire explained, was found in the erroneous Amsterdam edition of the *Eléments* that contained a work on this execution as an unauthorized addendum. Voltaire believed that this text, which he did not write, had no relationship whatsoever to Newtonian philosophy, and he further mocked the reading skills of his Jesuit critic by noting that the text in question condemned rather than defended this execution. "It is with the same sense of justice that this author critiques me instead of my work throughout," he concluded.¹⁶⁰

Especially frustrating to Voltaire was Regnault's tone in deriding Voltaire's views and integrity as a thinker while avoiding altogether the substance of his arguments. He quoted Regnault's retort that "it would be useless to offer a commentary about such a major mistake" since "everyone can see it and it would be too humiliating for M. Voltaire." "It would be curious to see what considerable mistake I should find so humiliating," Voltaire replied, going on to condemn in general "the injustice of such precipitous criticism." "An insult is not an argument," Voltaire reminded his readers, and his letter honored this principle by defending his own positions in detailed terms.¹⁶¹ Regnault had used his pamphlet to defend the rival Cartesian understanding of light, but to these arguments Voltaire responded "if one were to make more reasonable objections against me, then I would respond to them, either in correcting myself or in demanding greater clarification, since I have no other goal than the truth."

158. Voltaire, "Letter concerning the *Eléments de la philosophie de Newton*, in *Le pour et contre*, 15: 337–349; reprinted in *Œuvres complètes de Voltaire* (ed. Besterman), 15: 677–686. My citations will draw from the latter edition.

159. Voltaire, "Letter concerning the *Eléments de la philosophie de Newton*," 15: 682.

160. *Ibid.*

161. *Ibid.*, 15: 683.

Instead, since Regnault's counter-arguments were specious at best, he instead constructed a further defense of his own position.¹⁶²

Central to Voltaire's presentation was a brief in support of the concept of gravitational attraction. He believed rightly that this idea was "causing the greatest upset among his compatriots," and draping himself first in robes of academic legitimacy, he invoked Maupertuis' authority to ease the anxieties of his public. "I repeat again that one need only read the dissertation on the figures of planets by [this] illustrious [academician] to see if one has a better idea of the impulsion we are supposed to accept or the attraction that we must combat." He then demonstrated his own scientific mettle by inviting "mathematical physicists [*physiciens géomètres*]" to consider the quantitative measurements of falling bodies and pendulum motions according to the vortical system. "All the mathematical contradictions that emerge seem to annihilate the vortices while agreeing with the other, more doubtful hypothesis." "Where is the great difficulty, then, in saying that God gave gravitation to matter in the same way that he gave it inertia, mobility, and impenetrability?" This opened up the theological dimension of Newtonian physics that both Regnault and Machi found heterodox and dangerous. Voltaire responded by defending his own conception of Newtonian theology openly. "I believe that the more one reflects on the matter, the more one is led to believe that *pesanteur* is, like movement, an attribute solely given to matter by God." Voltaire noted rightly that Newton never argued this forcefully for gravity as an inherent property of matter. He stressed, therefore, that this was his own extrapolation from the physics of his master. Radical English deists like John Toland had further turned this position into a foundation for radical materialism, yet here Voltaire drew a line between his views and those of the radical Newtonians. He did so by positioning himself and his scientific views not within the discourses of radical libertinism and free thought but instead within the sober and *honnête* discourses of judicious, skeptical empiricism.¹⁶³

Prévost reinforced Voltaire's stance by praising his text in an addendum to the letter in *Le pour et contre*. "This letter merits being published someday as a supplement to the *Eléments of Newton*." For "not only does it justify the author against the accusations of an anonymous *physicien*, it also shows his *politesse* and moderation."¹⁶⁴ The combination of scientific correctness, philosophical authority, and sociable manners described by Prévost was precisely what Voltaire was attempting to assert with his Newtonian campaigns, and other

162. Ibid.

163. Ibid., 15: 685–686.

164. Ibid., 15: 678.

journalists further reinforced Voltaire's efforts in this respect. Castel, for example, disagreed with Voltaire that the Cartesian plenum was more atheistic and Spinozistic than Newtonian space, but he nevertheless praised him for speaking "with decency about God and his attributes."¹⁶⁵ Yet while journalists such as Prévost and Castel helped Voltaire to achieve his ambitions as an *honnête philosophe*, others worked to thwart them. Desfontaines was a case in point, and in the wake of the public debate over Voltaire's *Eléments*, the long-brewing rivalry between the two men erupted into a full-blown public war.

If one is to believe Voltaire's correspondence, his disgust with Desfontaines combined with his distaste for critical journalism overall led him to stop reading *Observations sur les écrits modernes* soon after the journal began appearing in March 1735. Desfontaines' treatment of Voltaire's tragedy *The Death of Caesar* was the precise excuse, but overall, Voltaire suggested, these "biweekly impertinences" no longer interested him. He would cease to read them, therefore, until the author showed more "probity toward the public" and stopped filling his pages with "satire and calumny."¹⁶⁶ Whether he in fact ignored the journal is not clear, but in March 1738, on the eve of the publication of his *Eléments*, he wrote to Thieriot from Cirey asking if "that monster Desfontaines continues to deliver his weekly rags [*malsemaines*]?"¹⁶⁷ In May, he wrote to Maupertuis expressing "neither surprise nor anger" that Desfontaines was trying to ridicule attraction, noting that "a man who is so little a physicist and who is so corrupted by the sin of antiphysics will always sin against nature."¹⁶⁸ This was an indication that Voltaire had been alerted to Desfontaines' views about Newtonianism, yet his exposure might very well have come through word of mouth or letters. Evidence that he had not yet read the journal himself was offered in June when he wrote to Prault, his bookseller in Paris, asking that he be sent a number of books at Cirey, including the "sheets by that miserable Desfontaines."¹⁶⁹

Assuming that Prault complied, what did Voltaire find when he read the *Observations* in July 1738? It is hard to know which issues Voltaire received exactly, but in the preceding months Desfontaines had discussed a number of works that addressed Newtonianism either directly or indirectly. Among those that treated it directly was a work by two Minim friars from Rome, Fathers Thomas le Seur and François Jacquier. Desfontaines reviewed their jointly au-

165. Review of Voltaire, *Eléments de la philosophie de Newton*, in *Journal de Trévoux* (1738): 1677.

166. Voltaire to Thieriot, 24 September 1735, in Voltaire, *Corr.*, 87: D918.

167. Voltaire to Thieriot, 8 March 1738, in Voltaire, *Corr.*, 89: D1469.

168. Voltaire to Maupertuis, 22 May 1738, in Voltaire, *Corr.*, 89: D1508.

169. Voltaire to Prault, 28 June 1738, in Voltaire, *Corr.*, 89: D1535.

thored commentary on Newton's *Principia* in March.¹⁷⁰ Describing the plan of the book, he wrote that "many commentaries on Newton exist, but no one has yet tried to follow and clarify Newton's work in the *Principia* proposition by proposition." This is what these friars attempted, and Desfontaines praised the initiative, calling the result "the definitive edition of Newton's text."¹⁷¹ Neither the authors nor their reviewer offered any judgment of the arguments themselves short of noting that much of the confusion surrounding Newton's thought derived from the mathematical difficulty of his text. Accordingly, this book was welcome, Desfontaines suggested, as corrective to many misunderstandings even if it offered nothing by way of argument either for or against Newton.

Desfontaines, however, did launch an indirect bomb by appealing for another philosophical commentary that would bring similar clarity to the work of a different philosopher. "The zeal that I have for the glory of the nation makes me wish on this occasion that some able philosopher would also work to illustrate, extend, and perfect the ideas of our great Descartes. We have become passionate about a foreign philosophe while we are today indifferent about our own." The work of Privat de Molières, he added, had begun to alleviate this shortcoming, and he ended his review by praising it glowingly. "*Les leçons de physiques* is a work of admirable profundity and judiciousness, and it does not allow us to put Descartes below Newton."¹⁷²

Overall, Desfontaines was an ardent Cartesian of this sort, one who was quick to launch dismissive attacks against Newtonianism. This most likely made a clash with Voltaire inevitable, but matters came to a head when Voltaire's name was attached directly to the anonymously published *Epistles on Happiness*, a work that included an epistle entitled "On Liberty." In it, the author called the Cartesian vortices "learned chimeras" that "hardly anyone still accepts." He also defended human liberty in ways that echoed a debt to the discourse of the English deists.¹⁷³ This prompted Desfontaines to take up the patriotic mantle of Cartesianism and challenge Voltaire's reckless defense of the errors of Newtonianism directly.

"Is it appropriate to show such little respect for the greatest man that philosophy has ever had?" Desfontaines asked in opening. Conceding to at least

170. Thomas Le Seur and François Jacquier, *Philosophiae naturalis principia mathematica. Auctore Issaco Newtono*, 3 vols. (Geneva, 1739–1742).

171. Review of Le Seur and Jacquier, *Philosophiae naturalis*, in *Observations sur les écrits modernes* 12 (n.d.): 229.

172. *Ibid.*, 234.

173. [Voltaire], *Épîtres sur le bonheur* (Paris, 1738). For a review, which names Voltaire as the author, see *Nouveaux amusemens du coeur et de l'esprit*, 2: 227–262.

one part of Voltaire's position, he admitted that Newton offered a better explanation of light than his French rival. "But his philosophy in general offers nothing comparable to that of the French philosopher." "[Newton's] opinions on the essence of matter, space, the void, and especially attraction are the real chimeras," he continued later, "borrowed from the ancient and erroneous philosophy of the Greeks." He further promised to show this in full when "he had the occasion to review the *Eléments de la philosophie de Newton, mis à la portée de tout le monde* by M. de Voltaire."¹⁷⁴ This review actually appeared several months later, but in the issue of June 5 he offered a précis of what that discussion would contain. In this review, "we will make it known that Descartes was right to submit all of nature's effects to mechanism while Newton, following another method, wanted to return us to the gibberish [*galimathias*] of the occult qualities." We will also see "that the physics of Descartes is unique and that all the others are irrational [*insensée*]." Desfontaines also asserted that "Newton's arguments, however much he was the greatest experimental physicist, serve only to prove our ignorance." "One can never reach conclusions that contradict the great demonstrated system of the mechanism of nature. It must never be swept away, as we will soon put *à la portée de tout le monde* (at the level of everyone)."¹⁷⁵

The promised review did not appear right way, however. Instead, Desfontaines devoted several long reviews to a discussion of Privat de Molières' *Les leçons de physiques*, framing it as the reasonable, Cartesian alternative to Voltaire's "absurd" *Eléments de Newton*.¹⁷⁶ Also indicative of his precise positioning was his review of two other Newtonian texts of the period. In late July he discussed Maupertuis' book on the shape of the earth, a work that defended the Newtonian position of the flattened, grapefruit-shaped earth through evidence drawn from empirical, geodesic surveys. Since the book also narrated the heroic adventures of the great Lapland expedition, Desfontaines focused his attentions here, noting how a "strong desire to be useful to the country" motivated the expedition and the courage of the participants. "What perils! What bravery! What determination! Nothing is more worthy of admiration," he enthused.¹⁷⁷

174. Review of Voltaire, *Épîtres sur le bonheur*, in *Observations sur les écrits modernes* 13 (n.d.): 232–233.

175. *Ibid.*, 233–234.

176. Review of Privat de Molières, *Les leçons de physiques*, in *Observations sur les écrits modernes* 13 (n.d.): 305.

177. Review of Maupertuis, *La figure de la terre déterminée par les observations*, in *Observations sur les écrits modernes* 14 (n.d.): 149.

Desfontaines also offered a matter-of-fact account of the pendulum experiments and empirical demonstrations that gave credence to Newton's theory of universal attraction. In doing so, he in no way inflamed Maupertuis' highly judicious and empirical account of this work or the conclusions he drew from it. Nor did he attempt to drag Maupertuis into his emerging critique of Newtonians such as Voltaire.¹⁷⁸ He did the same with his review of Algarotti that appeared in late August. He celebrated his *Newtonianism for Ladies* as a wonderfully accessible introduction to Newton's philosophy while distancing the author from any defense of the chimeras of Newtonian attraction. As discussed above, Desfontaines did use the review to continue his increasingly vociferous diatribes against the Newtonian theory of gravity, space, and physical action, but he did so in such a way as to divorce Algarotti the *honnête* writer and *bel esprit* from any direct connection to these views.¹⁷⁹

With Voltaire, by contrast, his Newtonianism and his person were consubstantial. Moreover, since Voltaire likewise equated Desfontaines' malicious intellectual views with his deficiencies of character, responding to the first inevitably involved impugning the second. Frustrated, therefore, by what he perceived to be a sustained and orchestrated assault on his character launched via a journalistic attack on his Newtonian philosophical convictions, Voltaire arranged for the printing and circulation of a libelous pamphlet entitled *Le préservatif* sometime around the end of October 1738.¹⁸⁰ The anonymous work took the form of a set of numbered critiques that dissected with sarcastic wit Desfontaines' erroneous and vindictive journalism. The critical language by itself was not that libelous, for very often Voltaire simply exposed Desfontaines' errors while unfavorably comparing his work overall with the "objective, accurate, scientific, tasteful, and judicious" journalists of such respected organs as the *Journal des savants*.¹⁸¹ Nevertheless, the work as a whole amounted to a scathing attack on Desfontaines' character, and it triggered a controversy with important consequences.

Voltaire's prime mode of attack was to demonstrate his enemy's mistakes while chiding him for the arrogance of criticizing that which he did not understand. Natural philosophy, therefore, figured centrally in the pamphlet, and

178. *Ibid.*, 149–163.

179. Review of Algarotti, *Il newtonianismo per le dame*, in *Observations sur les écrits modernes* 14 (n.d.): 217–229.

180. Voltaire, *Le préservatif, ou Critique des Observations sur les écrits modernes* (La Haye, 1738). A copy of the text is found in *Oeuvres complètes de Voltaire* (ed. Beuchot), 22: 371–389. My citations will be to this edition.

181. Voltaire, *Le préservatif*, 22: 371–372.

while Voltaire's tone was sarcastic throughout, the content of his arguments was substantive. A representative illustration was Voltaire's citation of Desfontaines' claim that "the English flatter the void" and "attribute marvelous properties to this Nothing." "Where does Newton 'flatter' the void?" he asked. Newton never attributed marvelous properties to the void, but he rather demonstrated that bodies act at great distances in a nonresisting medium. "One should at least learn about the topic before insulting the great men whose books one has never read, nor never could have read," he complained.¹⁸² Many of the other arguments Voltaire offered were equally substantive, and consequently the pamphlet worked at one level as a defense of his own views and a challenge to those of his critics. Desfontaines, for example, had championed Privat de Molières' *Leçons de physiques*, as the sane, Cartesian alternative to Voltaire's *Eléments*. Accordingly Voltaire made a point of showing the erroneous nature of the science it defended. He cited Privat de Molières' account of falling bodies on earth and the alleged agreement between it and Newton's account. He then demonstrated its quantitative errors and its disagreement with the real theory of Newton.¹⁸³ Similarly, Voltaire mocked Desfontaines' claim that Dortous de Mairan had "imitated the system of Newton with respect to light." "One must teach him that Newton never made any system regarding light," he chastised, "but rather gave a direct, step-by-step account of experiments and mathematical demonstrations. To speak of these discoveries as a system is like calling Euclid's geometry a system."¹⁸⁴

In each of these criticisms, Voltaire was drawing upon and exploiting the philosophical and scientific differences that separated Newtonians and Cartesians in France. He was also doing so in a substantive way that positioned his own views with those held by authoritative Newtonian philosophers. However, since the pamphlet as a whole framed these challenges within the idioms of libel, they acquired a critical coloring that had nothing to do with the philosophical pronouncements themselves. The title of Voltaire's pamphlet, *Le préservatif*, set the tone, since this word carried two meanings in French, "preservative" and "condom." Throughout the text, Voltaire also emphasized the sexual scandals that impugned Desfontaines' character in the public mind, while connecting his alleged depravity to his intellectual and critical character. Defending the progress of the arts and sciences against critics like Desfontaines who saw them in decline, Voltaire called this perspective typical of a social and intellectual misfit. "The sciences are better than ever," he wrote. "Just consider the

182. *Ibid.*, 22: 375–376.

183. *Ibid.*, 22: 374.

184. *Ibid.*, 22: 383.

work of the polar expedition” and the accolades awarded to “our best authors,” “men such as Réaumur and Voltaire” (the pamphlet, it should be remembered, was published anonymously). If Desfontaines could not see this, it was because he had the “merits of a satyr” and was “despised by the public.”¹⁸⁵

Especially provocative was the “malicious engraving” (Madame de Graffigny’s label) that Voltaire commissioned as the frontispiece of his work.¹⁸⁶ The libelous image offered an allegorical depiction of Desfontaines’ flagellation at the Bicêtre prison. In it, a prostrate Desfontaines, dressed in clerical robes, exposes his naked buttocks to a man with a whip, while a naked female figure, perhaps personifying wisdom, knowledge, or reason, hides her eyes while hovering on a cloud above. A set of venomous rhyming couplets underneath the image explained the action. “Formerly a curate, formerly a Jesuit, and everywhere known and hunted,” Desfontaines, the verses explained, has become a “parasitical author, and the public has grown weary of him. To repair the past, he became a sodomite,” but “at Bicêtre he was well spanked.” For in this act “God offered recompense for his merit.”¹⁸⁷

Whatever serious philosophical disputation Voltaire had hoped to achieve with the pamphlet was subverted by the licentious invective offered in the image and the text. For his part, Desfontaines only exacerbated this outcome by responding in kind to Voltaire’s attack. In December, he began to circulate his own libelous pamphlet called *La Voltairomanie* that sold thousands of copies within two months.¹⁸⁸ Desfontaines’ work was even more venomous than Voltaire’s, using phrases like “angry dog” and “proud fool” and adjectives such as “crazy,” “impious,” “reckless,” “brutal,” “impetuous,” “libelous,” “enraged,” and “shameful baseness” to describe Voltaire and his discourse. Moreover, rather than trying to defend himself against any of Voltaire’s accusations, he simply expanded the list of Voltaire’s errors, while heightening the ad hominem rhetoric attached to his critique. Readers of these pamphlets, therefore, would have been treated to a raucous and sometimes witty brawl, but they would have been hard pressed to find any clear and consistent philosophical positions.

The wider dispute triggered by these pamphlets similarly muddied the philosophical differences at issue. Desfontaines used the pages of his *Observations*

185. *Ibid.*, 22: 378.

186. This is reprinted, along with Graffigny’s commentary, in Waddicor, *La Voltairomanie*, xliii.

187. *Ibid.*

188. Desfontaines, *La Voltairomanie, ou Lettre d’un jeune avocat, en form de mémoire en reponse au libelle du sieur de Voltaire, intitulé Le Preservatif* (n.d). The text is reprinted with critical notes in Waddicor, *La Voltairomanie*, 1–70.

to offer the promised review of Voltaire's *Eléments* in September, and while most scholars think that Voltaire had already penned his pamphlet before this review appeared, it provided the immediate context for its reception.¹⁸⁹ While critical, Desfontaines refrained from the ad hominem attacks that he would soon launch in *La Voltairomanie*. Picking up the lament that many expressed regarding Voltaire's abandonment of poetry for philosophy, the journalist expressed concern that such a luminous writer would embrace Newtonianism, "a philosophy damned by all the good philosophes of Europe."¹⁹⁰ "One can rest assured that there are not two other philosophes in France who agree with him."¹⁹¹ He then offered what was by then the standard Cartesian critique, emphasizing in a long and very detailed analysis the absurdity and impiety of the Newtonian theories of space and attractive matter; the superiority of directly causal, mechanical accounts of physical change; the danger of groundless, speculative philosophical reasoning; and the arrogance of presuming to disparage great thinkers such as Descartes and Malebranche.¹⁹²

These criticisms were fairly moderate, but after the appearance of *Le preservatif* a few weeks later, whatever moderation was to be found in Desfontaines' relations with Voltaire was lost. As a journalist who published under his own name, French law made it impossible for Desfontaines to criticize Voltaire in his journal as freely as he did in his anonymous pamphlet. Nevertheless, a noticeable intensification of his polemical tone did occur with respect to his discussion of Newtonianism after the appearance of Voltaire's attack. One occasion was the appearance in 1739 of a serious and detailed refutation of Voltaire's Newtonian theories of light by a Cartesian savant named Jean Banières.¹⁹³ Only a year before, Banières had published his own, rival theory of light in a treatise of his own, and building on that work Banières focused attention on what he perceived to be Voltaire's errors and theoretical inconsistencies in the *Eléments*. His discussion, therefore, was as much a critique of Newton as a critique of Voltaire.

In his review, however, Desfontaines refocused this criticism, offering on the one hand a celebratory platform for Banières' rival Cartesian views, and on the other a new set of criticisms of Voltaire's reckless and misguided phi-

189. See Waddicor, *La Voltairomanie*, xxxix; Vaillot, *Avec Madame du Châtelet*, 97.

190. Review of Voltaire, *Eléments de la philosophie de Newton*, in *Observations sur les écrits modernes* 15 (n.d.): 74.

191. *Ibid.*, 75.

192. For the full discussion of Voltaire's *Eléments*, see *ibid.*, 49–67, 73–89.

193. Jean Banières, *Examen et réfutation des Eléments de la philosophie de Newton de M. Voltaire, avec une dissertation sur la réflexion & la réfraction de la lumière* (Paris, 1739).

losophy.¹⁹⁴ The appearance soon after of an anonymous anti-Newtonian work entitled *Examination of the Void, or Newtonian Space Relative to the Idea of God* gave Desfontaines further occasion to attack Voltaire.¹⁹⁵ In two reviews, he reiterated the work's thesis that Newtonian space was philosophically absurd and religiously suspect. He also implicated the defenders of this view with immorality and impiety. He also published a response by Davy de Fautrière, the anonymous author thanking Desfontaines for his defense of sane philosophy.¹⁹⁶ The "Letter from a Lady Philosopher" discussed above was also published by Desfontaines in this context, and overall this letter joined in the chorus of anti-Newtonian discourse that Desfontaines released from the pages of the *Observations* in the wake of his public battle with Voltaire.

Other pamphleteers also joined the fray, including the anonymous author of *Le portefeuille nouveau*, an anti-Voltaire libel that Graffigny called "terrible [effroyable]."¹⁹⁷ About the same time, the publisher of Voltaire's *Lettres philosophiques*, Jore, released something like the critical edition of the Voltaire-Desfontaines dispute, publishing *Le préservatif* and *La Voltairomanie* side by side in the same volume followed by a "factum" that evaluated the merits of each position.¹⁹⁸ Voltaire's position was supported by a critical discussion of Desfontaines' journalism published in the *Nouveaux amusements du coeur et de l'esprit*. The piece assumed the form of a salon conversation where Desfontaines was mocked as a "critical buffoon" [*haranguer bouffon*], while his style was criticized as hard and clumsy (Voltaire had called it "base" and "dimwitted [*marotique*] in *Le préservatif*). "He writes like a German," the text repeated more than once.¹⁹⁹ Also supportive of Voltaire was the work of the probably fictional Joseph de Neufville de Montodor. He published the pro-Voltaire *La nouvelle*

194. Review of Banières, *Examen et réfutation des Eléments de la philosophie de Newton*, in *Observations sur les écrits modernes* 18 (n.d.): 337-353; 19 (n.d.): 97-11; 20 (n.d.): 169-186.

195. *Examen du vide, ou Espace Newtonienne r'lativement à l'idée de Dieu* (Paris, 1739).

196. *Observations sur les écrits modernes* 28 (n.d.): 18-23, 42-45; letter from the author of *Examen du vide, ou Espace Newtonienne*, in *Observations sur les écrits modernes* 28 (n.d.): 355-357.

197. *Le portefeuille nouveau, ou Mélanges choisis en vers et en prose* (n.p., n.d.). See also Vaillot, *Avec Madame du Châtelet*, 123.

198. *La Voltairomanie avec le Préservatif et Le factum de Sr. Claude Francois Jore* (London, 1739).

199. *Dialogue on Writing and Writers*, in *Nouveaux amusemens du coeur et de l'esprit* 1 (n.d.): 433-459.

astronomie du Parnasse français in 1740.²⁰⁰ This text opened with Apollo seeking a successor and then choosing Voltaire because of his “luminous and determined brilliance.” The “hideous venom” of *La Voltairomanie* was mentioned as a way of imploring the new Sun King to “use his will in a sovereign manner to govern all the untamed and jealous people who, like pernicious basilisks, seek only to destroy him.” A new zodiac was then offered that described the *caelestis* that Voltaire would govern. In it, the *Journal des savants* was labeled Libra, or the scales, and the scorpion was the *Journal de Trévoux*. Sagittarius, or the wise one, was *Le pour et contre*, and the Hydra, that “aquatic serpent that has heads succeeding one after the other,” was Desfontaines. Du Châtelet was named as “the aurora that always follows the sun,” and the Café Gradot was called Akousmates, the god of “noise and tumultuous voices.”²⁰¹

Works such as these only enflamed the polemical energies unleashed by Voltaire and Desfontaines themselves, yet others attempted to dampen them with a tone of judiciousness and *honnêteté*. The *Nouveaux amusements du coeur et de l'esprit* published a sharp critique of the *Nouvelle astronomie du Parnasse*, calling it a “miserable work” and a “defamatory libel” that possessed “neither gaiety nor finesse.” “It excites the indignation of *honnête gens*,” the editor wrote.²⁰² More sympathetic to Voltaire was a work called “Le Mediateur” published in the same periodical. It used similar language to attack *La Voltairomanie*, but ultimately called for peace as the only appropriate response to this unfortunate civil war within Parnassus.²⁰³ Even more neutral was the “Disinterested Judgment on the Controversy That Erupted between M. Voltaire and abbé Desfontaines.” “Do you think the public is satisfied to see itself inundated by your miserable libels,” the author chastised? “You are the heroes of Parnassus, yet you do not even blush as you deliver yourselves into a war that would bring shame upon even the lowliest of men.” The author nevertheless tried to find substance in the dispute, praising the qualities of the two men while also validating the criticisms of each. Voltaire was supported in his view that Desfontaines “had perhaps overestimated the public’s confidence in his abilities,” while Desfontaines was supported in his view that Voltaire “shows insufficient discretion regarding religion, materialism, deism, and even athe-

200. Joseph de Neufville de Montodor, *La nouvelle astronomie du Parnasse français, ou L'apothéose des écrivains vivans dans la présente année 1740* (n.d., 1740).

201. Ibid.

202. Review of Neufville de Mohtodor, *La nouvelle astronomie du Parnasse français*, in *Nouveaux amusemens du coeur et de l'esprit* 5 (n.d.): 99–101.

203. “La mediateur,” *Nouveaux amusemens du coeur et de l'esprit* 3 (n.d.): 345–59.

ism.” Voltaire needed to continue writing poetry, history, and even philosophy, this self-appointed judge concluded, and he also needed to cede to Desfontaines the right to criticize his works. “This being accomplished, Sirs, the indulgent public will disregard all of your past follies.”²⁰⁴

Peace was also in the interest of the two combatants since no one gained any advantage by continuing such a vindictive dispute. The authorities were also troubled by this warfare, and since Voltaire’s political position was more precarious than Desfontaines’, and since he had instigated the public feud in the first place, he was particularly vulnerable in this respect. As the controversy heated up in early 1739, he confessed to Madame de Graffigny an impulse to absent himself in Holland.²⁰⁵ Instead, he worked behind the scenes to negotiate a resolution. In May, he and Desfontaines each signed separate disavowals with the royal police officer Hérault. This officially ended their open civil war, but it in no way terminated the wider struggle.²⁰⁶ In June, Voltaire’s other enemy, Jean-Baptiste Rousseau, arranged for yet another edition of *La Voltairomanie* to be published in Holland. The journals in France and throughout the Republic of Letters also continued to echo the dispute for many years to come. Similarly, since Desfontaines continued to publish his own journal until well into 1743, he retained his platform for continuing his strong, but nonlibelous, criticism of Voltaire’s Newtonian philosophical positions.

For his part, Voltaire was also moved to disassociate his name from the base, personal invective that had characterized his *Préservatif*. Since he also aspired much more than Desfontaines to be viewed as a serious and *honnête philosophe*, this agenda was particularly crucial for him. Attempting to restore his own intellectual authority in the minds of the serious savants who found his behavior disgraceful, and especially attempting to rehabilitate his Newtonianism from the insinuation that it derived from nothing more than libertine, materialist impiety, Voltaire worked to position himself more respectably. Defending his precise Newtonian position directly, he issued a rebuttal to his critics in the form of a pamphlet responding to various precise objections. Here he responded directly, and in detail, to the technical objections raised by Banières, Desfontaines, Regnault, and others without indulging in any sarcastic wit or satirical repartee whatsoever.²⁰⁷ Indeed, he did not even name his critics personally,

204. “Jugement désintéressé du demêlé qui s’est élevé entre M. de Voltaire et l’abbé Desfontaines,” *Nouveaux amusemens du coeur et de l’esprit* 3 (n.d.): 246–56.

205. Vaillot, *Avec Madame du Châtelet*, 103.

206. On the resolution, see *ibid.*, 112–115.

207. Voltaire, *Réponse à toutes les objections principales qu’on a faites en France contre la philosophie de Neuton* (Paris, 1739). This pamphlet is reprinted in *Œuvres com-*

focusing instead on the intellectual arguments they had made and his rebuttals of them.

Voltaire also reasserted his *honnête* critical style by publishing, first in the *Mercure de France* in June 1739, and then in the *Nouvelle bibliothèque, ou Histoire littéraire* the following month, an anonymous celebration of du Châtelet's essay on the nature of fire, recently published by the academy.²⁰⁸ In the text he praised the essay as a victory for savant women everywhere. He also made clear that her views were founded "on the ideas of the great Newton" and on the experiments of his celebrated followers 'sGravesande and Boerhaave. This associated du Châtelet's work with Voltaire's own essay on fire published in the same volume, despite the many differences between them. It also worked to align and sanction their mutual embrace of Newtonian science with the authority of the Royal Academy. In his *Réponse aux objections principales*, Voltaire made this association even more explicit. Here he wrote that "the truths [of Newtonian science] have penetrated the Academy of Sciences, despite its dominant taste for Cartesian philosophy." "They were first proposed there by a great mathematician who has since, by his measurements taken at the polar circle, found and determined the figure that Newton and Huyghens attributed to the earth."²⁰⁹ When this pamphlet appeared, Cassini de Thury had not yet conceded this debate to Maupertuis, but he soon would, further cementing the alliance between Voltaire, Newton, Maupertuis, and the Royal Academy implied in this passage. All of this worked to distance Voltaire, the aspiring Newtonian savant and philosophe, from Voltaire, the libertine poet and contentious public critic of Desfontaines. This was precisely the point.

These associations were further cemented, at least in Voltaire's mind, in early 1739. During the bitterest period of his controversies with Desfontaines, one of his letters, a long missive to Maupertuis, was published in the *Bibliothèque française*.²¹⁰ The richly detailed scientific text reiterated many of the same arguments made in his other apologia, but in this one his views were directly associated with those articulated and defended by Maupertuis. Especially powerful was Voltaire's discussion of God's power to grant an attractive property to matter. Here he countered those who denied this possibility by challenging them to read and refute the brilliant defense of this position offered in Maupertuis' *Discours sur les différentes figures des astres*. Voltaire similarly

plètes de Voltaire (ed. Besterman), 15: 724–750, and my citations will be drawn from this version.

208. Reprinted in *Oeuvres complètes de Voltaire* (ed. Beuchot), 23: 65–69.

209. Voltaire, *Réponse à toutes les objections*, 15: 697–718.

210. Voltaire, "Lettre de M. de Voltaire à M. de Maupertuis," 15: 698–718.

associated his own views on the figure of the earth with Maupertuis', also offering readers an image of a philosophical partnership between the two men, one marked by judicious reflection, moderation, and zeal for the truth. The letter thus worked to implicitly reflect Maupertuis' *honnêteté* and authority onto that of the scandal-prone writer. Voltaire insinuated himself with Dortous de Mairan in the same way. Without naming the academician precisely, he described how "one of the most estimable philosophes of our time, and one of your friends as well as mine, has honored me by writing and expressing his critical views about Newtonian attraction."²¹¹ This gave Voltaire the occasion to further show the respect accorded to him by some of the leading academicians, while also demonstrating his comfort with modest, academic-style debate.

The letter ended with an appeal for peace in the Republic of Letters. Since the true man of letters abhors the idea that the concept of *odium theologicum* will translate into an *odium philosophicum*, Voltaire asserted that "a Newtonian can love a Cartesian." "For a long time I have said that all those who sincerely love the arts should be friends. This truth is worth more than a geometrical demonstration."²¹² Yet the 1730s had been anything but a decade of friendship among French philosophers, and as the 1740s opened, the possibility of peace seemed remote. Voltaire had established his presence as a philosophical contender, but he had also generated a number of controversies challenging this very position. Maupertuis also remained distant from Voltaire, even if their respective career trajectories were beginning to converge. Du Châtelet, closely attached to both, further complicated the situation, especially as she began to grow more assertive in her own philosophical convictions. The 1740s opened, therefore, with the Newton wars still raging, yet by the end of the decade the situation had radically changed. Ironically, it was the injection of another "ism"—Leibnizianism—that catalyzed these changes, and the result was the field that allowed the philosophe movement, and thus the Enlightenment, to solidify in France.

211. *Ibid.*, 702–703.

212. *Ibid.*, 718.