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## Untitled - In Reply

James C. Evans

*University of Puget Sound*, [jcevans@pugetsound.edu](mailto:jcevans@pugetsound.edu)

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Letters to the Editor

Author(s): Massimo Germano, James Evans and Mario Gomez-Torrente

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## LETTERS TO THE EDITOR

TO THE EDITOR:

I have read with great interest the essay “Fraud and Illusion in the Anti-Newtonian Rear Guard,” by James Evans (*Isis*, 1996, 87:74–107). The fascinating “detective story” he describes concerns an episode of impure science during the Enlightenment. Two letters—the first dated 15 November 1768, from Samoëns, Savoy, and signed “Jean Coultaud, former professor of physics at Turin,” and the second dated 15 August 1771, from Sion, Valais, and signed “Mercier”—were sent to a scientific journal in Paris. They contained invented data refuting Newtonian attraction, and Evans argues that the culprit was Hyacinthe-Sigismond Gerdil, “theologian, Cartesian philosopher, later a cardinal of the Catholic Church, and, in the last years of his life, a candidate for the papacy” (p. 101).

It is very difficult for me to imagine that Gerdil was the author of these letters. At the time his intellectual honesty was universally recognized, and his battles were both liberal and genuine. Gerdil devoted his life to pedagogy; his sincere love for the Enlightenment is probably best demonstrated by his work devoted to the establishment of the Academy of Science of Turin. This was not an easy task, and he fought for the academy along with people like Lagrange and Condorcet.<sup>1</sup> Evans remarks in the introduction to his essay that “whether we succeed in identifying a culprit is, of course, less important than . . . understanding the reasons” for this late attack on Newtonian principles (p. 75)—and that is the real motivation for this letter. In arguing that Gerdil had “motive and opportunity” to write the letters, Evans notes that “he was a Cartesian natural philosopher devoted to vortices and opposed to attraction” and “a native of Samoëns who had taught at the University of Turin.” But because, as Evans says, “the evidence against Gerdil is, to be sure, mostly circumstantial” (p. 102), let me suggest some other circumstances and motivations that could also be examined.

Impure science is not inspired only by fraud and illusion. Derision and mockery can lead to jokes, and the literary underground of the mid-Enlightenment, the “Grub Street” so nicely described by Evans, had more than one reason to cultivate a feeling of contempt for academicians, schools, and systems. A representative figure of

this underground was Louis-Sébastien Mercier, once dismissed as one of the “oubliés et dédaignés,” but now understood as an outstanding original precursor of Romanticism. Mercier is well known as the author of the *Tableau de Paris* (Amsterdam, 1783); he also wrote a fantastic text of antisience, *De l'impossibilité du système astronomique de Copernic et de Newton* (Paris, 1806).<sup>2</sup>

Mercier is a fascinating and relatively unexplored figure. His aversion to Newton was universally recognized; we may note, following Léon Béclard, one of his biographers, that at the time of the events described by Evans he was just “en pleine liberté, livré à lui même et aux lettres, courant simultanément toutes les carrières proposées aux auteurs du temps.” Another biographer, Cousin d'Avalon, says that during these tumultuous years he even composed sermons for a priest—and that the pay was very good. Had Mercier some part in this “affair”? The second letter is, after all, signed “Mercier”; and Bertier says explicitly in his retraction that he thinks the experiments “véritable pour le fond, quoiqu'embellie par un homme d'esprit.”<sup>3</sup> Evans observes, correctly, that “in a detective story, it is bad manners to introduce a new suspect late in the plot” (p. 101). However, I think that some doubts and suspicions remain.

MASSIMO GERMANO

*Department of Aeronautical Engineering  
Turin Polytechnic  
Corso Duca degli Abruzzi, 24  
10129 Turin, Italy*

### NOTES

1. On Gerdil (1718–1802) see *Biographie universelle ancienne et moderne* (Paris: Michaud, 1821). On the Turin academy see Vincenzo Ferrone, *Le premesse e la fondazione* (Tra Società e Scienza, 200 anni de storia dell'Accademia delle Scienze di Torino) (Turin, 1988).

2. The latter work bears the motto “L'algèbre est le précipité de la pensée humaine; la vérité n'est point dans des amplifications de trigonométrie: mendaces filii hominum in stateris.” On Mercier (1740–1814) see *Biographie universelle ancienne et moderne*; C. Monselet, “Mercier,” in *Les oubliés et les dédaignés* (Poulet Malassis, 1857); and M. Delon, “Introduction,” in *Paris le jour, Paris la nuit* (Paris: Laffont, 1990).

3. Léon Béclard, *Sébastien Mercier, sa vie, son oeuvre, son temps* (Paris: Champion, 1903), p. 26; and Cousin d'Avalon, *Mercieriana* (Paris: Langlois, 1834),

p. 84. See also Massimo Germano, *Scienza impura nel secolo dei lumi* (Turin: Levrotto & Bella, 1998), from which the quotation from Bertier's retraction is taken.

#### IN REPLY:

Massimo Germano is correct to say that I was able to provide only circumstantial evidence linking Hyacinthe-Sigismond Gerdil to the fraud. The circumstances include Gerdil's connections to Turin and Samoëns, to be sure. But for me the most persuasive fact is that the fictitious letter from "Jean Coultaud" was dated November 1768—only a month after the publication in the *Journal des Sçavans* of Lalande's paper that refuted Gerdil's own refutation of attraction by appeals to experiments made on capillary tubes. Thus we have not only motive and opportunity but also an understandable provoking cause. I will grant that Gerdil shared Enlightenment values. But it is also true that he never gave up on Descartes. And in sketching a complete picture of Gerdil's values it is not irrelevant to recall that he later became Prefect of the Propaganda and Corrector of Oriental Books. Nevertheless, I agree with Germano that the case against Gerdil is not conclusive. It is also important to remember that some of the direct participants in the debate over the fraudulent experiments—most notably Joseph-Etienne Bertier—had more at stake than did Gerdil and that some of Bertier's contemporaries suspected him of involvement in the fraud. Whether or not we can identify "Jean Coultaud" with a particular culprit, the most significant aspect of the story is the insight it provides into the anti-Newtonian rear guard and their use of the popular press.

Germano suggests that the author of the papers by "Jean Coultaud" and "Mercier" may have been Louis-Sébastien Mercier. This is an intriguing suggestion. But as far as I am able to tell there is no evidence that L.-S. Mercier was interested in questions of physics at this stage of his life, when he seems to have been largely occupied by the theater and his ceaseless literary battles. If Mercier were concerned about the system of attraction, *The Year 2440* would have provided an excellent opportunity to set the world straight, for it was published in 1771, with other editions in 1772 and 1774—right in the course of the Coultaud-Mercier affair. The narrator awakens after a sleep of 672 years to find the world wonderfully transformed. Since there is a chapter (Chapter 31: "Le cabinet du roi") in Mercier's utopia that deals with the sciences, this would have been a good place to insert a correc-

tion of the system of attraction if it had been a passionate concern of Mercier's at the time. Mercier denounces the vain fabricators of systems and criticizes the fakery that often accompanies public lectures and demonstrations of experimental physics. But he is very enthusiastic about advances in useful science. These are pretty ordinary sentiments, and there is nothing explicitly anti-Newtonian here. Indeed, in Chapter 19, in the course of a discussion of the place of our souls in the universe, we find: "The soul of Newton has flown by its own activity toward all those spheres that he had weighed. It would be unjust to think that the breath of death had extinguished this mighty genius."<sup>1</sup> This seems to imply that Newton was still admired in the year 2440. But the real challenge in proposing L.-S. Mercier as the culprit—as with any other possible candidate—would be to uncover some evidence linking him to our circle of subjects, to the *Journal des Beaux-Arts et des Sciences* (in which the fraudulent papers appeared), or to the grand debate over the reality of attraction. Readers who wish a more detailed defense of Gerdil and a more strenuous effort to tie L.-S. Mercier to the case should refer to Germano's interesting and lively little book.<sup>2</sup>

JAMES EVANS

Department of Physics  
University of Puget Sound  
Tacoma, Washington 98416

#### NOTES

1. [Louis-Sébastien Mercier], *L'an deux mille quatre cent quarante: Rêve s'il en fût jamais* (London, 1772 [the imprint is false, and this edition was probably printed in Dresden]), p. 133. On Mercier and *The Year 2440*, besides the works cited by Germano, see Robert Darnton, *The Forbidden Best-Sellers of Pre-Revolutionary France* (New York: Norton, 1995).

2. Massimo Germano, *Scienza impura nel secolo dei lumi* (Turin: Levrotto & Bella, 1998).

#### TO THE EDITOR:

A review I wrote of John Dawson's book *Logical Dilemmas* was recently published in *ISIS* (1998, 89:356–357). The original text of my review read at a certain point: "The author says that in a lecture published in 1929 Hilbert 'raised the question of syntactic completeness' (p. 52) for first-order logic; in that lecture he stated somewhat vaguely the problem of semantic completeness, but not the problem of syntactic completeness (or Post completeness)." The editing process at the journal transformed this bit into the following: "Dawson says, for example,

that in a lecture published in 1929, David Hilbert 'raised the question of syntactic completeness' (p. 52) for first-order logic and stated somewhat vaguely the problem of semantic completeness, but not the problem of syntactic completeness (or Post completeness)." As it is clear from the text that follows in the review, I was not attributing to Dawson the absurd claim that Hilbert both raised and did not raise the question of syn-

tactic completeness in his lecture. I was denying that Hilbert raised the question. I will be grateful if you could publish this correction in your journal.

MARIO GOMEZ-TORRENTE

*Instituto de Investigaciones Filosóficas*

*U.N.A.M.*

*Ciudad Universitaria*

*Mexico City D.F. 04510, Mexico*