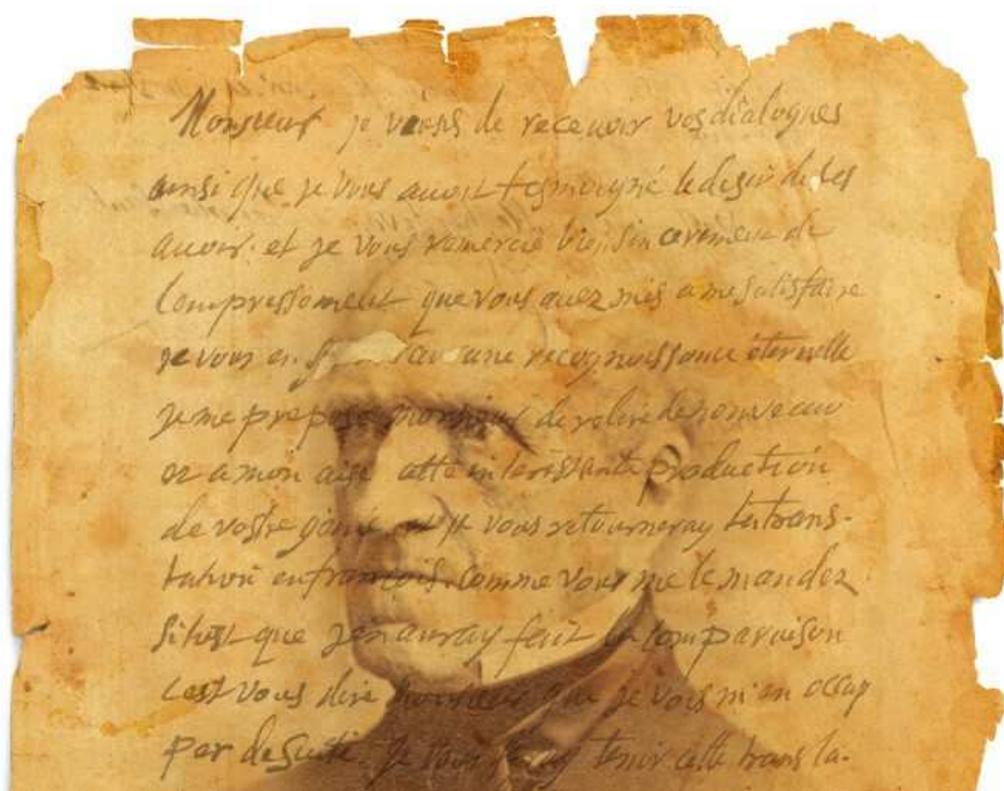


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# Missives impossible: How gravity fell victim to fake news

Patriotic fervour gripped Paris with proof that Isaac Newton had stolen his theory of gravity from a Frenchman – but the details looked distinctly fishy



**Did patriotism blind Michel Charles to the true origin of some astonishing letters?**  
Smithsonian Institute Library/Science Photo Library

By **Stephen Ornes**

MONDAY morning seemed a good time to upend the history of science. And Michel Chasles was poised to do it, armed with just two letters and four notes. It was July 1867, and Chasles, a mathematician at the Sorbonne, stood before the French Academy of Sciences in

Paris. The documents threatened to dethrone Isaac Newton as the originator of the law of universal gravitation and install French mathematician Blaise Pascal in his stead.

Chasles was a pre-eminent scholar. He had hammered out new geometry, won international awards and was a beloved “geometer of genius”. His reputation stretched far beyond France. When he talked, people listened.

But that morning, he stood on the edge of a maelstrom. The letters, one of them dated 1652 and apparently sent by Pascal to Anglo-Irish chemistry pioneer Robert Boyle, included an early description of the law of gravitation. The notes also contained calculations of the masses of the major planets, based on gravity and relative to the sun. The controversial part? The date on the letters was decades before Newton first described the same law in his *Principia*. It seemed Pascal deserved credit for one of the biggest advances in the history of physics. Newton was derivative.

*Newton dépossédé!*” (Newton dispossessed!) read the headline of a Belgian newspaper soon after. The affair agitated Europe’s scientific community and beyond. Over the next two years, it would swell to envelop not only Newton and Pascal, but also Galileo Galilei and René Descartes, Caligula, Judas Iscariot, Joan of Arc and even Jesus Christ himself.

Chasles’s supporters, typically lesser members of the academy, praised the sheer detail in the letters. Historians noted that the paper was aged and the ink chemistry consistent with the epoch. The academy published the text of the letters in its weekly proceedings.

Most established scientists were sceptical. Objections poured in. Pascal’s estimates of planet masses were too precise; the handwriting wasn’t a close match to other existing documents penned by him; there were logical inconsistencies. But Chasles not only held firm, he doubled down. When a critic pointed out that Pascal couldn’t have worked without calculus, which Newton had developed, Chasles presented a *new* newly found letter in which Pascal reported receiving a manuscript from Newton describing the “calculus of the infinite”. That was problematic: judging by the date of that letter, Newton would have been just 11 years old.

By October, Chasles had obtained and presented many letters between Newton and Pascal that hinted at a darker story: that a young Newton had appropriated the work of Pascal and other scientists to claim undue credit – a claim that riled British historians. An article in *The Times* said the charge against Newton “touches our national pride” and that the allegations should be “repelled by his countrymen”.

## **“The affair united scholars of diverse countries in one spirit of indignation”**

The scandal grew. Chasles refused to reveal his source, but produced letters from other scientists “proving” that Pascal, inspired by the work of Galileo and Johannes Kepler, devised the law of gravitation. Some letters came from Galileo himself, who apparently had a robust – and previously unknown – correspondence with the young Pascal.

### **Get Galileo!**

Italian historians jumped into the fray, noting a complete lack of other evidence that Galileo even knew French. In fact, all the letters Chasles presented were in French – a fact that didn’t dissuade him or his supporters.

“One of the remarkable points of this affair is the unanimous sentiment that united the scholars of all these diverse countries in one spirit of indignation,” reported attorney Henri Bordier and librarian Emile Mabille, who investigated the affair in 1869.

The cycle continued for two years, with Chasles answering questions by presenting more letters, which raised more questions. Many prominent historians believed the letters to be authentic, or at least that they were copies of authentic documents. It was in 1869, under pressure from his critics, that Chasles revealed to the academy that he had obtained the manuscripts from a mysterious archivist called Denis Vrain-Lucas, and enlisted the police to visit the man’s home. Inside, they found Vrain-Lucas, but no manuscripts. Instead, there was an array of ink bottles and blank pages ripped from old books. It was clear that Vrain-Lucas was writing the documents himself. He was duly arrested.

Vrain-Lucas, an insatiable reader from Châteaudun, started out as a

law clerk in nearby Chartres and moved to Paris in 1852. At first, he pursued work in bookstores and libraries, but was stymied by his lack of formal education. Finally, he was hired by a firm that forged family pedigrees for people who wanted to “uncover” their genealogical links to famous French people. It was perfect training: by 1854, he was working on forgeries of his own. He “drew boldness from his very ignorance”, wrote Bordier and Mabile, and he “hoped, against all expectations, that a catastrophe did not necessarily lie at the end of his undertaking”.

For the better part of two decades, with the industry of a monk, the counterfeiter reportedly created and sold more than 27,000 forgeries, including letters and autographs. He would pilfer blank pages from old books in Parisian libraries, sometimes wetting them to age them.

It was in 1861 that Vrain-Lucas first visited the home of Chasles and sold him three letters: one each from the playwrights Molière and Jean Racine, and one from the scholar François Rabelais. Vrain-Lucas said he had been entrusted to sell documents belonging to a collector who had died in a shipwreck, but whose collection had survived. Chasles bought every manuscript Vrain-Lucas brought him.

Chasles’s collection stretched far beyond science, and Vrain-Lucas’s fabrications grew increasingly reckless. He rewrote history through a huge cast of characters. Judas Iscariot wrote to Mary Magdalene, who wrote to Lazarus – risen from the dead – about her hopes of seeing Jesus, and how she enjoyed her travels in France. In another note, she mentions a letter from Jesus. “Lucas’ fecundity shames other forgers,” notes historian Joseph Rosenblum in *Prince of Forgers*.

But this fecundity caught up with him, with his arrest. Chasles testified that over the course of eight years, he had spent more than 140,000 francs – a fortune – on Vrain-Lucas’s products. No one knows why Chasles was so well deceived, but the judge was clear where the blame lay: “You have abused in the most brazen manner the passion of an old man, of a scholar, his passion as a collector and his love for his country, in order to deceive him shamefully.” Vrain-Lucas was fined 500 francs and sentenced to two years in jail. While inside, he wrote to Chasles, who visited him regularly and prayed for him.

It seems Chasles had fallen under Vrain-Lucas’s spell. Perhaps that’s

why the controversy left his reputation only bruised and his character untarnished. When Chasles died in 1880, an obituary in *Nature* affirmed his integrity and noted “how honourably he extricated himself from the matter, and did all in his power to repair the mischief done”.

The shock waves that Vrain-Lucas sent through science subsided, but his con-artistry did not. He would bounce back into jail twice more, before being banished to his home town, where he ended his days as a second-hand book seller. Quite a comedown for the man who hijacked history.

