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Promethean Sparks: Electricity and the Order of Nature in the Eighteenth Century

In 1800 the Italian physicist Alessandro Volta invented the electric battery.¹ From then onwards, the possibilities offered by electric current engendered numerous inventions that still give shape to our everyday lives. In the eighteenth century, however, no electric bulbs, no electric batteries, and no electric engines had yet been invented. What did electricity mean then?

O feu subtil, âme du monde, Bienfaisante électricité Tu remplis l'air, la terre, l'onde, Le ciel et son immensité.²

These lines, published in 1784 in a French magazine, epitomize the eighteenthcentury conception of electricity and the fascination it exerted upon expert and amateur audiences. The electric fire, the soul of the universe – "le feu subtil" of the poem – suffused air, earth, and water. It was regarded as beneficial in medical treatments and for the growth of animals and plants. It was deemed responsible for lightning, volcanic eruptions, earthquakes, and all the natural phenomena that seemingly departed from the usual course of nature. Early in the century electricity was associated with the well-known phenomena of attraction and repulsion of rubbed bodies. The word "electricity" itself, from the Greek *elektron* for amber, indicates the property that this and similar substances acquire when rubbed of attracting or repelling light bodies. Every "electrician" was aware that the human body is a conductor of electricity, and experiments that exploited this property proliferated. With the aid of a mechanical device that acted as a source of friction (the electrical machine), many amusing experiments could be easily performed. Electricity could turn bewigged ladies into electrify-

¹ Giuliano Pancaldi, Volta. Science, and Culture in the Age of Enlightenment (Princeton, 2003).

² C. J.M. Barbaroux, Mercure 3 July 1784 and 24 July 1784, p. 177.