
H-France Review Vol. 21 (March 2021), No. 25

François Zanetti, *L'Électricité médicale dans la France des Lumières*. Oxford: Voltaire Foundation, 2017. xvii + 265pp. £70.00 U.K. (pb). ISBN 978-0-7294-1197-4.

Review by Kieran M. Murphy, University of Colorado-Boulder.

One of the most eye-opening books I read in graduate school was Robert Darnton's *Mesmerism and the End of the Enlightenment in France*.^[1] It focuses on the rise and fall of what Franz Anton Mesmer called "animal magnetism," a kind of hypnotic therapy that had become quite popular in France at the end of the eighteenth century. Darnton relies on the historical curiosity of animal magnetism to shed fresh light on the ideological context that shaped the years leading up to the French Revolution. As a comparatist, I was taken by his seamless use of wide-ranging documents, which included medical, scientific, literary, philosophical, and political works. Together with his exploration of popular culture, they painted a deeper portrait of this momentous era. François Zanetti's *L'Électricité médicale dans la France des Lumières* adds another dimension to what Darnton achieved with the study of animal magnetism by focusing on the related yet different fate of electrotherapy between 1775 and 1785.

Zanetti's approach is more from below than Darnton's. The people he brings back to life are not the familiar heroes or villains of the history of medicine. They are mostly forgotten practitioners and patients. Their aspirations and struggles nevertheless provide an intimate look into the medical, institutional, and social realities they were immersed in. For instance, we learn about the abbé Sans, who practiced electrotherapy for thirty years on paralytics and children. He travelled in 1770 from Perpignan to Paris to trumpet the health benefits of electricity. Even though his treatments attracted the attention of the newly founded Société royale de médecine (1776-1793), he never fully got its stamp of approval. As Zanetti traces Sans's decades-long fight for official recognition, we are transported into a complex and heterogenous medical world in the process of reforming itself, and where what distinguishes real from fanciful remedies, the *médecin* from the *charlatan*, and enlightened from obscurantist methods remain thorny questions.

Zanetti concentrates on a type of electrotherapy that emerged in the 1740s following the recent invention of electrostatic machines like the Leyden jar. In France, the abbé Nollet was one of the first well-known figures to experiment with them for therapeutic purposes, but the enthusiasm for the new medical technology quickly petered out, partially due to Nollet's own doubt about the efficacy of the treatment. Thanks to Zanetti's study, we know now that long before the famous debate on animal electricity that pitted Luigi Galvani against Alessandro Volta at the end of the eighteenth century, the interaction between the body and electricity was the subject of renewed interest in France starting in the 1770s. Powerful philanthropists and official institutions

sponsored practices like Sans's not only because it showed some promise in the treatment of paralysis, but also because it was a cheap remedy that could potentially solve some key national health issues. Concerns about depopulation, degeneration, and work-related illnesses helped support research of the effects of electrostatic machines on conditions associated with onanism, mastitis, and lead colic.

The reconstruction of the patients' experiences is also an important part of Zanetti's work. Accounts of these experiences bring a rare perspective from within the medical world that helps reveal its social dimension. A cobbler, a German barber working in Paris, a midwife, a military sergeant, and a king's confessor are some of the patients with whom we become familiar as we learn about their ailments and hopes for recovery. Electrotherapy was often a last-chance option in a crowded medical market and was usually administered in conjunction with other treatments. Patients complained about the length of electrotherapy, which tended to take months. Some doubted its efficacy but spoke fondly of the time they spent in treatment. Others were quickly discouraged or overeager to claim they were cured.

Zanetti's history of medicine from below is also a history of medical technology. Electrotherapy depended on the recent development of more efficient electrostatic machines, which, by uncovering, intensifying, and popularizing electric phenomena, helped rethink the physical fabric of the world. In his famous kite experiment, Benjamin Franklin used a Leyden jar to store the power and prove the electric nature of lightning. With the help of various apparatuses generating electricity via mechanical friction, performers charged audience members to transmit shocks and sparks from one body to another. Electrotherapists relied on such machines to exploit the affinity between electricity and the body in three different ways. The *bain électrique* immersed the patient in electric "fluid" by insulating him or her before establishing a connection with an electrostatic device (pp. 15–16). For the *électrisation par étincelles*, the body is not insulated, which is conducive to sparks that can be applied more locally (p. 16). Finally, the "commotion" method relies on the violent shock produced by a Leyden jar discharge (p. 17).

To defend the medical value of electrostatic technology, practitioners reinterpreted older humoral and hydrological models through the lens of Franklin's proof of atmospheric electricity. As Zanetti shows, during the second half of the 1770s, academic publications compare the body to a fish or sponge immersed in a boundless "reservoir" of electric air (p. 44). Through the lungs and the skin's pores, atmospheric electricity enters the body, affecting the electric "fluid" already circulating along the "channels" or "pipes" of the nervous system (p. 55). Zanetti focuses on Pierre Bertholon's award winning and influential *De l'électricité du corps humain dans l'état de santé et de maladie* (1780, 1786), where the phenomenon of electrostatic "repulsion" becomes the prime mover of atmospheric oscillations, which, like ocean tides, appear connected to the humoral "fluids" regulating the body (p. 45). Familiar theories on the correlation of climate and *tempérament* receive an electric dimension (p. 58). For instance, Bertholon claims that mountaineers live in a particularly "charged" environment and are therefore more robust than the "effeminate" city dweller from the valley (p. 58). Climate turns out to be key in the healing process not just due to local air quality but also conductivity. A dryer climate increases conductivity and might be of help for a patient suffering from a shortage of electric "fluid."

Zanetti draws a multifaceted account of electrotherapy that makes a substantial contribution to the history of medicine. His book will be of interest to scholars working on the histories of medical institutions and technology, medical evaluation and legitimation of new medicine, and fringe

practices. In addition to detailed analyses of the theoretical and ideological context informing the works of electrotherapy's supporters and critics, his erudite exploration draws on rare documents and firsthand accounts to accomplish the difficult task of shedding light on the all too often overlooked experience of patients.

NOTE

[1] Robert Darnton, *Mesmerism and the End of the Enlightenment in France* (Cambridge, MA: Harvard University Press, 1968).

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ISSN 1553-9172