



Cesare Lombroso



Photograph courtesy of Frank H. Duffy, MD

Cesare Lombroso in his office with a portrait of William Lennox in the background, 1987.

CESARE LOMBROSO (1917-2013) was born in Rome to a family of distinguished scientists and authors. Perhaps most notable was his grandfather, whose name he carried and who is acknowledged internationally as the founder of criminal anthropology. Most of Lombroso's early years were spent in either Palermo or Torino, his father's home, and later in Genoa, where he received his undergraduate education.

Politics of the 1930s and 1940s, World War II, and a Lombroso family dislike of totalitarianism in any form, profoundly shaped his life. His own father was a professor of physiology in Italy until 1936, when, having refused to swear allegiance to the fascist regime, was forced to immigrate to Paris, where he worked until the Nazi invasion. Lombroso's uncle, Guglielmo Ferrero, and an aunt, Gina Lombroso, were well-known antifascist political writers who were imprisoned and exiled. Not unexpectedly, Lombroso himself was a dedicated antifascist and an active member of the clandestine Giustizia e Libertà (Justice and Liberty) movement.

After having won a trip to the United States as a result of a poetry contest, Lombroso decided to study medicine at Johns Hopkins. However, he remained a student for only one year. The war inspired him to leave medical study and become more involved in antifascist work. He served as editor of a journal advocating creation of a free Italian government in exile and actively participated in shortwave broadcasts from the United States beamed to Italy in support of the Italian resistance. After Pearl Harbor he volunteered his services to the Office of War Information. He remained active in antifascist and anticommunist organizations. During this period he met and married his wife, Rysia, who had recently arrived from Poland and was engaged in similar work against totalitarianism. They actually met at the White House, where they had been asked to attend the first World Youth Congress sponsored by Eleanor Roosevelt.

After the end of the war, Lombroso returned to the study of medicine. He completed his medical studies at the University of Genoa in 1947, and then in the physiology laboratory of Arturo Bonsignore at the University of Genoa, where he obtained his Ph.D. in 1951. The attraction of clinical medicine was strong, and he undertook a residency in pediatrics under Giovanni DeToni in Genoa. He had developed special interests in brain function, and decided to immigrate to the United States. He arrived in Boston, where he

took a year's fellowship with William Lennox, who had recently founded the Seizure Unit at Boston Children's Hospital, and completed his residency training in neurology and neuropathology at the Massachusetts General Hospital under Raymond Adams. He then returned to the Seizure Unit to join its staff. When Lennox retired in 1960, Lombroso was named chief of the Seizure Unit and later director of the Division of Neurophysiology, where he remained until his retirement from administrative duties in 1988. During his tenure at Children's Hospital, both the Seizure Unit and its laboratories underwent remarkable growth, not only in space and professional components, but also in scope. The excellence of the Seizure Unit training programs was recognized early, with federal grants from the Institute of Maternal and Child Health, and later from the National Institute for Neurological Disease and Stroke, allowing over a fifteen-year span for clinical and research fellowships in epilepsy. The Seizure Unit training program for technologists was among the first chosen as a national model, and a laboratory for experimental research was established in the late 1960s.

A dedication to helping the patient with epilepsy from all perspectives dominated Lombroso's tenure at the Seizure Unit. He was among the first to emphasize that epilepsy was both a symptom and a disease and was most often accompanied by emotional, cognitive, social, family, financial, and other problems. He created the Family Service Team, a small group of dedicated social workers, psychologists, and psychiatrists, to assist the unit's neurologists in the management of their patients. The multidisciplinary approach focused on the person with epilepsy became widely admired and served as a model upon which many other epilepsy units were developed, both nationally and internationally.

Equal to his care for his patients was his dedication to training young neurologists in epileptology and electroencephalography. Lombroso took a missionary's view and intentionally chose to train neurologists from countries where their knowledge, upon return, would have the greatest impact. This gave the Seizure Unit a rich international flavor. Many graduates of the Seizure Unit fellowship training program are now the leading epileptologists in their respective countries. He also refused to see training in clinical neurophysiology as separate from clinical epileptology. Lombroso regarded as sterile the isolated reading of clinical EEGs without fully integrating this information into the clinical practice of epileptology. Thus, Lombroso's outlook, evident during the political upheavals of the 1940s, carried through in his approach to the management of his patients and the training of his fellows.

Lombroso was a tenured professor of neurology at Harvard Medical School, senior neurologist at Children's Hospital, principal research associate in neurosurgery at Children's Hospital, and consultant in neurology and neurophysiology at Beth Israel Hospital, Brigham and Women's Hospital, and the New England Baptist Hospital in Boston. He had served as an officer in many national and international professional societies, including the presidencies of the Eastern Association of Electroencephalographers, the American EEG Society, and the American Epilepsy Society. He was a member of the executive council of the American Academy of Neurophysiology. He served as chairman of Region I of the Professional Advisory Board of the Epilepsy Foundation of America. He was a fellow in a dozen American professional societies, an honorary member of six foreign ones, and chaired committees of the International Federation of Clinical Neurophysiology and of the International League Against Epilepsy (ILAE). In 1981 he was awarded the Gold Medal of the ILAE, and a Special Award in Clinical Neurophysiology in 1982. His curriculum vitae lists over 200 referred publications in addition to many reviews and chapters in textbooks of neurology and neurophysiology.

His research interests were centered on epilepsy, including several papers regarding the mechanisms of reflex myoclonus and those of perinatal hypoxia and ischemia as potential inducers of later epilepsy.

His research also indicated an interest in central visual processing, and his work with Duffy and Robb (1969) on pattern visual-evoked potentials in human amblyopia sparked the creation of the Developmental Neurophysiology Laboratory at Children's Hospital where the inhibitory amblyopic hypotheses was confirmed in an animal model. Lombroso's clinical contributions include one of the first descriptions of the syndrome of Sylvian seizures (Lombroso, 1967). Of note are his studies of benign infantile myoclonus (Lombroso and Fejerman, 1977), his prospective studies on West syndrome (Lombroso, 1983), and with Pincus Lerman, on the syndrome of reflex syncope — emotionally triggered vasovagal asystole, often clinically confounded with epilepsy (Lombroso and Lerman, 1967). With his associate Giuseppe Erba, he published several papers on the classification and other aspects of the myoclonic and pseudo-myoclonic epileptic syndromes (Lombroso and Erba, 1982). His long experience with neonatal seizures and EEG led to an internationally accepted classification of neonatal seizures, as well as acceptance of the value of polygraphy and organization of states as predictors of the outcome of the "at risk" newborn (Lombroso and Matsumiya, 1985). Other contributions were on primary versus secondary generalization and the use of intravenous thiopental and diazepam to reveal poorly functioning cortical areas. There are also papers on the clinical and EEG aspects of Reye syndrome (Aoki and Lombroso, 1973), and on the clinical value of carbonic anhydrase inhibitors in the treatment of epilepsy (Lombroso and Forsythe, 1960). In 1966 he introduced the intravenous use of diazepam in the management of status epilepticus (Lombroso, 1966). He also had delineated measures for the intermittent home treatment of various paroxysmal disorders by rectal/oral administration of diazepam, after careful studies of its bioavailability. He contributed clinical observations in the syndrome of acquired aphasia in the context of brief epileptic phenomena (Landau syndrome) (Gascon et al, 1973) and proposed the pathophysiological substratum for epileptic laughter (gelastic epilepsy) by careful observations of patients with discrete lesions (Lombroso and Gascon, 1971). He recognized and collected the largest series then in the United States of patients with subacute sclerosing panencephalitis and published data obtained from direct cortical recordings that furthered understanding of the peculiar periodic complexes in this disorder (Lombroso, 1968). With Mildred McIntyre and Paul Pritchard, he published papers on the neuropsychological profiles of right and left temporal lobe epilepsy, outlining the diverse potential risks for psychiatric complications (Pritchard, Lombroso, and McIntyre, 1980).

With several associates, Lombroso was the first to introduce the B-mode technique of ultrasound, which was further developed and adopted worldwide (Lombroso and Galicich, 1965). Classic are his papers on the controversial "14 and 6 per second positive spikes," which were proven to represent a normal developmental variant (Lombroso and Schwartz, 1966).

Despite the great demands placed on his time by clinical and research activities, Lombroso remained an active member of the broad academic community. An invitation to his home often brought with it a surprise. On one occasion, Dr. Duffy was invited for dinner along with a very interesting "visiting musician" introduced by Lombroso as "Grommox". Only weeks later, while attending a concert, did he realize that he had spent the evening with the famous violinist, Arthur Grumieux. There was a similar experience with a fascinating writer named "Red" — only later to be recognized as Robert Penn Warren. Although fluent in several languages, Lombroso's English could occasionally escape full comprehension by a parochial, inattentive Yankee.

Following "retirement", Lombroso continued to be actively engaged in his career-long quest to better understand and treat the patient with epilepsy and he remained involved in a number of clinical and experimental projects. The medical tradition of his family has been continued by his three children, one a nurse, one a psychologist, and one a physician. The latter, his son Paul, is Professor Emeritus

of the Yale School of Medicine in the Child Study Center, Director of the Laboratory of Molecular Neurobiology. Cesare was very proud of his son's accomplishments, often phoning Dr. Duffy to bring him up to date on Paul's latest accomplishments.

Cesare passed quietly, on Oct 19th, 2013 at home in Cambridge, MA, surrounded by his loving family. Cesare remains an inspiration to expand his vision of the complete EEG analysis and care for the patient with epilepsy.

Respectfully submitted,

Frank H. Duffy, MD
Phillip L. Pearl, MD, *Chairperson*

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