OBITUARY

Jose Manuel Rodriguez Delgado

1915-2011

Jose Delgado was born in Ronda Spain in 1915, a founding member of the ACNP and lifelong Fellow he died at age 96, three months before our organization celebrated its fiftieth anniversary.

Jose intended to emulate his father, an ophthalmologist, but fell under the spell of Santiago Ramon y Cahal often considered the "Father of Neuroscience", Nobel Laureate in 1906.

Jose enrolled in Madrid Medical School in 1933 to study both medicine and physiology. In 1936 the Spanish civil war erupted, his mentor Juan Negri fled the country and Jose joined the Republican side as a medical corpsman. After the fascist victory he spent five months in a concentration camp before obtaining his M.D. and Doctorate of Science, both *cum laude.*

From 1942 to 1950 he began research in neurophysiology on selective brain ablation and electrical stimulation in animals, published 14 articles and won several prizes. In his 2005 OHP interview, at age 90, he tells how he went to Africa to buy primates for research, bonded with a gorilla and, unable to operate on his "new friend", donated the animal to a zoo.

In 1950 Delgado won a scholarship to Yale University in the Department of Physiology under the direction of John Fulton whose pioneer work on pre-frontal lobotomy in chimpanzees encouraged the Portuguese psychiatrist Egas Moniz to perform the operation in schizophrenic patients, for which he received the Noble Prize in 1949.

Delgado flourished at Yale; rising to Professor of both Physiology and Psychiatry he eventually succeeded Fulton as Director of Research. Described as "a technological wizard" he invented the "stimoceiver"; implanted electrodes which established two way communications with the brain in mobile animals allowing Jose to stimulate different regions, producing changes in affect and behavior. Encouraged by these results, and Moniz example, Delgado extended his research to patients with chronic refractory epilepsy and schizophrenia.

This ground breaking research was published in 1952 anticipating similar work by Bob Heath at Tulane University. 1952 was a watershed year in neuroscience, when chlorpromazine was being given to patients with schizophrenia, spawning the neuropsychopharmacology revolution.

Delgado positioned himself between growing disapproval of mutilating brain surgery and his own belief that electrical stimulation of specific brain areas was scientifically superior to oral administration of drugs whose effects were mitigated by liver metabolism, the blood brain barrier and uncertain distribution.

Events proved Jose wrong; the effects of electrical stimulation were imprecise, poorly replicated and yielded no useful therapeutic outcomes. Conversely neuropsychopharmacology thrived. Drugs were developed for every type of psychiatric disorder, deinstitutionalization occurred and, in 1970, the Nobel Prize went to Julius Axelrod and colleagues for the catecholamine hypothesis of depression.

Nevertheless in two decades (1950-1970) Delgado authored 134 scientific publications on

electrical stimulation in cats, monkeys and patients, psychotic and non-psychotic. In 1963 he performed an experiment that attracted worldwide attention, including a front page article in the New York Times. After implanting his stimoceiver in the caudate nucleus of a fighting bull Jose stood facing the bull waving a red cape before stopping the animal in its tracks by activating the electrodes.

Soon after this Delgado was invited to contribute a volume to a series on *"World Perspectives".* Its editorial board comprised twelve of the world's most distinguished leaders in ethics, sociology, economics, spirituality and science, including three Nobel Laureates. The series editor was a renowned philosopher whose life was devoted to inviting leading scientists and thinkers to speculate on the societal and philosophical implications of their narrow fields; to "extrapolate an idea in relation to life".

Jose chose a provocative title for his volume, *"Physical Control of the Mind: Towards a Psychocivilized Society".* The text and tone were equally challenging. While Jose's discussion of his scientific findings was modest and objective the philosophical speculations were grandiose and went beyond the data. None the less his intent was benevolent; to encourage the development of "a future psychocivilized human being; a less cruel, happier and better man". In essence he was proposing that science might accomplish what two millennia of religion failed to do!

Unfortunately this rhetoric and hyperbole clashed with a changing scientific, political and social Zeitgeist, engulfing Delgado in controversy that would end his career in America. Without distinguishing between science and philosophy Jose's research and ideas were attacked and denigrated on two fronts.

In 1972 Congress held hearings in response to efforts to end funding for this type of brain surgery. Testimony was given by a libertarian psychiatrist, a scientologist at the time, who disparaged drugs, ECT and biological psychiatry. This included a collage of selective, out of context, quotations from Delgado and other neuropsychiatrists.

Coincidentally public and political outrage surfaced over covert CIA "mind control" experiments, designed to combat communism, initiated in the McCarthy era and extending into the mid 1960's (MK-ULTRA).

These twin forces manifested a plethora of websites fed by conspiracy theorists and alleged victims of psychosurgery that disseminated innuendo and largely unsubstantiated accusations for four decades. Delgado's name and book figure prominently along with other well-known psychiatrists from among 43 Universities and Colleges alleged to have been involved.

Mired in controversy Delgado accepted an offer to become Chair of Physiological Science at a new medical School in Madrid and moved there in 1974.

For the next quarter century Jose continued to publish his research and philosophical ideas, achieving a lifetime total of over 500 articles and six books. His final book, in 1989, was titled "Happiness" and went through 14 editions.

In the last years of his life Jose and his wife returned to America and lived in San Diego where he died unheralded. Unjustly treated and harshly judged by segments of the public and his profession Jose Delgado's ground breaking research, benevolent philosophy and memory deserve better. His career trajectory may provide budding scientists with a cautionary note about the pitfalls of mingling science with philosophy.

Barry Blackwell, M.D., Milwaukee, WI, USA
blackwellbarry@hotmail.com