

Dionisio Nieto (1908-1985), neuropsychiatrist and neuropathologist: a leading figure in Mexico, but unknown in Spain

S. Giménez Roldán

Former head of the Department of Neurology. Hospital General Universitario Gregorio Marañón, Madrid, Spain.

ABSTRACT

Dionisio Nieto Gómez (Madrid, 13 March 1908 - Mexico, 2 February 1985) practised simultaneously as a psychiatrist and as a neuropathologist, a rare combination in the 20th century. Convinced of the proposition that “mental illnesses are illnesses of the brain,” he was trained in psychiatry with Sanchís Banús at Hospital Provincial de Madrid and in histopathology with Del Río-Hortega at the Residencia de Estudiantes. After two long years of further training in Germany, the Spanish Civil War forced him into exile in Mexico, a country where he found the support, appreciation, and resources he was later denied in his home country. As occurs with great personalities, his figure was an inspiration, and he began to be surrounded by committed students of high scientific standards. A resourceful man, he designed a cerebrospinal fluid study for the diagnosis of neurocysticercosis. He was especially proud of having identified the histopathology of schizophrenia in patients who had never been exposed to antipsychotics, which remains a debatable subject. After the restoration of democracy, he frequently visited Spain, where he enjoyed renown and admiration. In a long afternoon shared with the author of this article, Nieto recounted little-known memories and anecdotes of his long and prolific career.

KEYWORDS

Dionisio Nieto Gómez, psychiatry, neuropathology, purge, exile, Spain, Mexico, Cajal school, La Castañeda Insane Asylum

Introduction

The best biography of Dionisio Nieto Gómez (Madrid, 13 March 1908 - Mexico, 2 January 1985) is probably the document he himself sent from Casablanca (Morocco) to the Mexican ambassador to France, requesting permission to live in Mexico.^A His curriculum vitae was endorsed by professor Pío del Río-Hortega, in exile in Oxford at that time, who had led the laboratory of histology and histopathology where Nieto had worked as

an assistant. He was attracted to psychiatry and neuropathology early in his career, practising both at the same time. At his first job, at the age of 22 and working with Miguel Escardó, he expressed his admiration for “the scientific psychiatry of Kraepelin, master of nosology.”¹ And he was no less enthusiastic about Wilhelm Griesinger’s proposition that “mental illnesses are illnesses of the brain,” ie, the biological substrate of neuropsychiatry.² He began his career in Madrid, later continuing in Munich and Berlin and for the rest of his life in Mexico, his host country.

He took his first steps in neuropsychiatry with José Sanchís Banús (1889-1930) at Hospital Provincial

^AMexican delegation, file dated 14 March 1939, No. 2361. Requests from Spanish refugees who wish to emigrate to Mexico. Centro Documental de la Memoria Histórica, Ministerio de Cultura, Gobierno de España.

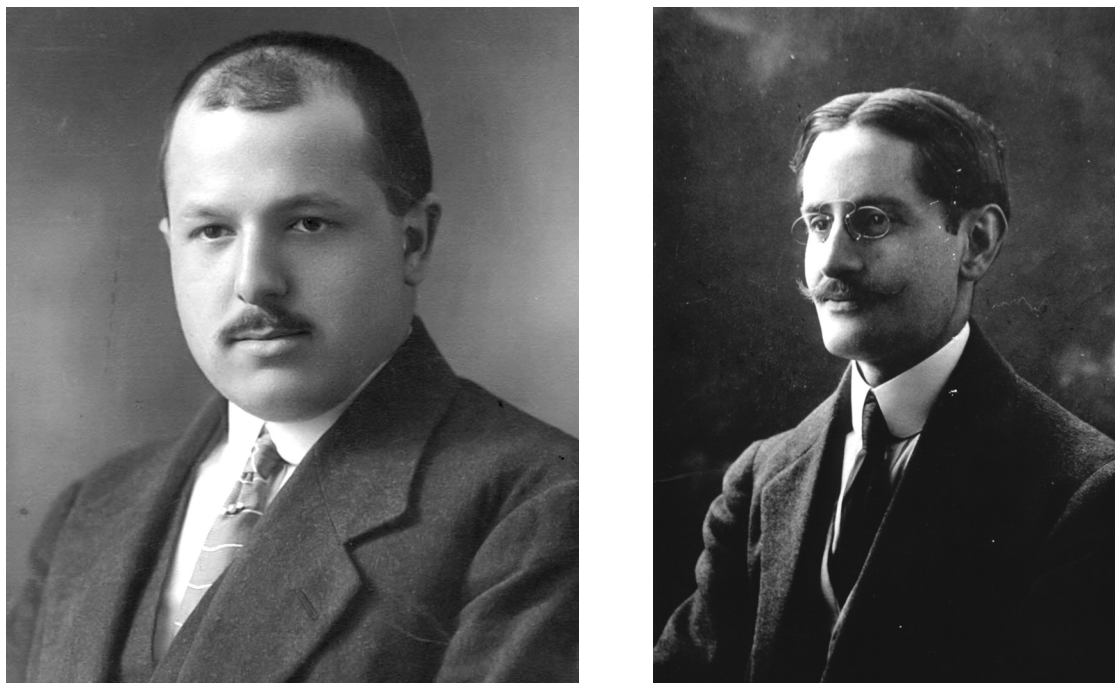


Figure 1. José Sanchis Banús (left) and Pío del Río-Hortega (right), masters of Dionisio Nieto. The photograph of Del Río-Hortega was taken from an article by J. Río-Hortega.⁴

de Madrid (“of compelling speech and proselytising strength,” wrote Rodríguez Arias, referring to his Republican ideas),³ in this case shared by both master and student. At the same time, at the Laboratory of Normal and Pathological Histology on the ground floor of Residencia de Estudiantes, he learnt from Pío del Río-Hortega the techniques of the Spanish School of Histology (Figure 1).⁴ This was not enough for him, and he expanded his studies in Germany for almost three years (1932-1934). He became an “up-to-date” neuropsychiatrist and, at the same time, an accomplished neuropathologist. His success was enjoyed not by Spain but rather by Mexico, as was the case with so many Spanish physicians exiled to that host country.⁵ His work and his very existence were silenced in Spain, just like that of other neuropsychiatrists forced into exile, such as Emilio Mira López, José Miguel Sacristán, W. López Albo, and Gonzalo R. Lafora.⁶

The first official reference to Dionisio Nieto in Spain was at the exhibition held at Palacio de Velázquez, in

the Retiro park in Madrid, between December 1983 and February 1984, when Soledad Becerril was minister of culture, with the collaboration of the Ateneo Español in Mexico. The exhibition named *El Exilio español en México* (The Spanish exile in Mexico) illustrated the huge contributions of around 300 Spanish physicians to their new Mexican home (10% of all physicians in Mexico at that time). Dionisio Nieto had a prominent place in the exhibition.^B García-Albea dedicated more than half a page of his doctoral thesis “Cisticercosis cerebral” (Cerebral cysticercosis) to Nieto, as well as a brief note on his scientific contribution.^{7,8} Thereafter, references to this physician have been scarce: a brief reference in *Revue Neurologique*⁹ and, as an exception, the compilation by a group of Basque psychiatrists of the most relevant personalities of the specialty during the “Silver

^B*El exilio español en México.* (The Spanish exile in Mexico). Palacio de Velázquez del Retiro-Madrid (December 1983 - February 1984). Exhibition organised by the Spanish Ministry of Culture (General Directorate of Arts), the Mexican Secretariat of Public Education, and the Ateneo Español in Mexico.

Age,” which included Dionisio Nieto.¹⁰ After the death of Franco, Nieto and his wife made sporadic visits to their native Spain from 1977.

I had the chance to meet this distinguished Spanish-Mexican personality just a few months before his death.^{11,C} In addition to many offprints he handed to me, I had the fortune to share a long lunch at my own home, which lasted hours. The aim of this article is to recollect anecdotes and confidences, together with some contributions on his life and work.

Development

Nieto’s time in Madrid between 1908 and 1939, unlike the 46 years he spent in Mexico, has received little attention in the literature. The aim of the study was to search for unpublished data in Spanish archives and databases. Searches were conducted at the National History Archive of Spain, Documentation Centre of Historical Memory, National Library of Spain (*Libro homenaje* [Tribute book], by Pérez de Francisco and Pérez-Rincón¹²), Fundación Pablo Iglesias (with negative results), as well as the archive of the Ateneo de Madrid (with no relevant findings), and the archive of the Official College of Physicians of Madrid (11 documents, some of considerable interest, such as the reference to the order that Nieto undergo a political purge investigation). At the Cisne library of Universidad Complutense, his doctoral thesis was accessed as a library loan,¹³ as well as the book by

Wechsler, translated by Nieto and Lafora.¹⁴ The Dionisio Nieto Gómez library (Ciudad Universitaria, Coyoacán, Mexico City) was contacted for information on his time in Mexico, but no response was received. I had the invaluable help of José Luis Díaz Gómez, the last living student of Nieto and a professor at the Department of History and Philosophy of Medicine at Universidad Nacional Autónoma de México (UNAM),^{15,16} together with the writer Héctor Pérez Rincón.

Results

Nieto’s years in Madrid

Barely any data are available on Nieto’s family life during his childhood and youth. His marriage with Catalina Vallejo, a woman of remarkable beauty, led to the birth of three children (Felipe, Victoria, and Adela). Adela Nieto Vallejo, also a physician, came to Madrid during the 1990s, where she wrote her doctoral thesis on her own father,¹⁷ directed by the psychiatrist Francisco Alonso Fernández (1924–2020).^{18,D,E} An abundance of flats were available for rent in Madrid in Nieto’s youth; between 1930 and 1941, he and his family had lived in four different houses in relatively distinguished areas of the city, typical for a comfortable middle-class family.^F He graduated from the Faculty of Medicine of Universidad Central in August 1929, at the age of 21 years, and became a member of the College of Physicians (member number 4111) on 18 September of that year.^G

In 1930, at the age of 22 years, he and Enrique Escardó published their observations on four patients diagnosed with pre-senile psychoses. The study was published in *Archivos de Medicina, Cirugía y Especialidades*, a journal directed by José Sanchís Banús, whom they refer to as “master”; this publication helped in Nieto’s admission to the Spanish Association of Neuropsychiatrists.^{1,19} At this early stage in his career, he was already working at Sanchís’ department at Hospital Provincial de Madrid (Figure 2). He subsequently published several articles in *Archivos de Neurobiología*, a journal founded by Ortega y Gasset, Sacristán, and Lafora in March 1920.²⁰ He was interested in twin psychoses,²¹ the association between schizophrenia and epilepsy,²² and social anthropology in psychiatry.²³ Attendees of the 4th Annual Meeting of the Spanish Association of Neuropsychiatry, held in Granada from 2 to 5 October 1932, knew of the sudden death of Sanchís Banús. As Nieto himself confessed to the author of this article, the year in which Banús died,

^CHe probably took the opportunity of being awarded the Gold Medal of the Universidad Complutense (*El País*, 25 July 1983) to visit me, in response to a letter I sent him on the diagnosis of neurocysticercosis in CSF samples. He was worried because he was going to undergo cataract surgery in Spain, but I am not aware if this was ultimately possible.

^DDíaz Rubio M. Sesión necrológica en memoria del Prof. Francisco Alonso Fernández. *Anales de la RANM*. 2021;138(1):40-6.

^EThe Nieto-Vallejo couple had three children: Felipe, Victoria (Tori), and Adela. Adela is known to have married Pablo Pacheco, also a doctor, with whom she had two children. For unknown reasons, she eventually emigrated to Canada, and her whereabouts is now unknown (Díaz, personal correspondence, June 2023). She came to Madrid to search for work in around 1990, when I had the chance to meet her. She wrote her doctoral thesis “La obra científica de Dionisio Nieto” (The scientific work of Dionisio Nieto) in Madrid under the direction of professor Francisco Alonso Fernández, although a detailed search in Madrid obtained no results (Dr Javier de Jorge, director of the library at the Faculty of Medicine). Adela probably took it with her to Mexico, as the Dionisio Nieto Gómez library at the UNAM does hold a copy. After repeated attempts to contact the library director, I obtained no response.

^FThey lived at four different addresses in 11 years: Méndez Álvaro, 5 (1930); Delicias, 23 (1932), Alcalá Zamora, 56 (1936), and Narváez, 21 (1941). Archive of the Official College of Physicians of Madrid.

^GData available at the Official College of Physicians of Madrid.



Figure 2. Hospital Provincial de Madrid during the second half of the 19th century. Source: Banco de Imágenes de la Medicina Española, RANM.

he consequently had to take on the directorship of the psychiatry department of Hospital Provincial. As for Escardó, it is known that he had founded the Mental Hygiene Dispensary, with 24 beds, in Dehesa de la Villa in 1930; the institution was destroyed during the Spanish Civil War.²⁴

Studies in Germany (1932-1934)

On 27 September 1932, having requested the cancellation of his membership to the College of Physicians during his “absence from Spain,” Nieto travelled to Germany to spend two long years expanding his psychiatry training. He went to the Kaiser Wilhelm Institut in Munich (today Max Planck Institut für Psychiatrie), where Emil Kraepelin (1856-1926) was proposing a new classification of psychoses. He assumed that schizophrenia (*dementia praecox*) and manic-depressive disorder were “organic” processes, in other words, of biological basis,²⁵ which has been discussed until today.²⁶ After the departure of Alois Alzheimer, Kraepelin appointed Walther Spielmeier as his replacement. Dionisio Nieto would be one of the 180 scientists from 25 different

countries trained at that neuropathology laboratory.²⁷ In April 1924, the chair was transferred to Oswald Bumke (1877-1950),²⁸ who combined neurology and psychiatry practice in the same department. There is no doubt that Nieto’s excellent training in clinical neurology is explained by his work with Bumke, as reflected by his works on necrotising myelitis, spinal pachymeningitis, Schilder disease, and cerebral fat embolism.

To conclude his German adventure, in 1934 he went to the Charité University Hospital in Berlin to work with Karl Bonhoeffer²⁹ and to Marburg to work with Ernst Kretschmer (1888-1964).³⁰ However, the political situation in Germany was changing rapidly with the installation of the Third Reich and the Nazi regime (1933-1945). Traditional German science and its professionals also changed: Bonhoeffer was defending his persecuted Jewish assistants, whereas Ernst Kretschmer supported the racial ideology, the “eugenic” sterilisation laws, and euthanasia or “biocriminality” of incurable patients with neurological diseases.³¹ It is not difficult to deduce that by 1934 Nieto would hurry his return to Spain. Practically all the psychiatry books used in the early years after the

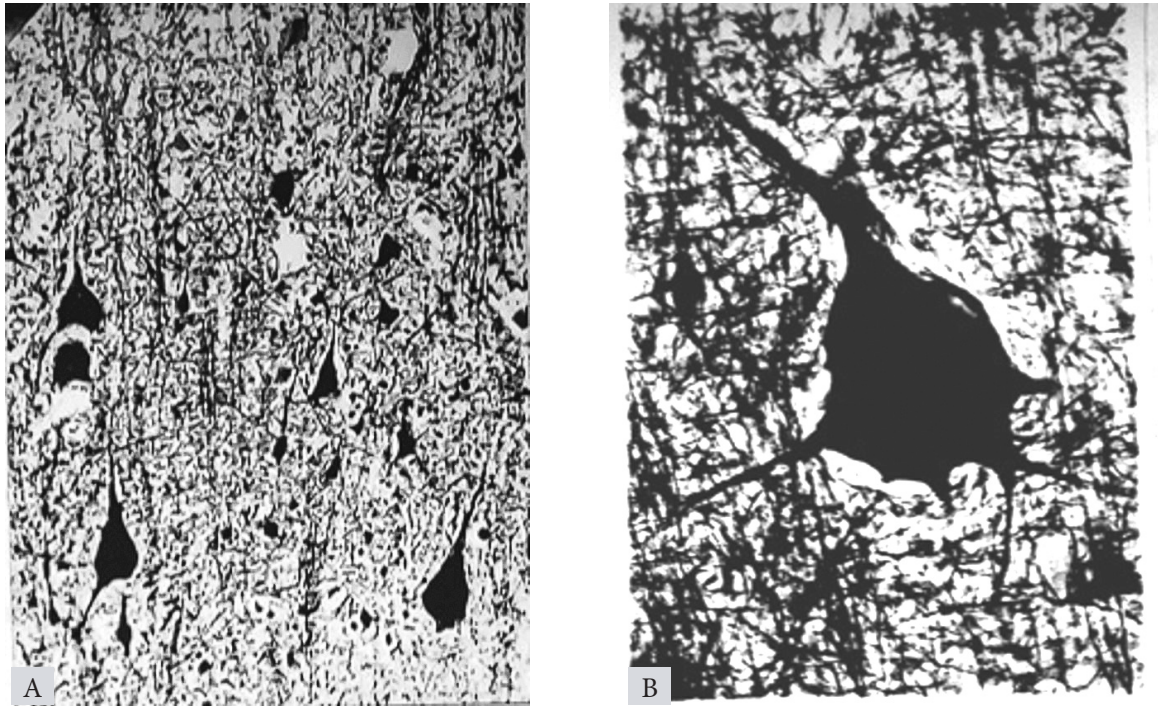


Figure 3. Histopathology of pellagra, according to Dionisio Nieto (thesis). A) Precentral region. B) Greatly enlarged image of A) showing a ganglion cell.

Spanish Civil War at Hospital Provincial de Madrid were still from Germany.

Dionisio Nieto, psychiatrist and neuropathologist

Soon after leaving medical school, Nieto became interested in mental diseases from a dual perspective: their clinical expression, on the one hand, and their underlying morphological basis, on the other. In Madrid, his master in neuropsychiatry was José Sanchís Banús at the psychiatry ward of Hospital Provincial, while he was lucky enough to work at the same time as a voluntary assistant to Pío del Río-Hortega at the Laboratory of Normal and Pathological Histology of the Residencia de Estudiantes between 1929 and 1932, where he mastered the techniques of the Spanish School of Histology.⁹ He expanded his knowledge of both disciplines in Munich: psychiatry with Kraepelin and neuropathology with Spielmeyer.

— Clinical-pathological thesis on pellagra. As a result of the unexpected death of Sanchís Banús in 1932 (although they did have time to write an article together on twin psychoses²¹), Nieto became the “deputy chief of the women’s psychiatry service.” Banús became chair of psychiatry in 1931 (Fundación Pablo Iglesias, consulted on 20 June 2023), and the prospect of becoming chair spurred Nieto to complete his doctoral thesis: he used archival material to create a text of barely 27 pages, including almost exclusively references in German.

Nieto’s doctoral thesis addresses the clinical symptoms and neuropathology of pellagrous psychosis. He completed his thesis on 26 February 1934, at the age of 26 years, after hurriedly leaving Berlin and Marburg due to the rise of Nazism. The five cases analysed were young women (aged between 32 and 38 years), with the exception of a 79-year-old woman with dementia,^H all admitted due to fluctuating confusional state of recent onset. The patients’ intense malnutrition was associated with

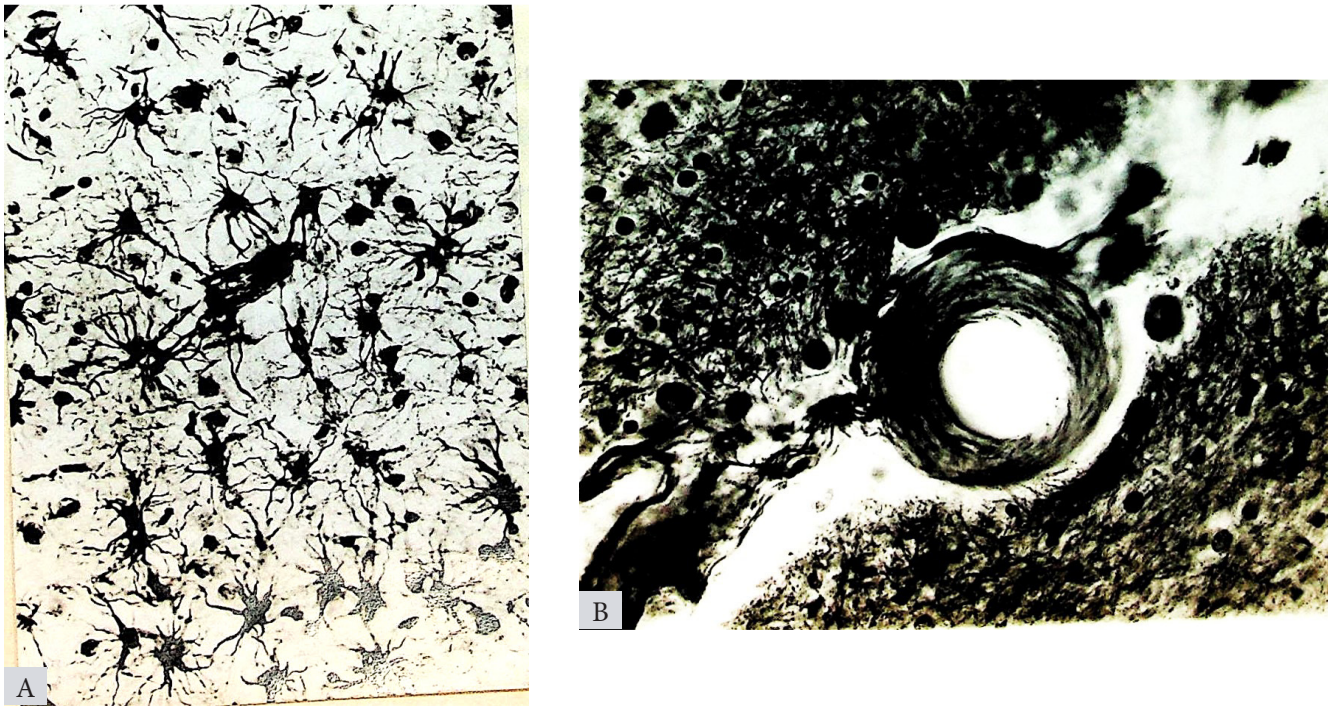


Figure 4. Histopathology of pellagra, according to Dionisio Nieto (thesis). A) Intense frontal gliosis. B) Hyalinisation of the intima of small arteries.

erythematous lesions in areas exposed to the sunlight, as well as diarrhoea, all of which suggested a diagnosis of pellagra. Several patients presented delusional ideation consistent with psychosis (for example, case 4 said that there were “baby chicks hatching from eggs on her head”; and case 5 said that she “was dragged there by prison guards”).

A histological finding common to all cases was that ganglion cells of layers V and VI of the precentral cortex “are tumefactive, giant, with pyknotic nuclei,” reported by Nissl as “*primäre Retzung*” (“primary rescue”) (Figure 3),

together with intense frontal gliosis and hyalinisation of the intima of small arteries (Figure 4). He concluded that CNS histological alterations in pellagra are “degenerative and relatively specific.”

During the famine of the besieged Madrid of the Spanish Civil War (September 1936 to 26 March 1939), Bartolomé Llopis (1905-1966) confirmed Nieto’s clinical observations in more than one hundred cases, although he accepted “pellagra sine pellagra”, ie, without the characteristic rough and photosensitive skin.³² Today, pellagra is a disease of the past, although it may rarely be observed as a complication of alcoholism.³³

Nieto was the first neuropathologist in Mexico, followed by his most dedicated student Alfonso Escobar Izquierdo (1929-2000). As a result of his innate creative spirit, Escobar also designed methods for myelin and *Treponema pallidum* staining.³⁴ Together, they published six chapters (basic staining, parasitic diseases, neurosyphilis, epilepsy, major psychoses, stress) in Jeff

³²The thesis is a booklet with 29 typed pages, including 11 histological images with short captions, not mentioning the staining method. It is preserved in a poor state of conservation at the library of the School of Medicine in Madrid (signature no. TA223). The doctoral thesis examination board included Pittalunga (the Italian Gustavo Pittalunga, who was exiled after the military uprising in 1936; curiously, his name is struck through, although his signature is legible on the cover), Enrique Otero de Carvajal, and Francisco Mora Teruel.

Mickler's 1971 book *Pathology of the nervous system*, whose publication was delayed due to editorial problems.³⁵⁻⁴⁰

Nieto's most original contribution, or at least the one of which he was proudest, was on the neuropathology of schizophrenia, which he presented in 1957 in Zurich at the Second International Congress of Psychiatry.⁴¹ Together with his student Alfonso Escobar, he addressed the topic, which had been seen as "untouchable" until that time, in *Pathology of the nervous system*.⁴² Using the silver carbonate and lithium methods (typical of the Spanish Histological School) they proposed the presence of periaqueductal and periventricular fibrillary gliosis as the most characteristic findings; it is worth mentioning that they observed this in patients who had never been exposed to antipsychotics. In the offprint he handed to me, I could see the word "¡ojo!" (careful!) next to the reference in which Stevens confirmed his observations with the Holzer method, specific for glial staining,⁴³ and one of the contributions against the supposed "functional" origin or "null hypothesis" of schizophrenia.⁴⁴

The Spanish Civil War: a State mission and a purge file

Dionisio Nieto was strongly committed to the Second Spanish Republic, at least during the Civil War. Without a doubt, his righteousness, staidness, and bonhomie were sufficient reason for him to be entrusted with distinguished positions. At the young age of 28 years, from August 1836 to February 1837, he replaced José Miguel Sacristán as director of the Ciempozuelos psychiatric hospital (Madrid),¹⁰ a centre with approximately 3000 patients that had been run by the Brothers Hospitallers of Saint John of God since 1867. Nieto himself published a scientific article in September 1937 when he was a medical captain in the air force, when the hospital found itself right on the front line: he stood firm despite the possible risk of losing his life.⁴⁵

In 1938, his name was proposed to perform a state mission as a man of confidence at the service of the Republic. The following lines are an approximate transcript of his words during our long conversation after lunch:

I had been sent to a small healthcare centre located [not far from the coast,] where my assigned mission [as medical captain] was to perform the physical and neuropsychiatric examination of future pilots of combat aircraft. I also occasionally attended sick officers, offering them a place for rest and recovery. I

was recommended to an officer [probably a military staff officer], diagnosed with tuberculous meningitis, a diagnosis that was not confirmed. He was soon discharged. To my surprise, an officer arrived one day on a motorbike and handed me a large envelope with the official coat of arms of the Republic, on which I could read: "State mission." I ended up on a train to Tangier carrying a briefcase full of cash.

In 1938, the sick official had informed general Asensio that Nieto was a man of sound judgement, and loyal to the postulates of the Republic.¹ His task was to deliver the valuable briefcase to a certain leader of a Moroccan cabila to use his men to rise against the national army, thus creating a second focus of insurgency. "He kept the money and there was no uprising at all," Nieto concluded.

Nieto did not escape the repressive apparatus of the post-war period. On 2 October 1941, a letter was delivered to the College of Physicians (presumably returned after being sent to Nieto to his address at number 21, Calle Narváez). It was signed by Valentín Matilla, secretary of the purge tribunal at the Universidad de Madrid¹:

To date, no affidavit has been presented in this institution in order to proceed with his professional purging, which was declared compulsory by ministerial order on 6 October 1939; therefore, I would be very grateful if you would verify this within a period of TEN DAYS, as otherwise, and in spite of this executive board, it would be necessary to apply regulatory measures.

I remain your humble servant,

The general secretary, V. Matilla.

Madrid, 2 October 1941.

Exile: Clovis Vincent, a protective neurosurgeon

"Rio Hortega qui chassé par la guerre était venu s'installer à la Pitié pendant plus d'un an. Autour de lui s'était créée une véritable école espagnole et cubaine" (Brunon, 2016).

¹General José Asensio Torrado (1892-1961) has gone down in history as a disciplined and rigorous official, committed to the cause of the Republican government since August 1936, who spent his last years in New York (Spanish Royal Academy of History, <https://dbe.rah.es/biografias/6913/jose-asensio-torrado>).

¹The examining magistrate was the chair of pathology and clinical medicine, Francisco Enríquez de Salamanca. Sometimes, information came from complaints by workmates. In: Pérez Peña F. *Exilio y depuración política en la facultad de medicina de San Carlos: sus profesores y la Guerra Civil*. Madrid: Visión Libros; 2005 (p. 66).

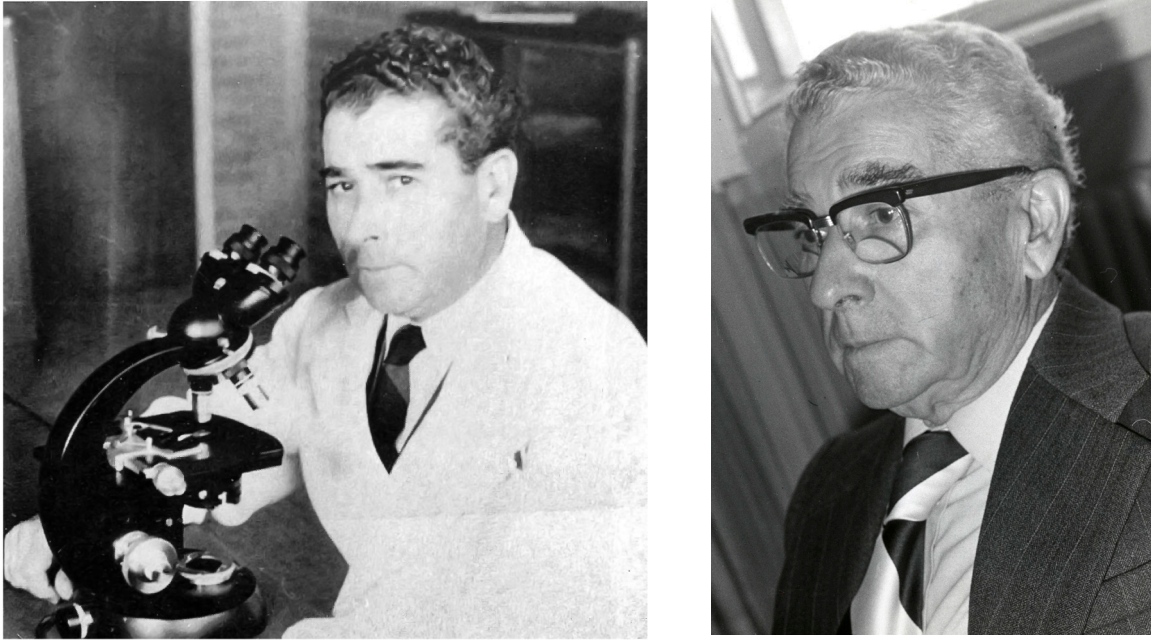


Figure 5. Dionisio Nieto as a young man, looking through the microscope (photograph taken from A. Escobar³⁴), and during his latter years (source: Banco de Imágenes de la Medicina Española, RANM).

Clovis Vincent was the classical example of a neurologist who later became a neurosurgeon, and became a renowned specialist within ten years. He was encouraged to do this by Babinski, whom he admired all his life: the latter advised him to travel to the United States to learn surgery skills with Harvey Cushing. Vincent is considered the father of French neurosurgery.⁴⁶ During the German occupation in the Second World War, he continued working at La Pitié hospital in Paris; this led some to consider him a collaborator, which has been denied.⁴⁷ He generously invited Del Río-Hortega to work at the hospital's histopathology laboratory, as well as other exiled Spaniards, including Dionisio Nieto.

Mexico, host country

The president of Mexico, Lázaro Cárdenas, was aware of the letter requesting asylum sent by the Republican soldiers to Julio Álvarez del Vayo, in Paris at the time, dated 3 April 1939. Álvarez del Vayo (1891-1975) was a lawyer and journalist, who was war commissary general at the time; although he was initially a socialist,

his political stance was gradually turning to terrorist positions.⁴⁸ Cárdenas' reply was as follows: "Mr Bassols has instructions for the Spanish citizens who want to live together with the Mexican people, who are limited in re-sources but full of excitement and affection for our brothers forced temporarily to leave their home country." Spanish migration began in 1937 when the so-called "children of Morelia" arrived, although the arrival of Spanish Republicans continued until the late 1940s.^{49(p55)}

Nieto and his wife Catalina Vallejo, Lina, pregnant with their first son, disembarked at the port of Veracruz in 1942.^{34,50} Soon after settling in, he became a Mexican citizen⁵¹ and immediately proceeded to refit an old dental clinic to create the Laboratory of Medical and Biological Studies, modelled on the Cajal Institute (Figure 5).^K

^KGómez de Lara (2021) mentions that Nieto arrived in Mexico in 1941. It seems more plausible that he would have arrived in 1942, as suggested by Escobar, a student who worked with Nieto for several years. This is also consistent with the time he spent in Paris with Clovis Vincent, after leaving Spain.



Figure 6. Dr Dionisio Nieto Gómez library, at Universidad Nacional Autónoma de México. Photograph taken from Ocampo.⁵²

He received a donation of 250 000 dollars from the Rockefeller Foundation and the support of president Lázaro Cárdenas and the House of Spain. By 1969, a new building would house up to eight researchers, a selection committee, and three departments (neuroanatomy, cytology, and physiology), and a bulletin was created, which, under various names, published the institution's scientific production. Since June 2010, the excellent library of the Institute of Biomedical Research bears the name of "Dr Dionisio Nieto Gómez," shown at the entrance in large letters (Figure 6).⁵²

The family's last dollars

Although the ambassador in Paris ensured him "enough financial means to travel to and live in Mexico," Nieto told me that his financial situation was precarious (personal communication, Madrid, 1983). He did not enjoy the same glamorous welcome as Lafora, when he rushed to emigrate in 1938: he was well aware that if the insurgents won, they would never pardon him for having been a signatory member of the Alliance of Antifascist Intellectuals.^{53(p107)} Lafora opened a successful private consultation at number 27 of Paseo de la Reforma, in Mexico City.⁵⁴ It is natural that Nieto would have sought support among the large community of Spanish exiles, who shared nostalgic memories at the House of Spain in Mexico City. Nieto formed an especially close relationship

with Lafora, a psychiatrist also from Madrid, who was 22 years his senior. The pair had collaborated at the Laboratory of Physiology of the Cajal Institute, a modest attic in the Velasco Museum. Nieto's position here was "head of the Anatomical Pathology section." Nieto told me an interesting anecdote that reflects Lafora's famous miserliness and zeal for making money. The Nieto family were down to their last few dollars, which were only enough to eat for a few more days. Lafora's financial position was advantageous: "he even attended pregnant women," Nieto told me. He invited them to have lunch, and when the bill came, Lafora did not make the slightest gesture. Finally, Nieto had no other choice but to pay the bill with his last few dollars. "He discouraged me from remaining in the country, where according to Gonzalo Lafora it would be very difficult to succeed."

La Castañeda Insane Asylum

When Nieto accepted the directorship of the La Castañeda Insane Asylum, this was an unfortunate warehouse of incurable "deranged people," with approximately 2000 patients housed in a building designed for a maximum of 500 (Figure 7). "Men eating rats and rats eating men, a real burning hell," commented Emilio Julio Muñoz of Madrid (<http://bibliotecadigital.ilce.mx>). Initially paid by the House of Spain,⁵⁵ and later with the support of president Manuel Velasco Suárez, Nieto developed a "cutting-edge pavilion" in August 1960: over the course of 25 years, he would pave the way to bring Mexican psychiatry into the modern era.⁵⁶⁻⁵⁸

Nieto was a positivist in search of the biological substrate (both methodological and scientific) of mental diseases in neuropathology. At a time when Mexican psychiatry was dominated by devoted followers of Freud and psychoanalysts, he did not hesitate to enthusiastically apply the new psychopharmacology.¹⁵ This left him in an "uncomfortable position, which has not been recognised enough,"⁵⁸ a professional isolation that Cristina Sacristán (2010) designated "the double exile of Dionisio Nieto."⁵⁷

Nieto's legacy: the development of neurosciences in Mexico

Five Spanish neuroscientists played an essential role in influencing the birth of this science in Mexico: Dionisio Nieto, together with the anatomist and pathologist Isaac Costero, Ramón Álvarez-Buylla, José Puche, and Rafael Méndez.^{34,50}

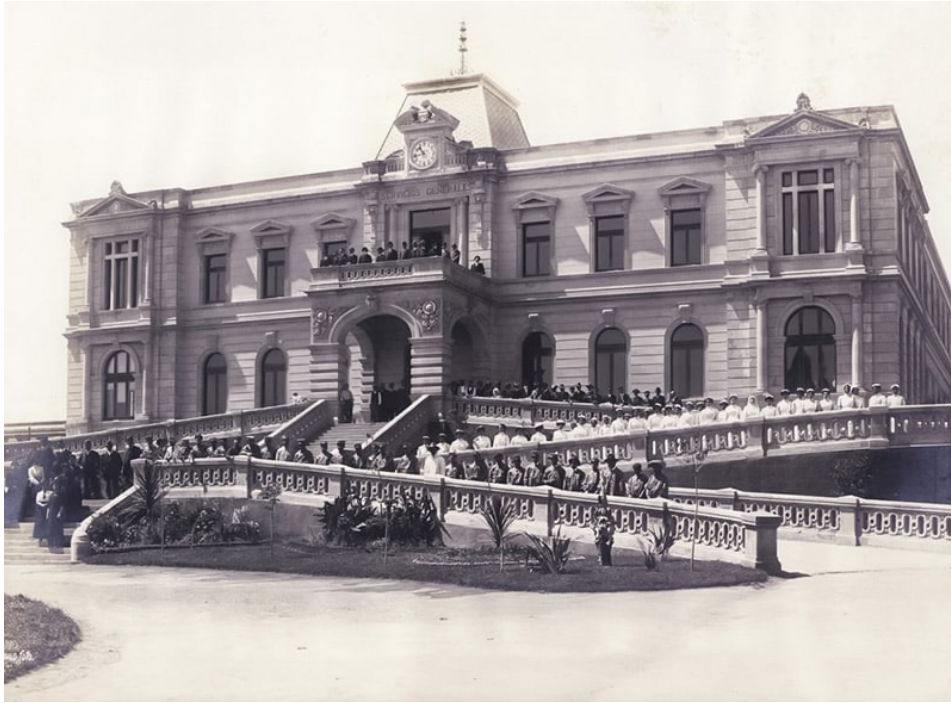


Figure 7. Main entrance to La Castañeda Insane Asylum. Photograph taken from the post by Paulina Lc., entitled *La historia del enorme manicomio “La Castañeda” que existió hasta hace poco en Mixcoac* (The history of the huge “La Castañeda” Insane Asylum, which existed until recently in Mixcoac) (6 May 2018). Available from: <https://www.local.mx/cultura/castaneda-hospital-psiquiatico/>

Students

“My master Nieto was and is a crucial person in my life. Curiously, I dream about him sometimes; in fact, he visited me in my dreams last night. In short, when you write about Mr Nieto, you touch a very fundamental area of my existence, both in professional and personal terms.” (J.L. Díaz, personal communication, 6 June 2023).

These moving words come from one who is considered the last living student of Dionisio Nieto, together with the writer and academic Héctor Pérez Rincón.⁵⁹ Nieto created an extensive school of researchers and psychiatrists in Mexico (Figure 8).^{15,58} One of the most distinguished members was Alfonso Escobar Izquierdo. He joined Nieto in 1956 at the Institute of Biomedical Research at UNAM, first as a mentor and later as a committed collaborator; years later, he worked with Nieto at the Mexican National Institute of Neurology and Neurosurgery as neuropathologist. In his article on Nieto’s career as a

researcher, he expressed the admiration he felt for his master.³⁴ He eventually died due to Parkinson’s disease.⁶⁰ Another outstanding student was Augusto Fernández Guardiola (1921-2004) of Madrid, exiled together with his father, A. Fernández Sastre, who was in charge of issuing the war dispatches for the Republicans. He studied at UNAM, furthering his studies on neurophysiology in France, and obtained a doctorate degree in Biological Sciences. He is considered the founder of neurophysiological research in his host country, making significant contributions on the association between epilepsy and sleep.⁶¹

Comments

“Many Mexican neuroscientists consider ourselves descendants, or at least beneficiaries, of the school of Santiago Ramón y Cajal, which established a way to do neuroscience” (J.L. Díaz, 2009).

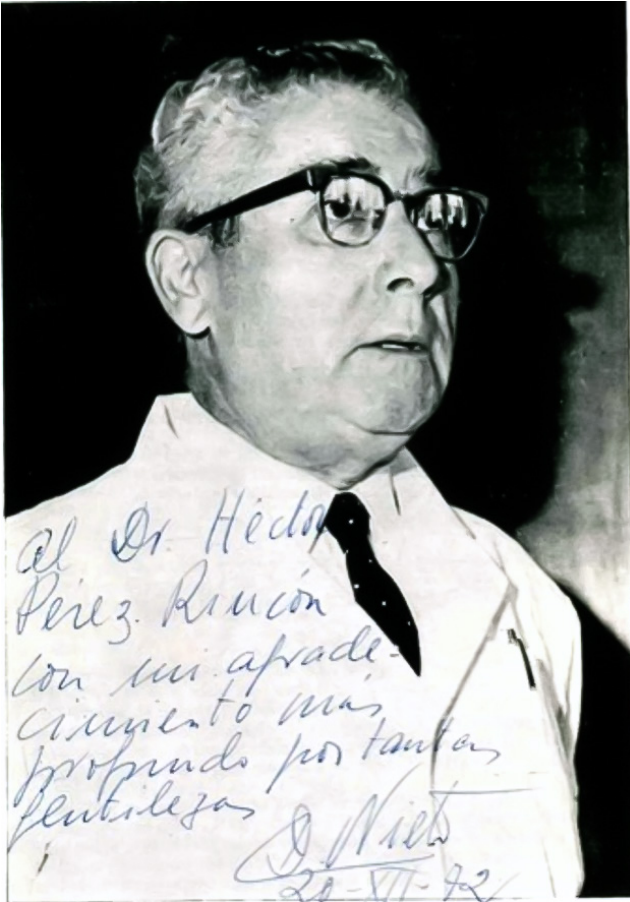


Figure 8. Hand-written dedication from Dionisio Nieto to Héctor Pérez Rincón. Photograph taken from *Libro homenaje al profesor Dionisio Nieto*¹² (Tribute book to professor Dionisio Nieto).

The unexpected arrival in Mexico of many well-trained physicians represented a significant impulse for the scientific development of the country, especially in the area of neurosciences. Due to their commitment to teaching and research, we may mention Rafael Méndez, Dionisio Nieto, Isaac Costero, Ramón Álvarez, and José Puche, all of whom were under the generous protection of general Lázaro Cárdenas del Río. Cárdenas established that the Ateneo Ramón y Cajal in the capital city would validate their academic qualifications, enabling them to practice medicine, and some to access university positions (UNAM).⁵¹

Cajal's ideas were soon introduced by Tomás Gutiérrez Perrín of Valladolid, a disciple of Cajal, and also in

occasional seminars by Tello and Pío del Río-Hortega.⁶² Gutiérrez Perrín (1881-1965) had travelled to Mexico in 1908 on the Higher Health Council's invitation to study syphilis and toxoplasmosis, but remained in the country to work as a professor of histology at the UNAM between 1913 and 1963, almost until the end of his life. He studied CNS alterations in exanthematic typhus and rheumatic fever, as well as the fibroblast activity of meningiomas.⁶² Outside of medicine, he also wrote poems, plays, and even a storybook (*Bum primero, un fantasma de segunda*), published in 1942.^{63,64}

On Nieto's understanding of psychiatry

— Personality. Nieto was an honourable man, loyal to his political ideas even in very complicated situations: he did not abandon his patients as director of the Ciempozuelos psychiatric hospital, even in the clamour of the Civil War,⁴⁵ and committed himself to carry out a dangerous mission to serve the Spanish Republic. During the hard times at La Castañeda Insane Asylum, he cannot have been an easy person to deal with: “good, erudite, pioneering, and uncomfortable,” summarises José Luis Díaz, his last living student, alongside Héctor Pérez Rincón (personal communication, May 2023). Díaz Gómez, in his medical degree thesis entitled “Bioquímica de la psicosis por anfetamina” (Biochemistry of psychosis due to amphetamines, UNAM, 1967), dedicated to Dionisio Nieto this affectionate line: “I would like to express my gratitude to those who have guided me in the path of science. In particular, to Dr Dionisio Nieto, director of this thesis, my master, and a tireless researcher of mental diseases.”

Emilio Julio Muñoz Martínez (1938-2016) of Madrid, who especially worked in neurophysiology with Augusto Fernández Guardiola at UNAM, kept more substantial memories of professor Nieto. “Generally, he wore a scowl, intimidating everyone. He walked slowly, frowning and looking to the floor, like someone who is trying not to step on their laces. Suddenly, if someone made a joke, his displeased expression would turn to a glowing smile and sparkling eyes.”⁶⁴

— Psychiatry according to Nieto. Loyal to his early calling to this discipline, he conceived it as a branch of medicine, and subsequently, as a branch of the natural sciences.¹⁹ At least during his first years at Hospital Provincial de Madrid, he followed the prevailing thinking of the time, such as the value of the constitutional types of Kretschmer, which Nieto applied to the possible

association between epilepsy and schizophrenia.²² When he wrote about an unusual case of two monozygotic twins with schizophrenia, he stated his “longstanding and unconditional adherence to the ideas of Kretschmer and Bleuler.”²¹ “All that is beyond the scope of natural science in this discipline is pure speculation,” he stated. It is from this point of view that we must understand the aggressive article he dedicated to Justo Gonzalo Rodríguez-Leal (1910-1986) and his “deductive method” in *Archivos de Neurobiología*.⁶⁵ “Erroneous lucubrations and an indefensible performance” that Justo Gonzalo also applied to people injured in the war, according to Nieto.^{66,67} “For Justo Gonzalo, schizoid disorder was similar to diabetic disorder,” Nieto emphatically concluded.

For him, the aim of the clinical-pathological method was not to identify the localisation of certain symptoms, as has been the classical objective since Broca; on the contrary, his aim was to identify the morphological substrate of such diseases as neurosyphilis or cysticercosis, for example, which were processes that shared the feature of progressing with mental disorders but differed in terms of their biological underpinnings. This idea took him to the laboratory of Del Río-Hortega in Madrid, and later to Munich with Spielmeyer; he finally demonstrated it at the special pavilion he led at La Castañeda Insane Asylum, in Mexico City.

He argued, sometimes harshly, that all speculation lacked a scientific basis.⁵⁰ This brought him trouble, especially with practitioners of psychoanalysis, a current in vogue at the time; this would represent the second element of his “dual exile,” the term used by some authors to refer to his relative professional isolation.⁵⁷

— On the brain of dolphins. We may assert that *El problema cerebro-mente y el misterio de los delfines* (The brain-mind problem and the mystery of dolphins), the only book Nieto wrote in collaboration with his daughter Adela,¹⁸ represents the compendium of ideas that he had

¹⁸In the analysis of a specimen of the *Stenella graffmani* dolphin (body weight of approximately 150 kg, with the brain weighing 1109 g), captured off the Mexican Pacific coast, the most surprising anatomical finding was the abundance of cerebral gyri, clearly higher in number than in the human brain. Adela Nieto was a researcher at the Institute of Biomedical Research, in the compared neuroanatomy and neurohistology section. She also studied the neurochemistry of the red nucleus (Nieto A, Nieto D. *Neurochemical significance of the red nucleus*. Bull Clin Neurosci. 1986;51:89-93).

^MM. Casanueva. “La Complutense ha concedido su medalla de oro a Dionisio Nieto, psiquiatra exiliado”. “El desagravio para todos los que se marcharon”. *El País*, 25 July 1983.

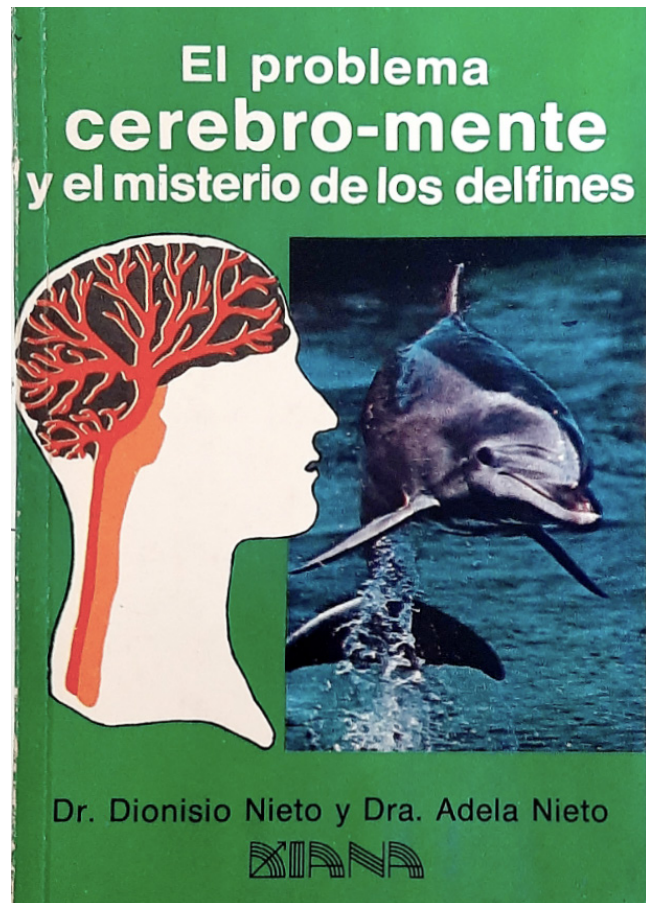


Figure 9. Cover of the book that Dionisio Nieto wrote together with his daughter Adela on the brain of dolphins (gift from the authors).

to defend his whole life before artificers, philosophers, and fanatical believers: “The mind cannot be separated from the brain”¹; denial of this idea had discriminated the organ, to the point of separating human beings from their anatomy. Emotional behaviour, whether we call it soul or spirit, was not a new idea: Papez’s research had already attributed it to the limbic lobe in 1937. This psychiatrist and neuropathologist had faced a frustrating problem: the dogma according to which schizophrenia lacked an anatomical basis (Figure 9).

— Occasional visits to Spain. After the restoration of democracy in Spain, from 1977 Nieto and his wife started to visit the country frequently; one of these visits was on the occasion of the awarding of the gold medal of the Universidad Complutense in July 1983.^M This

circumstance marked the beginning of our brief, yet intense, friendship. Cysticercosis had disappeared from Spain as an endemic disease^{58,68} but reappeared in Latin American immigrants around 1990.⁶⁹ Among other challenges, one consisted of determining whether the lesions observed in CT scans represented viable or “live” forms of the parasite or simply residual calcifications. In 1956, Nieto had published in the prestigious American journal *Neurology* an ingenious modification of the complement fixation test, although in the CSF rather than in serum, as was typical in neurosyphilis.⁷⁰⁻⁷² The problem in our laboratory was the lack of the corresponding antigen, so I decided to write him a letter to request some; time went by and I almost forgot about it. “There’s an old man asking for you, he’s waiting outside,” Nico Muñoz, the kind secretary, told me. I had no idea who it might be. He was wearing a somewhat threadbare suit and looked very old. After introducing himself, he handed me a bottle full of proglottids, the gravid segments that tapeworm releases in the human intestine. He was interested in the new techniques for cataract surgery, so I took him to the appropriate place. He happily accepted the invitation to have lunch at my home, with his wife and another relative, a nursing student who had worked at my department.

The procedure was technically laborious, and a biological diagnosis was eventually established using ELISA and PCR testing. However, the “Nieto method” continued to be used for diagnosis for some time.

— Obituary. The chair of Psychiatry and Psychology of the School of Medicine of Madrid, professor Francisco Alonso Fernández, had had a long-lasting personal relationship with Dionisio Nieto. Not long after his death, Alonso organised a small memorial ceremony in one of the classrooms at Hospital Clínico San Carlos. I was invited to speak. Three or four men wearing mourning clothes sat discreetly at the back of the room during the ceremony. They were students of Nieto who had travelled from Mexico to pay their last tribute to their Master.

Acknowledgements

I would like to thank María José Rebollo, head of the heritage area of ICOMEM, for helping me access the personal file of Dionisio Nieto. I am also grateful to José Luis Díaz Gómez, researcher at the Department of History and Philosophy of Medicine at UNAM in Mexico City, for the invaluable data he provided on the admired

master. I also thank professor Héctor Pérez Rincón, the researcher, academic, and writer, for his valuable help. The computer specialist Carlos Méndez Botella searched for documents on Dionisio Nieto in little-known archives.

Conflicts of interest

The author has no conflicts of interest to declare.

References

1. Nieto D, Escardó E. Contribución al estudio de las psicosis preseniles. *Arch Med Cir Esp.* 1930;32:301-6.
2. Thiels C. Neurology in the German training system for psychiatrists – a personal view. *Br J Psychiatry.* 2013;203:399-400.
3. Rodríguez Arias B. Historia de la neurología española. *Arch Neurobiol.* 1961;24:181-96.
4. Río-Hortega J. A propósito de los descubrimientos de la microglía y la oligodendroglía: Pío del Río-Hortega y su relación con Achúcarro y Cajal (1914-1934). *Neurosci Hist.* 2013;1(4):176-90.
5. Campos R, Villasante O, Huertas R, eds. De la “Edad de Plata” al exilio: construcción y “reconstrucción” de la psiquiatría española. Madrid: Frenia; 2007.
6. Villasante O. La producción científica en torno a la neurosis en el marco de la guerra civil española. In: Campos R, Villasante O, Huertas R, eds. De la “Edad de Plata” al exilio: construcción y “reconstrucción” de la psiquiatría española. Madrid: Frenia; 2007.
7. García-Albea Ristol E. Cisticercosis cerebral. Aportaciones al conocimiento de una enfermedad endémica en España e Hispanoamérica [doctoral thesis]. Madrid: Arán Ediciones, Universidad Complutense de Madrid; 1991.
8. García-Albea E. La obra científica de Dionisio Nieto. *Rev Neurol.* 1995;23:874-87.
9. Giménez-Roldán S. The Madrid School of Neurology (1885-1939). *Rev Neurol (Paris).* 2015;171:5-15.
10. Rahmani R, Medrano J, Pacheco L. Dionisio Nieto Gómez: un neuropsiquiatra republicano exiliado en México. *Norte de Salud Mental.* 2019;16(61):93-100.
11. Giménez Roldán S. Necrológica: Dionisio Nieto (1908-1985). *Arch Neurobiol.* 1985;48(5):502-7.
12. Pérez de Francisco C. Libro homenaje al profesor Dionisio Nieto: dimensiones de la psiquiatría contemporánea. Mexico City: Editorial Fournier; 1972.
13. Nieto Gómez D. Contribución al estudio clínico e histopatológico del sistema nervioso central en la psicosis pelagosa [doctoral thesis]. Madrid: Facultad de Medicina; 1934.
14. Wechsler IS. Neurología clínica, con una introducción a la historia de la neurología. Instituto Nacional de México. Mexico: Unión Tipográfica Editorial Hispano-Americana; 1949.

15. Díaz JL. El legado de Cajal en México. *Rev Neurol*. 2009;48:207-15.
16. Escobar A. La neurociencia mexicana y los bisnietos de Cajal. *Rev Neurol*. 2009;48:169-70.
17. Nieto A. La obra científica de Dionisio Nieto. Mexico City: Universidad Nacional Autónoma de México; 1990.
18. Nieto D, Nieto A. El problema cerebro-mente y el misterio de los delfines. Mexico City: Editorial Diana; 1978.
19. Ferrándiz A, Lafuente E. Dionisio Nieto (1908-1983): contribuciones de un neuropsiquiatra exiliado español al estudio de las bases biológicas del comportamiento. *Rev Hist Psicol*. 1993;14(3-4):205-12.
20. Lafora GR. Las relaciones de la Revista Archivos de Neurobiología con la Asociación Española de Neuropsiquiatría y con la Liga de Higiene Mental (1957). Conferencia leída el día 27 de abril de 1957 en el V Congreso de la Asociación Española de Neuropsiquiatría celebrado en Salamanca. *Rev Asoc Esp Neuropsiq*. 2000;20(75):605.
21. Sanchís Banús J, Nieto D. Contribución casuística al estudio de las psicosis gemelares. *Arch Neurobiol*. 1932;12:403-26.
22. Troyano R, Nieto D. Sobre las relaciones de la esquizofrenia con la epilepsia en la herencia. *Arch Neurobiol*. 1932;12:377-8.
23. Nieto D. Antropología existencial y psiquiatría. *Arch Neurobiol*. 1935;15:411-6.
24. Ferreirós Marcos CE. Salud mental y derechos humanos: la cuestión del tratamiento ambulatorio involuntario. Madrid: Comité Español de Representantes de Personas con Discapacidad; 2007.
25. Berrios GE, Hauser R. The early development of Kraepelin's ideas on classification: a conceptual history. *Psychol Med*. 1988;18(4):813-21.
26. Kendler KS, Engstrom EJ. Criticism of Kraepelin's psychiatric nosology, 1896-1924. *Am J Psychiatry*. 2018;175(4):316-26.
27. Kreutzberg GW. Walther Spielmeier and Japanese neuropathology. *Brain Pathol*. 1990;1:60-2.
28. Steinberg H. Oswald Bumke (1877-1950). *J Neurol*. 2013;260:2444-5.
29. Ströhle A, Wrase J, Malach H, Gestrich C, Heinz A, Karl Bonhoeffer (1868-1948). *Am J Psychiatry*. 2008;165:575-6.
30. Biografías y vidas: la enciclopedia biográfica en línea [Internet]. Barcelona: Biografías y Vidas; ©2004-2023. Fernández T, Tamaro E. Biografía de Ernst Kretschmer; 2004 [accessed 20 Jun 2023]. Available from: <https://www.biografiasyvidas.com/biografia/k/kretschmer.htm>
31. Kondziella D. Thirty neurological eponyms associated with the Nazi era. *Eur Neurol*. 2009;62:56-64.
32. Huertas R. Hambre, enfermedad y locura: la aportación de Bartolomé Llopis al conocimiento de la psicosis pelagrosa. *Frenia*. 2006;6:79-107.
33. Norihiko T, Kensuke K, Shijima T, Yasuharu T. Wernicke encephalopathy and pellagra in an alcoholic and malnourished patient. *BMA Case Report*. 2015;1136: 1-3.
34. Escobar A. Dionisio Nieto y la investigación científica. Centenario del natalicio del doctor Dionisio Nieto Gómez. *Salud Mental*. 2008;31:331-4.
35. Escobar A, Nieto D. Stress. In: Minckler J, ed. *Pathology of the nervous system*. New York: McGraw Hill; 1971. P. 2672-5.
36. Nieto D, Escobar A. General staining. In: Minckler J, ed. *Pathology of the nervous system*. New York: McGraw Hill; 1971. P. 2809-11.
37. Nieto D, Escobar A. Parasitic diseases. In: Minckler J, ed. *Pathology of the nervous system*. New York: McGraw Hill; 1971. P. 2503-21.
38. Nieto D, Escobar A. Neurosyphilis. In: Minckler J, ed. *Pathology of the nervous system*. New York: McGraw Hill; 1971. P. 2448-65.
39. Nieto D, Escobar A. Epilepsy. In: Minckler J, ed. *Pathology of the nervous system*. New York: McGraw Hill; 1971. P. 2627-34.
40. Nieto D, Escobar A. Neuropathology of major psychosis. In: Minckler J, ed. *Pathology of the nervous system*. New York: McGraw Hill; 1971. P. 2654-65.
41. Nieto D. Cerebral lesions in schizophrenia. Their neuroanatomical and neurophysiological significance. II International Congress of Psychiatry, Congress Report, vol. 2. Siebig, Zurich. 1957:131-4.
42. Nieto D. Bases cerebrales de la esquizofrenia. *Arch Fac Med Madrid*. 1978;33:5-17.
43. Stevens JR. Abnormal reinnervation as a basis for schizophrenia: a hypothesis. *Arch Gen Psychiatry*. 1992;49(3):238-43.
44. Harrison PJ. The neuropathology of schizophrenia. A critical review of the data and their interpretation. *Brain*. 1999;122(4):593-624.
45. Nieto D. Psiquiatría y neurología de guerra. *Revista de Sanidad de Guerra*. 1937;1(5):182-93.
46. Brunon J. Aux origines de la neurochirurgie française. *Neurochirurgie*. 2016;62:119-27.
47. Guiot G. Clovis Vincent (1879-1947). *Surg Neurol*. 1973;1:189-90.
48. Maestro Bäcksbäck J, Sagredo Santos A. Juan Negrín, Julio Álvarez del Vayo y la lucha por la legitimidad del régimen republicano en el exilio (1939-1952). *Trocadero*. 2013;25:75-9.
49. México y la República Española. Antología de documentos, 1931-1977. Mexico City: Centro Republicano Español de México; 1978.
50. Ascensión Vargas D. Las neurociencias en el exilio español. *Acta Universitaria*. 2003;13:26-9.
51. Gómez de Lara JL. Médicos exiliados en México. Su labor y aportes (1936-1939). *Cirugía y Cirujanos*. 2021;89(2):278-83.
52. Brito Ocampo L, Aguilar C, Brito E. Biblioteca del Instituto de Investigaciones Biomédicas "Dr. Dionisio Nieto Gómez". Biblioteca Universitaria: Revista de la Dirección de Bibliotecas de la UNAM. 2013;16(1):67-72.

53. Moya G. Medicina y cultura en una España en crisis. Madrid: Universidad Autónoma de Madrid; 1986.
54. Valenciano Gayá L. El doctor Lafora y su época. Madrid: Ediciones Morata; 1977.
55. Alatorre A. Actas de las jornadas celebradas en España y México para conmemorar el septuagésimo aniversario de la Casa de España en México (1938-2008). Mexico City: La Casa de España en México; 2010.
56. Ríos Molina A. Locura y encierro psiquiátrico en México: el caso del manicomio La Castañeda, 1910. *Antípoda*. 2008;6:73-90.
57. Sacristán C. La contribución de La Castañeda a la profesionalización de la psiquiatría mexicana, 1910-1968. *Salud Mental*. 2010;33:473-80.
58. Colotla VA. La psicofisiología mexicana a través del trabajo de tres investigadores: Raúl Hernández-Peón, Dionisio Nieto y Augusto Fernández-Guardiola. *Revista Argentina de Ciencias del Comportamiento*. 2016;8(2):48-57.
59. Pérez-Rincón H. Prólogo. In: Pérez de Francisco C, ed. Libro homenaje al profesor Dionisio Nieto: dimensiones de la psiquiatría contemporánea. Mexico City: Editorial Fournier; 1972.
60. Escobar Briones C. In memoriam Alfonso Escobar Izquierdo (1919-2020). *Salud Mental*. 2023;46(3):1-2.
61. Vargas Rangel V. Augusto Fernández Guardiola, un incansable científico. *Ciencias*. 2006;84:61-6.
62. Dosil FJ. La huella de la neurociencia mexicana del exilio español, el legado Cajal en ultramar. *Neurosci Hist*. 2013;1(4):154-61.
63. González Serrano RC. Tomás Perrín. Centro de Estudios Literarios, Instituto de Investigaciones Filológicas (UNAM). Universidad Nacional Autónoma de Mexicana, 13 Dec 2002.
64. Emilio Julio Muñoz Martínez: in memoriam. *Elementos*. 2016;102:62-4.
65. Nieto D. Antropología existencial y psiquiatría. A propósito del trabajo de Justo Gonzalo "Contribución al estudio del esquizoide", publicado en esta misma revista, tomo XIV, número 6, 1934. *Arch Neurobiol*. 1935;15:411-6.
66. Giménez-Roldán S. La dinámica cerebral según Justo Gonzalo. *Neurología*. 2004;19:405-40.
67. Gonzalo Fonrodona I. The pioneering research of Justo Gonzalo (1910-1986) on brain dynamics [Internet]. 2015 [accessed 20 Jun 2023]. Available from: <https://docta.ucm.es/rest/api/core/bitstreams/2a7c2d86-7675-4099-aed6-5027194f550b/content>
68. López Albo W. Parasitosis del sistema nervioso central. *Arch Neurobiol*. 1932;12:487-502.
69. Obrador S, Roda E, Letamendi LMH, Escalada JG. Un caso de cisticercosis cerebral generalizada. *Rev Clin Esp*. 1947;27:45-9.
70. Nieto D. Cysticercosis of the nervous system. Diagnosis by means of the spinal fluid complement fixation test. *Neurology*. 1956;6:725-38.
71. Nieto D. Cysticercosis of the central nervous system. Diagnosis by means of the spinal fluid complement fixation test. In: Palacios J, Rodríguez Carvajal J, Taveras M, eds. *Cysticercosis of the nervous system*. Springfield (IL): Charles C. Thomas Publishers; 1983. Chap. 5.
72. Chinchilla N, De Andrés C, Giménez-Roldán S. Frecuencia de neurocisticercosis en un hospital de Madrid (1880-1989). *Arch Neurobiol (Madr)*. 1989;52(6):287-94.