

Gonzalo Moya (1931-1984): an unmatchable neurology department

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ABSTRACT

Introduction. No hospital departments able to care for neurological patients were available in Madrid until well into the 1960s. In 1964, however, Gonzalo Moya (1931-1984) formed a department equipped with the latest technology and featuring an unprecedented method of organising staff, who worked full-time and for that department exclusively. The creation of this department represented a milestone in the history of Spanish neurology.

Methods. Both authors of this article worked in Moya's department for several years, and LMF was one of his best friends, according to Moya's own writings. In addition to presenting our personal reflections and recollections, this article provides a critical review of Moya's works as researcher and writer.

Results. The Nicolás Achúcarro Neurology Department, as Moya named it, became reality thanks to its founder's exceptional intelligence, surprising powers of persuasion, and almost quixotically ambitious plans. He won the trust of the totalitarian regime of that time and also had the support of distinguished figures in international neurology, including Raymond Garcin and especially Ludo van Bogaert.

Conclusions. Many neurologists who would later occupy important posts were trained in Moya's department. Nevertheless, his complex personality and abrasive manner, together with the change in political regime and the launch of several hospitals managed by the Spanish National Healthcare Service, spelled the end for his project. Despite his department's fate, Gonzalo Moya was a key figure in promoting the rapid rise of neurology in Spain.

KEYWORDS

Gonzalo Moya, Nicolás Achúcarro, history of neurology, Ludo van Bogaert, Raymond Garcin

Dedicated to the memory of Gonzalo Moya, in celebration of the 50th anniversary of the founding of the Nicolás Achúcarro Neurology Department.

Introduction

The Madrid school of neurology disappeared after the Spanish Civil War, which left behind a trail of death and exile. Madrid itself would remain devoid of neurological care until the mid-1960s. Only three or four determined specialists were permitted to see patients in rehabilitation, neurosurgery, or general medicine departments. The best option for a young doctor with a thirst for neurological

knowledge was to emigrate. These were just a few of the reasons why the establishment of an exceptional neurology department in 1964 was a historical milestone. The department was equipped with a level of technology that was inconceivable considering the hardships of that time (and unlikely to be equalled today). Staff also worked exclusively and full-time for that department; this was a novel concept in Spain, as was receiving a decent salary.

This department was organised by Gonzalo Moya (Madrid, 1931-1984), aided by his visionary determination, titanic effort, and above all, his arresting ability to gain influence and persuade those in power. Sadly

enough, there are no known biographies of this unique doctor, and a brief funeral note in the newspaper *El País*¹ and his obituary were once the only published descriptions of his complex life.² A few years later, Oscar Trelles in Peru also shared his memories of his old friend from their time they spent together at La Salpêtrière.³ More than ten years after Moya's death, the efforts of the Spanish Society of Neurology (SEN) ensured that more character studies and recollections of this exceptional neurologist would be published.⁴⁻⁷

Material and methods

The authors of this article were members of the Nicolás Achúcarro Neurology Department. SGR worked in the department from 1965 to 1970, whereas LMF, in addition to being a member of the department, remained one of Moya's closest friends from 1955 until the latter's death. Memories and personal documents constitute a funda-

mental part of this biography, which aims to be objective, limited only by the respect due to Moya. In addition to the usual sources, some of the references were provided by the diligent efforts of María José Rebollo, the librarian at ICOMEM (Official College of Physicians of Madrid). Print issues of *Acta Neurologica et Psychiatrica Belgica* dating between 1955 and 1975 were examined one by one at the Cajal Institute. We consulted a copy of Moyá's doctoral thesis at the library of the Faculty of Medicine at Universidad Complutense; the book *Síndromes epilépticos*,⁸ which Moya co-authored, was located at the National Library of Spain.

Results

Biographical data

Gonzalo Moya Juancervera (1931-1984, Figure 1) was born at 44 Calle Hermosilla in Madrid, the city where he would spend most of his life. He was the only child of impover-



Figure 1. Moya was extremely camera-shy. These two portraits show him at the age of 20 (left) and about 40 (right).

ished middle-class parents related to Gregorio Marañón and the famous journalist Miguel Moya, and he was also very close to his aunt Amparo Juancervera, "who taught me to read, to write, to think and to live...in besieged Madrid during the Spanish Civil War". During his time studying at the French Lycée, he acquired a perfect command of French and made lifelong friends. Among them was the Parisian psychiatrist Jean Garrabé, whom Moya entrusted with writing the prologue to his biography of Lafora, published posthumously.⁹ He had fond memories of Paul Guinard, one of his teachers, who was hit and killed by a car as he was crossing a highway in Madrid.¹⁰ Moya displayed extraordinary intelligence as a child, but he was also lonely, obese, bookish, and clumsy.⁷

His beginnings in neuropsychology

Spanish psychologists are surely unaware of Gonzalo Moya's interest in their speciality. Gonzalo Moya was a friend of José Germain's, and his earliest studies, all psychological, were published in *Revista Española de Psicología General y Aplicada*. He wrote the first of these articles when he was only 24 years old.¹¹ As he often explained in later years, "I did so purely for research purposes, and certainly not to step on any psychologists' toes". In cooperation with the Universidad Autónoma, and despite being very ill, he organised the 1982 and 1983 language disorders courses which attracted so many important figures in medicine.

In the summers of 1955 and 1956, when Moya was completing his military service in Medical Unit 5 in Zaragoza, he conducted an exhaustive study of intelligence, personality, and conduct. He administered a battery of neuropsychological tests to a large group of soldiers every day. These results were published in an 85-page article that was often cited in later years.¹² One of the authors (LMF) served with Moya at that time, and he highlights the respect Moya earned by persistently overcoming his physical limitations. In contrast with Moya's rather questionable skill at performing conventional neurological examinations, it was a privilege to watch him examine the higher cortical functions of certain patients. He sent further submissions to José Germain's psychology journal during those years.¹³

An encephalography specialist

As did many other members of the Madrid school of neurology, Gonzalo Moya made his first forays into the specialty in a dilapidated old building in Madrid called the Hospital Provincial. He completed here his doctoral thesis *Electroforesis del suero sanguíneo de enfermos con tumoraciones del sistema nervioso central* (Electrophoresis

of blood serum from patients with central nervous system tumours) based on cases provided by Pablo Peraita and Alberto Rábano. He defended his thesis, which was only 32 pages long, on 9 January 1958. Moya's doctoral supervisor was not his uncle Gregorio Marañón, but rather Enríquez de Salamanca, the director of the laboratory in which Moya carried out his research. As was to be expected, and as he so honestly acknowledged, results from his research were not statistically significant.¹⁴

The interest he developed in the critical flicker-fusion frequency¹⁵ led him to study electroencephalography (EEG). In the Institute of Medical Pathology at Hospital Provincial, Marañón had set up an EEG laboratory under the direction of Pedro De Castro, who had been trained by Jasper in Montreal (Figure 2). Moya, De Castro, and



Figure 2. This brick pavilion with the elegant entrance was the Institute of Medical Pathology at Hospital Provincial, directed by Gregorio Marañón. Moya saw his first neurological patients in the electroencephalography laboratory (photograph taken by SGR years after the hospital had been closed).

other authors published an excellent monographic article on epileptic syndromes in a series of 1063 patients.^{8,16} He became an extraordinary EEG specialist, a position that brought him into contact with neurological patients for the first time. These patients were treated by a wide variety of specialists, a fact that surprised Moya. This experience left its mark, and years later he would still recall his specialty as “*neurologia irredenta, victim of history*”.

In 1962, thanks to the powerful influence of president von Bogaert, the World Federation of Neurology gave Moya a grant to study the epidemiology of epilepsy in the Congo,¹⁷ an underdeveloped country immersed in a severe economic crisis. The social concerns that Moya would display for the rest of his life developed at that time, and he began criticising similar problems in his own country, such as the expulsion of epileptic children from school, the belief that epileptics were dangerous, and epilepsy-related discrimination in the workplace.¹⁸ He had epileptic patients in mind in 1970 when he founded the journal *Revista de Subnormalidad, Invalides y Epilepsia*. One of the journal's objectives was “to modernise public opinion in our country”.¹⁹ He also showed interest in clinically silent epileptogenic EEG foci in children with behavioural problems,²⁰ and published his last clinical article, on shock-induced reflex seizures, in 1974.²¹

Moya required EEGs for all inpatients and outpatients treated by his department at Gran Hospital del Estado, regardless of their disease. One of the many tasks he performed early in the morning, before dawn, was drawing up reports on the EEG recordings made that day. He would sit in the gloom and flip through the pages of EEG traces at impressive speed while the eerie red light from the microphone of a huge tape recorder played across his face. The stack of EEG traces produced every day was divided up equally between Gonzalo Moya and Manuel Pérez Sotelo, SGR's predecessor in the department. Strangely enough, Moya became interested in telemetry EEG not as a diagnostic tool for epilepsy, rather “in order to study emotions in subjects able to move about”²².

La Salpêtrière

Moya would always remember that autumn morning in Paris in the 1950s when he handed his letter of presentation (written by his uncle Gregorio Marañón) to Raymond Garcin (1897-1971), professor of clinical neurology at La Salpêtrière. Although Moya was camera-shy, he appears in a group photo of the foreign assistants for the 1958-1959 academic year taken in front of the

Pavillon Bellièvre, and he later published the photo in *Revista Española de Subnormalidad, Invalides y Epilepsia* (Figure 3). This was probably one of the best times of his life, with La Salpêtrière providing dramatic clinical sessions and a historic library, and Collège d'Espagne for his lodgings. After the death of Raymond Garcin, Moya nostalgically recalled the muscle biopsies he performed in Jean Laprèse's laboratory, where he first explored his interest in myopathies (Figure 4).

Moya spent some time at the National Hospital at Queen Square, London, where he was trained in language disorders by MacDonald Critchley.³ Moya often spoke of him with admiration and encouraged the Faculty of Medicine in Madrid to award him an honorary degree. In 1983, Moya invited Critchley to attend the course on language disorders and present a lecture (“How far is aphasia a localisable symptom?”).



Figure 3. Group of foreign assistants at La Salpêtrière, Pavillon Bellièvre, in 1959 (Moya, very thin at that time, is indicated with an arrow).

The Bunge Institute in Antwerp

The Bunge Institute was created as a private foundation in 1934, but the rich and influential Ludo van Bogaert (1897-1989) managed to transform it into a world-famous neurological institute. Around 1960, Gonzalo Moya, now a member of the Institute, signed three articles that were published in the journals *Revue Neurologique* and *Acta Neurologica et Psychiatrica Belgica* (edited by van Bogaert). Moya's studies were based on the excellent records kept by the Institute. He recognised the contributions of J. Radermecker and A. Lowenthal in the articles addressing late-onset distal myopathy²³ and a family with multiple cases of spasmodic paraparesis and amyotrophies.²⁴ One of his more influential articles showed that the condition initially known as 'menopause myopathy' was actually misdiagnosed polymyositis and could be treated with corticosteroids.²⁵ He also authored the first review on familial multiple sclerosis to include anatomical pathology evidence,²⁶ and he collaborated in studies led by other recipients of grants from the Institute.²⁷⁻²⁹

Although van Bogaert described six clinical-pathological entities, the main disease studied at the Bunge Institute was subacute sclerosing panencephalitis (SSPE), a topic which included Radermecker's contributions to EEG

studies and Lowenthal's studies of CSF alterations.³⁰ Moya mentioned he had already examined a case of SSPE in Barcelona with Luis Barraquer Ferré, and in fact, he had even given a lecture on the same topic in Professor Sarró's department in Barcelona.³¹ He was therefore very surprised to learn that the entity was unknown elsewhere in Spain.³² The truth is that these patients were attended in neurology departments, and all of them invariably underwent brain biopsies.³³ Moya quickly published the first observations from his new department,³⁴ conducted trials of diazepam to control periodic myoclonias,³⁵ and continued consulting with the Bunge Institute on the management of its long-term patients.³⁰ Belgian medical personnel even made the journey to Spain to perform sleep studies.³⁶

In Antwerp, Moya also became fascinated with metabolic diseases of the nervous system that cause intellectual disability, since cases were frequent among the large population of Ashkenazi Jews living in that city. He published a monographic issue of the *Revista Española de Subnormalidad, Invalidez y Epilepsia* (1970) addressing the early detection and prevention of retardation. Back in Spain, he researched phenylketonuria with special interest; paradoxically, the first reported case was a young Cuban boy with violent kinetic tremor and hyperammonaemia.^{37,38} The case of a Roma family with four children affected by the syndrome, patients who SGR would attend years later in an asylum, was especially tragic.³⁹ This was the first case of a neurological disorder of genetic origin reported in this ethnic group in Spain.

Neurology according to Moya

The reason why the rise of our specialty came so inexcusably late in Spain was that neurology was a "victim of history".⁴⁰ For a field in which "everything had yet to be sorted,"^{32(p117)} Moya prescribed a sort of shock therapy that would include creating a model centre –this was how he envisioned his service– and obtaining official recognition of the specialty. But how was he to build compelling arguments that would persuade the government? The best approach was to present neurological disorders as social diseases, understood as "diseases which, in addition to being very frequent, impose a financial burden on society".^{32(p108)} The uncomfortable feeling of guilt reached the highest tiers of a government that had abandoned unknown numbers of disabled unfortunates to their lot. In fact, the activity listed as 'Neurological disease surveys' would constitute a line item in his departmental budget.



Figure 4. Paris, 1959. Moya (1) is shown with his friend Oscar Trelles, a leading figure in neurology in Peru and ambassador to France (2), and Garcin (3).

From 1970 on, new hospitals within the social security system started to be built in numerous cities across Spain. These hospitals included neurology departments, most of which depended on internal medicine or neurosurgery divisions. Moya fought fiercely to end the dependent status of the specialty, “a situation that, while still unresolved...is intolerable”.¹⁹ Fifteen years after his department had been set up, he pondered what the future held for neurology, stating “it will become increasingly technical and social in nature”. He was quite right on that account, and in his estimation of the importance of neuroimaging and functional rehabilitation, but less so when he predicted that the future would lie in “the detection of metabolic diseases by measuring amino acid breakdown in urine and CSF, and language rehabilitation”.

An unmatchable neurology department

We have provided a sketch of the circumstances that made this department come to life, and it was certainly well nourished by the government during the dictatorship.^{3,6} The most direct account of its origin was written by Eduardo Valera de Seijas,⁷ who coincided with Moya at the Collège d’Espagne residence in Paris in around September 1957 and would be the first head clinical consultant in his department. During long talks after work, he would let Valera de Seijas in on the details of the fantastic project he planned to undertake back in Spain. Together, they looked for a hospital with the space they craved, and found it on the 10th floor of Gran Hospital de la Beneficencia General del Estado, known today as Hospital de la Princesa. This “avid reader of Machiavelli”, as Varela de Seijas described him, devised a plan: he would arrange an audience with Franco with the help of two ladies. Friends of his family, these ladies were also acquainted with Doña Ramona, the wife of Camilo Alonso Vega (1889-1971), Minister of the Interior and one of Franco’s most trusted men. Moya explained how the meeting came about in a 12-page paper with no publisher’s imprint that he dedicated to that minister and general under Franco: “a friend of ours, Laína Uría de Cores,” introduced van Bogaert and Gonzalo Moya to the minister. With our prior knowledge of his astonishing powers of persuasion, we can easily imagine the powerful officer bowing to Moya’s every whim. In the short paper mentioned above, Moya emphasised that Don Camilo always took an interest in the workings of his department, even when he was on his deathbed.

Influential players in the establishment of Moya’s department included Ludo van Bogaert, president of the World



Figure 5. Group photo taken during the inauguration of the department (1964). We can see, among others, Gonzalo Moya (1), Ludo van Bogaert (2), Fernando de Castro, the chair of the histology department and a former student of Cajal’s (3), and psychiatrist Jean Garrabé (4). Strangely enough, there are no pictures of Moya together with his different medical teams.

Federation of Neurology (WFN),⁴¹ and some would also say Queen Fabiola, although evidence in the latter case is scarce.⁴² It is true that van Bogaert was granted an audience with Franco, but Varela de Seijas⁷ believed that he was invited as president of the WFN, and not to treat Franco for Parkinson’s disease. The first physician to administer levodopa to Franco was André Barbeau, who displayed a bullfight poster in his office in Montreal as a souvenir of his visit (personal communication from A. J. Pérez de León to SGR). In any case, Don Ludo, as we called him, made frequent trips to Madrid and paid visits to Moya’s department; he may possibly have passed by the Palace of El Pardo as well. On one occasion, one of us (SGR) was about to read aloud the clinical history of a patient with subacute sclerosing leukoencephalitis (as van Bogaert first named it), but to no avail, because Don Ludo exclaimed “SSLE!”, as soon as he entered the patient’s room.

Moya never denied receiving special treatment: “This Neurology Department was established, thanks to and with special oversight by the man who served as Minister of the Interior between 1957 and 1969, General Alonso

Vega". He acknowledged that for his actions, Alonso Vega would be "criticised by the right, the left, and the centre." Moya mentioned that "he was an energetic man, and hard at times...but some prefer to look back at the past and demand accountability instead of resorting to the best form of vengeance: forgetting and using the enemy's mistakes to avoid one's own". To this he added, "[the General] gave a new life to the sick and disabled without ever asking about their ideological beliefs".⁴³ Other figures who had petitioned the Spanish government to show their support for the department included Raymond Garcin and Jean Scherrer.⁴⁴

The Government issued a decree to establish the department in December 1962. Over the next two years, major renovation works transformed the dilapidated Gran Hospital (Figure 5). Moya personally designed every section of the department meticulously and with undeniable good taste; elegant walls with hardwood or cork panelling, vases, comfortable armchairs, and an original decorating scheme featuring old maps (Figure 6). The department was officially inaugurated on 1 May 1964, and the event was followed by an international symposium in which such old friends as van Bogaert, Trelles, Hécaen, Scherrer, Fardeau, and Lowenthal all participated. Spanish attendees included Rodríguez Arias, Barraquer Bordas, and Subirana, from Catalonia; Alberca Lorente, the chair of the psychiatry department in Murcia, and Sixto Obrador, the influential neurosurgeon, also attended the event.

Organisation

Moya modelled his Neurology department after the Bunge Institute in Antwerp,⁴⁵ and also included elements from the Institute of Medical Pathology headed by his uncle Gregorio Marañón.⁴⁶ For physicians, the 1960s represented a decade of multiple jobs with low salaries and poor results. He introduced the concept of working full-time on an exclusive basis; his staff worked shifts from 8.00 to 17.00 and were not permitted to hold second jobs. He even installed a time clock at the entrance, and one of his personal secretaries discreetly supervised adherence to the schedule and replaced the used time cards.

Salaries, which Moya calculated on a case-by-case basis, were generous, at least compared to those corresponding to other members of the hospital's staff. For example, a doctor at a level equivalent to that of a modern consultant or attending physician earned a salary 12.5 times that of



Figure 6. The elegant entrance to the Neurology Department, with its wainscoting, vases, and paintings. On the right, a panel displays the names of benefactors and companies provided financial support for the establishment of the department.

colleagues from other departments in the same hospital. We also discover a rather ominous paradox; the lab technicians, many of whom were the wives of non-medical staff at the hospital, were paid only 1.25% less than consultants. Moya, in turn, had awarded himself a salary three times that of his department's consultants. Seeing private patients was possible in theory, but in practice, few private patients were likely to come to a charity hospital with its unfriendly doormen and patients wandering along dilapidated corridors. One of his secretaries was in charge of bill collection, and any income was kept in what Moya called the "common fund", although profits were never shared out among the doctors. Logically, the doctor who contributed the most to this fund was Moya himself.

Paying the staff's monthly salaries had become a serious problem: items on the budget had to be approved by different government entities every year, a situation which translated into doctors not being paid for six months at a time. During a short visit to Mexico, Moya made contact with successful Spanish businessmen –especially those whose children had some type of disability, according to some– and these businessmen provided sizeable amounts for purchasing equipment.⁹ This money was controlled by Moya himself and known as the "Mexican pool". Some of the "gadgets" described by Lafora were in fact purchased using this fund.

Table 1 Structure of the Nicolás Achúcarro Neurology Department in Madrid (1694-1980)

Adult inpatient ward (men and women)
Paediatric neurology rooms
Long stay beds
Section for neurological coma patients
General sections
Secretary
Classroom
Doctor's lounge
School for children with disabilities
Kindergarten for children with disabilities
Clinical analysis laboratory
Functional rehabilitation section
Speech therapy section
Electroencephalography section
Electromyography section
Neuroradiology section
Neuropathology section
Neurochemistry section
Neuroophthalmology section
Neurootology section
Social neurology section
Neuropsychology section

Bird-type ventilators, a portable X-ray device, and to top it off, an 'electronic nurse' able to remotely monitor the vital signs of several patients at once. This device cost a million *pesetas*, but it was relegated to storage in the end since it was not practical. Moya also leaned on the Social Security system to issue an official order according to which all coma patients in Madrid had to be admitted to his department (some 800 cases in the first year the order was in force). Only two doctors remained in his service at the time, a neurologist and an internist, and the rest of the medical staff had to work on-call. Truth be told, the staff was not well-trained in treating hepatic or uraemic patients, or those who had attempted suicide, and these groups accounted for a large percentage of patients in a coma. Moya's venture did not result in any groundbreaking scientific contributions; it only yielded a study of 35 patients with acute iatrogenic hypoglycaemia, including the neuropathology work-up of two of these cases.⁴⁸

Nicolás Achúcarro Neurology Department

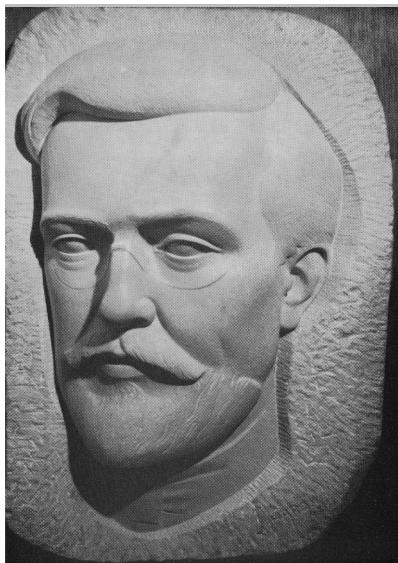
In 1966, Moya decided to name his department after Nicolas Achúcarro (1880-1918). Achúcarro had made significant contributions to the field of neurohistology as a member of the Cajal School, and we know that his ward

As at the Bunge Institute, every doctor had to combine clinical work—ward rounds, outpatient consultations, and on-call shifts—with performing techniques included EEG, neuro-ophthalmological examinations, and so on, during the afternoon hours. Rodríguez Lafona, an occasional visitor,⁴⁷ wrote that the department was "led by a single man" and boasted "extraordinarily specialised colleagues". In fact, the neuropathologist and the neurochemist, and eventually the neuroradiologist as well, were made exempt from rounds and consultations. At the height of its activity, the department contained 83 beds and several different units (Table 1). Its frequent visitors, whether from Spain or abroad, were rendered speechless by its impressive display of technology.

The neurology department, separated from and disapproved of by the rest of the hospital, had no access to the emergency department and treated very few patients with acute diseases. That situation was transformed when Moya managed to obtain a huge room that he redesigned to house 12 beds for patients in neurological coma. It was equipped with articulated beds (unknown at the time),



Figure 7. Inauguration in 1966 of the haut-relief of Nicolas Achúcarro, created by sculptor Juan Haro. We both attended the event. The sculpture was illuminated by two spotlights on the ceiling (some of the more devout attendees blessed themselves when they passed beneath it). Attendees included the Martín Artajo brothers, Gregorio Marañón's son, a relative of Achúcarro's named Severino (father of musician Joaquín Achúcarro), the chair of the histology department Fernando de Castro, and Moya (1).



● servicio de neurología
nicolás achúcarro
madrid

Figure 8. Programme from the inaugural ceremony of the Nicolas Achúcarro monument, including a photo of the haut-relief sculpted by Juan Haro.

at Madrid's Hospital General in Madrid was mainly occupied by neurological patients. His early death, however, prevented him from making any real contributions to clinical neurology. Achúcarro's wife's name was Lola Artajo, a detail that may have influenced the decision to name the department after the famous neurohistologist. Alberto Martín Artajo (1905-1979) was an influential minister during the Franco dictatorship and also distantly related to Achúcarro. He allowed himself to be named as a "friend of the department", and he and his brother presided over the inauguration of the haut-relief portrait of Nicolás Achúcarro on Friday, 14 June 1966 (Figure 7). The inauguration was followed by scientific sessions that were attended by Lafora, Trelles, Laprèse, and others, and announced on an elegant programme (Figure 8). The haut-relief was created by Juan Haro, one of Moya's friends. This sculpture was illuminated by a spotlight in the central hall on the 10th floor, and it can be found today in the collection kept by the SEN's historical museum in Barcelona.

The golden decade

Moya's scientific studies carried out between 1964 and 1974 were original and relatively abundant. He began with an extraordinary monographic article that he co-authored with two recent graduates, Pérez Sotelo and Utiel³²; His last research article in medicine was published in 1974.²¹

Some would question whether Moya's scientific results were on par with the astounding technological arsenal at his disposal. The answer is probably 'no', for many reasons, including a team of insufficiently trained support staff and motivated but relatively inexperienced doctors, most of whom were under 30 (even their leader was very young). In any case, the Madrid school of neurology began to show its paces at the SEN's annual meetings; in 1967, 19.2% of a total of 57 presentations came from Gonzalo Moya's department.⁵ He scouted for and recruited physicians with an interest in neurology from all over Spain: Eduardo Varela de Seijas, Román Alberca, Luis Montserrat, Salvador Barluenga, Francisco González Sastre, Gonzalo Miranda Nieves, Pablo Barreiro, Juan Crisóstomo Utiel, Manuel Pérez Sotelo, Jaime Campos Castelló, and Carlos Benito Cristóbal. Many of them later left the department after a severe internal conflict that Varela de Seijas delicately refrained from mentioning in his historical article.⁷ Moya would later be joined by Antonio Vázquez, Antonio Palao, Francisco Máiquez, Antonio Trujillano, Fernando Martín Santos, Tomás Delgado, José Ramón Ricoy, and Santiago Giménez Roldán. By 1970, however, practically all of them had parted ways.

Neurosyphilis was rediscovered,⁴⁹⁻⁵¹ new drug trials made inroads into the therapeutic wasteland that characterised neurology in the early days,^{31,52} the first Spanish cases of ataxia-telangiectasia were identified,⁵³ and embolism of the anterior tibial artery was found to be a cause of foot drop.⁵⁴ Following up on the cases of two children with sensory neuropathy and severe mutilating ulcers,⁵⁵ Moya administered a survey among rural doctors who were working in Spanish towns on the Portuguese border to look for possible cases of *mal dos pezinhos*, or familial amyloid neuropathy with mutilating acral ulcers. Results from the survey were all negative and, to our knowledge, they were never published. It would be interesting to examine the circumstances that spurred Moya to locate patients with lathyrism who had survived Spain's post-war years,⁵⁵⁻⁵⁷ for follow-up studies of this exotic topic. In contrast to what one might expect given Moya's authori-

tarian nature, he let his colleagues publish several studies that did not mention his name although they used techniques he had developed. These studies are not listed in this article.

Revista de Subnormalidad, Invalidez y Epilepsia

Moya's journal was not a mere tool used to influence government policy and gather donations; he showed a deep concern for the problem of disability associated with neurological disease. This journal, founded in 1970, provides a true reflection of his top priorities in neurology. Issues were published at irregular intervals depending on possibilities for funding, which grew increasingly precarious. It is also no exaggeration to state that the vast majority of the journal was Moya's work alone. The journal included opinion articles,⁵⁹ articles on the medical aspects of idiocy⁶⁰ and epilepsy,⁶¹ and a set of guidelines for assessing permanent disability published in 1970, as well as articles on the historical evolution of the concept of disability and the level of involvement of the government.⁶²⁻⁶⁴ It also included dense extracts from laws related to disability,⁶⁵⁻⁶⁷ but perhaps the most eye-catching part of each issue was the section dedicated to famous figures with disabilities (Table 2). He had always shown interest in the historical aspects of disability,⁶⁸ and this interest was magnified by his love of writing.⁶⁹⁻⁷⁷

The erudite neurologist

As mentioned before, nearly all the doctors who had contributed to the relatively glorious years described here left the department just before Spain's transition to democracy. It was in this context that Moya redirected his

tremendous erudition, appetite for books, and initiative. The monographic study of the life and work of Nicolás Achúcarro, edited by Moya and published in 1968, is a must-read that recounts the opinions of important figures in Spain.⁷⁸ Moya's magnificent biography of Gonzalo Rodríguez Lafona provides first-hand details, many of which had never been published.⁷⁹ He wrote the book in 1981, retiring to the monastery of Santa María de El Paular to review his final draft, but it would not be published until 1986, after his death.

Moya's extensive biography of Peter the Cruel, contains undercurrents that speak volumes about Gonzalo Moya's personality.⁸⁰ The life of Peter of Castile (1334-1369), also known as Pedro the Cruel or Pedro the Just, was marked by ambition and countless murders, including that of his brother, Don Fadrique. This was not the first time his skull was examined: an 1878 report by a doctor named Paradas y Santón had described sutures of the occipital bones typical of fetal development. Reading that report stimulated Moya's imagination,^{80(p82)} and he conjectured that the king's cruelty could only be explained by childhood cerebral palsy, more specifically, hemiparesis that would have caused hypotrophy of one side of the body.

This reflection sparked a full-scale investigation. He wrote letters and contacted friends, and in the end Peter the Cruel's already disturbed remains were exhumed once more from the Royal Chapel in the Seville Cathedral. As solemn organ chords and the prayer for the dead filled the air, the casket, wrapped in purple velvet, was taken from its niche in the presence of the secretary and *mayordomo* (chief of staff) representing the Cathedral Chapter, medical personnel and several journalists and onlookers. A notary recorded the proceedings. Apart from the skull, only a small mass of bones remained in the casket. They took radiographs, and Luis Martínez Fuertes, using a hastily obtained pelvimeter, measured the tibias and other bones. There was a difference of 7 mm in the length of the tibias. The team included no experienced palaeoanthropologists, but that detail was hardly relevant. As Moya categorically stated, "a neurologist could not have the smallest doubt: the behavioural disorders of Peter the Cruel exerted an influence and led him to commit most of his crimes". It was almost 10 o'clock on the morning of 18 May 1968, and the group concluded its investigation in only 4 hours. The dean allowed Moya to keep a distal phalanx in order to perform carbon-14 dating studies.

Table 2. Famous figures with disabilities, according to Gonzalo Moya¹

Louis Pasteur	Hemiplegia
Alphonse Daudet	Tabes dorsalis
J.S. Bach	Blindness
Beethoven	Deafness
Franklin Roosevelt	Poliomyelitis
Goebbels	Poliomyelitis
Gonzalo R. Lafona	Poliomyelitis
Marcel Proust	Asthma
Lenin	Stroke
Richelieu	Tuberculosis
Thomas De Quincey	Drug addiction
Pascual Duarte's brother in <i>The family of Pascual Duarte</i>	Mental retardation

¹Published in *Revista Española de Subnormalidad, Invalidez y Epilepsia*

In 1977, Moya's pen addressed the still-neglected topic of the different languages spoken in Spain: Castilian Spanish



Figure 9. Group photograph taken in the Cathedral of Seville after the exhumation of Peter of Castile. The group includes Gonzalo Moya (1), Denise Karcher from Belgium (2), Luis Martínez Fuertes (3) (with Lowenthal behind him), neuroradiologist Carlos Benito Cristóbal (4), and several others.

(his preferred term), Catalan, Galician, and Basque, as well as the Caló language spoken by the Spanish Romani.⁸¹ The pretext of his article was to speculate on strategies for achieving language recovery in aphasic patients who were bilingual or diglossic, a distinction he liked to make. In any case, his monographic article represents an extraordinary essay on the evolution of languages

in Spain throughout history. His argument was undermined by his tendency to think big; he proposed rehabilitating bilingual aphasics in centres that would include not only bilingual speech therapists, but also a sociologist and even a telecommunications engineer “to develop mathematical approaches”^{81(p282-3)}

Sánchez de Muniain, president of the publishing house Editorial Católica, invited him to write articles on his department’s progress in the newspaper *Ya*. Beginning in 1977, he collaborated with the left-leaning weekly magazine *Triunfo*, and he also admitted to being a regular reader of the social-democratic magazine *Nouvel Observateur*.^{81(p199)} Years before, in his biography of Peter the Cruel, he had mentioned an altarpiece destroyed during “our war of liberation”, referring to the Spanish Civil War.^{80(p87)} The Spanish magazine was probably more in line with his political ideas; during his stay in Paris, he came into contact with important members of the communist party, but like many others, he soon became disenchanted. *Triunfo* also published his well-documented eulogy for Marcelino Pascua (Valladolid 1897-Geneva 1977), a socialist representative during the Second Spanish Republic and the Spanish ambassador to Russia. He was accused of being responsible for the Moscow Gold operation.⁸³ Moya must have been very moved by a demonstration of disabled citizens in wheelchairs in Calle Preciados in Madrid, because he wrote an account of the event (Figure 10).⁸² A passionate bibliophile, he contributed to special interest journals with his well-documented articles on the Count of Aranda or the establishment of a Spanish bank in 1808, to cite just two examples.⁸⁴⁻⁸⁶



Figure 10. Photograph of a demonstration of disabled citizens in Calle Preciados in Madrid. The image appeared in an article of Moya’s that was published in the weekly review *Triunfo* in 1976.

Moya’s last years

Moya was well aware of the increasing difficulty of maintaining support for his life’s work, and he enigmatically cited “the obstacles that have emerged, or were made to emerge”. He acknowledged that the association of friends of the department, presided over by Alberto Lescure, “helped the department survive despite everything”.⁸¹ It was a fact: Spain had evolved and the department could no longer maintain its state of autarky. The department was dismantled, its sections were centralised, and only a few beds remained of what had been a proud empire. Nevertheless, Moya was enthusiastic about the courses that he began presenting in 1976 as a lecturer in clinical neurology at the Universidad Autónoma in Madrid, and he also taught practical sessions with I. Sarasqueta. Curi-

ously enough, he taught his very first class in one of the gardens of the university, since the classroom was not available. He donated his sizeable collection of books, including valuable texts in the history of neurology, to the Universidad Autónoma. He was assigned a few residents,⁸⁷ but everything had changed; in the throes of deep depression, and increasingly unstable on his legs, Moya now rarely left his office. His perpetually delicate health and complex metabolic disorders provoked sudden falls, which may have been caused by proximal muscle weakness. After numerous hospital stays, he died of cardiomyopathy in Clínica Puerta de Hierro in Madrid. The date was 22 January 1984.

Personality

It is not difficult to imagine Moya's lonely childhood as an annoying know-it-all with no siblings and no skill at children's games. The few friends he made, however, kept faith with him even after his death: "he was the best of the best...I am so grateful for what he did for me during those days in August 1973 and throughout our nearly 25 years of friendship"^{81(p87)}, he wrote, referring to one the authors of this article (LMF). His personal drama was evident in his extreme changes in body weight, and his unrestrained self-medication for that condition contributed to his early death.

His physical appearance and intellectual prowess left no one indifferent. His shiny old black suit, worn tight or loose depending on his weight, combined with his somewhat battered white shirt and a carelessly knotted tie, gave him the air of an ascetic or dishevelled scholar. On the other hand, he was a big-hearted man who took his friends out to the best restaurants, and his generous tips were legendary. His restlessness was unforgettable, and his movements were almost robotic. He carried a massive sheet-like handkerchief that he used to wipe the sweat from his shiny bald head and a huge comb to try to smooth down what little hair remained. "So clever, and yet so nervous", one of his patients observed. He even trampled the unwary on his way into the lift.

His capacity for work appeared to be boundless. He arrived at the hospital well before daylight and locked himself in his office; when he emerged for the eight-thirty rounds, he would already have dictated a pile of letters or part of an article or the draft of a new strategy. An avid reader, he once went out walking with one of the authors (SGR) and ducked into a bookshop along the way. He left the shop

with a pile of books half a metre high. He was able to win over those he had just met thanks to his impressive persuasive skills. However, many people proved a disappointment to him, and sometimes Moya did not hesitate to show his temper. He required members of his staff to address each other by their first names so that everyone would be at the same familiar level.

Once Moya set his mind on something, nothing could curb his enthusiasm, even when the foundations of the venture were shaky and chances of success were small. A good example would be his examination of the remains of Peter of Castile⁸⁰ and his unsubstantiated conclusions. At times his projects seemed so ungrounded that they might well have floated off into space. We mentioned one such case from the end of his book on bilingualism in Spain. In this proposal for creating a centre for the functional rehabilitation of bilingual patients with aphasia, he planned to include a telecommunications engineer among the staff.^{81(p282-3)}

Remarks

It is clear that Moya's inflexibility regarding his sine qua non conditions (such as staff working full time on an exclusive basis), and his detachment from the reality of the new healthcare system that was taking shape, contributed greatly to the pitiful decline of the Nicolás Achúcarro Neurology Department. His brusque personality and the tension he created around him also contributed to its downfall but could not have caused it alone. The department's atypical financing and the self-imposed rigidity of its organisational system, which Moya believed to be incompatible with alternate survival strategies, made it very vulnerable. New hospitals with neurology departments were being created, and they offered new opportunities for ending departmental isolation, earning a stable salary, and even opening private offices. The political regime changed, as did the times, and so someone with a narrow mind, and perhaps a touch of resentment decided to destroy his masterpiece, a tragedy all too common in Spain's history. In the 1980s, taking a surprising leap forward, he managed to start works on a new building that would house his Neurological Institute on the site that had once been home to Hospital del Rey. Construction was interrupted, however, and the building remained abandoned for some time.⁹

Moya's detractors point out that he was hand-picked by the authorities since he never sat the competitive exams

(which themselves were questionable).⁶ However, we are sure that if he had taken such an exam, Gonzalo Moya would have used his way with words, his boundless theoretical knowledge, and his obviously incomparable curriculum vitae to trounce the competition.

Moya made a name for neurology in Spanish medicine of the post-war years. The specialty, "a victim of history" as he called it, would of course have reached our hospitals at some point, but we cannot know how many years and how much effort it would have cost without Moya. It was because of his department that Spain's budding social security system decided to move forward and create a neurology department at Clínica Puerta de Hierro.^{6,7} Moya knew how to attract young dedicated Spanish doctors, and his legacy will continue to flourish in future generations. His scientific contributions were robust and thanks to his work, patients from the entire country benefited from his splendid facilities.

In conclusion, we can only repeat the words one of us wrote after Moya's death:

Moya infused Spanish neurology with a breath of fresh air from Europe...with perseverance and intelligence, he founded one of Spain's first neurology departments, and it was extraordinarily well equipped and cleverly designed... His initiative lives on in those doctors whose careers were shaped by their formative experiences in Moya's department...

This reason alone would make his life's work worthy of admiration and respect.²

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