CAJAL, AS SEEN BY HIS SON

Luis Ramón y Cajal

On October 17th of this year, 1984, it will be 50 years that my father passed away. Much has been written of the importance of his scientific works -- according to Sherrington, "the greatest anatomist of the nervous system that has been known" -- and also much has been written about him as a person. I fear that in this respect he is not known well. The biographies written about him by persons who knew him personally and saw him frequently, such as Dr. Corteo, César Juarrós, Azorín, Marañón, Enriqueta Lewy, etc., are not the most popular or the best known. Almost all of the books that have appeared in the last thirty-five or forty years are not more than precipitated and incomplete incursions of his autobiography, deformed by those who have taken advantage of it and filled their books with subjective (opinions) about him.

I lived with him until my late marriage, a year before his death, and even then, we saw each other every week. It would be difficult for anyone today to say that they knew the real Cajal better than I.

Physically, he was tall and strong. Even in his later years he always maintained the springy, rapid and athletic walk of his youth. He was accustomed to carrying a cane, not of necessity, but because it was a style of his time. He liked to wear a Spanish cape on top of his coat, even though he never preoccupied himself much about his personal appearance; it was my mother who saw to it that he was appropriately attired.

His head was large, having an oval face with large features, emphasizing in him, almost as a contrast, a sweet and serene look. His character was more like his mother's, kind and tranquil; nevertheless, he inherited two very important qualities of his father: an indomitable will and a great love for work. He had an artistic temperament with extraordinary observation, which his father was never able to understand, even though he tried several times to modify it, never succeeding, fortunately.

He never was a good student for his teachers; only studying the subjects which interested him, but receiving the highest grades in these.

His childhood and youth were a constant battle to be himself and not the way his father wanted him to be. All of his life he appreciated the love for study that his father inculcated in him, but they who feel that his father modeled him are mistaken. He was a genius in spite of him.

After he completed his studies in medicine, his father insisted in obliging him to practice his profession and dedicating himself to the clinic. He hoped, without a doubt, that someday his son would inherit his substantial clientele. He asked Cajal to assist him in doing a cesarean and my father refused. He left home and wandered around Zaragoza for several days, until because of his concern for his mother, he decided to return home. The definite separation came sometime later when he (Cajal) married against the will of his father. Because our grandfather, Justo, had such a rigid character, it was only natural that he (Cajal) would be closer to his mother, whom he adored, and to her brothers and sisters, especially an Aunt Pablita.

As a child and young adult he (Cajal) was very close to his brother, Pedro. He was a companion as well as his imitator of pranks and diversions. After they both became doctors, they began to work together in research. My father was already married at this time. After my father received his professorship from Valencia they

1Translated from the Spanish, and edited for clarity, by the Cajal Club. Dr. Luis Ramón y Cajal was the youngest son of Santiago Ramón y Cajal. This article written in 1984.
(Cajal and Pedro) began to grow apart; not because of a lack of affection, but because of a lack of time to spend together. They seldom wrote to one another. Their physical characteristics were so much alike that they were often taken one for the other. Their characters were very different; Pedro, also very intelligent, oriented his life in the style of his father, practicing clinical medicine and being a professor in Zaragoza in gynecology. He was more of a conformist and was more practical than his brother, Santiago.

In some biographies my father is attributed with having a military soldier-type character since childhood. These authors, perhaps, had the intention of wanting to endorse in him a military spirit, as an adult, which he never had. Like all children, he had his military heroes, some of whom he tried to imitate: he made a canon with his friends which functioned effectively. He was such an expert with the slingshot that wherever he set his eye he could place the stone. He wrote all about it in something he wrote and titled Lapidary Strategy. What child doesn’t like to play soldiers and play war games? I believe that all do, especially in that time period when there were very few toys, and less (to do) in the villages. Those of us who have heard, from his own lips, his opinions of the Carlist Wars which he experienced: what he thought of the war in Cuba in which he participated as a military doctor; of his political, military and economic disaster; know well he was far from having a military spirit. In his correspondence with General don Miguel Primo de Rivera others have tried to show certain admiration or approval to the regimen that the general represented. This was far from true.

When he (Cajal) received news that King Alfonso XIII had turned over his power to don Miguel Primo de Rivera, my father commented during dinner that day, "He has jeopardized the throne because the people don’t want a dictatorship, nor politicians, nor the persons of

prestige." My father’s profoundly liberal and progressive character was incompatible with dictatorships of any kind. General Primo de Rivera admired and respected Cajal as a Spaniard and as a scientist. General Rivera proposed to the king that a title of marquis be created for Cajal, to which my father refused. His only ambition in life was learning. During his command, my father was awarded the medal, Plus Ultra (1932 or 1933). Because my father was in no hurry to get it, don Miguel Primo de Rivera sent his two daughters to present it to him at his home. There were a lot of differences between them (Cajal and don Miguel), and my father, like a person who was well-born and educated, always, was plainly courteous and appreciative towards don Miguel. Our father was autodidact. Nature endowed him with extraordinary qualities and he developed them to the limit. With his talent, exquisite sensibility, righteousness, austerity, simplicity, mental ductility, inexhaustible tenacity, and an enormous power of abstraction, he seemed predestined to be outstanding in whichever road he undertook.

My father disciplined his mind in a prodigious manner. This is the reason he was able to have such an enormous quantity of skills and knowledge, even though my father (with his humility and simplicity) always considered himself an ordinary man, if perhaps, a little more hard working than normal.

Since childhood he was an untiring reader. He read whatever fell into his hands, having a vast and integral education. In the private library of our house on Alfonso XII Street, there were more than 10,000 volumes on all kinds of subjects: ancient and modern books about medicine, philosophy, literature, botany, etcetera. Those on philosophy abounded especially. He constantly received books inscribed by well known and unknown authors. He read them all, but if at first they bored him, he did not continue to read them and would write on the title page, "heavy, boring or uninteresting". When the author interested him, he would carry on a dialogue with him by writing his opinions in the margins of the book or making his criticisms in the pages following the title page. He re-read the Latin classics in Latin more than once and he had a preference for Laercio. I still have today

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2The well know story of the cannon adventure is described on pp. 69-73 of Recollections of My life by S. Ramón y Cajal.
two books which belonged to my father written by
this author (Laercio) and one of them is
practically full of annotations. He also often read
the French encyclopedists in their language
which he mastered. Of our classicists, the one
he read most frequently was Quevedo. During
his last illness—with full mental capacity up to the
last moment—he distracted himself reading in
bed next to a bookstand full of books so varied
such as Marvels of Animal Life by T. A.
Hammerton, The Esthetic by Locke and works
of H. J. Wells, Julian Huxley.... He alternated his
readings with writing the description of his
symptoms on a day by day basis in a small black
notebook which I guard as a treasure along with
my father's other books.

My father organized his time with sufficient
ability to dedicate himself to the family, work,
literature, his social gatherings, country
excursions, etcetera. He was one of the few
Spaniards of his time who was familiar with
practically all of Spain. Customarily, my mother,
her sisters and some of us children accompanied
him. He always took his camera along. Close to
the house in which we lived at that time, on the
street of El Prado, he had a photographic studio
where he worked on his research of color
photography. He was the first in this country to
fabricate color plates. This was the reason that
the scatter-brain writers thought that he was one
of those who were students of La Boheme.
Since we were a large family, we lived in an
enormous home, but my father never had enough
space for books and apparatus. In our house on
Alfonso XII Street, he ordered that a summer
study with a terrace be built so that he could set
up his telescope.

My father's best luck came one day while
walking in Zaragoza. He met a beautiful woman,
equal to the German painting of Margarita of
Faust by Goethe, which he had just recently
admired. He remained close to where she lived,
became better acquainted with her, then married
her against the wishes of his family. She was the
person who understood him completely. She
was very intelligent and besides the fact that she
had no more than the general education of a
middle class women of that time, she had a blind
faith in him and in the importance of the work to
which he wanted to dedicate himself. She
surrounded him with a care-free environment with
no domestic worries, an atmosphere that was
absolutely necessary for his research. My
mother was neither sullen nor disagreeable but
was an authoritarian; she had no other remedy.
Just like the women of today, whose husbands
spend much time outside of the home working,
she was in charge of educating and rearing
seven children, a difficult task in whatever era.

She was a woman who loved him deeply
and fully. In turn, Cajal favored her with a love of
the same intensity. In a book which he titled
Rules and Advise for Research, my father
pictured her as a model and perfect example of
the ideal companion for future researchers. The
early days of their marriage were difficult, similar
to so many other young people who begin a life
together on a modest income, worse, marrying
against the wishes of the father, to whom he
never turned for a bit of help. My grandmother
and her sisters helped them as much as they
were able under the watchful eye of my
grandfather. Since my mother was very
industrious, thrifty and modest, there was never
a lack of money so that my father could have all
that was necessary for his work or publications.
He always had the best of scientific materials
available at that time. He was his own editor and
printed his works on the best of paper and with
the best inks. He often gave many of these
magazines away. If today it is impossible to do
this, in his era it was a luxury that almost no one
could enjoy. The situation improved later after he
became a professor in Valencia.

In Madrid we lived like the families of any
other professor. I went to the Pia Schools and
the Institute of San Isidro where Juan de la
Cierva, inventor of the autogiro, also attended.
My brother, Santiago, graduated from college, but
my father did not permit him to go on with his
studies due to the serious heart disease from
which he suffered. My father set my brother
Santiago up in a bookstore which he managed
until he died at the young age of twenty-eight.
Jorge and I studied medicine. Our father gave
us complete freedom to pursue our directions.
My sisters studied the liberal arts of that time.
They had no wish to pursue a particular career,
except for Fe (Faith), who studied piano.
My father was not dominating. On the contrary, he wanted Spanish women to enjoy culture as much as the English or Nordic women. He used to say that a woman would be even more beautiful if she did physical exercise and learned, or studied, beauty from books and museums. He felt that Dona Emilia Pardo Bazán should enroll in the Language Academy because she deserved it. She was a very talented writer. He profoundly admired María Curie, whom he knew personally. He disliked women who made themselves look like men. He also looked down on women who abandoned their husband and children for their careers, not taking into account the importance of their mission as a wife and mother.

My father has been accused of being an egoist; that he sacrificed the well-being of his family for his love of science. If that were the case, why did he not dedicate his time to becoming a millionaire with all the things that he accomplished? For instance, patenting his technique of color plates in photography; the vaccination against cholera which is used today; or simply, not selling his books on histology so cheaply. All of these would have been enough.

Money was never of much importance to my parents. My father didn’t sacrifice anybody because we always lived well and my mother always had whatever she wanted. Both of them left money in their wills for scholarships and awards for students in need. My father left the entire Nobel Prize (1906) for medical students. We, their children, felt very proud to have such parents.

My father’s life was to give to everyone else: to science, family, friends and disciples. His life was full of nobel preoccupations. He sacrificed no one to become a success, neither did he abuse his authority nor prestige.

He had an enormous respect for the public treasury in which he always appreciated the product of the work and sweat of the common folk. More than once, the magazine, "Institute of Biological Research", published every trimester, was published because my father paid for the publication. On another occasion, as director of this Institute, they gave him a raise in salary. He then asked that it be lowered to a salary which he felt just.

He accepted the presidency of the Meeting of Extending Studies because it was a gratuitous position in which he could help young students in extending their knowledge. He was a life-long senator for the same reason, and he tried to help the country by voting in favor of Canalejas.

My sister, Pilar, as well as myself, were completely horrified to see in a television series about our father, the falsehood which showed my mother calling him in anguish when my sister, Enriqueta, was dying, and (the claim) that my father wouldn’t pay attention because he was too busy in his laboratory. What ignorance to the sensibility of my father!! He wasn’t even able to work on account of other unfortunate events, much less when one of his children was ill. My mother and sister, Fe, related about the many rights that he spent at my sister’s side without any sleep, and I witnessed his constant worry over my brother, Santiago’s Illness. He treated us exactly the opposite to the way his father treated him.

He was very affectionate and a lot of fun. Every Sunday he used to take us for a snack at the Suizo. While on vacations to our villa in Sardinero, or to the one he had built in Cercedilla, we always went on many outings together. He also showed us how to play chess. My older sisters were the models for his photographs. He dressed them in all kinds of fancy clothes and adornments of many colors to make his color pictures. He also had us sing so that he could record us on the phonographic cylinders that he had brought from the United States.

In place of having a social life, he used to exaggerate his excuses in order to avoid official events, especially if they were in honor, my father loved to travel to foreign countries. Every summer he took my mother to the Plombiere bathing resort for her health. He also liked to entertain his intimate friends in the house he had built in Cuatro Caminos (Four Roads) with the money from the Moscow Prize (1900). It was a large three-story house of red bricks, with a
garden of more than 12,000 meters. It was almost like a Botanical Garden because of the many varieties of plants. There was even a special stove for tropical plants. He loved to eat out of doors in the garden and always had at his feet a little dog which he called Lord Byron. He also liked to photograph his dog.

He talked about diverse topics because he had such an extensive knowledge. It was a delight to hear him talk. He was hearty and lovable and had a fine sense of humor, even though his tone of voice didn't quite match because it was so deep.

His children, as well as his many companions of conversation, knew him to be the center of attention up until Dr. Aechucarro diagnosed him as having the beginnings of cerebral arteriosclerosis. He became excessively frightened. He suffered from very strong headaches but they usually left quickly in cold environments. When he detached himself from the cales and no longer wanted to dedicate much of his precious time to magazine interviews, some of these writers, who were no longer welcome, labeled him "sanbenito" (similar to "holier than thou"). They said he was a cross, rude, as well as an arrogant and proud character. He might have been this way. I believe that nobody had more right, than he, to be proud. Today it is difficult to find another scientist who received as many honors as my father.

As a professor here in Madrid, he found out that King Alfonso XIII was planning to create the counties of Aguilar and Calleja in honor of the doctors by these names and was also going to create the title of Grand Duke for Cajal. Immediately, my father contracted the King, expressed his appreciation, but amiably refused this honor. The awards that he held in the highest regard were: the plaques given to him by the students of Valencia and Madrid when he received the Nobel; the Helmholtz Prize (1905), more difficult to obtain than the Nobel; being the Commander of the Legion of Honor (1914); being a Fellow of the Royal Society (1909). He loved Spain profoundly, but he admired England for its patriotism and the integrity of its politicians. And he admired France for its liberties.

It was his desire to be buried in a common grave next to unknown Spaniards - showing his humility of all times. Since my mother passed away first, he asked to stay near her and prohibited that "one day his remains be transferred to the Pantheon of Distinguished Men, where there were only politicians and military people".

Dr. Marañón wrote about my father's simplicity in his complete works and discussion of my father's autobiography: "the inexpressible charm of the memories of the noted Spanish histologist, shows that the long pages dedicated to his life and person, in which are mixed the most insignificant happenings with the most transcendental, do not produce, not even for one instant, in the reader the sensation of conceit. It is not possible to focus with more modesty on the theme of the conscience of his elevated human and scientific valor. Cajal exalts at length in his passages the significance of his personality and his work with such pure objectivity, as if he were speaking of an important discovery in one of the tissues under his microscope." It's true that Professor Marañón occupied the vacant seat left by my father in the Royal Academy of Language. He was elected a member of the academy, but did not occupy the position because he didn't have enough time for the position.

Cajal was convinced of the capacity of the Spaniard for scientific research (contrary to the opinion of the Saxon people) and he dedicated himself to demonstrate this with intensity.

His book, Rules and Advise for Scientific Research, (which is not as well known as it should be, like so many other of his works) is all a treatment of support, encouragement and hope for the studious Spanish youth. His motives were to animate youth to dedicate itself to research in all classes.

I regret to differ with Ortega y Gasset as to his statement, "Cajal is more of a shame to Spain than a pride, because he is more of a coincidence than an exception". If there is something that my father was not, it's precisely, not a coincidence. He used all his extraordinary talent to procure a profound scientific preparation. He never trusted anything to chance. He verified
his findings more than once before making them public in international scientific magazines or conferences. He never considered himself an exception; on the contrary, this is the reason he tried to inspire youth to follow in his footsteps and even to surpass him. And he was right. Out of his Cajal School, which no longer stands, many of his disciples graduated with great talent and scientific stature. Many had to exile themselves and gave their prestige to the countries who sheltered them, such as Lorente de Nó, Dionisio Nieto, Del Río-Hortega, etcetera.

It has also been said that today it is impossible for a solitary researcher to exist such as Cajal, that today there is a shortage of complete laboratories with a team of scientists in an adequate environment. In my father’s opinion it will always be men who will create science and make the discoveries, not the laboratories. These laboratories, without man, are nothing. In all ages there will be solitary geniuses. True talent does not require special environment in order to develop itself because it will take charge of creating its proper environment: the example, Cajal.

I hope that I have been able to better acquaint you with the human figure that was my father. I appreciate the tribute that the magazine, EL MEDICO, has bestowed on him on the fiftieth anniversary of his death.