Figure 3. This picture was taken by Dr. W.H.F. Addison in April of 1928. Standing around Don Santiago are (from left to right) Luis _, Tomas Garcia, (unknown), Dr. DeCastro, Dr. Sanchez, Carmen and Katie. [Figure kindly made available by Axone Craigie.]
The main laboratory of the Institute was a long room with places for three or four investigators facing the windows. In the middle of the room stood a small iron stove, in which Tomas kindled a few sticks of wood every morning, allowing it to burn out and remain cold until the next morning. It was just at my back, so that I was roasted each morning and shivered for the rest of the day.

At one end of the main laboratory was that of the technicians, and at the other end was the over-flowing library, beyond which opened the small private laboratory of the Director. For, in spite of having three technicians available, Cajal always preferred to make all his own preparations, and somehow these were always better than those made by anybody else.

Don Santiago usually came in late in the afternoon. I was told that he had a full-equipped laboratory in his own house, where he spent most of the day, as had been his practice throughout his career, a statement confirmed by his daughter when we had the privilege of calling upon her in 1965, but she said that the home laboratory had not been preserved after her father's death, so that we could not see it.

Cajal's house itself was handsome outside but the rooms were surprisingly small, rather bare, and very plainly, even shabbily furnished. However, he had a very large home library and his writings show that he was not only a voracious reader but also a remarkably retentive one. It was said, "He has read everything and he remembers everything, quoting classical and modern authors in a manner that shows he has digested them perfectly."

When, in contrast with the old quarters of the Institute and his severe home surroundings, the Institute was moved into a splendid new building in 1932, Cajal almost never went there, considering it too grand, and he worked entirely at home.

When the Director appeared in the Institute, everybody would cluster round him, all talking at the tops of their voices at the same time, until he started to speak, upon which everybody paused to listen, hanging upon his words. These might concern anything under the sun, and were always voluble, length, and emphatic. A new paper defending the view of continuity of the neurons at the synapse was referred to with derisive laughter. Medical practitioners were frequently criticized. Once the remains of an infant that had died in birth had been brought in, which caused him to turn away with the exclamation "Que barbaridad!" What barbarity!"

Shortly before his death, Don Santiago was persuaded to make a record of one of his little addresses and I have been so fortunate as to secure a tape taken from it, through the kindness of Dr. Glenn Russell of the University of Texas. Thus we can have a suggestion of the sound of his voice as he pontificates on a favourite subject. You will hear him declare: "If there is anything within us that is truly alive, it is the will. Through it we assert our personality, shape our character, challenge adversity, develop our minds, and excell each day."

"You complain about the reproach of your teachers, your competitors, your adversaries, when in reality you should be thankful for them. Their
blows do not harm you, rather they sculp you. With few exceptions, all young people who are endowed with an enquiring mind and a strong personality will react against exaggerated doctrine and opinions of their parents by adopting complementary ethical and moral codes. The tumult of social life affects the weak mind as a river works upon a crystal of quartz. He who wishes to preserve unharmed the brilliance of his spirit gathers himself quickly into the backwaters of solitude, which is so favourable for creativity."

Of course, he speaks in Spanish, and what you will hear will be: "Si hay algo en nosotros verdaderamente vivo, es la voluntad. Por ella afirmamos la personalidad, templamos el carácter, desafiamos le adversidad..."

As Cajal when I knew him was very deaf, he usually was able to enjoy the adulation of his listeners with few interruptions. He would then take a presiding chair in the library and attend to whatever Dr. Castro or anyone else might submit to him, and would finally retire into his small private laboratory beyond, putting on an old worn jacket as a work coat.

As I usually could not follow very well either the shouted conversations or the rapid, emphatic discourses, I remained outside the circle of worshippers. Usually the Master would come to my desk to see what I was doing and to answer questions, but his deafness and volubility often made it difficult to ask more than one question each evening. He kept a close interest in my work as well as in that of any of his other followers who were in the laboratory at the time.

Never have I met any other person who so dominated all those around him. He seemed to permeate their whole thinking and determine all their opinions. Their statements were always "Don Santiago says" so and so; "Don Santiago thinks that" such and such; "Don Santiago's opinion is" something else, and so on. I discovered, however, that even the loyal and unquestioning supporters by whom he was surrounded felt it wise to avoid subjects on which there might be tolerated. For example, I was warned never to mention to the Master the name of Rio Hortega, a former pupil who had offended him by a disagreement over the discovery of mesoglia. He was bitter about the use in America of the name of Ranson in connection with a trifling variation of his reduced-silver method. Again, he told me that a certain former Spanish student about whose publication I had asked was one of his greatest disappointments, and that he himself had really done the work reported. Of the Nobel address by Golgi, who shared the prize with him in 1906, he wrote in his memoirs with restraint, "I was trembling with impatience as I saw that the most elementary respect for the conventions prevented me from offering a suitable and clear correction of so many odious errors and so many deliberate omissions."

I think that, in justice to other people, I should remark that most of Cajal's greatest accomplishments were attained by his modification and brilliant use of a technique originally discovered accidently by Golgi, and also that the Cajal method of staining neural material by reduced silver was actually a very successful improvement of a technique originated by another Spaniard, named Simarro. Of the latter, Cajal wrote "Unfortunately, Simarro, who was endowed with great talent, lacked perservance, the virtue of the less brilliant", a virtue that Cajal himself did display outstandingly. He maintained that his own accomplish-
ments were the product not of exceptional ability but of indefatigable dedication to an ideal despite uncertain health and other discouragements in his earlier days.

Perhaps in connection with these remarks I may interpolate a reminiscence of my own which reflects the reactions of another histologist and, I believe, the jealousy that existed in the German school. When I was on my way home in 1927, I arranged to pass through Zurich in order to visit there the prominent German-Swiss authority, C. von Manakov. This gentleman assured me that the work of Cajal and Golgi was of little value and that a simple carmine stain was quite as good as their silver-impregnation processes. I found them very beautiful carmine-stained preparations, but his claim that they revealed anything like even moderately good silver material I considered utter nonsense.

Even apart from his deafness, Don Santiago was not a very approachable person. Outsiders were not welcome, and the public and the Press complained of his inaccessibility. Nevertheless, his memoirs show that in his mature days he habitually and actively consorted with a small group of intimates in a modest café, a peña or tertulia. In Madrid his peña was a group of mostly radical intellectual men, with whom he talked forcefully of the needs of Spanish culture, and against absolute power, though he remained always tolerant and abhorred any fanaticism. He also took a prominent part in the discussions in the Royal Spanish Academy. In one of his Charlas, he wrote that "The joviality of friends constitutes the best antidote against the deceptions of the world and the fatigue of work." Indeed, his discourses among his friends were so impressive that in 1906 the Prime Minister begged him to become Minister of Public Instruction, and he seriously thought of consenting. However, he declined, writing "In the eyes of my professional colleagues...I should appear... as one more case of vulgar ambition. This is repugnant to my feelings as a citizen and as a patriot." All the same, there was truth in his perhaps semi-facetious statement earlier (in Cuentos de Vacaciones): "Those who know the scientist solely by his works believe, in their innocence, that he labours for humanity. Nonsense! He labours for his own pride! The investigator loves progress that is made by him!"

All this was past before I knew Cajal, and even the Café Suiza itself had ceased to exist. He had long before given up his beloved game of chess because it took time an energy from his studies, but his had been a sacrifice so great that he devoted several pages of his memoirs to describing it and how, in the Casino Militar of Barcelona, "I finally attained my desired end... by flattering and lulling to sleep my insatiable selflove by defeating my skilful and cunning competitors for a whole week."

As his health deteriorated, he withdrew and, a little later, he wrote that the old man, particularly if arteriosclerotic, as he knew himself to be, should give up tertulias and cafés. He became a victim of insomnia and what he himself called the abuse of veronal to combat it.

People who had worked with him for longer periods recorded that he was always kind and and sympathetic and was endowed with a keen sense of humour, and personally I found him friendly and got on well with him though, of course, I never became intimate. Our contacts were only in the laboratory but he occasionally did discourse on other subjects besides the
techniques and the sections prepared, which were our real concern. Once, for example, he brought to show me some colour photographs that he had made some years before by an adaptation of the method of Lumière, something unusual in 1927, and he presented me with a copy of a book on colour photography that he had published in 1912. In the foreword of this book is an expression of his attitude that I think is typical. "To deprive oneself of the theory", he said, "is to distain half of the pleasure of colour photography. The cultivator of photography of colours should not be a routine practitioner merely adhering to receipts and formulas. Only he who knows is successful." So he prepared all his own photographic materials. Another time he brought to show me some examples of photo-micrographs that he had made by a technique of multiple exposure so that he could record the course of a nerve fibre through the thickness of a section.

Cajal had been an enthusiastic photographer since his youth. In his *Recuerdos* he describes in rapturous terms his impressions when, as a teenager, he discovered the process of photography on wet plates, and among several other references, we read that later "without wishing it, I found myself obliged to manufacture emulsions for the photographers both in the capital and elsewhere. In my experiments, I had come across a method of preparing an emulsion more sensitive than those known until then..."

Of photography he wrote "It is the privilege of photography as an art to immortalize the fugitive creations of nature. Thanks to the former, bygone generations seem to live again, beings without a history, who did not leave the slightest trace of their existence. For life passes but the image remains."

The interest in photography may have developed from a frustrated artistic urge. In the *Recuerdos* we find, "When I was about eight or nine years old... I had an irresistible mania for scribbling on paper,... daubing on walls, grates, doors, and recently painted facades all sorts of designs. I could not draw at home because my parents considered painting a sinful amusement. ... I took pleasure in adorning my drawings with colours which I obtained by scraping the paint from walls or by soaking the bright red or blue bindings of the little books of cigarette paper." Further on he adds "My habitual reclusiveness sprang from the need of removing myself from the severe vigilance of older people during my artistic efforts and my clandestine manufacture of instruments of music and of war." Later, his father was obliged by his stubborness to seek a professional opinion on his possibilities as an artist, the judge being a village house-painter. This worthy condemned him utterly, and his father's determined opposition then doomed him to a medical rather than an artistic career. However, the love of beauty and of its artistic expression remained. While still at school, he not only continued to draw but undertook to compile a catalogue of all the colours and shades of all the flowers he could find, and in his mature years he was still moved at times by what he saw under the microscope to such outbursts as, "Like the entomologist in pursuit of brightly coloured butterflies, my attention hunted in the flower garden of the grey matter for flowers in the cells with delicate and elegant forms, the mysterious butterflies of the soul." The illustrations in his nearly three hundred publications were mostly, if not all, I believe, drawn by his own hand. Also, as a young teacher, he himself drew wall charts to illustrate his lectures. Yet, strangely, so far as I can learn, he did not in his adult life show any interest in Art.
in the narrow sense of that word, nor do I remember any reference to an interest in music.

Actually, the forbidden urges of the schoolboy had led indirectly to his becoming acquainted with the principle of the camera long before he had heard of photography. When he was about ten years old, "In school my caricatures exasperated the master so much that, more than once, he had recourse to locking me up in a room underground, which sentence I regarded as an opportunity for planning my escapades of the next day.

"There, in the darkness of the school prison, ... it fell to my lot to make a tremendous discovery in physics, the camera obscura. ... The little shuttered window of my prison faced the square, bathed in sunlight and full of people. I noticed with surprise that a slender beam of sunlight projected on the ceiling, head downwards and in natural colours, the people and the beasts of burden that passed outside. Proud of my discovery, I was so simple as to tell my comrades in confinement ... and they, laughing at my foolishness, assured me that the phenomenon was of no importance, merely a natural thing. How many interesting facts fail to be converted into fertile discoveries because their first observers dismiss them as merely natural things!"

One biographer points out that all this was only one expression of a romantic streak that was strong both in the boy and in the later man, though it was overshadowed by his eagerness for minute precision, so that sentimentalism and positivism are both ingredients of his view of the world, underlying determination, a stupendous force of will. (Lain, p. 116.)

The fact was that the teen-age Santiaguito Ramon was an incorrigible rebel, and in the Recuerdos it appears abundantly clear that the staid and learned memornist, Doctor Cajal, in his fifties was still inclined to glory in his early escapades.

The editor of the 1954 edition of Cajal's collected literary works wrote: "He does not feel hypocritical blushes nor modesty in presenting himself as he believed himself to be. Absolute sincerity. Complete naturalness." But I cannot escape the feeling of a little unconscious self-satisfaction in the account of the boy who was the leader of a gang of youngsters, who wrote a treatise on the use of the sling, and who was imprisoned for discharging a cannon at a neighbour's gate.

His account of his battles with his hated teachers in the Escolapian School at Jaca, to which his distracted father sent him as a ten-year-old, shows that the schoolboy feeling was still alive; and when I visited the school I found that his rebellious episodes were still remembered there. I was shown a small, totally dark broom-cupboard in which tradition said that he had sometimes been confined, and I was begged to obtain a copy of a letter that the school authorities had persuaded him to write late in life softening his strictures. This I did, and I found that, while he acknowledged blame-worthiness, his severe criticisms of the harsh school discipline were not wholly withdrawn. However, I do remember that, when I was talking to him about translating his memoirs, he suggested that I
might omit the account of his youth and confine my attention to the section on his scientific work.

Before we went to Spain, we were warned that people there, though friendly, would never give one a personal invitation or become close in any way, and that was our experience. I had pleasant chats with various people who came into the laboratory, but there it remained. When I asked Dr. Castro if I could go to a university function at which the King was to speak, his reply was that he was not interested in it. In later years, we were privileged to call upon Cajal's daughter (in 1965) who still lived in his house, and in 1960 we were entertained by a cousin who lived in Larrés, the village from which his parents came. I also had an interview with his nephew, Don Pedro Ramón y Vínós, in Zaragoza, who emphasized the close resemblance of his father to Don Santiago but refused any cooperation and tried to discourage my visiting their birthplace.

A story that I think is worth reading to you is hidden in the memoirs of the Marqués de Villavicencio published in 1938. 'One day the Marquesa warned me to arrange an outing as she had asked the great scientist, Don Santiago Ramón y Cajal, and some other high-brows for dinner. Unfortunately, she mentioned that to our cousin, the Duc de Miranda, and when I was playing polo with the King in the afternoon he said to me: 'I hear Tolita is giving a dinner for Ramón y Cajal tomorrow! Tell her that I want to come; I am anxious to meet that man again, and he is most difficult to get hold of.'

"My wife, fond as she was of the King, was terribly upset.

"Ramón y Cajal was one of those intellectuals who had no need for society and never went out anywhere. It was with Dr. Marañón that she had met him, and because of the genuine interest she had shown in his work he had consented to tear himself away from his books and papers and come to dinner at our house. At first he had shown great concern about his clothes, not being sure even that he had a suitable garment, but my wife had assured him that he need not bother about that but could come in his ordinary suit, his genius being so great that the most elegant attire and the most brilliant uniform would be overshadowed by it. Had he been told that the king was coming to dinner, he would most probably have found an excuse, because he was a very timid man and not a particularly ardent monarchist.

"However, with Marañón's help, nothing was changed and the dinner took place. ... It turned out to be a most successful evening, and gave some of Spain's great brains the opportunity of talking with their King at their ease. For no one knew better than Alfonso XIII the art of making everybody feel comfortable in his presence. ... Ramón y Cajal was almost overwhelmed by the King's great interest in and praise of his works, and maybe he regretted not having known more of this intensely alive monarch before. The two seemed to be reciprocal in their delight at renewing each other's acquaintance, and I dare say that the wise Don Santiago went home that night feeling that it had been worth while wasting a little of his time on a social dinner."

Actually, the King had previously proposed to confer a title upon Cajal, and the democratic scientist had refused it. He declared that he was "the most humble of Spanish professor's, and when his state-supported
Institute was established he insisted that his salary as Director be reduced from 10,000 pesetas to 6,000 pesetas, at which level it remained until the end of his life. He had no interest in money but regarded silver merely as an agent for staining nerve elements.

Dr. Marañón, to whom the Marques de Villavieja refers, was a man of thirty-five years younger than Cajal and was among the most eminent public man of Spain in the first half of the twentieth century. As an undergraduate, he had been in Cajal's classes, and he had known the Master well in his later decades. When Cajal died, Marañón delivered a memorial address to the Royal National Academy of Medicine in which he said "He had all the amusing distractions of the classic savant. He was like a child... but he as an extraordinary man." Elsewhere, he wrote: "A man who could say, 'I saw Socrates pass by. I heard him speak.' would for that reason never again be like other men. Similarly we have, in our lives as physicians and as men, this noble and irreplaceable fact; We have seen Cajal alive!"

In a book entitled, "Los Grandes Españoles. - Cajal." published in Madrid in 1918, I had found before I went there the following: "Do you know Cajal? He is an austere man, who wears a tall hat and a cape, and walks the streets absorbed in his own thoughts .... Do not approach Cajal with any frivolity or to cause him to lose time. He will receive you badly, very badly .... The least that he will call you is idiot."

This reaction was probably what had been experienced by reporters who wanted to interview him. So far as I was able to observe, occasional visitors were received with least bored civility, even if they were not always welcomed with enthusiasm.

On the occasion of a tribute given by the University of Madrid to Cajal in recognition of his having received the Nobel Prize, he read an address in which he said, "I am not really a scientist but a patriot; I have more of the tireless labourer than of the designing architect. In my youth, looking sadly at ... the paucity of compatriots who had a name in the history of scientific medicine, I formed the firm determination to ... launch myself boldly upon the international stage of biological investigation. My strength was patriotic feeling, ... my ideal, to increase the sum of Spanish ideas circulating in the world, gathering respect." This patriotic aim comes out constantly in the Recuerdos. However, it is revealed less pleasingly in an extraordinary letter written by Cajal to the famous Basque novelist, Pío Baroja, and published in part by the newspaper, Índice de Artes y Letras of Madrid at the centenary of the birth of the great scientist. Incidentally it may be noted that Baroja was also a medical man.

In one of his pronouncements, Cajal had written: "An adverse opinion of our work when we are thirty makes us smile with pride; at forty, we take it seriously; but at seventy, it has the effect of a shotgun blast right in the heart. Carried away by anguish, we exclaim '... Will our cherished ideas be implacably wiped out from the books and the minds of the World? How can we defend ourselves or improve ourselves if our lives are over?'" That these words indeed reflected his own feelings is demonstrated by his publication in his old age of a book entitled The World Seen at Eighty and by his printing and distributing a complete list of the honours he had received, as well as by the letter to Pío Baroja.
Regarding the honours, he had previously written in the *Recuerdos*, "To ignore them in an autobiography might be attributed to pride or ingratitude: to take a belated pleasure in enumerating them in detail might seem like childish vanity. I take a middle path and list them in an appendix." But later he published them as a separate pamphlet.

In 1893, he had delivered an inaugural address which went on for so long that he was persuaded to continue it on the following day. The resulting essay appeared as a book entitled *Precepts and Counsels on Scientific Investigation,* giving full scope to the author's strong didactic urge. This book was so successful that, with revisions, it passed through seven editions and was also published in English translation. Marañón described it as "The true evangel of the sacred search for the truth".

This popular work by Cajal was apparently criticized by Pío Baroja in such a way as to provoke an outburst of unbelievable bitterness and virulence from its author. "You do not see the spirit of books", he writes. "I do not show myself to be a thinker? Why? First, I know better than anyone that I am not, and besides, to stimulate the volition of studious youth (for to that end the book is written) do I have to show myself a philosopher?

"Are you angry because I do not present disturbing ideas? But, Lord! When have you seen that could be done in an academic discourse? ... If I had acted as you wish, ... the cause of nationalism would have gained nothing.

"You are not a Spaniard! With repugnant cynicism, you tried to avoid military service. ... If I were the Government, ... I would condemn bad Spaniards such as you are to be flogged and then exiled to permanent shrivelling up in the Gold Coast. I think that thus you might leave us in peace!"

What an example is this of the intensity that may be reached in the clash of two powerful personalities!

Besides his voluminous scientific publications, Cajal wrote considerably on other subjects, including philosophical essays, literary criticism, and even fiction. It has been said that while Pío Baroja was a writer who practiced medicine, Cajal was a medical man who practiced writing. His published fiction comprised a volume of rather long short stories, "*Cuentos de Vacaciones*", in all of which the didactic urge of the author comes out strongly.

The longest of the five tales, however, I feel to be particularly revealing from another point of view. It involves discussion between two friends of several fundamental subjects, including religion, and here occurs the clearest statement I have found that I believe may be taken as expressing the religious views of the author. I will quote only a few representative sentences.

"Beautiful and sublime is the religious ideal! It may be compared with those so-called 'Children of the Virgin', the delicate threads of silver with which, in autumn, the spider connects and interweaves the leaves and stems along the sides of paths and roads. The artist stops
before the fragile obstacle and contemplates with amazement how such
delicate threads catch the rays of the sun in golden flashes. ... When all
the cells of your brain sing a clamorous hymn to the Redeemer, Work, then
you will understand the solemnity in the profoundly religious statement:
I am free, I live in my works and, thanks to my labour, humanity will have
a little more pleasure and less pain!

"The work of God, interpreted by reason, is irreconcilable with the
dogmas proclaimed by the Church. It is impossible for me to share the
illusions and hopes of other people. ... Poor Humanity, that cannot live
in peace without the hope of immortality!

"If my soul is condemned to die, at least its ideas will survive.
Let us work, then, to create something live and enduring, ... something
that will grow incessantly in the activity of human brains. ... The
important thing is to make the lives of human beings easier and more
agreeable."

Cajal's confidential secretary, Enriqueta Rodriguez, writes: "He
regarded religion just as any other phenomena of life and of the world,
that is, from the strict angle of scientific investigation. ... He did not
go to confession, but did not cease to respect Christian orthodoxy. ... When Doña Silveria (Cajal's wife) died (in the summer of 1930, at the age
of 76), he asked his sons to fetch a priest, his wife being Catholic." In
his will he directed that his own remains should be buried in a common
grave, without religious or other ceremonies. After his death, on October
seventeenth, 1934, he was actually buried beside his wife. Only a year
later, hugely attended ceremonies in the University and at the grave-side
marked the first anniversary of his death.

A few years ago I talked of Cajal's discussion of Don Quixote. To
me, however, perhaps more interesting among his literary excursions, and
more provocative, is a collection of several hundred notes, comments,
philosophical reflections, and anecdotes entitled Charlas de Café or "Café
Chat". Translations of some of these I have already published, and I
shall conclude with two or three other extracts that I think offer further
glimpses of the author's wide-ranging mind. He opines that:

"In each reader there live together a man, a tiger, and a monkey.
Those who wish honour write for the man; those who are anxious for power
direct themselves to the tiger; and, finally, the greedy and the hungry
write to amuse the monkey." (I cannot help a sneaking, unkind feeling
that the author of the Charlas wrote for all three.)

"Cicero, reflecting the opinion of some wise Greeks, says that
friendship is a perfect agreement about all things, divine and human,
joined with a reciprocal benevolence and affection. This view expressed
by the wonderful Roman orator is too narrow. Often we appreciate each
other because, within the reciprocal feelings of sympathy and respect, we
realize that we are somewhat different. Were this not so, conversation
itself, which is indispensable for the maintenance of friendship, would
become impossible."

Among many pronouncements about women, the author insists that it is
essential that a wife accept gladly her husband's ideal of life, and in the "Café Chat" we find that: "The queen of the ants gives to the wife a
splendid example of discretion and modesty. Beautiful, slender, and winged during the nuptial flight, she pulls off her wings and shuts herself up for life in the home, to consecrate herself, assisted by self-effacing workers, to the care and multiplication of the progeny. Such exalted feminism does not exist anywhere else in the animal kingdom. In honour of the fair sex, we recognize with pleasure that the majority of women follow the example of the Hymenoptera. But some, on the contrary, in place of pulling off their wings are anxious to expand and adorn themselves."

That this pronouncement, though written lightly as café chat, expresses truly the views of the writer appears clearly in his memoirs. There his wife is rarely mentioned, but we find that, in 1888, "the vortex of publication entirely swallowed up my income. Before that desolating cyclone of expenditure my poor wife, taken up with caring for and watching five little demons, determined to get along without a servant. ... She discreetly and self-sacrificingly avoided any suggestion of rivalry between the children of the flesh and the creatures of the mind." His salary at that time was 3,500 pesetas a year, or a little over fifty-two dollars a month, and he was struggling to secure recognition by printing reports of his observations at his own expenses and bombarding with them all the leading histologists of Europe, particularly of Germany. In one other tribute he wrote; "In spite of beauty ... my wife condemned herself to obscurity, remained simple in her tastes and devoid of other aspirations than peaceful pleasure, good order in the administration of the home, and the happiness of her husband and children."

However, he explicitly reserved the right to change his views on any subject if evidence required it, declaring that "there is an honour of the understanding: to study things thoroughly and know how to change one's opinion impartially"; and, in keeping with this, he acknowledges in his last book (The World Seen At Eighty) that sometimes the Spanish girl may work competently and be as efficient as a man.

To his seven children, of whom only five survived him, he seems to have been an affectionate and concerned parent so long as they did not interfere with his more serious concerns, but he insisted "The children of the flesh do not smother the children of the spirit: and "The gratitude of the fatherland will always be preferable to that of the family".

Among thoughts upon old age we find: "The most deplorable thing about old age is the loss of physical and moral individuality. In extreme senescence souls and faces look alike. There is nothing more similar to a skull than another skull, or one disillusioned person to another.

"As children we think 'I am immortal'. As old people we say, 'I die without having lived' or, what is sadder, 'I have not known how to live'. And we should think the same if we were to live the three hundred years of the crocodile or the two hundred of the elephant.

"It remains unquestionable that, of all the organs, the brain offers more resistance to degeneration than any of its companions. ... But what is the advantage of the cerebral cortex being built to last a hundred and fifty or two hundred years if most of the organs charged with nourishing it and serving it fail at seventy?"
A whole book that I have already mentioned, The World Seen At Eighty, was completed only in May of the last year of Don Santiago's life, and from the wealth of material in it I will cite one item. "Many old men are anxious to think and to display their thoughts in print without considering whether they are commonplace or interesting. ... When the brain has been active for half a century in eager talking and writing, we are unwilling to relapse on to paper.

"For me the spontaneous burst of ideas suffices for them to flourish in my consciousness and impose themselves upon wandering attention. The difficulty is not to think but to stop thinking, which does not alter the fact that the thought may be worth little."

On his death-bed he was still thinking - recording his sensations and planning two new books.

Finally, two of the Master's thoughts upon life after death.

"The inexplicable fashion of theosophy and of spiritualism persists. It makes one sad to think that men of science like Crookes and Richet and philosophers like Krause and William James have fallen into the absurdities of modern necromancy.

I confess, a little shamefacedly, my insuperable scepticism. Apart from certain serious reasons, such as proof of the fraud of the mediums and the impossibility of proving the identity of the apparitions, I base my unbelief on the following frivolous considerations. In one of the accounts from beyond the grave published in spiritualist books or magazines have I come across a haunting mother-in-law disturbing the felicity of her son-in-law, nor a spectre of a poor poet damning with harmful jokes the lives of his critics."

The reflection with which I will close is a little longer.

"I am greatly pleased that the poor human animal enjoys the privilege of immortality of the soul, and it would please me still more if the theologians would not spread it around too much,,,[so that it] embraces everyone from the stone age to the imbeciles and monsters of the present time.

Let us choose an ordinary case.

I am served by a maid from a small town. She does not know how to read or write, hardly to speak; she counts on her fingers; tiles often break in her plantigrade hands; her physique is that of a degenerate gorilla. In spite of such endowments, the cura of the parish asserts positively that my maid servant possesses an immortal soul.

Let us consider seriously the very grave significance of such a statement.

Thousands of centuries will pass; the mountain ranges will grow small; the waterfalls will diminish or disappear; present-day man will have been superseded by another predatory animal infinitely more sagacious and cruel - perhaps the blond superman of Nietzsche. Nevertheless the
A whole book that I have already mentioned, The World Seen At Eighty, was completed only in May of the last year of Don Santiago's life, and from the wealth of material in it I will cite one item. "Many old men are anxious to think and to display their thoughts in print without considering whether they are commonplace or interesting. ... When the brain has been active for half a century in eager talking and writing, we are unwilling to relapse on to paper.

"For me the spontaneous burst of ideas suffices for them to flourish in my consciousness and impose themselves upon wandering attention. The difficulty is not to think but to stop thinking, which does not alter the fact that the thought may be worth little."

On his death-bed he was still thinking - recording his sensations and planning two new books.

Finally, two of the Master's thoughts upon life after death.

"The inexplicable fashion of theosophy and of spiritualism persists. It makes one sad to think that men of science like Crookes and Richet and philosophers like Krause and William James have fallen into the absurdities of modern necromancy.

I confess, a little shamefacedly, my insuperable scepticism. Apart from certain serious reasons, such as proof of the fraud of the mediums and the impossibility of proving the identity of the apparitions, I base my unbelief on the following frivolous considerations. In one of the accounts from beyond the grave published in spiritualist books or magazines have I come across a haunting mother-in-law disturbing the felicity of her son-in-law, nor a spectre of a poor poet damming with harmful jokes the lives of his critics."

The reflection with which I will close is a little longer.

"I am greatly pleased that the poor human animal enjoys the privilege of immortality of the soul, and it would please me still more if the theologians would not spread it around too much, so that it embraces everyone from the stone age to the imbeciles and monsters of the present time.

Let us choose an ordinary case.

I am served by a maid from a small town. She does not know how to read or write, hardly to speak; she counts on her fingers; tiles often break in her plantigrade hands; her physique is that of a degenerate gorilla. In spite of such endowments, the cura of the parish asserts positively that my maid servant possesses an immortal soul.

Let us consider seriously the very grave significance of such a statement.

Thousands of centuries will pass; the mountain ranges will grow small; the waterfalls will diminish or disappear; present-day man will have been superseded by another predatory animal infinitely more sagacious and cruel - perhaps the blond superman of Nietzsche. Nevertheless the
spirit of my clownish servant girl will float endlessly in the starry spaces or wherever it may be.

Several more hundreds of thousands of years will pass by. The sun will be extinguished after sailing through space like a red lantern becoming ever duller. The polar snows having extended over almost the whole of the planet, the superman, withered and discoloured like a white rat, will vegetate miserably in subterranean cities lighted by electricity, or by radio, or by some other means that we cannot imagine today. And the goal of my maid will continue wandering through the infinite!

Saturn and Clotho together will sound the supreme hour, finally cutting the thread of life. The planet, despoiled of clouds and of seas, will have been converted into an immense cadaver, cold and black. The coal beds will have disappeared some time previously, the rivers will have frozen and have ceased to flow; and with the funereal immobility of the crust of the early, the last superman will have perished after biting with a supreme gesture of anguish the last pill of synthetic albumin, starch, and sugar. And the soul of my servant girl will continue imperturbably, perhaps contemplating the terrible spectacle from the Empyrean with her intellect of an oyster!

Still more myriads of centuries will pass. In a frightfully tragic and overwhelming moment, according to the prognostications of Arrhenius and other astronomers, a black star spinning with dizzying speed will collide with the sun; and it, volatilized by the shock, will be converted first into a nebula and then into a star. The star, in its turn, will be the origin of new planets irrevocably condemned to destruction. And the cycle begins all over again - to eternity.

Yet with all this, the coarse spirit of my illiterate serving maid will last eternally, unmoved by the cataclysms of the planets! And with her will be all the savages of Polynesia, the negritos of the Phillipines, the African pygmies found by Stanley in the impenetrable forests, and indigenous people of the remote recesses of Brazil who can hardly speak and lack religious ideas or even superstitions.

Why continue?
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