

Realism and neurology: neuroliterary contributions from Benito Pérez Galdós' spiritual novels *Nazarín* and *Halma*

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ABSTRACT

Introduction and objectives. Galdós is the most distinguished Spanish proponent of literary realism, characterised by a faithful transcription mirroring scenes, settings, and language. This style was adopted as a tool for denouncing the great social deficiencies, with neurological disease and disorders playing an important role.

Methods. This review is structured as follows: 1) descriptions published to date of neurological disease in Galdós' contemporary novels; 2) a new analysis of the findings in *Nazarín* and *Halma*, two key contemporary spiritual novels; 3) a discussion of disease in Galdós' oeuvre as a whole, its narrative role, and his sources.

Results. Previous analyses described a range of neurological disorders: headache, epilepsy, sleep disorders, movement disorders, substance use disorders (alcoholism), and cerebrovascular disease. The analysis of the novels *Nazarín* and *Halma* identified confusional syndromes, typhoid fever with sepsis, pseudoseizures ("hysteria"), and deformities (achondroplasia) in the former, and in the latter, forensic diagnosis of "epileptic monomania" to describe impulsive behaviour disorders with mystic and religious content, meeting criteria for Gastaut-Geschwind syndrome, as well as spinal cord infarction with paraplegia, age-related memory alterations, and pseudoseizures.

Galdós displays a love of science, and denounces the prevailing folk medicine of rural Spain in his day. Physicians are described with respect and affection, as an element dignifying the wretched, tragic lives of his literary creations, mirroring the society of the time. Ideas of degeneration theory, the theory of evolution, and public hygiene impregnate the author's work. His understanding and detailed descriptions drew on several specialised books, as well as information from distinguished physician friends from various settings in Madrid, such as Gregorio Marañón, who treated him right up until the time of his death.

KEYWORDS

Benito Pérez Galdós, history of medicine, history of neurology, realism and neurology, epileptic monomania, Gastaut-Geschwind syndrome

Introduction

The goal of literary realism was to reflect the reality of the author, with a specular image that, as described by Stendhal, simulates a mirror placed on a path, shifting to reflect the setting around it, with special attention on

human beings. These individuals were the protagonists of a stricken, changing modern world, marked by deficiency and suffering. Thus, disease could not be omitted from the scenes portrayed, and included neurological disorders and the physicians attending them in healthcare settings as real as the specular path

of Stendhal's world. In Spain, the most noteworthy proponent of realism was the Canarian writer Benito Pérez Galdós. With the foundation described above, it is unsurprising that his oeuvre should include a range of neurological disorders. This hypothesis has already been tested in studies of several contemporary novels by the author, whose findings are summarised in this article. In continuity with these, we also study his two most relevant spiritual novels, *Nazarín* and *Halma*. In order to guide readers, this study introduces concepts related to literary realism and provides basic biographical details; I also analyse the findings and the role of disease in Galdosian fiction, including the writer's sources, the historical context of medicine and surgery, and the influence of various scientific theories in vogue at the time, such as degeneration theory and the theory of evolution. Thus, we demonstrate the relevance of neuroliterary aspects of Galdós' work and the narrative importance and didactic power that emanate from his clinical descriptions, some of which are pioneering in that they predate the first medical descriptions of these conditions.

Development

Literary realism: historical context

The term literary realism is used to refer to an artistic movement that in Spain reached its highest point in the latter half of the 19th century. It emerged as a reaction to the romantic idealism of previous generations, which was unable to respond to the social problems stemming from industrialisation, with swathes of people living in urban poverty. Thus, social issues constituted the central topic in these authors' works, which revealed deficiencies, deformities, and disease, both at the individual and the social levels. To this end, novelists acted as a mirror or the lens of a camera, their words faithfully reproducing the social or individual model of the qualities they portrayed. Fidelity to the model demanded an exact, precise, and complete reproduction of the subject, at once honest and simple, that anybody could understand, as the potential readership included the working class so carefully depicted in these works.

This movement distanced itself from idealism and fantasy, from the transcendence of the romantics, considered unable to tackle and understand the social reality of the time. Individual and social profiles were described in a register of language that had to be colloquial, regional, almost a recording of speech, imitating the subject.

Writers conducted detailed research, enabling them to give thorough descriptions of characters and settings, with an almost surgical capacity to dissect, reveal, and thereby denounce the deficiencies in their place and time. We see individuals in their setting and hear events recounted in what may be called the voice of the people. This may explain why Valle Inclán, from the subsequent Spanish literary generation (the generation of 1898) referred to Galdós as "don Benito el Garbancero" ("Benito the chickpea lover"), for using the language of builders, artisans, and seamstresses for whom the legume would have been their main source of sustenance. Of course, this phrase of Valle-Inclán's overlooked Galdós' significant technical and stylistic achievements, such as the development of the internal monologue, as he was probably more concerned by the competent theatrical works of a rival who triumphed in this artistic arena.

Realist descriptions must also include the scientific progress of the time, with an explosion of new discoveries that was unparalleled in the history of science and medicine.^{1,2} These advances include Darwin's theory of evolution, with the publication in 1859 of *On the origin of species*; the appearance of Pasteur's germ theory in 1860-1864; the publication in 1865 of Claude Bernard's *An introduction to the study of experimental medicine*, another key moment in the history of medicine; the appearance in the same year of Mendel's laws of heredity, establishing the foundation of the study of genetics; the consolidation of hygiene and public health as independent disciplines; Morel's degeneration theory in 1859, which together with genetics constituted the foundation of eugenics, which realist writers saw and knew to denounce; and the parallel development of photography in the same period. Photography's reach was ubiquitous, being used not only by reporters and journalists, but also by clinical departments in hospitals, where the availability of the technology (and other forms of recording) was established with scientific rigour.^{3,4}

Notes on the life of Benito Pérez-Galdós

These revolutionary changes occurring in science, and by extension in the field of medicine, could not have passed Galdós by (Figure 1). They emerged soon after his birth in Las Palmas de Gran Canaria in 1843. Galdós was the youngest of ten children born to a family that lived from the rent of properties on the island after his father's military career; his father fought in the Napoleonic Wars and without a doubt influenced his son's education and



Figure 1. Portrait of Benito Pérez Galdós by Joaquín Sorolla, currently displayed at the Pérez Galdós House-Museum in Las Palmas de Gran Canaria.

love of history. He was spoiled by his mother, older sisters, and sisters-in-law, clearly setting a precedent for the women in his life: he was a seducer, bachelor, and lover to the end of his days. His first romantic relationship, with his cousin Sisita, was forbidden by his mother, who sent him to Madrid to study law in 1867. He never completed his studies. Fascinated by the capital and its artistic life, he became a frequent face at the Ateneo, located on Calle Montera at the time. There he met his first contacts, who became decisive in his career. He published his first novel, *La fontana de oro* (“The golden fountain”) in 1870, with money borrowed from his aunt. At the time, he was beginning to write his *Episodios nacionales* (“National episodes”), which soon became a publishing success. Also at a young age, he began to collaborate with newspapers, especially in the Argentinian press (*La Nación*), which he continued for

many years and which represented a source of regular income. In 1868, he made his first trip to Paris, where he became familiar with the French realism and naturalism movements of the day. This education continued with the British author Dickens (he translated one of the latter’s novels) and subsequently with the great Russian writers, whose work was being introduced in Spain at that time through the famous translations of his then lover, Emilia Pardo Bazán.

He always considered himself a man of the people, and denounced the great deficiencies in the lower classes, which are reflected in many of his novels; good examples are the chapter “Visita al cuarto estado” (“Visit to the fourth state”) in *Fortunata and Jacinta* and the child labour depicted in *The disinherited*. He eventually became involved in politics, and was appointed by Sagasta to sit as a parliamentary representative between



Figure 2. Inauguration in January 1919 of the sculpture of Galdós at the Retiro park in Madrid. It was erected by popular petition, and a speech was given by Serafín Álvarez Quintero. Galdós died just a year later. An homage to the writer is held every year on 4 January. The 2020 ceremony, on the centenary of Galdós' death, was attended by a large congregation of journalists and dignitaries, and was the least Galdosian of them all.

1886 and 1890, although he confessed that he undertook this work more as a way to understand politics than out of a genuine desire to actively intervene; in fact, he never once addressed parliament. He was a republican parliamentary representative in 1907, and in 1909 stood beside Pablo Iglesias in the leadership of the Republican-Socialist Party. The lessons he learned during those years are reflected in his work, especially in the late *Episodio Nacional* entitled *Cánovas*, in which he denounces the alliances of interests, lack of ideas, and corruption of public representatives.

It was only on his second attempt that he was elected a member of the Royal Spanish Academy, in 1889. His anticlerical (though not antireligious) position earned him powerful enemies among Catholic conservatives.

They hindered his entry to the Academy and ensured the failure of his candidacy to the Nobel Prize, actively blocking him after the premiere of his play *Electra* in 1901; the prize was awarded to Echegaray in 1904.

Galdós was a lover and a seducer throughout his life. It has been suggested that the affair between Fortunata and the young gentleman Juanito de Santa Cruz was in fact based on a relationship between Galdós and a lower-class woman, represented by Fortunata.⁵ While this detail is not corroborated by the writer's other prestigious biographers,^{6,7} we do know that when he returned to Madrid after his private escapades he was often awaited at the door of his house on Plaza de Colón by certain individuals of ill repute who would ask him for money, which he of course gave them: he was always generous in

economic matters, a spendthrift, according to some.⁶ He also famously had a love affair with the actress Concha Morel: a woman with a particularly difficult childhood,⁸ which probably influenced her rigid, defiant attitude towards Galdós, she caused him enormous difficulties, including economic and legal demands. Fleeing from these and other conflicts, he spent long periods at his house in Santander, which he called San Quintín and has sadly disappeared. Lorenza Cobián, with whom he had his only daughter María, was from Cantabria. He provided both with room and board in the working-class neighbourhood of Noviciado, on Calle Amaniél, in a house that was far from the grandeur of those he inhabited in the luxurious districts of Colón and Serrano. Thus, it has been said that while he did take care of them, his support did not reach the level they deserved, and he did not show them the same affection that he held for the children of other famous friends.⁶ He famously had affairs with Pardo Bazán, a feminist ahead of her time whom he left when he learned of her fling with Lázaro Galiano during the 1888 Barcelona Universal Exposition. His last love was the Basque woman Teodosia Gandarias, when both were in their old age; the writer was practically blind and close to death, in 1920.

A year before, in 1919, the Álvarez Quintero brothers and the mayor of Madrid inaugurated a sculpture of Galdós by Victorio Macho in the city's Retiro park (Figure 2); Galdós, blind, excitedly palpated the sculpture until he recognised his likeness. A ceremony is held in Galdós' honour every year on 4 January, the writer's birthday; the tradition is still alive today, 101 years after his death and funeral (which was attended by 30 000 people, demonstrating his fame and prestige during his lifetime), and has become a classic event.

Disease in Galdós' works

To describe disease and neurological disorders in Galdós' realism, the subject of this article, we should bear in mind that the author conducted detailed research on the subjects he addressed. He is therefore to be considered a great teacher on the history of the 20th century, which is told through his pages, modelling the lives of his characters; the economy, with the former governor of the Bank of Spain, Luis Ángel Rojo, giving a speech on the occasion of his entering the Royal Spanish Academy in 2003 that focused precisely on a study of the economy through the work of Galdós⁹; fashion, on which the novel *That Bringas woman* represents a valuable treatise; or

bureaucracy in *Meow*, with its rigid hierarchy and 19th-century manners, cold and cruel towards employees and the public. Thus, Galdós' work necessarily also deals with disease, which, as a good realist, he reflects in photographic, mirror-like detail, as mentioned previously. Such an endeavour required sources of information, mainly the author's physician friends, as well as written works; these will be discussed later. Above all, he needed a capacity to observe and to listen, enabling him to sincerely reflect the traits of specific clinical disorders that, in some cases, even appeared in literary works before they were described in medical texts. An example of this phenomenon is Pickwickian syndrome, described by Charles Dickens in *The Pickwick papers*, and narcolepsy-cataplexy, which appeared in the novel *Moby Dick* (1851) prior to its clinical description by Gelineau in 1880-1881.¹⁰

These qualities are clear in Galdós, whose work presents numerous neurological diseases and disorders, summarised in Table 1. Some of these have been widely addressed in the medical literature and in works on Galdós in other fields. As an example, we may mention syphilis, which was very extended in Galdós' time, affecting multitudes of people in the big cities, where prostitution was widespread in conditions of extreme poverty and overcrowding. The disease famously affected artists including Maupassant,¹¹ and was particularly prevalent in Paris, where some of the novels published are almost monographs on the epidemiology and symptoms of the disease¹²; it was treated as a taboo in Spain, despite its high prevalence. Given his promiscuity, Galdós may also have contracted the disease; however, circumstances conspired to prevent our knowing this for certain: his zeal in concealing both his private life and his correspondence; the professional secrecy of his physician friends; and the fact that Gregorio Marañón, a friend of the author, ordered that his personal archive of clinical records be destroyed upon his death.

What we do know for certain, with documentary evidence, is his detailed understanding of the disease. This is evident in the character of Maximiliano ("Maxi") Rubín, Fortunata's husband in the novel *Fortunata and Jacinta*. The writer depicts mental and physical characteristics that leave little doubt on the subject. He describes a flat nasal bridge, the typical placement and morphology of the teeth, probable thoracic aortic aneurysm, and a mental disorder including delusions of grandeur and religious, obsessive, and paranoid

Table 1. Summary of the neurological diseases described to date in the oeuvre of Galdós.

Disease	Novel: character	Author
Migraine without aura Migraine with aura Aura without headache	<i>Fortunata and Jacinta</i> : the three Rubín brothers	L.C. Álvaro
Congenital syphilis	<i>Fortunata and Jacinta</i> : Maximiliano Rubín	H. Turner M. C. Rodríguez Acosta
Schizophrenia	<i>Fortunata and Jacinta</i> : Maximiliano Rubín	M. C. Rodríguez Acosta A. Garma A. Berná Jiménez
Myasthenia gravis	<i>Tristana</i>	B. Morales
Parkinson's disease	<i>Torment</i>	L.C. Álvaro
Hemifacial spasm	<i>Fortunata and Jacinta</i> : José Ido del Sagrario	L.C. Álvaro
Narcolepsy	<i>Meow</i> : Luisito Cadalso	I. Casado-Naranjo J. I. Fernández
Sleep paralysis	<i>Fortunata and Jacinta</i> : Fortunata	L.C. Álvaro
Chronic alcoholism Hepatic cirrhosis Hepatic encephalopathy Pellagra	<i>Fortunata and Jacinta</i> : Mauricia la Dura	L.C. Álvaro
Epilepsy, petit mal	<i>That Bringas woman</i> : Isabelita de Bringas	L.C. Álvaro
Syncope and psychogenic alterations in awareness	<i>Torment</i> : Amparo <i>That Bringas woman</i> <i>Fortunata and Jacinta</i> : mother of the Santa Cruz family	L.C. Álvaro
Cerebral haemorrhage	<i>Fortunata and Jacinta</i> : Isabel Cordero	L.C. Álvaro
Apoplexy with hemiplegia and aphasia	<i>The forbidden</i> : José María Bueno de Guzmán	L.C. Álvaro

delusion, presenting an episodic course. In addition, the character presented thin, weak skin, thinning hair, and poor sexual maturity at the age of 25 years. He was born prematurely; the narrator's account suggests that his mother was promiscuous (all three of her children were from different fathers); and he had been nursed by a goat. All these features are highly suggestive of syphilis, and sufficiently precise for us to suppose that the writer knew of Hutchinson's description of congenital syphilis in 1871, which had been translated into Spanish in books at the time.¹³ The disease was known to cause premature birth, and children (and

later adults) with these deformities were described in various European cities, including Madrid, as noted by Galdós' friend the paediatrician Manuel Tolosa Latour.¹⁴ It was known that wet nurses who breastfed these children could transmit syphilis and other infectious diseases. Thus, mothers were advised to use animals to nurse their children, exploiting the specific barrier that different species possess for certain infectious diseases. The animals most frequently used were goats, as in the case of Maxi, and donkeys. Syphilis was also known to present an association with what was known at the time as "general paralysis of the insane," which Giné i

Partagás had reported in Spain shortly after the first description by Fournier in Paris in 1879,¹⁵ seven years before Galdós' novel depicting syphilis in the character Maxi. It was attributed to a condition known at the time as syphilitic meningitis or interstitial pachymeningitis with cerebral softening. Delusional symptoms with these features, especially in young men, which were almost pathognomonic in patients presenting the Hutchinson triad of physical features, were diagnostic of neurosyphilis presenting as general paralysis. The treatment advocated at the time was potassium bromide, a drug that Maxi, a trained apothecary, used regularly. It cannot have been coincidence that Galdós' library included a copy of *Libro médico azul* ("Blue medical book") published by Burroughs Wellcome, a therapeutic treatise that specifies this indication. Fortunata is probably referring to this book when she criticises her husband for so insistently reading "those great medical books."^{15,16}

Headache was part of the clinical spectrum of general paralysis and meningoencephalitis, and was known to precede or co-present with other symptoms. Thus, some authors have interpreted Maximiliano's headaches as part of the clinical spectrum of congenital syphilis with late-onset neurosyphilis.^{15,17-19} However, I do not defend this hypothesis. Galdós' description of migraine is precise with regard to its episodic course, classical trigger factors (already recognised at the time), familial nature, and response to restorative sleep and symptomatic medications, including ergotamine, a pioneering drug at the time. All of these aspects had previously been described¹⁶ and the author was no doubt very familiar with them, as demonstrated in letters exchanged with his friend Tolosa Latour: in this correspondence, the latter mentions the diagnosis and indicates topical prescriptions. The letters also refer to Tolosa's invitation for Galdós to visit the clinic at his home on Calle Atocha to observe a case of somnambulism,²⁰ following the French tradition of Charcot, whose famous Tuesday lessons, attended by "tout Paris," were a kind of theatrical spectacle based on a clinical session where the patient was presented to demonstrate hysteria (in the case of Charcot, for which extensive imagery is available)⁴ or somnambulism (Tolosa).

Scientific theory in Galdós

Galdós described Maximiliano's mental illness^{21,22} at a time when, as a correspondent for the Argentinian press (the *La Prensa* and *La Nación* newspapers), he was

attending the famous trial of the priest Galeote, who murdered the first bishop of Madrid, Narciso Martínez Izquierdo, on Palm Sunday in 1886. Galeote presented referential delusions, and his mental condition was examined by forensic physicians. That murder and other famous cases such as the Calle Fuencarral murder in 1888 are reflected in his work, with depictions of murder in *Ángel Guerra*, *The unknown*, and *Reality*. At that time, mental illness and forensic psychiatry were very much in vogue; in Spain, the leading exponents were Luis Simarro, another contact of Galdós, and the famous Dr Esquerdo, who founded the pioneering private mental institution in Carabanchel. These severe mental conditions, which would today be categorised as psychosis or schizophrenia, were understood in Galdós' time as "sociodegenerative diseases."²² This category also included tuberculosis, alcoholism, and syphilis. They constituted so-called degenerative disorders, first described by Morel as part of his degeneration theory in 1857. For Morel, the concurrence of these diseases in entire families, usually from lower social classes, affected by numerous deficiencies, suggested that they were hereditary. Disorders and defects, including such moral defects as prostitution and delinquency, were commonly associated with these families and diseases, indicating their hereditary nature. Thus, these families were doomed to disappear, representing a blemish on the society that harboured degenerates, whose numbers were increasing exponentially with industrial and urban growth. We may draw clear parallels between degeneration theory and phrenology or the criminology expounded by Lombroso, who claimed to extract morbid characteristics inherent to criminals (degenerates) based on their cranial and physical features.

Galdós was never convinced by the deterministic, pessimistic hypotheses of degeneration theory. His characters are crafted with a natural vigour that also permeates them in sickness and in poverty. They stand out for their human traits in a society full of deficiencies, in which the reader will soon recognise them as victims. Family history and genetics are a feature of Galdós' narrative that demonstrates his understanding of degeneration theory, especially in his novel *The forbidden*, in which he deploys a detailed description of mental illnesses and extravagant behaviours, including some individuals who presented mystical ideation bordering on delusion, in the dynasty of the Bueno de Guzmán family.²³ These traits are exemplified in the characters

of Camila, Constantino, and the protagonist José María. The latter dies due to apoplexy with hemiplegia and aphasia, and a rich description is given of their semiology and progression to his eventual death. These mental and physical defects to which degenerates were doomed are also found in *El doctor Centeno*, a novel dominated by tuberculosis, which takes the life of the central character. Much may also be said of alcoholism, which is observed in numerous characters, with the case of Mauricia la Dura, Fortunata's closest friend, being particularly illustrative; Mauricia displays behaviours characteristic of alcohol dependence, as well as possible pellagra, cirrhosis, encephalopathy, and ascites, and dies due to liver failure. The final example of sociodegenerative maladies is the case of Maximiliano, whose delusion leads to his admission to the Leganés mental asylum, where the novel closes.

Leganés is also the setting to the opening of another novel, *The disinherited*, whose opening chapter masterfully portrays the environment inhabited by the centre's psychiatric patients: their thoughts, relationships, delusions, and particularly the cruel treatment, with restraints and cold showers with high-pressure water, against a backdrop of material, human, and above all care-related deficiencies.^{15,24} The reader is led through the institution by the patient Tomás Rufete, the brother of Isidora, who presents delusions of grandeur and is a victim of prostitution. The writer, a committed intellectual, reveals the mysteries of the lower classes, who were often deprived even of a surname, as was the case of Fortunata; with this detail, she was at once nobody and everybody, purely of the people, to whom Galdós felt so close. His study of clinical and neurological symptoms served as a tool for his literary realism, which was charged with social critique, as mentioned earlier. Doctor Miquis appears in this novel and three others (*Tristana*, *El doctor Centeno*, and *Torquemada y San Pedro*). Miquis is the antithesis of the human misery of the powerful that populate Galdós' novels: he is portrayed as sensitive, cultured, generous, medically and socially observant, selfless, and able to help with enthusiasm and excellence; these virtues demonstrate the author's esteem for physicians and medicine, which were very close to him.

In addition to degeneration theory, another paradigm that reached its climax at the time was the theory of evolution, which Galdós undoubtedly knew and used as a structural mechanism in one of his key works,

Meow. This novel from 1888 depicts the world of Madrid bureaucracy through the vicissitudes of a civil servant at the tax office, Ramón Villaamil (the surname a pun on how common such individuals were, roughly translating as "in the city [of Madrid] there are a thousand [like him]"), and his grandson Luisito Cadalso (son of Víctor Cadalso, an upstart civil servant who ascended through his lack of scruples but was eventually convicted for his actions). Villaamil was dismissed just days before he would be entitled to a lifetime pension, and felt as though he had received a death sentence. The novel recounts Villaamil's trials and tribulations, aided by his grandson, who serves as a messenger, to try to right the glaring injustice he is subjected to by the blindness of the civil service. He considers himself an exemplary civil servant, with many plans, as demonstrated by the title of the novel: MIAU, the Spanish acronym for morality, income tax, customs, and the unification of debt, which defines Villaamil's plan of action. In contrast, his son-in-law Víctor Cadalso is an unscrupulous upstart at the same ministry.²⁵ This clash is exemplified through the terms and concepts of Darwin's theory of natural selection which, translated to literature, proves that the author followed Zola's theses on naturalism. The latter aimed to imbue literature with the experimental strength of the scientific method, which had triumphed in medicine (as in chemistry and biology) after the publication Claude Bernard's 1865 work *An introduction to the study of experimental medicine*. This natural experimentation with life and with his creations is characteristic of the work of Galdós, who also knew how to breathe life into them, making them seem to inhabit a real world, with complex sensations, precise language, and physical and mental suffering. *Meow* displays the experimental method of naturalism, and in addition inserts ideas from the theory of evolution. Thus, the novel presents many examples of animalisation: the women are referred to as "the Meows" for their cat-like appearance; and in the final perceptions of Villaamil, now disillusioned and aware of his irremissible condemnation, he likens his colleagues and neighbours to apes or cats, doubtless reflecting personality traits that had enabled them to survive in a society full of injustices and emotional blindness. The novel, a key work for the purposes of this study, though it was completed in five weeks and seen by its author as a minor work, also stands out for the descriptions of Luisito's neurological symptoms, with episodes of narcolepsy^{25,26} during which he converses

with a humanised god who is shifted to his plane, even through the language he uses. The diphtheria and sepsis of Posturitas, a deceased friend of Luisito, cases of alcoholism, and the fact that Luisito's mother had died of a mental illness complete the neurological disorders and scientific theories that bathe this rich novel.

Neuroliterary contributions of the spiritual novels *Nazarín* and *Halma*

Among Galdós' works that have not yet been the subject of neurological analysis are his spiritual novels, particularly *Nazarín* and *Halma*, written in San Quintín (the author's house in Santander) in May and October 1895, which he regarded as two parts of the same novel. It seems ironic to speak of spiritual novels by a writer regarded as anticlerical. However, this is not such a great contradiction, considering that his anticlericalism was based on a critique of a church rooted in premodern times. The church dictated social norms and its power was felt suffocating to rationalists who, for a hundred years before the publication of these novels (ie, since the beginning of the Age of Enlightenment), had advocated for free thought and for legislation to be autonomous, civil, and not imposed.²⁷ However, Galdós was very disappointed with the limited social achievements of liberalism and the doctrine of pursuing the greatest good for the greatest number. This is summarised as follows in *Nazarín*, where the titular character, a priest, affirms that:

What used to be called political problems, that is, issues of freedom, human rights, etcetera, have been resolved without mankind finding a new heaven on this earth. After winning all those rights the peoples of the world are as hungry as they were before. Much political progress and little bread. Much material progress and every day less work and an infinity of idle hands. From politics we can no longer expect anything good, as it has no more left to give.^{28(p152)A}

With this speech, *Nazarín* summarises Galdós' scepticism about politics, a field to which, soon after (from 1909), the author dedicated some of his energies for several years. Galdós always conferred pedagogical or didactic value to his literature, trying to show the path to overcoming the limitations of social organisation.

With these novels, he did this precisely through spiritualism, searching for authentic moral values in the purest and simplest Catholic doctrine. This effort is personified in *Nazarín*, a cleric who could be considered a kind of Don Quixote in a cassock. His name itself demonstrates this: Nazario Zaharín, a contraction of Nazarene, one dedicated to God and to the holy spirit, and *zaherir*, the Spanish verb "to lambast," as occurred to *Nazarín* in response to his mission to be a saviour of the weak and disadvantaged among the people of the province of Madrid, like Don Quixote. Indeed, he is described as a Moor of La Mancha or as a *Manchego* with a Moorish face. Nonetheless, it has been said that the return to authentic moral values that the author propounds through *Nazarín* was in fact an inverted imitation²⁹; in other words, the author showed things not as they were, but as they ought to be: a model to copy, a step beyond realism and naturalism. In any case, the characters of *Nazarín*, an atypical priest, and *Halma*, an atypical countess who accompanies *Nazarín* in the second part of the novel, are also presented as models on a journey through the countryside, with their companions (two women for *Nazarín*) mimicking Sancho Panza, and their unquestioning dedication to the ideal of helping the neediest reaching the point of madness, remitting in the last days before death in Don Quixote, and by human decree in *Nazarín*. On this trip, setting off from the outskirts of Madrid, on Calle Amazonas (district of La Latina) and ending at a hospital (possibly San Carlos) between Móstoles prison and Madrid, disease and neurological disorders mark different junctures of the route and the plot. The following constitute key examples of this in *Nazarín*:

1) Confusional syndrome or delirium that, on the circular journey, appears at the beginning and the end of the novel. At the beginning, it is observed in one of Nazario's squires (Ana de Ara, "Andara"). She is a thief and an alcoholic, taken in by *Nazarín* as she flees. After setting fire to her bedchamber she escapes and is wounded, developing an infection with high fever. The author writes that "she fell into alarming exhaustion, with frequent collapses and delirium,"^{28(p57)} presenting a fluctuating course with improvements in the day: "now, close to daytime, in a moment of lucidity[...]"^{28(p58)} Wine improved the symptoms, both with regard to confusion and the skin lesion itself. Thus, we observe the clear possibility of alcoholism as a factor in the overall clinical picture, with the masterful writer including in

^APérez Galdós B. *Nazarín*. Labanyi J, translator. Oxford; New York: Oxford University Press, 1993.

the resolution of symptoms an element of expectation, or what we may refer to today as the placebo effect:

She fell into the deepest lethargy, from which Nazarín brought her out, shaking her head to offer her wine. Oh, she drank with such thirst and such enjoyment! Then, he applied to her wounds the same medication he had given for internal use, and the great woman had such faith in this therapy, no doubt because she had observed countless examples of its effectiveness, that through that faith alone, without any other treatment, her wretched condition improved.^{28(p62-3)}

The end of the novel features a more developed and more richly detailed depiction of confusional symptoms. We see Nazarín at the end of his journey, locked up in the miserable jail in Móstoles with his two squires and with criminals, one of whom is converted to his cause. The priest from La Mancha describes in first person how he feels hot and has a very high fever and “horrible typhus.”^{28(p273)} He experiences altered awareness and perception, with noteworthy symptoms being a sensation of accelerated time (“Nazarín’s mind and confusion became greater confusion and delirium [...]. In brief moments, Andara told him of innumerable concepts”^{28(p272)}), distorted space (“He saw the prison as a yawning cavern, the ceiling so low that a man of average height could not stand without stooping”^{28(p271)}), and deformation of the people surrounding him. This occurred with one of the thieves (“The church burglar stretched until the upper half of his body was obscured by the ceiling; he reappeared as a tightrope walker with his head down”^{28(p272-3)}) and his two companions. He sees these women as part of a hallucinatory, delirious external scene, ending with an army of evildoers who stab Nazarín but do not succeed in killing him:

Before him, he saw Beatriz, transfigured [...] an army of evil people was coming towards him [...] after the first group came more, and more [...] that turmoil [...] did not touch a hair on Nazarín’s head, or draw a drop of blood [...] he saw Andara coming from the eastern part, transfigured into the bravest and most beautiful warrior woman imaginable [...]. Behind [...] I am more powerful, and I convert you into dust and a mire of blood.^{28(p275-6)}

Nazarín recovered consciousness (“The vision ended and everything returned to the cloudy, sad reality”^{28(p277)}). He felt especially debilitated and close to death, wishing to shed vanity, in a new place, alone (“where was I?

[...] it was as though I recovered consciousness after a tremendous stupor [...] You are in my holy hospital [...] Rest, for you so deserve it”^{28(p279)}). If the features described meet criteria for confusional syndrome, it is also worth highlighting the author’s skill in reflecting on the perception of reality, which he questions through Nazarín’s sensory experience, as a true pioneer of phenomenology and the tricks of sensory knowledge, demonstrated decades later by the Gestalt theory and visual neurophysiology:

Was he seeing and hearing reality, or an external projection of the delusions of his burning fever? Where was the truth? Within or beyond his thought? Did the senses perceive things, or create them?^{28(p271)}

2) Other infectious symptoms: febrile and septic disease in a seven-year-old girl, the niece of Beatriz, with whom the latter and her sister lived before setting off to travel with Nazarín. Their living conditions were so precarious that the child’s typhus (which the novelist refers to with the colloquial term *tabardillo*) was unsurprising; it was extremely severe, the very image of sepsis:

The two sisters lived in a run-down tavern, close to a stables, with so few resources [...] if the little girl had not been so sick, with pernicious *tabardillo*, that surely would send her to heaven within 24 hours.^{28(p111-2)}

Carmencita’s face was corpse-like, her lips almost black, her eyes sunken, her skin burning, and her whole body limp, inert, already presaging the stillness of the tomb.^{28(p117)}

Nazarín presents elements of Galdós himself when he dares question the fact that, given the gravity of the case (“Don Sandalio, the chief physician of the village, had come three times, and on the last occasion told them that only God with a miracle could save the child”), the family had called a “charlatan who promised great cures.”^{28(p116)} Being the educated and advanced man that he was, he despised pseudoscience and folk medicine: “Nazarín severely and almost angrily reprimanded them for their stupid faith in such nonsense, urging them to believe in science alone.”^{28(p117)}

On their journey, the protagonists come across a fatal epidemic in the villages of Villamantilla and Villamanta, which the author describes very succinctly as “smallpox” (“A horrible epidemic of smallpox? Frightful, no question”^{28(p166)}). The disease in question is more likely to have been typhus or cholera, given the incidence of

these diseases at the time, the high mortality rate, and the fact that Nazarín himself is affected at the end of the novel. In this instance, the narrator is not concerned with the details, as it is highly likely that he never experienced them, and a realist writer would need direct documentation in order to portray them. Rather, he uses the epidemic as a narrative device to recount the selfless commitment of his characters. The inhabitants of the first village, who mistake Nazarín and his companions for beggars, exclaim:

Here there is only misery, death, and helplessness [...] I am the mayor [...] here we are only myself and the priest and a physician who was sent, as ours died, and around 20 villagers, without counting today's sick and deceased, whom we have not yet been able to bury.^{28(p177)}

3) Nazarín/Galdós is highly critical of the popular magical thought and the pseudoreligious ideas of demonic possession. In the following fragments, his squires Beatriz and Andara describe bouts of rabies, resembling epilepsy, that in reality corresponded to hysteria, which Nazarín correctly diagnoses and goes so far as to propose a mechanism and a treatment:

She had terrible attacks, so terrible, Mr Nazarín, that all of us together couldn't restrain her. She would roar and froth, then she started screaming, saying shameful things [...] she had demons in her body [...] I had a disease that you cannot imagine, father, and when I had attacks I would have killed my own mother while she was with us [...].

That, said Nazarín, is not witchcraft or anything to do with demons; it is a very common and well-studied disease called hysteria [...] How is it cured? A large part of it is in the imagination, and in the imagination we should search for the remedy [...] Endeavouring to make clear that these disorders are imaginary [...] Persuade yourself that these phenomena do not reflect injury or malfunctioning of any organ, and you will no longer experience them.^{28(p122-3)}

Beatriz later experiences a blissful, pleasant variant of the same attacks, which Nazarín again questions:

She felt almost a satisfaction at feeling unwell, and the premonition that she would have a very enjoyable experience [...] pressure on the chest was somewhat uncomfortable, but compensated the effluvium that ran over her whole epidermis, erratic vibrations that would stop in the brain, where they were converted

into beautiful images, more dreamed than perceived [...] that had to be repressed to overcome the impulse to spring towards whatever she was seeing.

She heard Nazario say that he did not trust the visions and that she must look for a long time before crediting things (he had said phenomena) that only existed in the imagination and in the nerves of people with ill health.^{28(p176-7)}

4) One character whom Nazarín meets on his quixotic journey, Pedro Belmonte, is revisited in later novels, like other characters of Galdós'. In this work, he is a mystic visionary, a recluse from society devoted both to religious worship and to self-worship. Like Don Quixote, who lost his brilliant good sense and became delirious at the mention of damsels in distress, Pedro Belmonte presented similar experiences related to religion: "They say that when he is told of things related to the Catholic religion, or the pagan religion, or idolatry, if it comes to hand, he loses his good sense, for it was this legend and the study of the holy scripture that had upset him."^{28(p165)}

He was a mature man, a similar age to Galdós at the time he wrote the novel (52 years), with memory complaints, which he acknowledges as they cause emotional changes and irritability; "Because you must know that for some time memory loss has been the greatest torture of my life, and the cause of all my tantrums."^{28(p146)}

5) Deformities and malformations are a constant in the Galdosian oeuvre, acting as a mirror mechanism to reflect the monstrosity and ugliness of the miserable environments his characters inhabit. This is the case in Nazarín, in which the character Ujo presents features of achondroplastic dwarfism, following the great tradition of Velázquez. Deformity is also portrayed here with compassionate and humanising traits that, as in other deformed characters in the work of Galdós, rescue these characters from the material and moral misery from which they emerge:

They saw there the ugliest, most deformed and ridiculous dwarf imaginable [...] he was also a beggar [...] people threw crusts of bread at him to see them bounce off of his head [...] the first impression upon seeing him was that of a head walking on its own, moving two little feet below its beard. On either side [...] emerged an incredibly small arm. In contrast, his head was more voluminous than usual, very ugly, with a trunk for a nose, a few limp hairs in the beard and moustache, and bright mouse-like eyes that looked at one another, as he was horribly cross-eyed.

His voice was like a child's [...] those who entered the church without knowing of that piteous mistake of nature were terrified as they saw that giant head advancing three spans above the floor, thinking he was some demon escaped from the altarpiece of the holy souls [...] Though he looked otherwise, poor Ujo was a good man, or rather a good dwarf or a good monster.²⁸(p198-200)

The other key spiritual novel by Galdós is *Halma*. As mentioned above, it is the second part of *Nazarín*. The protagonist is the countess of Halma, guardian to Nazarín, who in this novel plays a secondary role, and is as spiritual as the latter after her husband's death from tuberculosis ("Her husband was diagnosed with tuberculosis, so severe that it was easy to predict a funereal outcome in the near future"^{29,30}(p50)). Without addressing the plot in detail, it is sufficient for the purposes of our analysis to note that the countess was made Nazarín's guardian after an unusual court order. Thus, we may begin considering the neuroliterary contributions of this novel:

1) The forensic diagnosis of Nazarín: as mentioned above, the priest, dedicated to his cause as a roaming preacher, together with the thieves and other marginalised individuals who joined him on his pilgrimage, ended up imprisoned, sick at hospital, and, once cured, tried:

The court did not find don Nazario guilty: vagrancy, abandonment of this priestly duties, and the suggestion exercised over beggars and criminals were none other than the result of the clergyman's piteous mental state and none of his acts displayed incitement to crime; rather, to the contrary, his insanity tended to noble and Christian ends, and he was freely acquitted. The doctors who had repeatedly examined him reported that the acts of the roaming preacher were unconscious, as he had been overcome by religious melancholy, a form of epileptic neurosis, and he was delivered to the ecclesiastical authorities to take responsibility for his treatment and custody at a religious asylum or other convenient place.³⁰(p170)

He is labelled with none other than religious melancholy, a variant of epileptic neurosis. This was a consolidated tradition from the first quarter of the 19th century; in France, epileptic disorders were cited to explain forms of behaviour not controlled by the patient, violent or otherwise, executed with no pernicious intent, especially when the content was of religious nature. They were initially classified as "petit mal" seizures.³¹ Galdós speaks first of melancholy, with the severe connotation of apathy

that this implied in religion, as it was considered to be the result of demonic possession.^{29,30} Next, he added the denomination of epileptic neurosis, which is sufficiently elucidating, in the light of the fact that neurosis is a term whose sense, at the time, was not psychodynamic but rather degenerative; in other words, it was included among the disorders that affected patients due to their setting and heredity, resulting in a deterioration considered to be irreversible.²³ Therefore, epilepsy and delirious mental disorders, particularly those with religious content, were included in the category of degenerative diseases; this explains the fact that Nazarín is described soon after as being "at the height of pietistic delirium, prey to the monomania of sacrifice and death."³⁰(p171) From a modern neurological perspective, we may consider that his religiosity and pietism, which Galdós refers to as religious monomania, may correspond to Gastaut-Geschwind syndrome, whose features include hyperreligiosity and an intense and profound mental life, leading to proposals to improve the human condition. The remaining clinical features are a rigid personality and an inability to move away from religious ideation, which becomes repetitive in ubiquitous, unending speech. The complete syndrome also includes hypergraphia and changes in sexual behaviour, frequently in the form of hyposexuality. Nazarín shows neither of the latter traits, although he does undoubtedly display the other three, which may be sufficient for diagnosis.³² We may also add the descriptions of other epileptic disorders in the fiction work of Galdós (Table 1).

Due to Nazarín's behaviour with the countess, always disciplined, and full integration into the almost monastic life that she establishes at a property near San Agustín de Guadalix, he is deemed worthy at the end of the novel of his sanity being judicially restored, as occurs in *Don Quixote*: "I will give a favourable report; it is abundantly clear that he is of sound mind! Intelligence as bright as the sun [...] I have no qualms in discharging him [...] the bishop will surely corroborate my verdict."³⁰(p316)

2) Spinal cord infarction. Manuel Flórez, the second clergyman in the novel, presents a spinal cord infarction. He is of a very different breed than Nazarín, with great skill relating with people and dedicated to conversational preaching. He fails in his attempt to "normalise" Halma, whom he considers a victim of disproportionate spiritual aspirations and dedication, due to the influence of Nazarín. Flórez becomes aware of the authenticity of Nazarín's preaching, which minimises his own

approach of pure personal connections and power, the preaching of an impostor. This marks Flórez' downfall, both literally and metaphorically. Literally, because he comes to despise himself, and metaphorically because he physically falls, surely a drop-attack or a transient ischaemic attack affecting the spinal cord, and several days later presents "spinal cord effusion":

When he arrived home he fainted in the doorway [...] some neighbours lifted him from the floor and carried his dead weight to the second floor, where he lived [...] they put him to bed, and he took half an hour to recover consciousness. The good priest tried to speak, but his tongue defied him [...] after resting for several hours, he was able to express himself with a degree of clarity [...] the following morning he showed a marked improvement.^{30(p178-9)}

In addition to these acute epileptic symptoms including transient aphasia, the fall is a more valuable detail, as several days later, still resting in bed at home, he presented a fatal spinal cord lesion: "The physician, who visited to attend half of these attacks, gave him remedies that aimed only to make his dying moments less painful. The lower part of his body was completely paralysed. The effusion had begun in the area of the spinal cord, with the brain unaffected."^{30(p204)}

3) Alcoholism. Alcoholism was a social scourge in Galdós' Spain, and thus could not be omitted from his work. His work deals with alcoholism numerous times, including three cases in *Halma*. While this novel does not include an alcoholic character presenting all of the numerous clinical manifestations of the disease, as is the case with Mauricia in *Fortunata and Jacinta*, we do observe the social consequences of the habit:

Félix Mauricio was the worst of the Halma-Lautenberg family [...] Because of his violent, exacting manner, his unpleasant appearance, and above all his irresistible inclination to imbibe alcohol, he was scarcely admirable and scarcely admired by those close to him and by strangers.^{30(p56)}

My good Cecilio suffers a wicked thirst that is only quenched by wine. The poor man is so broken that it would be cruel to deprive him of his vice. During the journey, you must allow him to drink a glass in some of the inns you pass through [...] three or four innocent drinks over the whole journey will be enough, but no more, no more.^{30(p198)}

Don Pascual Díez Amador, who used to manage the estate [...] a fat, boorish man [...] there was no

greater gourmand in all the district, though he had the noteworthy peculiarity that he was unable to moderate his drinking [...] and needed to stifle his anger with copious libations.^{30(p239-40)}

4) Physicians and other diagnoses of Nazarín. When Manuel Florez' spinal cord infarction is diagnosed, we are introduced to a physician who prescribes palliative measures after diagnosing the severe disease and fatal prognosis. In contrast, Láinez, the physician of San Agustín, is better profiled as a professional and as a local authority. He is depicted as professional, kind, and charitable: "Láinez, the physician of San Agustín, travelled twice weekly to Pedralba to hold consultations with the poor of the surrounding area."^{30(p267)}

It is precisely in Pedralba that the countess of Halma establishes what she calls her "island," her little kingdom governed according to Christian charity. The island required a governor, and applications to the role successively arrived from the parish priest of San Agustín (Don Remigio, the third clergyman appearing in the novel), Don Pascual (the estate manager mentioned above), and Láinez, who argued that "The Administration [...] if the reverend agrees [...] should be entrusted to science."^{30(p274)}

As a representative of science, he was obliged to issue an opinion on Nazarín's mental health; despite having endorsed the official forensic opinions establishing madness and recommending his sentence, he could not ignore the evidence of his behaviour and reason, and with him the other members of Pedralba:

With my friend Láinez, the village doctor [...] imagine our astonishment when we spoke to him and noted his clear discernment, amazing serenity, and evangelic docility [...] It is most unusual that he shows not even the slightest hint of delusion of persecution, one of the fundamental symptoms.^{30(p219)}

Madness, the supreme passion, madness, the passion of others' well-being, madness, love for the helpless! No, no [...] I sustain that this is not the case, and I will sustain this before the [...] judge [...] and before the whole world.^{30(p253)}

He is peculiar. He lives like a saint; he does not cause the slightest upset, he reasons well when he is asked to reason, he is quiet when asked to be, he obeys all instructions, he works without rest [...] Have you noticed any sign of brain flattening? None.

Difficulty coordinating ideas, slowness in expressing them? [...] No, sir.^{30(p293-4)}

5) Further examples of hysteria. We discussed above the pseudoepileptic attacks of the character Beatriz in *Nazarín*, which the priest diagnosed as hysteria. Beatriz herself, who in *Halma* is a companion of the titular countess, “had not presented even mild attacks of her constitutive spasmodic malady during the Pedralba days, and believed herself completely cured due to the long period of rest, felt the first symptoms that day, no doubt because of the violent emotion of the conversation with the lady.”^{30(p291-2)}

Here, it was the countess who presented the attack, due to the excessive emotion of a proposal by Nazarin himself:

The countess gave a guttural yell, bringing her hand to her heart, as though to contain an outburst, and fell to the floor, wracked by fierce convulsions [...] after fainting, between unintelligible phrases, she clearly uttered the following: “He is mad, and he wants to drive me mad as well.”^{30(p306)}

The foundation of Galdós’ medical knowledge

Galdós’ knowledge was the result of a magnificent capacity to observe and to listen, but also the fruit of thorough research. This explains the knowledge of history shown in his *Episodios nacionales*, of economics and fashion, mentioned previously, and of course his understanding of medicine, which is most relevant for the purposes of the present article. With no specific training, his knowledge would have come from two main sources: books, and physician friends, or both at once.

Little remains of Galdós’ original library. Most of the collection is held at the Pérez Galdós House-Museum in Las Palmas de Gran Canaria, the home where he was born. The collection is catalogued, and includes several relevant medical texts, including Jaccoud’s *Treatise of internal pathology*, with a dedication by Galdós’ friend Tolosa Latour. This book contains descriptions of such neurological diseases as migraine. Galdós must have consulted this work, as notes were made in the margin and the descriptions are followed reasonably faithfully in *Fortunata and Jacinta*.¹⁶ Another work in the collection is the 1888 edition of Enrique Diego Madrazo’s work *Lecciones de clínica quirúrgica* (“Surgical clinical lessons”), with a dedication from the author, a pioneering surgeon who introduced Lister’s aseptic technique in Spain; this may have influenced the

description of the amputation of the titular character’s leg in the novel *Tristana*, although the book is largely unopened, with many of the pages still stuck together. Also noteworthy is *Enfermedades nerviosas*, a book in two volumes by Armangué i Tuset, which cites neurological and psychiatric disorders present in Galdós’ work, and *Libro médico azul*, a therapeutic treatise by Charles Christie published by Burroughs Wellcome, a kind of pharmaceutical handbook of the time, which in all likelihood would have been the author’s reference for the numerous treatments mentioned in *Fortunata and Jacinta* by the character Maximiliano Rubín, an apothecary, as mentioned earlier. A large part of the author’s library has been lost, probably including direct sources on the diseases and treatments described in his oeuvre.

His friend Tolosa Latour was director of a prestigious medical journal at the time, *La Gaceta Médica*. Its pages featured advertisements for works by Galdós, such as the *Episodios nacionales*, and articles by Tolosa, a respected paediatrician at Hospital del Niño Jesús, which served as sources on diseases of childhood, advice on hygiene and paediatrics, and such charitable institutions as milk depots (Gotas de Leche, or “drops of milk”). In our opinion, there is a need for direct, detailed research on this journal and its influence on Galdós’ work. Analysis of the years of publication and the descriptions featured in his different novels may reveal which editions he referred to. This is better profiled in other areas, for example in his account of the murder of the bishop Martínez Izquierdo or the Calle Fuencarral murder, also mentioned above.

Finally, he was advised by several physicians. We have already discussed Tolosa Latour, whose close friendship with the author is shown in their correspondence. He knew of Galdós’ severe, familiar migraines, and treated him on more than one occasion (Figure 3). In turn, Tolosa was a colleague and friend of such prestigious alienists as José María Esquerdo, Luis Simarro, and Victorio Garrido, some of whom were involved in the mental forensic examination of suspects in the most famous murders in Madrid, subsequently reflected in Galdós’ works and the material he sent to the Argentinian press during his years as a correspondent; these journalistic texts, in turn, are yet to be analysed from a medical perspective. The prestigious surgeon Enrique Diego Madrazo, and Alejandro San Martín, who pioneered the use of anaesthesia in Spain, must

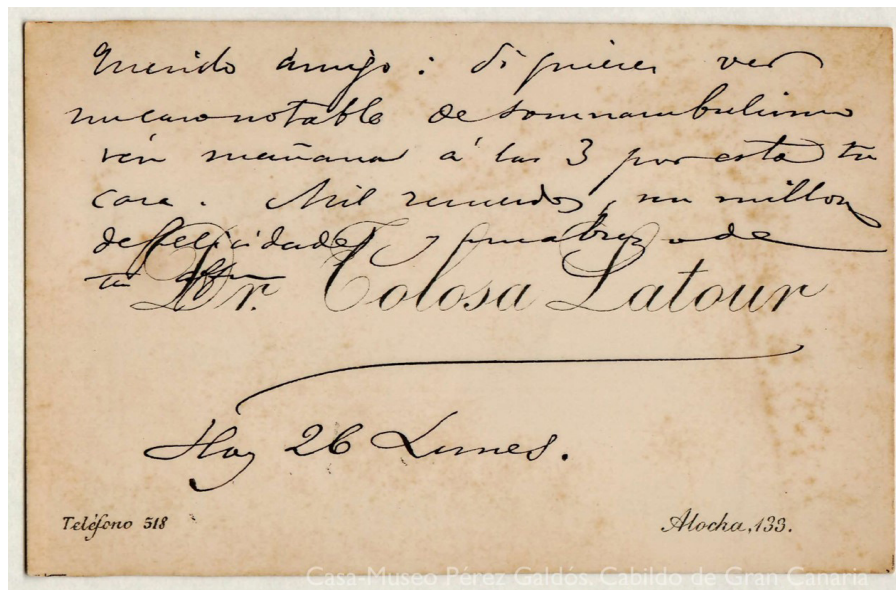
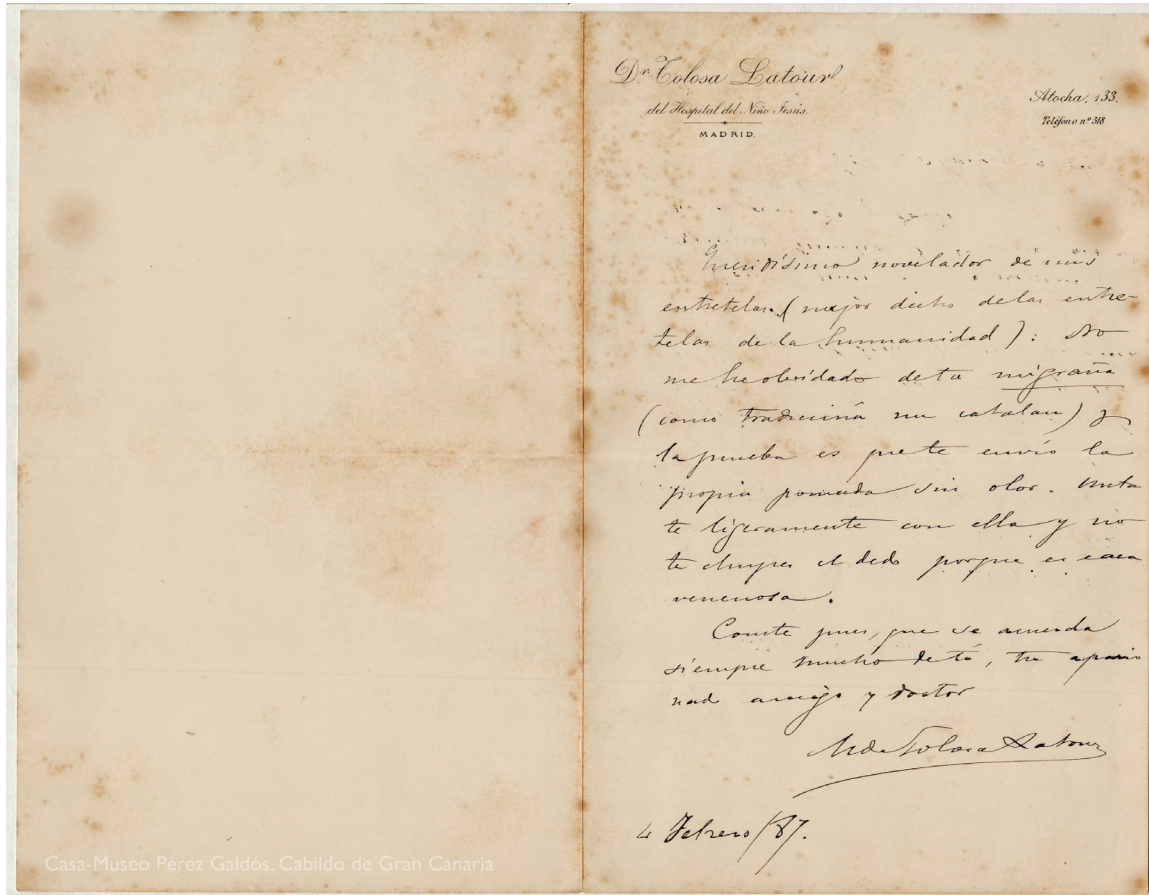


Figure 3. Correspondence between Tolosa Latour and Benito Pérez Galdós. Above, in a letter dated 25 February 1887, the former mentions the writer's migraine and proposes a topical treatment. Below, he invites Galdós to his home on Calle Atocha to witness a noteworthy case of somnambulism, following the great tradition of Charcot's "Tuesday lessons."



Figure 4. The face of Galdós, cachectic, on his death bed, a drawing by Victorio Macho.

have contributed information on surgical techniques and anaesthesia when they visited the author's home in Madrid.¹⁵ Finally, he and Gregorio Marañón shared a friendship that began a generation before, with the latter's father. Galdós spent seasons at his country house in Toledo, where he set another of his spiritual novels, *Ángel Guerra*. Dr Marañón was his personal physician. The available data from his medical history show that he was diabetic, an inveterate smoker, and that in his final years he was nearly blind due to a cataract complicated by diabetic retinopathy. Blindness prevented him from writing, and his last novels were dictated to his nephew José Hurtado. He presented generalised arteriosclerosis and what was known at the time as spinal softening,³³ probably spinal canal stenosis that, together with chronic ischaemia due to arteriosclerosis, would explain the fact that he used a wheelchair for his last trips. In the last

year of his life he barely left home, only twice; one was captured in the image shown in Figure 1. He was unable to leave his home due to these health conditions and chronic kidney failure, and eventually died on 4 January 1920 due to these diseases and, in his final days, heart failure and gastrointestinal bleeding; his friend Gregorio Marañón cared for him in these last hours, and finally shrouded his body (Figure 4).

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Conflicts of interest

The author has no conflicts of interest to declare.

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