Grand mal seizures in the *Cemetery of the Living*: the diagnosis of epilepsy at Brazil's National Hospital for the Insane

NEVES, Margarida de Souza. Grand mal seizures in the *Cemetery of the Living*: the diagnosis of epilepsy at Brazil's National Hospital for the Insane. *História, Ciências, Saúde – Manguinhos*, Rio de Janeiro, vol.17, suppl.2, Dec. 2010. Available at: http://www.scielo.br.

Abstract

This study in the social history of medical thought analyzes the articles on epilepsy published in the journal *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal* in 1915 and 1918. Through these texts, it is possible to identify some of the ways in which early twentieth-century Brazilian medicine addressed this syndrome, particularly the direct association that medical science then drew between epilepsy and a propensity to violence and crime. The texts, which contain clinical observations on patients diagnosed as epileptics, also afford us a brief glimpse into these individuals' life stories.

Keywords: epilepsy; positivism; science and prejudice; Brazilian National Hospital for the Insane; medicine and society.

Margarida de Souza Neves
Department of History, Pontifícia Universidade Católica do Rio de Janeiro (PUC-RJ)
Coordinator of the PUC-Rio Memory Group
Núcleo de Memória da PUC-RJ
Rua Marquês de São Vicente, 225
Ala Kennedy - 3º andar
CEP 22451-900 Rio de Janeiro – RJ – Brazil
msneves@puc-rio.br

Received for publication in August 2010.
Approved for publication in October 2010.

Translated by Diane Grosklaus Whitty.

The lengthy article by Dr. Jefferson de Lemos published in Brazil's first scientific journal on psychiatry, neurology, and forensic medicine (*Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal*) is of value to historians today for several reasons. First, it provides new information for studies on health and disease in Brazil, especially research into the history of culture or of medical thought. Dr. Lemos' article features a dialogue between the era's medical culture and a topic that was particularly troublesome for medicine back then: epilepsy and the treatments to which those diagnosed as 'epileptics' were submitted.

Dr. Lemos' article likewise sheds light on the obstacles physicians encountered when addressing a challenging, socially stigmatized disorder. Further, it helps situate the Brazilian approach to the disease by affording a comparison between the understanding and procedures of Brazilian specialists and those adopted in other countries, where historiographic production has already made epilepsy an object of study (Temkin, 1994; Dweyer, 1997; Friedlander, 2001; Eadie, Bladin, 2001).

Surprisingly, the physician's article also reveals some rather unknown facets of Comtean positivism in Brazil. But perhaps the most invaluable contribution comes in the form of a scant number of accounts of patients observed by Dr. Lemos. Taken together with the scientific paper that Dr. Heitor Carrilho published in the same journal in 1918 (Carrilho, 1918), Dr. Lemos' text gives us a glimpse of the human faces of some of the men and women in the first decade of the twentieth century who were treated as 'insane' (*alienados*) because they allegedly suffered from epilepsy.

Dr. Jefferson de Lemos apparently did not lead an easy life. Starting in May 1912, he had under his care patients diagnosed as epileptic and therefore hospitalized at the National Hospital for the Insane (Hospital Nacional de Alienados), an institution that Brazilian writer Lima Barreto astutely labeled a "Cemetery for the Living" (Lima Barreto, 1956).

Dr. Lemos headed two pavilions at the hospital: the Griesinger, for women diagnosed with epilepsy, and the Guislain, a "unit for male epileptics" (Lemos, 1915a, p.14), to employ the hospital's terminology.

Dr. Lemos was not directly responsible for children with epilepsy, including the boy who touched Lima Barreto's heart during one of his stays at this hospital. When the boy – whose name we will never know – asked Lima Barreto for a cigarette, the writer looked at the lad, pondering his dreary destiny, "his whole life locked away in there because of these accursed seizures that cannot be predicted" (Lima Barreto, 1956, p.211). The Escola Bourneville Pavilion was meant for him and for all the other "retarded, healthy, and epileptic children" hospitalized at the old asylum, which had been made into a National Hospital (Lima Barreto, 1956, p.221), founded in 1904 and headed by Dr. Fernandes Figueira for fifteen years (Azevedo, 2009).

Dr. Lemos was the alienist responsible for the care of adult epileptics, and his job was matched in its challenges by the paucity of medical tools available for dealing with epilepsy, then known as grand mal when accompanied by the convulsive seizures that both medicine doctors and the lay referred to as fits or spasms.

Epilepsy, with its dramatic manifestations, was believed to be a mental illness, and in the early decades of the twentieth century it was a target of medical and social prejudice.

Some of these biases traced their ancestry to the age-old association between the disease and demonic possession (Moura, 2007). Others were actually spread by medical science itself, which at that time asserted that epileptics had an innate and irrepressible tendency toward crime and violence (Santos, 2008; Carvalho, 2009). Other prejudices were related to the embarrassment of the sick and their families themselves, who felt the diagnosis as a kind of damnation, since the illness was believed to be a cursed legacy and a sign of degeneration, vice, perversion, and dissolution.

The exhausting daily routine at the infirmaries of the old Praia Vermelha Hospital was not the only hardship faced by Dr. Jefferson de Lemos. He was a physician but also a diehard orthodox positivist, well versed in the writings of Auguste Comte and a devoted follower of his.

When he took over supervision of the epileptic pavilions at the National Hospital for the Insane in 1912, positivism no longer enjoyed the social prestige and political influence it had wielded in the first days of the Brazilian Republic, especially outside the ranks of the Army. Much as Comte's followers in Brazil had taken an active part in the military movement that proclaimed the Republic, the subsequent constituent assembly debates, and military governments, but their only significant victory had been a symbolic one: part of the Comtean motto "*love* for its principle, *order* for its basis, and *progress* for its end" became woven into the national flag in golden letters, where it is possible to read the words "order and progress."

Dr. Lemos' unshakable positivist faith led him to designate 'harmony' as the ideal value for people and societies. Dealing every day with patients who might at any moment suffer a severe seizure and lose consciousness and control of their bodies, he was constantly forced to come face-to-face with the always unexpected breakdown of any kind of harmony at an individual level.

Moreover, in Dr. Lemos' view, he was living through a historical moment that was anything but harmonious, and he often referred to it as "the age of anarchy we are going through" (Lemos, 1915a, p.7; 1915c, p.454). On top of the crises confronted by the fledgling Republic and the tumultuous situation in the streets of the nation's capital, the war in Europe was, in his words, "a shameless explosion" and uncontestable evidence that "there is no one left today to rule over the West spiritually" (Lemos, 1915c, p.455).

François Hartog cannot be called wrong when he points out that Flaubert, in a letter written on April 30, 1871, to Aurore Dupin – better known by her pseudonym Georges Sand – chose epilepsy as a metaphor for the frenzied uprising in modern cities, manifested in the Paris commune, nor when he compares physicians' impotence before this disorder with the paltry resources available to public administrators for controlling the mobs.

Leaning over a patient's bed, all these astute doctors of the social body go on repeating their diagnosis: madness. Like Flaubert, who said that Paris, once the turbulence of the uprising moment had past, was 'completely epileptic'" (Hartog, 2003, p.72).

In those days, living in the capital of the Brazilian republic likewise meant experiencing the constant turbulence of both the country's political life and the city's daily routine (Sevcenko, 2003), which the press relentlessly blamed on the 'disorder' that had to be vanquished at all costs, for 'order' – its excluding, hierarchical nature and its ties to the

exercise of oligarchical personal power notwithstanding – was deemed a prerequisite to 'progress,' through which Brazil would become a "member of the civilized nations," as repeatedly asserted in the discourse of the day.

As a man of firm convictions and a professional who felt medicine was both science at the service of order and progress as well as a religious mission in the name of mankind (Bastos, 2008), Dr. Lemos seemed to be imbued with a twofold certainty as he grappled with the hardships of his daily hospital routine and the clash of ideas within the republican political arena: on the one hand, he held a conviction grounded in his unified view of mental disorders, according to which all illnesses of the brain, including epilepsy, were types of insanity; on the other, he also held a conviction that "the marvelous construct" (Lemos, 1915b, p.56) devised by Auguste Comte translated into an equally unified system that could account for man and the world, answer all questions (including those about the human brain), and solve all impasses, even scientific ones. For Lemos, as for other orthodox positivists, Comte's doctrine was a kind of philosopher's stone that could usher in an earthy Parousia of perfect harmony and lead mankind to a longed-for 'positive state,' which would herald and then surpass the 'theological state' and 'metaphysical state' through which the evolution of the history of all peoples must necessarily pass.

In 1912, the general director of the National Hospital for the Insane was Juliano Moreira, a physician from Bahia who in 1903 had taken up this post, which came with the responsibility of introducing modern scientific practices to health care for the insane at the former D. Pedro II Asylum. Acclaimed as a remarkable scientist in his day, Juliano Moreira was the founder of scientific psychiatry in Brazil and, in 1905, creator of the Brazilian Society of Psychiatry, Neurology, and Related Sciences and its official publication, *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal*. Along with Carlos Eiras, Henrique Roxo, and Afrânio Peixoto, from 1908 through 1910 he was a member of the commission assigned to define a classification for psychiatric illnesses; recognized as the leading Brazilian expert in his field, he was also the contact person for international specialists (Portocarrero, 2002; Venancio, 2004).

When Dr. Moreira invited Dr. Lemos to transform the report he had presented on his work at the hospital into an article for the *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal* (directed by Drs. Moreira, Afrânio Peixoto, and Antônio Austregésilo), the alienist in charge of caring for epileptics at the Griesinger and Guislain pavilions saw a golden opportunity to combine his faith and his calling, conjoining his positivist convictions and his medical work.

Epilepsy, positivism, and impasses in medical science

The article that the journal's editors received on December 5, 1914, entitled *A propósito do tratamento dos doentes epiléticos no Hospital Nacional de Alienados durante os anos de 1912 e 1913* (On the treatment of epileptic patients at the National Hospital for the Insane during 1912 and 1913) may have come as something of a surprise. Dr. Lemos recounted his experience at the hospital while expounding on his Comtean premises in abundant detail; in closing, he endeavored to arrive at a synthesis between his medical practice, his knowledge of

epilepsy, and his positivist faith. The article was so long that it had to be published in three consecutive issues of *Archivos* in 1915, the year of the journal's eleventh anniversary. Given its content, it seemed wise to publish an 'editor's note,' which was nothing if not curious:

> The directors of *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal*, who founded the journal with the precise purpose of creating a broad forum for discussion of all philosophical doctrines, today publishes remarks by Dr. J. de Lemos concerning his report on the treatment of epileptics in his trust during the years 1912 and 1913. Since not all of our readers may have a precise idea of Comtean thinking on a range of questions in the realm of medicine, we publish the present article, which we feel has been born of a spirit firmly convinced of the ideals of Auguste Comte. Judging it to be a worthy psychological document, we offer it to our fair-minded readers.

This editors' note was not merely rhetorical. Lemos' lengthy text included the full transcription of his report, along with some final observations on what the author called "the positivist view of epilepsy" (Lemos, 1915c, p.447). But its pages stood primarily as a positivist confession of faith, an effort to synthesize Comtean writings on health, disease, and the human brain, and a panegyric of Auguste Comte and Dr. Georges Audiffrent – Comte's most beloved disciple, correspondent, bedside physician, and executor of his will, as well as the author of two treatises on the brain and diseases of the brain[1] that had direct influence on Comtean theory of the brain and medicine as practiced by Dr. Jefferson de Lemos.

In defense of Dr. Lemos' intellectual honesty, it would be fair to recognize that his readers could not protest that they had not been warned about the nature of the text presented for them to read. Besides the caveat in the editors' note, the author himself is quick to insert a word of warning regarding his goals for all those about to venture into his article:

> I shall do nothing more than endeavor to explain in brief some general views of that part of positivist doctrine that applies to medicine and especially to our particular topic, epilepsy.
>
> In the final part, I shall closely follow Dr. Audiffrent, and in all ways I shall strive to be as faithful as possible to Auguste Comte, in accord with the example set by the methodical apostles of positivism in Brazil, under whose guidance I was fortunate to have received the principal clarifications regarding the estimable doctrine drawn up by my incomparable master. ...
>
> Before moving on, however, I must advise you that you will find nothing new regarding the means of treatment used (Lemos, 1915a, p.6).

His admitted goal was thus to remain faithful to his "incomparable master"– Comte – "and to the estimable doctrine" of positivism, rather than to describe any innovative treatment for epilepsy. His patients should no doubt have been grateful for his scientific modesty. Forced to deal blindly with this illness at a time when Western medicine was just beginning to understand the anatomical structures of the brain, physicians back then risked their patients' lives in their efforts to develop innovative treatments.

The reigning confusion about epilepsy, a disease that seemed to elude science, found expression in some of the suggested treatments, like those mentioned in the first Brazilian

thesis on the topic, presented in 1859 by Dr. Francisco Pinheiro Guimarães as part of his qualifying exam for a chair at the Rio de Janeiro Faculty of Medicine. As a preventive measure, Pinheiro Guimarães advocated a peculiar diet meant to forestall seizures, in which the patient would avoid "beef, eggs, pasta, fried food, duck, pork, salted meat, eel, skate, crab, lobster, artichokes, asparagus, and parsley" (Guimarães, 1959, p.79). He also prescribed some radical forms of treatment to be used during seizures themselves, such as firing a gun close to the patient's ear, so the noise would frighten him (and possibly injure or kill him as well); throwing him into a river; and, in the cases of "false intermittent fever" – provoked for therapeutic purposes at regular intervals – let the naked, cold epileptic suffer his seizure and then bundle him up in a super-heated environment (Guimarães, 1959, p.80). As to procedures to be used as part of "systemic treatment," he recommended "bloodletting, purgatives, emetics, and issues" as well as drugs derived from plants like valerian, belladonna, and wormwood or from chemical compounds like zinc oxide and, principally, silver nitrate (Guimarães, 1959, p.72), albeit the latter had an unfortunate side effect, with its prolonged use causing the patient's skin to turn bluish.[2] Pinheiro Guimarães also raised the possibility of surgical treatments, such as the destruction of epicranial arteries, the cauterization of the pharynx or nerves, and even castration, which in his words had been "used in medicine successfully on two occasions" but was not recommended, since it was barbaric (Guimarães, 1959, p.76).

As bizarre as the treatments recommended by Pinheiro Guimarães in 1859 may seem, many resurfaced in early twentieth-century theses, like the one defended by Antônio D'Albuquerque L. Andrade in 1906 as part of the requirements for his medical degree from the Bahia Faculty of Medicine (Faculdade de Medicina da Bahia). Andrade's only innovation was to highly recommend a new treatment using potassium bromide, which he believed to be the most efficacious—though this hypothesis was weakened by his own argument: "In France, Séglas and Heitz used this method on 22 patients, with three showing improvement, one dying, and seven cases of intoxication" (Andrade, 1906, p.35).

Thanks to Comte, Dr. Jefferson de Lemos' patients were not subject to the circus of horrors that medical theses suggested as epilepsy treatments. Dr. Lemos knew that Auguste Comte had refused to accept any medication when he contracted the disease that would eventually lead to his death. In one of Comte's letters to Dr. Audiffrent, he had read that the founder of positivism, "referring to the advent of positivist physicians, said they 'would soon be curing more and prescribing less'" (Lemos, 1915a, p.8). Nevertheless, he cautiously stated that "it is always a legitimate option in certain cases to use some chemical agents, with their application always guided by the most rigorous caution" (Lemos, 1915a, p.8).

The report sent to Dr. Juliano Moreira and published in 1915 begins with the statement that "accompanying statistics show that one observes a steady decrease in epileptic spasms from June on" (Lemos, 1915a, p.9). What was the secret of the alienist's treatment for epileptics?

Nothing simpler and – compared with other treatments of that era – nothing less aggressive. Dr. Lemos basically forced his patients to follow a specific diet:

> These results were achieved mainly through a change in dietary regimen, shifting to a vegetarian, chloride-free diet, which also excludes any stimulating liquids (coffee and

> related liquids). This is the basis of the treatment found to be the only method whose use could be generalized without causing problems. …
>
> Under these conditions, after introducing a diet free of stimulants, … it was necessary to complete the dietary regimen by varying the amount of foods in accordance with the state of each particular patient. Thus was our approach.
>
> When these methods were not sufficient, we intervened with revulsive agents, derivatives, and blood depletion, with the latter in fact required only rarely (Lemos, 1915a, p.9-10).

His patients, however, were deprived of any type of meat, forced to follow a strictly bland diet, required to give up coffee, possibly forced to eat less, and at times subjected to bloodletting, a procedure the physician favored even though he admitted that it was "broadly disdained nowadays" and that he used it only parsimoniously. Dr. Lemos did not use chemical agents, radical surgical interventions, complex or violent procedures, nor did he favor *balneoterapia,* that is, the prolonged baths advocated by Pedro Ernesto, a physician who would later serve as mayor of Rio de Janeiro (Baptista, 1908), nor *klinoterapia*, a technique that had the enthusiastic support of João Fagundes, a physician from Rio Grande do Sul, in which the patient was confined to bed for long periods of time—and when he resisted, coercion might be used, including isolation, restraints, straightjackets, hypnotic drugs, or Priessnitz sheets, whereby the patient was wrapped in wet sheets and thus immobilized (Fagundes, 1903).

The crude data presented seem to prove the relative success of the non-invasive treatment administered by Dr. Lemos, who provided the following figures on patients at the Griesinger Pavilion:

> Since 1907, the earliest date for which we find statistics, the number of fits presented by the 24 female patients at this Pavilion (given that the pavilion was always full) were under 100 in only four months, 95 and 99 in January and February 1907; 88 and 90 in December 1909 and January 1910. In other months, the figure ranged from 108 to 336, falling below 200 forty times, below 300 fifteen times, and above 300 five times.
>
> However, with the dietary change introduced on May 15, the month I began working at the Asylum, the number of fits never again surpassed 94 as of the following month, as seen in the attached table,[3] and everything leads us to expect better results this year, with a low of 54 already having been observed (Lemos, 1915a, p.13).

We find two pertinent observations in the cited excerpt. First, only 24 places were assigned to women with epilepsy, a figure that cannot be compared with places for men diagnosed with the disease, since there is no indication of the latter in the body of the report. Second, the average number of seizures suffered by female patients was high: at best 2.25 per patient, under Lemos, and during five of the months studied, at least 12.5 per patient.

The third article published in *Archivos* offers some "individual observations" that give us a bit more insight into the cloistered existences of those housed in the "cemetery for the living" and also provides further details and the physician's own statistical observations about the women under his care:

> All female patients showed improvement not only in terms of the number of convulsive spasms but also of their intensity. In no case was a worsening of symptoms noted, and we found that the number of spasms fell to almost ¼ of what it was prior to treatment.

> To prove this, we took the 11 months prior to introduction of the treatment (because from then on the number of patients [24] in the section held practically steady) and compared them with the subsequent 11 months. During the first period, convulsive spasms per month had totaled 234, 228, 300, 218, 242, 280, 336, 286, 227, 306, 324; and during the subsequent period, 82, 94, 70, 81, 72, 81, 63, 75, 57, 54, 90, 80, and 76.

Looking at the averages, we find 271 compared to 74, representing a drop of approximately ¾ (Lemos, 1915c, p.459).

If we assume that the journal was faithful in its transcription of the data provided by Lemos, and if we overlook the physician's slip-up in comparing an average for 11 months during the first period against an average for 13 months during the second (his calculations err slightly in his favor, since the second average should be 75 seizures and not 74 'spasms,' as the article states), the women under his care really appear to have improved as a result of the unique treatment administered at the Hospital.

The data on the Guislain Pavilion, which housed male patients with epilepsy, are less consistent but no less shocking. With constant references to the statistical tables not found in the article, Lemos points out:

> You will note that convulsive spasms seem to have increased as of August. But this was an effect of seriously ill patients who were brought in from other sectors, one of whom alone had 88 fits in the month of October. If, however, you consult the previous statistics, you will realize that this impression notwithstanding, this year still displays an improvement over prior years, when the monthly quota quite often surpassed 400 or even 500; taking each of the prior two years as a whole, we find that the total numbers were 3,200 to 4,575, compared to 2,381 in 1912 (Lemos, 1915a, p.14-15).

The alienist saw two reasons for the higher number of seizures among male patients, both a consequence of the application of his positivist convictions to medical practice:

> [on the one hand,] the superiority of the female organism over the male and, on the other, the belief that epilepsy is more of a male illness, since it affects the organs of activity, and if one compares the ordinary epileptic patient of both sexes, one will find that the male brain is affected more seriously than the female brain in these cases, overall, with the former more inclined towards idiocy (Lemos, 1915a, p.14).

In this, he was in disagreement with other physicians,[4] including Dr. Estevão Ribeiro de Rezende, who stated that "women are more predisposed, given their greater impressionability and the existence of certain special functions" (Rezende, 1872, p.7).

Beyond this, the article published in the *Archivos* added little to distinguish Dr. Jefferson de Lemos' understanding of epilepsy, its etiology, diagnosis, and the prognosis for those presenting the disorder, then unanimously believed to be incurable and degenerative.

It should be pointed out that no physicians back then, Brazilian or otherwise, understood much about the disease. To use the terms proposed by Charles E. Rosemberg and Janet Golden (1997), medical culture was still 'framing' epilepsy in terms of flawed parameters.

It was only in the late nineteenth century—two decades before Lemos' article was published—that Camilo Golgi, an Italian, first visualized the neuron using a technique known as the black reaction, where silver was used to stain nervous tissue. Soon after, the

Spanish scientist Santiago Ramón y Cajal used Golgi's method to discover a small space separating one neuron from another and was thus able to describe the structure of the neuron and neural networks. In 1898, Camilo Golgi identified the internal reticular apparatus (Mazzarello, 1996; Ramón y Cajal, 2006). Because their discoveries had unveiled the anatomy of the human brain and thereby revolutionized the scientific world's understanding of epilepsy, their achievements earned both scientists the Nobel Prize for medicine in 1906.

Jefferson de Lemos' article does not indicate any awareness of these European accomplishments, nor do the medical school theses or other scientific articles published in Brazil at that time. The latter, however, often do reveal knowledge of the works of John Hughlings Jackson, which were first published in 1873 and suggested the road towards a modern understanding of epilepsy (Temkin, 1994; Friedlander, 2001).

Other than Dr. Lemos' enthusiastic advocacy of his dietary regimen as a form of treatment, the article did not put forward many explanatory observations. He did state that he felt the hospitalization of epileptics was a necessary evil, because "moral action had an uncertain effect on patients separated from their families and living in asylums" (Lemos, 1915a, p.10). Dr. Lemos was also an outspoken critic of homeopathy (Lemos, 1915b, p.81) and of what he called microbial generalization, that is, of the bacteriology that revolutionized the era's medicine but which in his opinion was

> an error that always stems from the same reasoning: on the one hand, a focus on details and minutiae where only synthetic overviews are appropriate; on the other, the materialist way of thinking, which attempts to explain superior phenomena by way of inferior ones (Lemos, 1915c, p.436).

Furthermore, he shared the notions held by his contemporaries, and by many who came before him, that epilepsy was a disease centered in the brain, a type of mental illness, degenerative, associated with violence, primarily hereditary but which could also be acquired, and its preeminent manifestation was the "major convulsive fit." Like his peers, he believed that the "symptoms [of epilepsy] are as deleterious for the individual as they are dangerous to society" (Lemos, 1915c, p.451).

Dr. Lemos apparently agreed with his boss, Dr. Juliano Moreira, in defending colonies especially designed for epileptics. In 1905, Dr. Moreira had published a famous article in *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal* that had a marked impact not only in medical circles but also in the lay press. In its pages, which showcased the physician's vast knowledge of similar establishments in Europe and the United States, he firmly advanced the idea that the government should be responsible for building such colonies in open spaces located well away from the hubbub of the city, arguing that it was "indispensible to give the epileptic an illusion of freedom in order that he remain resigned" (Moreira, 1905, p.182). Out of deference or conviction, the alienist Dr. Jefferson de Lemos used the following terms to close his report, originally meant for the director of the National Hospital for the Insane and later forming the basis for his lengthy article:

> In closing this report, we wish to put forward a desire: that colonies for epileptics of both sexes be established in short order, as already urged on more than one occasion.

> In addition to improving the general care provided to patients, these [colonies] could also afford them a variety of opportunities to apply themselves to useful activities by undertaking suitable work. Moreover, the adequate organization of such colonies would not require enormous expenses, for well-known reasons (Lemos, 1915a, p.15).

Alongside those who adopted a Comtean view of the world, science, the human brain, and man, Lemos was convinced that the origin of epilepsy would be found in "affective disorders"; it was his assumption that "only moral disorder should be (…) considered the origin of all organic disturbances" (Lemos, 1915c, p.434). Consonant with Dr. Audiffrent, whose writings were Lemos' central reference, he believed that "the brain site of these symptoms should be sought in the organs of activity (character), and especially in the organs that excite movement, that is, the organs of courage" (Lemos, 1915c, p.441) – a formulation that could be understood only by the scant number of the physician's peers who were thoroughly familiar with the doctrine, brain theory, and complex jargon of positivism.

In his conclusion, Dr. Jefferson de Lemos summed up his positivist faith, the medical trends of his day, and his practice as an alienist all in one observation about his patients:

> Physical and even mental hygiene can only be quite secondary to affective education. As to other methods, they can only be palliatives of greater or lesser value, which may achieve a reduction of the more intense or grievous symptoms, yet it would not be rightful ever to expect a true cure from them (Lemos, 1915c, p. 453).

Dr. Jefferson de Lemos' beliefs saved patients at the National Hospital for the Insane from invasive traditional or experimental treatments but did not spare his peers – the readers of *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal* – from massive doses of positivist indoctrination.

Most of the pages published in the three consecutive issues of *Archivos* were devoted to presenting: the principles of Comtean positivism; an explanation and overview of "Classificação positiva das dezoito funções internas do cérebro ou quadro sistemático da alma pelo autor do sistema da filosofia positiva" (A positive classification of the eighteen internal brain functions or systematic picture of the soul by the author of the system of positive philosophy; Lemos, 1915b, p.50-70); a transcription of some of the correspondence between Auguste Comte and Dr. Audiffrent (Lemos, 1915b, p.70-80); and the "positivist view of epilepsy" (Lemos, 1915c, p.447).

Dr. Lemos was quite likely proud that he had turned the pages of a respectable scientific journal into a space for preaching positivism, since he started out by declaring that he intended first and foremost to follow "the example set by the apostles of systematic positivism in Brazil" (Lemos, 1915a, p.6). Yet one of the gems to be found in this published paper actually lies in the "individual observations" transcribed as an attachment following the end of the article itself (Lemos, 1915c, p.457-459).

Fragments of stories

The attachment features five brief accounts. Five sad portraits, mere sketches in fact, all of women, along with an outline of the story of one male patient referenced in a footnote meant to reinforce the argument that epileptics are given to violence (Lemos, 1915c, p.447).

The six accounts are all quite short and do not reveal the patients' identities; they are referred to only by their initials, in keeping with the day's protocol.

The women ranged in age from 16 to 38. It is surprising to note that a minor had been assigned to the pavilion along with adult women, rather than to the Escola Bourneville Pavilion, as we would expect – evidence, in the Ginzburgian sense of the term (Ginzburg, 1989), that patients were not always assigned to the different hospital pavilions according to criteria that distinguished them formally, that is, age or social condition. Two are described as '*mestiças*' (mixed race), one as '*preta*' (black), and two as 'white' (Lemos, 1915c, p.457, 458).

Dr. Lemos spells out the criteria applied in selecting these five women, whose personal stories can be glimpsed in the physician's observations: "We only take note here of the more seriously affected female patients, where the result of the treatment was more apparent" (Lemos, 1915c, p.459). The sole purpose of the life stories merely hinted at in the article was to reinforce the empirical argument of the success attained by the alienist, who painstakingly transcribed the number of 'spasms' that each female patient presented per month before and after following his dietary regimen.

The women in these accounts are identified only in terms of their diagnosis of epilepsy and the number of 'fits' they had. No feature of their life history is provided other than age and race. If we take Dr. Lemos' observations at face value, we might conclude that none of them had a family, was married or single, had any education, or had ever worked in her lifetime. This is an eloquent silence. Their identities are the disease with which they were diagnosed. By antonomasia, they were 'epileptics.'

Yet there are things to be discerned between the lines of these notes.

F.M., a 25-year-old mestiça who had been housed in the Epileptic Sector for one year when Dr. Lemos took charge of the Griesinger Pavilion, presented "fits nearly every day, up to six times a day." Her overall picture was discouraging, and the alienist described her as "thin, pallid, scrawny. Drawn, sad face. Extreme muscular asthenia." The physician's treatment, which we know consisted of nothing other than a thoroughly uninviting diet, was tremendously successful in the case of F.M.: treatment commenced on May 17, 1912; in June she had no seizures and from July on the number of monthly seizures fell drastically. Moreover, the physician noted that "the patient has acquired more normal involuntary functions, with her asthenia disappearing." And what was F.M.'s fate once her seizures decreased, her overall state improved, she was less feeble, and she had regained her physical strength? The only information we are offered is that her improvement was so substantial that "she could help with the Sector's common services" (Lemos, 1915c, p.457).

We will never know whether or not F.M. was pleased about being elevated to the rank of an 'epileptic' able to work without pay for the Hospital, where she remained because her seizures continued even though fewer in number. But her fate was much better than that of M.T. de J., a 23-year-old black female, hospitalized in August 1911. Before Dr. Lemos came to the Pavilion, M.T. was submitted to "the treatment known by the name of Bechterew," an approach proposed by Russian neurologist Vladimir *Mikhailovich Bechterew* (1857-1927), which entailed combining the phytotherapeutic *Adonis Vernalis* (a sedative, cardiotonic, and vermifuge) with bromide treatment (Friedlander, 2001, p.164). But the

patient still had up to six seizures a day, and "often two to four." Her overall condition was much worse than F.M.'s and was described in the following terms by the doctor: "She was extremely skinny and so feeble that she could barely stand up, and she was simply unable to project her voice. Sad, idiotic face." M.T. de J. also improved greatly once Dr. Lemos took over her case. In August 1912, the fourth month in which she was under his care, she had only two seizures. In September 1912, M.T. "was better nourished" and, like F.M., "already helping out with Sector services, and her fits had lost almost all their epileptic features."

The disappearance of her seizures in conjunction with her poverty were her downfall. That same September, M.T. de J. was transferred to the Esquirol Sector, which housed not epileptics but the indigent insane; there she "was submitted to the regular regimen, and she passed away a few days later following a successive series of violent fits" (Lemos, 1915c, p.457-458). For M.T. de J., the improvement achieved by Dr. Lemos was her death sentence.

A. de O.G., a 30-year-old mestiça, had spent the longest time in the "epileptic sector," that is, since 1907. The physician registered nothing about her condition or physical characteristics. Her clinical history in the years preceding Dr. Lemos' arrival was limited to the fact that she had alternated between periods in which she received no treatment and periods when the physicians decided to experiment with different kinds of medication. Her 'clinical records' are confusing and filled with omissions: there is no record of any kind of treatment during her first nine months of hospitalization, a situation that repeated itself during a later ten-month period. Perhaps this situation was distinct from the five months during which her clinical record indicates that she was not receiving any type of treatment or medication. During the other months of her long hospitalization, A. de O.G. was treated with 'magnesia [sic] salts'; 'valerian bromide' (a sedative composed of valeric acid and bromides, used to treat nervous illnesses), and '*potassium bromide'* (Lemos, 1915c, p.458), which was recommended for "epilepsy, sicknesses of the genital organs, and neuroses," according to a medical thesis presented in Portugal – which naturally guarantees us that there were many accounts of epilepsy being cured through the continuous application of this medicine (Souza, 1873, p.13). Medicated or not, she still had ten to fifteen seizures a day. O.G. also showed significant improvement when her care was taken over by Dr. Lemos; she actually had only one seizure during two of the months for which data were recorded. We know no more about her, and the physician's records do not indicate whether or not she provided 'work services' at the Pavilion.

All we know about 16-year-old C.F. is that she was 'white' and had been housed at the pavilion since the age of 12, as Dr. Lemos recorded that she had "entered the sector" (…) "in January 1909." This detail, when taken in conjunction with the information that Dr. Lemos recorded giving her 'bromide' for some months (even though he was leery of using drugs) and also applied his chloride-free diet, suggests that her case of seizures was severe. Before Dr. Lemos came on the scene, there had been an eight-month period in which no record had been made of C.F. receiving any treatment whatsoever and twenty-six months during which she had been submitted to the "Bechterew treatment." While her number of monthly seizures had previously hit 52, it dropped significantly under Dr. Lemos' care, even disappearing for some months. C.F., however, "passed away from dysentery in February" (Lemos, 1915c, p.458-459).

Dr. Lemos left only four incomplete lines about the last patient he observed. She was the oldest of the five women and her initials were A.W. All we know about her is found in telegraphic notes, which let us infer that she was already a hospital inmate before entering the Griesinger Pavilion:

> A.W., 38, white. Transferred to the sector in January 1912.
>
> Bechterew treatment for 3 months; results: 7, 15, and 24 fits. From May onward: 3, 10, 9, 0, 0, 0, 2, 1, 0, 2, 4, 3, 2, 6 (Lemos, 1915c, p.459).

We have more detailed information on P.R. de C., the only man about whom Dr. Lemos left any observations; these data include his life outside the walls of the National Hospital for the Insane, although the physician's comments in this regard are not part of his clinical observations.

Sketched out in the body of a long note, P.R. de C.'s characteristics offer empirical evidence of an idea favored by physicians back then, first formulated in Brazil by Afrânio Peixoto. In the thesis he wrote as part of the requirements for receiving his medical degree, defended in 1897 and the following year published in book form, with a preface by Nina Rodrigues and Juliano Moreira, the physician from Bahia launched the debate in Brazil about whether or not epileptics have an irrepressible tendency to violence and crime.

Peixoto sums up his thinking in his conclusion:

> I am left, however, with one conviction, grounded in its fairness and truth, which I record here: the criminal tendency of epileptics is indeed a symptomatic expression of epilepsy (Peixoto, 1898, p.176).

This discussion was especially important for Brazilian physicians. In the wake of Lombrosian thought, the argument sustained by many medicine doctors that epileptics had an irrepressible tendency to commit crimes was strategic in allowing the medical profession to leap the walls separating their domain from that of the legal system and permitting them to become specialists in criminology and legal medicine whose expert opinions could define the inculpability of certain criminals (Santos, 2008).

Although he was not a noted follower of Afrânio Peixoto's, Dr. Lemos did not doubt the intrinsic relation between epilepsy, violence, and an innate propensity toward crime. Thus he stated, in positivist terms as always:

> The aberrations of the destructive instinct are so common that we could hardly imagine epilepsy without them (Lemos, 1915c, p.446).
>
> To back up his hypothesis, Dr. Lemos first relates the heinous case of a cannibalistic Italian epileptic who murdered and ate his own 2-year-old son and critically wounded his wife and 5-year-old son, as reported in one of Dr. Audiffrent's books. He then tells of analogous cases at the Hospital and recounts the sad story of P.R. de C.
>
> We have many patients at the asylum who display this destructive delirium. One of them, P.R. de C., armed himself with a large knife during a spasm and attacked members of his family and then others who came to their aid, killing seven people in all, including his father, and seriously wounding four. After he was hospitalized at the asylum, he went on to murder two patients (Lemos, 1915c, p.447).

P.R de C.'s parricide, his murder of six other members of his family and of neighbors as well, and his later murder of two Hospital inmates corroborate the thesis held in high regard by the era's physicians: people diagnosed as epileptics are violent and dangerous.

Another article published in the *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal* in 1918 by Dr. Heitor Carrilho complements this series of unlikely portraits. Carrilho joined the staff at the National Hospital for the Insane in 1919, where he was put in charge of the Service for Insane Delinquents (Serviço de Alienados Delinquentes). He was a major advocate behind creation of the Legal Asylum (Manicômio Judiciário) and became its first director. One of the purposes of the 1918 article was to defend establishment of this institution.

Heitor Carrilho (1918, p.3) uses the pages of the journal headed by Juliano Moreira to transcribe a forensic criminal expert report that he had written about an "inmate at the Reformatory in this capital." In so doing, he paints an extraordinary portrait of a man deemed to possess an "epileptic nature" while simultaneously showing us how susceptible science is to the biases of an era, and perhaps to its political disputes as well.

As a matter of fact, the convict J.S.B.R. is not initially diagnosed as an epileptic. Carrilho states that:

> We find in him those attributes which, when occurring together, the authors have agreed to call an 'epileptic nature,' based on a temperament that is agitated, short-tempered, averse to discipline, egotistical, unstable, given to outbursts of fury, [attributes] which are quite often found in our social milieu (1918, p.21).

In effect, the concept of epileptic nature so favored by early twentieth-century medicine and addressed by Lopes Rodrigues Ferreira (Santos, 2008, p.58, 59) allowed a gamut of behavioral misconducts that do not fit the typical medical history of this disease to be assigned to the medical realm of epilepsy-linked pathology.

What lies at the heart of J.S.B.R.'s alleged epileptic nature was his conduct in prison. After his arrest, he started displaying violent outbursts of fury, some of which saw him lose total control of his body, with his "falling on the ground and writhing about in convulsions that lasted some minutes" (Carrilho, 1918, p.12).

But what had J.S.B.R. done to warrant his arrest and what else do we know about him?

He was arrested for larceny and murder, two crimes that led to a six-year sentence in the House of Detention and twelve years in the Reformatory. A 'postal employee' had caught J.S.B.R. in the woods of Andaraí in the act of digging up some cans with the goods from a mysterious robbery that had involved "two crates that contained a considerable quantity [of money], which had been onboard a Lloyd packet … and were to be delivered to internal revenue offices in the Southern states of Brazil" (Carrilho, 1918, p.9). It was not hard to accuse him of the unsolved theft. J.S.B.R. had been a crew member on the Lloyd Brasileiro vessel from which the money had disappeared without a trace. When the postal worker caught him red-handed, J.S.B.R. killed him. So he could not exactly be called a model of virtues.

We know more about his identity than what could be hidden behind his initials. When Carrilho lists J.S.'s "hereditary forebears," we learn that he had "a first cousin who

was married to a socially well-known man [who was] confined to a sanatorium, suffering from a prolonged nervous disease." But not only was his cousin's husband a member of 'fine society.' The forensic report mentions that, "on his maternal side, the subject is the grandson of a great nobleman of the old regime, more than once president of national provinces, with a reputation for having a conciliatory, even-tempered, and judicious spirit" (Carrilho, 1918, p.4, 5).

His ancestors on his paternal side come across differently:

> His great-grandfather [was] a man of political action, an enthusiastic orator, renowned for his nationalist ardor, and [who] was arrested and served a prison sentence of many years for sedition, as he had taken part in a riot known as 'mata-galego'.[5]
>
> His father was a well-known official with our navy. In 1893 he was arrested and held at the House of Detention in this capital city as a mutineer, and he later published a book entitled *Sonho no cárcere* (A dream in prison) against Marshal Deodoro and other great figures of that time, in which he commented on attitudes and criticized current facts.
>
> One of his uncles (his father's brother) distinguished himself in medicine and politics and was known as strongly neurasthenic; he faced great opposition in his day (Carrilho, 1918, p.5).

It is unlikely that Heitor Carrilho was naïve or that he had not realized that so many clues would clearly convey to his readers that the initials B.R. in the convict's name referred to a black sheep from the Barata Ribeiro family, since the author of *Sonho no Cárcere* was Atanagildo Barata Ribeiro, in turn an outright indication that the 'insurgent's' paternal great-grandfather was none other than Cipriano Barata (1762-1838), the physician and journalist who founded the newspaper *A Sentinela,* a radical thinker and political activist, and one of the nineteenth-century's fiercest proponents of Brazilian independence, national interests, and the establishment of the Republic. The 'neurasthenic' uncle to which Carrilho refers was the first mayor of the Federal District, Cândido Barata Ribeiro (1843-1910).

The forensic criminal report provides many data about J.S. Barata Ribeiro: he was a man aged "37, white, a sailor, single, a free-thinker, born in the Federal District" (Carrilho, 1918, p.4). At the age of two, he had smallpox, and although he had always been "a frail lad, perhaps a bit rachitic," he apparently led a very healthy childhood, "not suffering any neuropathic conditions or morbid disturbances." J.S. Barata Ribeiro's detailed medical history also tells us that he was not given to "bed-wetting" as a boy, he "had sexual intercourse for the first time … at the age of 14," and, as an adult, he had a single "venereal accident" and caught "paludism in Amapá" (Carrilho, 1918, p.6).

Carrilho also takes note that Barata Ribeiro had been an attentive, well-behaved student at private schools and at the Military School, where, the physician explains, "the only outstanding fact … was that he had taken part in the collective uprising of 1897 against the government of Prudente de Moraes" (Carrilho, 1918, p.6).

To summarize the long story that Carrilho tells us, based on his interviews with Barata Ribeiro, "the subject devoted himself to the life of a sailor, traveling all the Brazilian seas and navigable rivers of the Amazon region in the employ of the Companhia Industrial Brasileira, Lloyd Brasileiro, Amazon Navigation Steam Company, and Empresa de Navegação Norte e Sul." He also points out that the subject "displayed courage and cold

blood at the time of several accidents" (Carrilho, 1918, p.7 and 8), then going on to state that because of his fearlessness, "he was greatly feared and thought of as a malcontent, rebel, and neurasthenic."

As observed by Carrilho, the man named Barata Ribeiro was therefore a Brazilian with the vices and virtues appropriate to his origin, class, and condition, differing in nothing from so many others, were it not for the evidence of his dual crime and the fact that after his arrest, he displayed imperious conduct, was easily riled, and made more than a few threats, including that of resuming the family tradition of militancy by way of words. Arrested for larceny and murder, Cipriano Barata's great-grandson threatened that after his release, he would devote himself to decrying these infamies through conferences "in Argentina, Paris, and other places," under the titles "'Por que me Envergonho do meu País' ['Why I am ashamed of my country' – a parody of a book by the well-known man of letters Afonso Celso]; 'B.R. e o Meio Social em que Viveu' ['B.R. and the social milieu in which he lived']; 'A Decadência do Caráter Brasileiro' ['The decadence of the Brazilian character']; 'A Venalidade da nossa Justiça' ['Corruption in our system of justice'] etc. etc." (Carrilho, 1918, p.18, 19).

Before concluding his expert report, Carrilho makes two final observations. The first, more than an observation about the subject, is a diagnosis of his social position and the privileges he had always enjoyed, since J.S., "an educated and somewhat cultured person of respectable lineage, at times [comes] in conflict with the manner in which he is treated and [becomes] irritated by these things." The second observation is that, according to the physician, "he was ruled by remarkable narcissism and egocentrism" (Carrilho, 1918, p.19).

Carrilho was most likely not an admirer of the former mayor Barata Ribeiro, even though the latter had been a physician and in his role of politician had gained renown for applying the concepts of hygienism to urban life, razing tenements in the name of science, including the one known as 'Cabeça de Porco,' a legendary stronghold of poverty. It is even less likely that he would admire liberal zealots or participants in any type of armed movement. At least that is what we can apparently glean from the "general conclusions" of his report, according to which:

> There are clear signs of degeneration in J.S.B.R.'s genealogical tree.
>
> If these characters are not so pronounced on the maternal side, a number occur on the paternal side, … where we find nervous, neurasthenic, querulous, and feebleminded malcontents, some of whom served sentences at penitentiaries (Carrilho, 1918, p.20).

In addition to thinking that having 'malcontents' as ancestors was a serious degenerative precondition, the physician found "marks of physical degeneration" in the convict Barata Ribeiro. Much to his misfortune, J.S. had a long pointy chin and long face, which for some reason was most suspicious, particularly when "psychic symptoms" displayed "a clear tendency towards abnormality," manifested in a "peculiar, agitated, querulous temperament, given to unmistakable irritability and impetuous reactions" (Carrilho, 1918, p.20). For Heitor Carrilho, his subject patently displayed an 'epileptic nature,' as we see in his final judgment:

> We therefore believe that J. dos S.B.R. is an epileptic with a paranoid make-up, whose condition was worsened by his penal situation (Carrilho, 1918, p.23).

Since J.S. Barata Ribeiro was considered an epileptic but had acted in full consciousness at the moment he committed his crimes, the forensic expert – after first demonstrating his knowledge of the debates on the inculpability of epileptics and also taking the opportunity to defend the establishment of a Legal Asylum – concluded that J.S. Barata Ribeiro should serve out his sentence in the House of Detention.

The brief sketches found in Dr. Jefferson de Lemos' article and the detailed portrait that Dr. Heitor Carrilho paints of a Barata Ribeiro who thought his lineage gave him immunity from justice afford us a glimpse into the life stories of individuals diagnosed as epileptics. When we combine this information with the content of scientific articles and of medical theses and debates from that era, we see the warning signs that science is not safe from the traps set by history – and this of course includes the science we ourselves do. While the medical writings of another era may help us identify the framework within which scientific debates were taking place, they likewise help us realize that when we do science today, we are just as susceptible as those physicians of yesteryear to the values, biases, political issues, interests, and passions of our times.

NOTES

[1]Audiffrent's treatises are entitled *Du cerveau et de l'innervation* (1869) and *Des maladies du cerveau* (1874).

[2] The use of silver nitrate as a medicine for controlling epileptic seizures and its side effect play a central role in the plot of a British novel published in 1872: *Poor Miss Finch: a domestic story*, by Wilkie Collins.

[3] The statistical table mentioned several times in Jefferson de Lima's article was not included in the publication in the *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal*.

[4] Other medical theses argued that women were more inclined towards epilepsy than men, such as those of Drs. Pedro Sanches de Lemos (1872), Eduardo Olympio Teixeira (1873), and Antonio José da Costa (1881).

[5] Translator's Note: For more on this subject see June Hahner: Jacobinos versus galegos: urban radicals versus portuguese immigrants in Rio de Janeiro in the 1890s. *Journal of Interamerican Studies and World Affairs*, vol.18, no.2, pp.125-154. May 1976.

REFERENCES

ANDRADE, Antônio D'Albuquerque L. "Ligeiras reflexões sobre os principais métodos de tratamento da epilepsia." Salvador: Tipografia do Salvador. Medical thesis presented at the Faculdade de Medicina da Bahia, Salvador. 1906.

AUDIFFRENT, Georges. *Des maladies du cerveau*. Paris: Leroux. 1874.

AUDIFFRENT, Georges. *Du cerveau et de l'innervation*. Paris: Dunod. 1869.

AZEVEDO, Roberto César Silva de. "Educar as creanças anormaes: práticas policiais, médicas e pedagógicas na internação de crianças com epilepsia no início do século XX." Undergraduate thesis, Department of History, Pontifícia Universidade Católica, Rio de Janeiro. 2009.

BAPTISTA, Pedro Ernesto. "Balneoterapia nas moléstias mentais." Rio de Janeiro: Tipografia e Litografia da Papelaria Comercial. Medical thesis presented at the Faculdade de Medicina do Rio de Janeiro, Rio de Janeiro. 1908.

BASTOS, Rebecca Coscarelli Cardoso. "Entre o sacerdócio e a ciência: a auto-representação dos médicos (1850-1906)." Undergraduate thesis, Department of History, Pontifícia Universidade Católica, Rio de Janeiro. 2008.

CARRILHO, Heitor. "Epilepsia, estado paranóide e delinqüência:

perícia médico legal." *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal*, Rio de Janeiro, 1º semestre, p. 3-26. 1918.

CARVALHO, Aline dell'Orto.
"Epilepsia e criminalidade nos manuais de medicina legal. 1909-1964." Undergraduate thesis, Department of History, Pontifícia Universidade Católica, Rio de Janeiro. 2009.

COLLINS, Wilkie.
Poor Miss Finch: *a domestic story*. (3rd ed.) Oxford: Oxford University Press. 2000.

COSTA, Antonio José da.
"Epilepsia." Salvador: Tipografia Constitucional. Medical thesis presented at the Faculdade de Medicina da Bahia. 1881.

DWEYER, Ellen.
"Stories of epilepsy: 1880-1930." In: Rosemberg, Charles E. and Golden, Janet. *Framing disease: studies in cultural history.* New Brunswick: Rutgers University Press. 1997.

EADIE, M.J. and Bladin, P.F.
A disease once sacred: A history of the medical understanding of epilepsy. Eastleigh: John Libbey & Company. 2001.

FAGUNDES, João.
"Contribuição ao estudo da Klinoterapia nos alienados." Rio de Janeiro: Tipografia do Jornal do Commercio. Medical thesis presented at the Faculdade de Medicina do Rio de Janeiro, Rio de Janeiro. 1903.

FRIEDLANDER, Walter J.
The history of modern epilepsy: the beginning, 1865-1914. London: Greenwood Press. 2001.

GINZBURG, Carlo.
Mitos, emblemas, sinais: morfologia e história. São Paulo: Companhia das Letras.1989.

GUIMARÃES, Francisco Pinheiro.
"Algumas palavras sobre a epilepsia." Rio de Janeiro: Tipografia de D. L. dos Santos. Thesis presented as part of the application process for a post with the Medical Sciences Sector at the Faculdade de Medicina do Rio de Janeiro, Rio de Janeiro. 1859.

HARTOG, François.
O século XIX e a história: o caso Fustel de Coulanges. Rio de Janeiro: Editora UFRJ. 2003.

LEMOS, Jefferson de.
"A propozito do tratamento dos doentes epiléticos no Hospital Nacional de Alienados durante os anos 1912 e 1913." *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal*, Rio de Janeiro, n.1, p.5-30. 1915a.

LEMOS, Jefferson de.
"A propozito do tratamento dos doentes epiléticos no Hospital Nacional de Alienados durante os anos 1912 e 1913." *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal*, Rio de Janeiro, n.2, p.49-88. 1915b.

LEMOS, Jefferson de.
"A propozito do tratamento dos doentes epiléticos no Hospital Nacional de Alienados durante os anos 1912 e 1913." *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal*, Rio de Janeiro, n.3, p.431-459. 1915c.

LEMOS, Pedro Sanches de.
"Epilepsia." Medical thesis presented at the Faculdade de Medicina do Rio de Janeiro, Rio de Janeiro. 1872.

LIMA BARRETO, Afonso Henriques.
O cemitério dos vivos. São Paulo: Brasiliense. 1956.

MAZZARELLO, Paolo.
La struttura nascosta: la vita di Camilo Golgi. Bologna: Cisalpino. 1996.

MOURA, Mariana Lapagesse de.
"Danação dos homens, salvação da sociedade: epilepsia e exclusão social no Brasil da segunda metade do século XIX." Undergraduate thesis, Department of History, Pontifícia Universidade Católica, Rio de Janeiro. 2007.

MOREIRA, Juliano.
"Assistência aos epiléticos. Colonias para elles." *Archivos Brasileiros de Psychiatria, Neurologia e Medicina Legal*, Rio de Janeiro, n.2, p.167-189. 1905.

NEVES, Margarida de Souza.
"Ciência e preconceito: uma história social da epilepsia no pensamento médico brasileiro." Available at: http://www.historiaecultura.pro.br/cienciaepreconceito/index.htm. Accessed on Aug. 14, 2010.

PEIXOTO, Afrânio.
"Epilepsia e Crime." Salvador: V. Oliveira & Companhia. Medical thesis presented at the Faculdade de Medicina da Bahia, Salvador.1898.

PORTOCARRERO, Vera.
Arquivos da loucura: Juliano Moreira e a descontinuidade histórica da psiquiatria. Rio de Janeiro: Editora Fiocruz. 2002.

RAMÓN Y CAJAL, Santiago.
Recuerdos de mi vida. Ed., Juan Fernandez Santarén. Barcelona: Editorial Crítica. 2006.

REZENDE, Estevão Ribeiro de.
"Epilepsia." Rio de Janeiro: Tipographia Laemmert. Medical thesis presented at the Faculdade de Medicina do Rio de Janeiro. 1872.

ROSEMBERG, Charles E. and GOLDEN, Janet. *Framing disease: studies in cultural history*. New Brunswick: Rutgers University Press. 1997.

SANTOS, Maria Aparecida dos. "Entre a ciência e o preconceito. Afrânio Peixoto, epilepsia e crime." Undergraduate thesis, Department of History, Pontifícia Universidade Católica, Rio de Janeiro. 2008.

SEVCENKO, Nicolau. *Literatura como missão: tensões sociais e criação cultural na Primeira República*. São Paulo: Companhia das Letras. 2003.

SOUZA, Vicente Carlos de. "Breves considerações sobre os efeitos fisiológicos e terapêuticos do bromurato de potássio." Porto: Tipografia de Manoel José Pereira. Medical thesis presented at the Escola Médico-Cirúrgica do Porto, Porto. 1873.

TEIXEIRA, Eduardo Olympio. "Epilepsia." Medical thesis presented at the Faculdade de Medicina do Rio de Janeiro, Rio de Janeiro. 1873.

TEMKIN, Owsei. *The falling sickness*: *a history of epilepsy from the Greeks to the beginnings of modern neurology*. 2. ed. rev. Baltimore: The Johns Hopkins University Press. 1994.

VENANCIO, Ana Teresa A. "Doença mental, raça e sexualidade nas teorias psiquiátricas de Juliano Moreira." *Physis: Revista de Saúde Coletiva*, Rio de Janeiro, v.14, n.2. Available at: http://www.scielo.br/pdf/physis/v14n2/v14n2a06.pdf. Accessed on Aug. 14, 2010. 2004.