

Dr Lafora's controversial report on Gregorio "Goyo" Cárdenas, "the strangler of Tacuba"

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ABSTRACT

Introduction. Dr Gonzalo R. Lafora, an internationally renowned Spanish neurologist, psychiatrist, and neuropathologist, took exile in Mexico in 1938 as a result of the Spanish Civil War. He was received with the highest honours and provided a special licence to practice medicine, as well as teaching at various institutions. In the summer of 1942, four women were raped and murdered by a man named Gregorio Cárdenas. The murderer was apprehended and underwent numerous psychiatric assessments, with contradictory diagnoses.

Material and methods. Lafora examined Cárdenas, concluding that he presented "psychic epilepsy" and that the crimes had been committed during crepuscular epileptic episodes, for which reason he could not be held criminally responsible. This article analyses Lafora's study, which was published in a specialised criminology journal (*Criminalia*) and in the mass media (*Excelsior* newspaper).

Results. Lafora's diagnosis was based on dogmatic ideas of the time regarding epilepsy. It led to serious conflict with the family of the accused and with the Mexican psychiatric community, due to supposed violation of professional confidentiality and disagreement about the diagnosis and the criminal responsibility of the accused.

Discussion. This study reviews the historical concepts underpinning Lafora's diagnosis of psychic or disguised epilepsy, a concept abandoned by modern epileptology, which has disappeared from neurology texts but persists in the fields of psychiatry and forensic psychiatry and in the Spanish criminal code.

KEYWORDS

Criminality, disguised epilepsy, epilepsy, epileptic equivalents, Gregorio Cárdenas, Lafora, psychic epilepsy, violence

When a murder has been committed without apparent motive and the reason of it seems inexplicable, it may chance that the perpetrator is found on inquiry to be afflicted with epilepsy.

H. Maudsley (1835-1918)

Introduction

Dr Gonzalo R. Lafora (he almost never used his father's surname Rodríguez) was a great Spanish neurologist, psychiatrist, and neuropathologist of international

renown, particularly for his original description of intraneuronal corpora amylacea, bearing his name (Lafora bodies), in myoclonic epilepsy. Two extensive monographs and numerous other articles have been written on his life.¹⁻⁸ The two monographs^{1,2} and the excellent study by Balcells⁸ only mention in passing Lafora's involvement in the Cárdenas case.

Politically left-wing and a Republican, Lafora took exile in Mexico due to the Spanish Civil War of 1936-1939. He was received with the highest honours, and provided

Goyo Cárdenas: el estrangulador de Tacuba

Por ENRIQUE GUARNER
Columnista

(Primera parte)

El 8 de septiembre de 1942 la prensa nacional fue sacudida por la macabra situación que había sido descubierta en el jardín de una casa situada en

mediato que rara vez aparecen sentimientos frente a los actos realizados, aunque el criminal señala a veces: "mi mal proceder", o bien, "asistí a la iglesia para reconfortarme espiritualmente". Lo que predomina en el relato de Gregorio Cárdenas son las frases rebuscadas y cierta pedantería.

De acuerdo a su declaración la

Una vez realizado el asesinato dice que se encontró con un cadáver del que debía disponer cuanto antes, por lo que la envolvió en el impermeable, la arrastró al jardín enterrándola a poca profundidad. Mientras realizaba el dantesco trance se dijo a sí mismo: "esto es como el gato que ensucia y después tapa la porquería".

Goyo Cárdenas: el estrangulador de Tacuba

Por ENRIQUE GUARNER
Columnista

(SEGUNDA PARTE)

Fue natural que al conocerse, a través de la prensa, el asesinato e inhumación de cadáveres perpetrado por el estudiante de Ciencias Químicas Gregorio Cárdenas Hernández de 27 años, en la casa de Mar del Norte 20 en Tacuba, los psiquiatras

por las tremendas diferencias económicas que existían. El psiquiatra español realizó varias pruebas psicológicas, entre las que destacó la de asociaciones de Jung-Bleuler, observando que las respuestas del delincuente tardaban bastante con vocablos como:

Figure 1. Examples of the widespread media dissemination of the case of Gregorio Cárdenas.

with a special presidential licence to practise medicine; he was selected as an honorary member of the Mexican Society of Neurology and Psychiatry and the Academy of Medicine, which immediately invited him to give a series of lectures. He soon enjoyed significant social and professional standing.⁹⁻¹¹

In the summer of 1942, four women were raped and murdered by a man named Gregorio Cárdenas. These dramatic serial offences caused a nationwide commotion, reaching the front pages of practically all the national newspapers.¹²⁻¹⁵ The murderer was soon apprehended and underwent numerous psychiatric assessments, with contradictory diagnoses. Lafora examined Cárdenas at the request of the *American Journal of Psychiatry*, concluding that he presented "psychic epilepsy" and that the crimes had been committed during "crepuscular" epileptic episodes, for which reason he could not be held criminally responsible. This diagnosis contradicted those proposed by other psychiatrists who had examined Cárdenas. Lafora's study was not published in the psychiatry journal that had encouraged him to write it, but in the specialised journal *Criminalia*¹⁶ and

in the news media (the *Excelsior* newspaper), which led to serious conflict between Lafora, the family of Cárdenas, and the Mexican psychiatric community, both due to disagreement with his diagnosis and because it was perceived as unethical to violate professional confidentiality in this manner. Dr Lafora's diagnosis did have certain consequences, as Cárdenas was never tried for his crimes, although he was incarcerated for many years due to his supposedly dangerous nature.

Objective

This study presents a brief review of Dr Lafora's report and the historical concepts underpinning his diagnosis of psychic or disguised epilepsy, a concept abandoned by modern epileptology, disappearing from neurology texts, but which persists in the fields of psychiatry and forensic psychiatry and in the Spanish criminal code.

Material and methods

The description of Cárdenas' crimes, their social repercussions, and the testimony of the experts

who examined him were taken from sources in the literature.^{12-15,17-20} Lafora's article¹⁶ reporting his examination of Cárdenas was kindly provided by Guillermo Cerón of Universidad Autónoma de México. The content of Lafora's report is compared against the ideas of his time and modern views of such concepts as "psychic epilepsy" or "epileptic equivalents" and their relationship with violence and crime.

Results

The case of Gregorio "Goyo" Cárdenas, the "strangler or the jackal of Tacuba"¹²⁻¹⁵

A young student was reported missing by her parents in Mexico City on 3 September 1942. Gregorio Cárdenas, another student who regularly met the missing woman and seemed to have a deep, unrequited infatuation with her, arrived that day at his mother's house in a terrible mental state of agitation and confusion. Under interrogation, Gregorio fell apart and confessed to the crime. The police found the bodies of the missing student and three young prostitutes buried in his garden. All four had been murdered over the previous month. These serial murders were sensationalised in the press (Figure 1) and caused national commotion. Furthermore, they immediately revived the debate on capital punishment in Mexico and, as a result, the crucial importance of defining a criminal's mental state, which may enable them to avoid the death penalty.¹⁵

The judges responsible for the case requested the necessary psychiatric reports to determine whether any mental health condition may have explained the crimes and, if appropriate, to establish exemption from criminal responsibility. A priori, neither the personal nor the family history of the accused suggested any degenerative condition or intellectual disorder, given that Gregorio had been a student, worked as a typist, and had been awarded a scholarship to study chemical sciences. His grades were outstanding. However, his relationship with women was conflicted, and a previous marriage had failed.

Goyo's mood fluctuated in the early days following his detention, ranging from moments of lucidity, in which he recounted his crimes with clarity, to other episodes in which he was incoherent and delusional. He presented facial contractions of varying intensity, which were more pronounced on the left side, described as tics, as well as mild tremor in the hands. These motor manifestations

seemed to eventually disappear. Numerous opinions were issued by psychiatrists and criminologists who in many cases had never even seen the patient, and were informed only by stories printed in the press. In other cases, medical interviews with Cárdenas were conducted in an inappropriate context, in the presence of journalists, police officers, and members of the public, which fed into the sensationalism surrounding the crimes, rather than clarifying it. Lafora himself was astonished by the number of journalists and inquisitive individuals who came and went from Cárdenas' cell, interrupting his examination. Cárdenas shone in the limelight, expressing himself articulately and with a profusion of technical terms and elegant poses; he even permitted himself to announce, to the great disappointment of the gathered journalists, that he would make no statements on Sundays. The psychiatric reports issued in the early days, and over the following years, reached varying diagnoses (as many as 25), with serious debates and personal disagreements between authors; however, the majority of experts considered it justified to rule that Cárdenas was not criminally responsible due to mental alienation, but recommended incarceration due to his extremely dangerous nature.

As a result, Cárdenas never received a clear guilty verdict. After a short spell at the Palacio Negro de Lecumberri prison, he was transferred to a mental asylum, the Manicomio General de La Castañeda, for treatment; he escaped in 1946, either with another patient or with a nurse, according to different versions of the story. He then returned to Lecumberri, where he remained, staying in different pavilions, until his release in 1976.

His behaviour during his incarceration was exemplary, and contributed to the doubts about his true mental state,¹⁷ leading to further examinations in 1947 and 1948, when he had already been imprisoned for five years. Once more, expert opinions were contradictory. Under the effect of sodium thiopental, he denied having committed the murders, claiming that friends of his were responsible; this testimony was considered unreliable. Quiroz-Cuarón was summoned once more and issued a report, this time including electroencephalograms, that ratified the previous diagnosis of "post-encephalic (sic) disorder resulting in delinquent perversion."¹⁸

Making a show of his superior intelligence (which had been confirmed by the expert reports) and his great seductive powers, he was permitted to establish a small

shop selling cigarettes and drinks. On some occasions, following announcements in the press, he was able to organise public sales of craft goods produced by fellow inmates, with great success. He himself knitted purses, which he was able to sell to make some income. Numerous women would visit him, and he maintained relationships with others during prison furloughs. One testified that Gregorio's sexual behaviour was normal, with the exception that he would fall into a deep sleep after intercourse.¹⁴ This testimony was of medical and legal value, since the hypotheses proposed to explain his crimes included the suggestion that sex with his victims had triggered his criminal rage, in a crepuscular state of psychic epilepsy. He consolidated his relationship with Gerarda Valdéz, under circumstances regarding which he never volunteered the slightest detail; the pair married and had five children, all of whom became legal or medical professionals.

As the years passed, he became interested in studying law, and offered legal advice to other inmates. In addition to numerous articles and letters, he wrote five books (*Celda 16*; *Pabellón de locos*; *Adiós, Lecumberrri*; *Una mente turbulenta*; and *Campo de concentración*) reflecting his day-to-day life, his experiences, and his general observations on the prison system. These books recount his journey through the sordid, often subhuman, conditions in different pavilions of the prison. He is particularly critical of psychiatrists, whom he accuses of "storing away the insane," adding that "I wasn't honest with any of them because I'd reached the conclusion that they don't know what they're doing."¹⁴

In 1972, when Cárdenas had been imprisoned for 30 years, following several unsuccessful attempts (even contacting the president of Mexico) and additional psychiatric examinations, his lawyer Salvador Salmerón Solano argued that it was unconstitutional for him to be incarcerated any longer as the maximum sentence allowed for murder in the criminal code had been exceeded. Judge Raúl Gutiérrez Márquez ordered in September 1976 that Goyo be released due to a "lack of verification."

The case once more became prominent, being used by politicians to argue in favour of the prison system, which had enabled the rehabilitation of the murderer, and against the death penalty, demonstrating that capital punishment would have been an irreparable mistake, even for such heinous crimes.^{17,19,20} Cárdenas was

invited to the Chamber of Deputies, where he received a standing ovation, and again featured on the front pages of the newspapers. He gave interviews, assuring reporters that everybody who had examined him and established different psychiatric diagnoses had been mistaken.²⁰ His behaviour had been deliberately intended to imitate disease, to confound the psychiatrists, in order for him to be exempted from criminal responsibility.

He was especially critical of Quiroz-Cuarón, his main accuser, considered the father of Mexican criminology.²⁰ Quiroz-Cuarón had found that an outbreak of encephalitis had occurred in Veracruz during Gregorio's childhood, with no clear evidence that he had developed the disease, and that it was very possible that he may have sequelae. With such a weak aetiological argument, he concluded that Cárdenas was "mad," in the vulgar terms used in article 68 of the Mexican Criminal Code. He presents a postencephalitic pituitary-hypothalamic syndrome resulting in delinquent perversion, and is highly dangerous," and recommended that he be incarcerated. This was the end of the court case.

However, in the words of Cárdenas, years later²⁰:

He was wrong about everything. I am a normal person. I work normally. I have a normal family... He [Quiroz-Cuarón] was simply an autodidact. But he was neither a lawyer nor a doctor. I have never had a disorder. Never. If I had a mental disorder I wouldn't lead a normal life. Schizophrenia is incurable. All disorders are incurable. If I was sick I wouldn't be here. I lead an ordinary life.

Cárdenas integrated into normal society. He graduated with a degree in law in 1985 and worked as a lawyer. His paintings also sold for good prices. He lived with his family until his death in 1999. His image and story have transcended the limits of medicine and law, and have been portrayed in theatrical works, film, and literature.¹⁷

The circumstances and consequences of Dr Lafora's report

Before analysing its content, we should make a brief comment on the circumstances in which Lafora's report on the Cárdenas case was written, and its consequences. According to Lafora himself,^{2,6,11} the initiative for his examination of the murderer came from *The American Journal of Psychiatry*, which was interested in the figure of the serial murderer. It is rather surprising, in the absence of any request from the prisoner, his family, or the judge, that the prison warden should have permitted

Lafora to conduct an examination of the accused, who was held *sub judice* and for whose case all medical examiners and experts had already been appointed by the judge. According to the available accounts, Lafora interviewed Cárdenas with his typical thoroughness, but had to interrupt proceedings on the third day by order of the judge.

Yet more surprising is the fact that Lafora published his results in the *Excelsior* newspaper, in three parts (which undoubtedly increased the morbid interest of the public), and immediately thereafter in the journal *Criminalia*,¹⁶ but not in the American psychiatry journal that had initially requested that he perform the study. Years later, Lafora himself told Valenciano Gayá² about this surprising decision, acknowledging that his actions could only be explained in the context in which they occurred, when everything was being done in public and in the presence of journalists; this included his own interviews with Cárdenas, as mentioned above.

Lafora's diagnosis of "psychic epilepsy" and the conclusion that Cárdenas could not be held criminally responsible led to a conflict with the Mexican psychiatric community, Cárdenas' family, and public opinion, with calls for his head.

The Mexican Society of Neurology and Psychiatry invited Lafora to its session of 20 October 1942 to discuss his conclusions in public. The announcement for the session, which mentioned that it would include discussion of "all aspects" of Lafora's study, and the press headlines ("Dr Lafora summoned to a liability suit") must have forewarned him of the true intention of the session. Lafora attended with the idea of defending his opinions against those of his Mexican colleagues, some of whom (including Dr Siordia, an expert witness for the defence) had pejoratively referred to him as "don Gonzalito" when commenting on his second submission to *Excelsior*. At the session, Lafora gave a very extended, detailed, and somewhat dry initial presentation, defending his medical judgement, which was met with hard criticism, particularly from Dr Salazar Viniegra, who considered Lafora's report to lack any merit. However, Lafora was also surprised to find that the session led to accusations against him for violating professional confidentiality, and extremely severe personal attacks and disqualifications¹¹; he was accused of creating literature, rather than science, of seeking fame and profit with extortionate fees, and exhibitionism and irresponsibility. The scandal reached

El Secreto Profesional Su Alcance

—¿Ha violado el secreto profesional el prestigioso neurólogo don Gonzalo R. Lafora, en sus artículos publicados en "Excelsior", en los que formuló el examen psicopatológico de Gregorio Cárdenas?

Por José ANGEL CENICEROS.
(Del diario "Excelsior".)

SERENIDAD EN EL JUICIO

Esta pregunta ha sometido uno de nuestros redactores al eminente jurista y presidente de la Academia de Ciencias Penales, José Angel Ceniceros.

—¿Desde el punto de vista médico legal, qué juicio le merecen los trabajos publicados por el doctor Lafora en "Excelsior" y la reacción que ha provocado entre los penalistas y psiquiatras mexicanos?

—Supongo que la pregunta se refiere —manifestó nuestro intercedido— a la exposición del doctor Lafora de los datos de herencia de la familia del reo. Mi contestación es ésta: Se han dicho tantas cosas en la prensa con motivo del crimen de Gregorio Cárdenas, y es tan enorme la polvareda de publicidad que se ha levantado en torno al mismo, que lo que ha escrito el doctor Lafora es mínimo, en comparación con

—He leído con un gran interés los tres artículos del famoso neurólogo español, y hasta tal punto los he considerado importantes, que en el próximo número de CRIMINALIA serán reproducidos íntegramente. En cuanto a la segunda parte de la pregunta, tengo plena confianza en que se impondrá la serenidad en el juicio de los neurólogos y psiquiatras mexicanos, quienes en su

Figure 2. The authorised opinion of J.A. Ceniceros, president of the Mexican Academy of Criminal Sciences, which was decisive in exonerating Lafora from the charge of violating professional confidentiality.

the press, and Lafora published articles defending himself against an attack he considered to be xenophobic, as well as professional.

The second part of the conflict was promoted by Cárdenas' family, as well as some psychiatrists, with Lafora being accused of violating professional confidentiality. While this controversy was initially very heated (Lafora had to testify to the public ministry and the case nearly went to court), it soon eased. Lafora based his defence on the fact that he had intervened on behalf of the patient's physician, and that professional confidentiality therefore did not apply. He argued that the same was true for the family, who had been interviewed to establish Goyo's medical history, and who were aware of the journalistic purpose of the information they provided. An essential part of Lafora's defence was the attitude of José Ángel Ceniceros,²¹ president of the Academy of Criminal Sciences and editor of *Criminalia*, who in his summary said that Lafora had not been less discreet than other physicians, experts, lawyers, journalists, etc (Figure 2), who had aired all manner of reports and comments in the press.

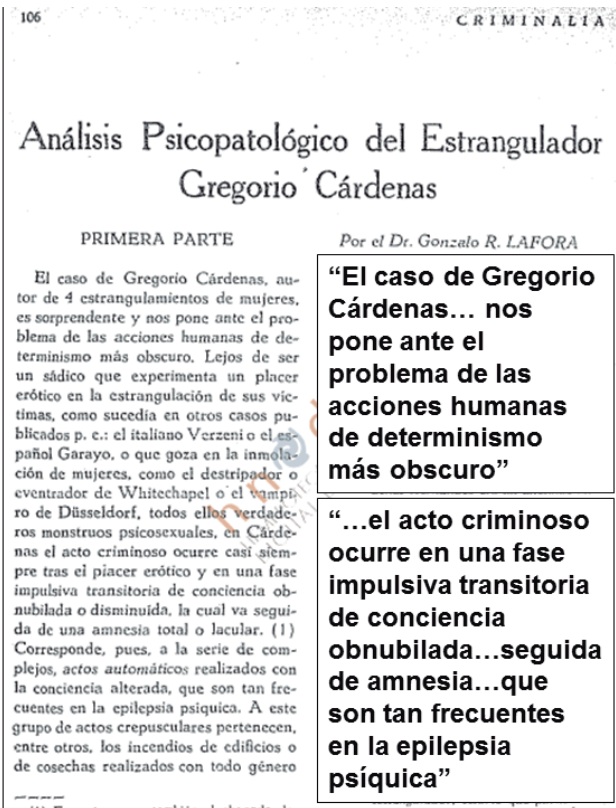


Figure 3. The first page of Lafora's analysis of Gregorio Cárdenas in the journal *Criminalia*.

Another statement strongly supporting Lafora was given by Héctor Pérez Martínez, a highly prestigious individual who even stood for election to the presidency of the country, who described him as “[...] exemplary in the position he occupies within scientific research; these unjustified, debatable, xenophobic accusations are far below him.”

Dr Lafora's report

This article aims not to analyse all diagnoses of Gregorio Cárdenas, but rather focuses only on that issued by Gonzalo Lafora,¹⁶ who was the only one to base the murderer's lack of criminal responsibility on a neurological condition, epilepsy, and specifically disguised or psychic epilepsy. His report has been analysed in a previous publication.²¹

Lafora's analysis begins with a sentence (Figure 3) summarising the motivation for physicians in general and

psychiatrists in particular to perform this type of study: “[The case] makes us face the problem of human actions of the most obscure determinism.” This was the question posed by the alienists of the first half of the 20th century: how do we explain crimes with no apparent motive, profit, hate, or vengeance; senseless, gratuitous violence? According to Foucault,²² the first time a psychiatric label was used to justify an unmotivated crime was in 1835, when Dr Jean Pierre Falret diagnosed Pierre Rivière with homicidal monomania (delusion limited to one or few ideas) after he murdered his mother and siblings; the diagnosis was corroborated by a committee of six experts led by Esquirol.²³ At the time, monomania or delusion was associated with dangerous personalities and violence. Homicidal monomania was later substituted by epilepsy in attempts to explain why somebody might impulsively kill with no apparent motive or remorse. It is widely accepted that the main proponent of the association between epilepsy and violence and crime was Lombroso.²⁴⁻²⁷ He and other authors developed the concept of “disguised” or “psychic” epilepsy, based on another concept, “epileptic equivalents.” Violent behaviours and other symptoms constituted epileptic discharges, in the absence of other epileptic symptoms. Patients with epilepsy were part of the class of born criminals and degenerates, with whom they shared easily identifiable physical traits.

According to Lafora,¹⁶ the grounds for his diagnosis of “psychic epilepsy” in the Cárdenas case were: 1) personal and family history; 2) the findings of psychological tests (Bleuler-Jung word association test and Rorschach inkblot test); 3) dream analysis; and 4) the opinions of highly prestigious authorities on psychiatry (Lombroso, Forel, Krafft-Ebbing, Bumke, Birnbaum). The analysis of Cárdenas' dreams is not discussed in Lafora's article in *Criminalia*, in which he also laments that he was unable to perform an EEG, the Terman-Miles masculinity-femininity test, or the cardiazol test, after the judge prevented him from continuing his examination.

Regarding family history, Cárdenas presented an intense, bilateral, hereditary epileptogenic defect, according to Lafora, although no close relative presented epileptic seizures. The predisposition to epilepsy was based on the history of “seizure equivalents,” such as sleepwalking, enuresis, migraine, irritable personality or explosive genius, and choleric reactions in his brother. Gregorio

himself had presented sobbing spasms as an infant, enuresis, night terrors, nightmares, migraines, and attacks of "irritable sadness." Lafora also reports history of "neurotic sentimentality" in response to animals being abused or killed, which he described as "frequent in epileptics [...] and compatible in an epileptic with impulsive violent actions."

Psychological test results "conclusively indicate an epileptic personality." The Rorschach test detected "marked repressive tendencies, concealment of thought, and affect with predominant primary impulses." In the Bleuler-Jung test, involving free association of 100 words, he presented delays in some answers with a high level of affectivity.

Lafora cited Lombroso²⁴⁻²⁷ and his famous cases of sadistic criminals, whom he considered to have disguised or psychic epilepsy, asserting that the impulsive tendency to strangle women as a psychopathological manifestation inherent to epilepsy and other impulsive sexual psychopathies was by no means a rare phenomenon. However, Lafora acknowledged that Lombroso "does not give compelling reasons to support this diagnosis" and that there were other alternatives to "sexual psychopathies with sadistic tendencies that do not belong to the group of epilepsy," citing several cases from the literature.

He also refers to Birnbaum (*Die psychopathische Verbrecher*, 1926, p.144) to support the claim that "the characteristic epileptic traits of pathological irritability, explosive inclination to brutal discharges and impulsive manifestations, as well as the special peculiarities of epilepsy, such as the tendency to dysthymia, bouts of fury and crepuscular states, and intolerance and pathological reactions to alcohol, bring a severe criminal character to a psychopathic constitution that is not particularly asocial, and turn some psychopathic criminals into the most brutal and impulsively violent criminals." Lafora also asserts that awareness is more impaired in epileptic crepuscular states "than in other psychopathies, such as dysphoric dysthymia or hysteria," in which amnesia is less complete. Therefore, like Birnbaum, he considered them not to constitute "a special source of criminal actions."

Lafora's conclusion is decisive: "Repeated brutal murders, showing similar characteristics and committed during exceptional states of obscured consciousness (crepuscular states), are a specific feature of epilepsy."

Discussion

It may be said that, given the progression of the supposedly insane murderer's state of mind, all the experts who examined him were mistaken, as Cárdenas himself stated at the end of his life, and that he did not truly have any neuropsychiatric disease.²⁰ Of course, we would not expect a severe neuropsychiatric disorder to have resolved naturally without any medication or other therapy, especially in such an unfavourable setting as the Lecumberri mental asylum. However, our interest here is not in contrasting the expert diagnoses against the patient's progression, but in analysing the conceptual foundations of Lafora's diagnosis of psychic or disguised epilepsy in Gregorio Cárdenas, which was plainly incorrect.

From today's perspective, it may be shocking that from the first page of his report, and with no further arguments, Lafora concluded that the criminal acts were committed "during an epileptic crepuscular state." This categorical a priori approach suggests that for Lafora, it was a matter of consolidated doctrine, requiring no justification, that a person presenting no other manifestations of epilepsy may suffer episodic disorders of awareness during which he is capable of committing heinous serial crimes. To support his hypothesis, he cites Rosanoff (*Manual of Psychiatry*, 1938, p.91), who reported the case of a patient who one day went to a bar and ordered a drink, such an innocent and routine complex action, without recalling anything. However, he does not emphasise the fundamental detail that this patient truly did present epilepsy, with nocturnal convulsive seizures. Lafora's hypothesis that Cárdenas' four murders were committed during a crepuscular state contradicts the criminal's confession, in which he recalled the symptoms of the homicidal outburst and the hate he felt for the person beside him.

Lafora's diagnosis was strongly influenced by the ideas of Lombroso, which impregnated not only medicine and psychiatry, but also the literature and politics of the 19th and the early 20th century. They spread across Europe and reached the Americas, where we can note two good examples. In a 1909 paper, Astelarra,²⁸ in Argentina, took hold of and faithfully developed the concept of "disguised epilepsy" and its relationship with violence and crime. Hidalgo y Carpio,²⁹ one of the fathers of legal medicine in Mexico, asserted that "the epileptic character was defined by an absence of moral values regulating behaviour, and

the diagnosis was psychic or disguised epilepsy that manifested with cruel actions accompanied by transient amnesia.” He categorically stated that “all epileptics are original, fantastical, cannot be lived with, and may at some time commit irresistible, unpreventable, harmful acts of hallucinatory origin.”¹⁴

Relevant examples of Lombroso’s influence in Spain are Dr Tomás Maestre and Dr Villacián. The former spent the early years of his career practising in Murcia, participating in numerous social, political, and even literary initiatives.^{30,31} He moved to Madrid in 1893, and became a chair in 1903. He promoted the Institute of Legal Medicine, Toxicology, and Psychiatry. A forward-thinking man and a humanist, he was interested in scientific psychology and liberal politics, and contributed to the development of a law on psychiatric care in 1931, considered exemplary at the time. However, he strongly believed in the ideas of Lombroso and Morel regarding the relationship between epilepsy and hereditary degeneracy that could be diagnosed with simple craniotomy.

Dr Villacián was director of the Provincial Psychiatric Institute of Valladolid and chair of psychiatry. He drafted the chapter on epilepsy in Professor Bañuelos’ medical treatise.³² It is noteworthy that the chapter, published as recently as 1951, was included in a volume dedicated to mental illness, rather than neurological diseases. In patients institutionalised in the mental asylum, which he portrayed with very dramatic photographs, Villacián found all the deficits or peculiar traits generally attributed to epilepsy: degeneration, character, personality, violence, and dementia. These ideas were widespread, as Bañuelos’ text was one of the most influential of the time, studied for decades by thousands of physicians throughout Spain.

Lombroso’s theory of the born criminal, his physical and mental characteristics, and the relationship with epilepsy, was based on a very weak scientific foundation, and was debated and rejected by his contemporaries. Critics of Lombroso and his theory of the born criminal included (among others) Lacassagne,³³ who highlighted the importance of harmful social influences in the development of criminality. Modern authors have also criticised Lombroso’s methodological errors and the weakness of his theories but note that, on the other hand, he correctly intuited the neuropathological basis of some epilepsies, specifically cortical dysplasia.³⁴⁻³⁶

Today, what theory regarding the association between violence and crime and epilepsy is accepted by neurologists and epileptologists? A Spanish monograph constitutes a reference on this subject.³⁷ Above all, we must stress that an “epileptic personality” in general terms does not exist, and the psycho-physiological traits of atavism and degeneration are not a general trait among patients with epilepsy. Many studies were unable to demonstrate a causal relationship between epilepsy and criminal acts³⁷⁻⁴⁵; neither has it been shown that epilepsy is more prevalent among convicted criminals or that crime is more prevalent among patients with epilepsy.⁴⁶⁻⁴⁷

It is very difficult to confirm violence during ictal confusional states outside the context of a video EEG monitoring unit. In today’s literature, violence during seizures is thought to be very rare, estimated to occur during one in every thousand recorded seizures.⁴⁸⁻⁴⁹ This makes it implausible that a single patient, like Cárdenas, should commit serial crimes during successive crepuscular episodes. Treiman³⁹ proposed strict criteria for linking a violent act to a seizure, which have been widely accepted.

Violence during post-ictal confusional states is very common.⁵⁰ However, it is almost always considered a resistance behaviour, in patients who feel restrained in their automatic movements; while they may punch, kick, or bite, these acts are always largely undirected and cannot underlie complex criminal behaviours, and particularly repeated behaviours.

More intense, potentially dangerous post-ictal violence is associated with post-ictal psychosis.⁵¹ Approximately one in five episodes of post-ictal psychosis includes violent behaviour with hetero- or auto-aggression (suicide). The natural history of post-ictal psychosis is well established. It usually occurs in patients with refractory epilepsy, with or without focal seizures. These patients often present bilateral brain lesions, particularly encephalitis or trauma. Disease progression time is prolonged, often longer than 20 years, with patients presenting very high numbers of seizures. In this context, a seizure or cluster of seizures is followed by a period of lethargy or drowsiness, and then a lucid interval. After this interval, the psychotic episode begins, with alterations of thought, visual and auditory hallucinations, illusions, alterations of affect (mania, depression), paranoia, and potentially violent behaviour. In these cases, violence is usually

targeted and leads to severe injury, for example due to punching, stabbing, or strangling. The psychotic episode lasts hours or days, and is diagnosed according to strict criteria that may not cover crimes committed during non-psychotic states, as was the case of Cárdenas, who presented none of the traits required for this diagnosis.

Finally, we should mention that epileptic patients may present episodes of violent behaviour unrelated to epilepsy, such as “intermittent explosive disorders” or “episodic dyscontrol syndrome.”⁵² These disorders are caused by deficient impulse control, and may give rise to episodes of rage, aggression, or antisocial behaviour. They are more frequent in children or adults with brain lesions or low intellectual levels, and are often triggered by minor provocation or frustration and facilitated by alcohol. This is the only diagnosis compatible with the Cárdenas case: uncontrollable criminal outbursts, potentially facilitated by his frustration and poor relationship with women, and the effect of alcohol.

Including these alleged “equivalents” among the manifestations of epilepsy is probably one of the most severe conceptual errors committed in this field, above all because it allows for the diagnosis of “disguised” or “psychic” epilepsy to explain any behavioural disorder, particularly violence, in the absence of any true manifestation of epilepsy.

In the light of today's understanding, Dr Lafora's diagnosis of “psychic epilepsy” in the Cárdenas case is unsustainable as an explanation for his heinous crimes. The arguments Lafora cited in support of his diagnosis were born of concepts and prejudices that lacked a true scientific or empirical grounding, despite being widespread and dogmatically accepted. The patient's subsequent progression merely confirmed the implausibility of the diagnosis, as Cárdenas never presented the slightest manifestation of epilepsy during his lifetime. As is noted by Valenciano Gayá,¹ “his lack of symptoms over many years is surprising.” Showing charity to his esteemed mentor, he adds that “we need not attempt here to establish whether Lafora's diagnosis was the most accurate.” Fortunately for patients with epilepsy, the majority of the harmful ideas about their disease over the centuries, particularly those related to violence and criminality, are now being abandoned. However, recent texts from the field of forensic psychiatry assert that “the brutal, instantaneous, unmotivated acts performed by a subject unaware of their execution,

which are consequently followed by a special behaviour (impossible to imitate), are typical of epileptics.”⁵³ Another more recent text, the majority of whose content is correct, cites Lombroso and his school, as well as Krafft-Ebing, who once stated that “many crimes are no more than misinterpreted epileptic phenomena.”⁵⁴ Some authors still consider that “aggressive inter-ictal behaviours, often characterised as explosive reactions, which were previously considered typical of the epileptic personality, are currently recognised to be a manifestation of temporal lobe epilepsy.”

The situation has improved since Lafora's time, but much is yet to be clarified in order to establish the true relationship between epilepsy, violence, and crime.

Conflicts of interest

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