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JOURNAL OF CATALAN INTELLECTUAL HISTORY,
Issues 9&10, 2015 | Print ISSN 2014-1572 / Online ISSN 2014-1564
DOI: 10.2436/20.3001.02.92 | P. 53-76
Reception date: 9/10/2014 / Admission date: 24/10/2014
<http://revistes.iec.cat/index.php/JOCIH>

“Phrenology Brings Sound Judgment to Our Selection of Rulers”. The Failure of Phrenology in Social Reform Efforts in Catalonia in the Nineteenth Century

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abstract

While this paper begins with a definition of phrenology and its theoretical foundations, the primary focus is on the efforts to spread phrenology in Catalonia undertaken by Marià Cubí and other mid-nineteenth century followers of the tenets of Gall and Spurzheim. Cubí saw the money-making potential of applying these ideas in diverse areas of society. In Catalonia, he and his followers took the view that it would be highly opportune to use phrenology to achieve reformist goals not only in education and business but also in the selection of the best political candidates. The ideological ambiguity of their approach, however, undermined the credibility of the supposedly scientific parameters of applied phrenology because they sold it as a tool to any and all parties. The elite that took an interest in the supposedly reform-minded aspects of Catalan society put forward by phrenology proved to be the same bourgeoisie that wanted to oust the aristocratic, conservative and Spanish nationalist sectors that still clung to their monopoly over the institutions of greatest authority and social influence. Phrenology used reform as a pretext, while what it actually guaranteed was merely an easy-to-use pseudoscience that called for nothing more than a prominent skull, enormous powers of suggestion and a steady stream of imaginative, seductive verbiage.

keywords

Phrenology – Social hygiene movement – Political reform – Classism – Epistemology.

Science, economics and social governance form a perverse, yet common triad in modern Western thought. The case of phrenology in Catalonia in the mid-nineteenth century offers a clear example of this intrinsic relation. Phrenology, however, did have the potential to contribute to a new ideal social model of progressive reform, which the ascendant Catalan bourgeoisie of the period, for a variety of reasons, were nonetheless unable to exploit.

In Spain, however, it was not until the reign of Isabella II that academia made tentative openings towards ways of thinking imported from abroad. Prior to that, a number of Spanish intellectuals had been frustrated in their attempts to move into step with the artistic and scientific developments being promoted by the nationalist policies of Europe's great powers. This led to a mass exodus of intellectuals who were to come into contact with new ideas that had not yet succeeded in crossing Spain's borders.

Indeed, the introduction of phrenology into the country in the nineteenth century arose out of the political and intellectual tension between the "two Spains" that resulted from the French invasion: the restoration of the Bourbon monarchy gave rise to a significant rejection of Enlightenment ideas and bolstered a more absolutist, reactionary orientation that opposed any kind of liberal undertaking. Thus, the nineteenth century witnessed the co-existence of a conservative tendency that clung to the status quo and the principles of the ancien régime and a progressive line eager for profound political and social transformation (Carpintero 1996; Domènech and Sáiz 1996).

This clash also resulted in a clear split in the scientific thinking of the period. In the human sciences, for example, there was a current indebted to French influence that was spiritualist and speculative in nature, while support also grew for a tradition that was naturalist and staunchly positivist in character, drawing on a mechanistic view of human beings and their social constitution. Phrenology drew its mixed inheritance from both of these two tendencies.

The period from 1833 to 1868 marks phrenology's greatest flourishing in the country, though its impact was most evident in the Catalan-speaking lands (Domènech and Sáiz 1996), thanks particularly to the exhaustive campaign of dissemination undertaken by Marià Cubí (1801-1875). Even so, Cubí was always encumbered by certain conservative positions that were nonetheless still too radical in Spain.

At this point, it is necessary to define what we mean by phrenology.

Definition of phrenology

If we take the explanation that Nofre (2006) gives of its possible etymological origins, the noun phrenology was coined by the physician Benjamin Rush (1745-1813) from the Greek phren (φρήν: "mind") and logos (λόγος: "science"). Indeed, phrenology was destined to serve as a new science of the mind, though the professionals in the field saw themselves more as anatomists than as philosophers and metaphysicians of the psyche. As a result, phrenology must be understood as a clear precursor to the scientific establishment of psychology in that it established the brain as the fundamental organ of the mind.

Phrenology's place in the history of psychology and related sciences can be attributed to its emphasis on the relation between certain human capacities and the structure of the body, further reinforcing the organicist conception of the mind. While this did lead to psychology being subordinated to physiology, it also opened up a new practical approach to psychopathological diagnosis, career guidance, expert legal opinions, educational psychology and development, and other social applications (Sáiz 2008; Rodríguez 1989).

Phrenology brought together a disparate assortment of organicist tenets that sought to explain differing mental capacities in terms of certain anatomical features of the skull. Taking the brain as the sole organ of the mind, phrenology tried to break down its functions into a number of particular, specialised areas, based on the knowledge of the mind at the time. According to the theoretical beliefs that concern us here, an intimate connection was purported to exist between the outer shape of the skull and particular functions of the mind, thereby linking questions of intellect, morality and personality with given expressions and patterns of behaviour (Hergenhahn 2001; Pérez and Tortosa 2006; Siguan 1981).

From a belief that each psychological faculty originated in a surface region of the brain, it was speculated that the skull enveloped the brain so closely that its contours would indicate deviations in the brain itself. Accordingly, it followed that more highly developed functions would present bumps in the skull, while more deficient ones would correspond to small clefts or indentations. Measuring these irregularities would reveal the degree of the mental capacities in question.

The founding father of phrenology, Franz Joseph Gall, established twenty-seven different functions, while his follower Spurzheim added eight more. By contrast, the system of Marià Cubí had up to thirty-seven different faculties that were distributed over the entire cortex and all of them affected the physical shape of the skull. Therefore, any mental propensity could be determined by measurements of the skull.

Phrenology offered the man in the street a theory of personality and a quick and easy diagnostic method to find individual differences with at least a degree of scientific assurance, based on the classification and description of the skull currently in use in other strands of natural history, such as comparative anatomy—which established similarities between man and ape—racial eugenics and physiognomic morphology in relation to supposedly innate propensities. Building on these suppositions, phrenologists conceived of the brain as a set of functional areas that could be developed independently. Thus, strengthening the most deficient functions could successfully restore a sound mental balance to an individual.

On one hand, phrenology overthrew the metaphysical conception of mental phenomena that was still a subject of contention in academia. The phrenological perspective was closer to a naturalist view of the human being than other less objective tools which were in use at the time in the diagnosis of mental and behavioural disorders and which employed a confusing terminology based on the soul or the spirit, according to the critique levelled by Gall himself (1825) in his inaugural text in the discipline.

On the other hand, phrenology reinforced the belief in individual differences, overcame the Cartesian distinction between mind and body, and contributed a detailed descriptive system of the brain's functions. It also offered a supposedly objective analytical technique to analyse the mind, an approach that could serve as an alternative to the introspective methods of a psychology still too cloaked in metaphysics (Hergenhahn 2001). Today, though, authors like Peña-Casanova (2009) find substantial points of similarity between phrenology and neuropsychological exploration.

As noted earlier, however, phrenology aimed not only to address an individual's level of intellect but also his or her innate moral principles, to which an internal organisation and an associated skull shape were thought to correspond. This aspect of the measurement of moral characteristics was to have serious consequences in the establishment of an ideal model of society, thanks to the intended application of phrenology in the civil government of the country. Its overwhelming success, however, went hand in hand with the simplicity of its methodology and its ease of comprehension, which reduced diagnosis to cranial palpation—or, as it was also known, the “cranioscopy” (Gall 1825).

Based on a hitherto unprecedented relation between behaviour and the nervous system, phrenology combined a theory of the brain and a science of character and temperament that could be summarised in the following points:

1. The brain is the sole organ of the mind.
2. The brain is an aggregate of functional areas that are independent of one another.
3. Each area is located on the surface of the brain and fulfils a specialised function.
4. As the skull ossifies over the brain during its development, the external part of the skull is a reflection of the brain within.
5. The mind can be analysed by measuring the correspondence between the bumps and indentations of an individual's skull and his or her inherent faculties.

The most controversial aspect, though, was the claim that mental faculties did not exist in the same manner and to the same degree in everyone.

This was used to justify not only a whole series of individual differences, but also differences of class, race, gender, age, cultural background, and other factors used to distinguish between people and account for diversity. As a consequence, phrenology was quickly adopted by the liberal movement to defend the need to fix certain social problems on the basis of studies resulting from its application in some segments of the population.

Despite worldwide success, particularly in England, France, Switzerland and the US, phrenology's positive impact in Spain was limited to the Catalan-speaking lands. What was the source of the disdain that greeted phrenology in the rest of the Iberian Peninsula? Before answering this question, it would be useful to look at the distortions that befell the original model created by two pioneering figures in phrenology: Franz Joseph Gall (1758-1828) and Johann Caspar Spurzheim (1776-1832), whose biographies are practically a mirror image of the life of Marià Cubí (1801-1875).

The founding fathers of phrenology

While still a boy, the Vienna-born Franz Joseph Gall (1758-1828) noted that most people who were endowed with a great memory had enormous, prominent eyeballs. This fact was the starting point of an intense career as a physician and anatomist, which Gall, in his writings, drew on to make systematic comparisons of the external traits of individuals and precise measurements of their personalities. At the same time, Gall amassed years of experience in Austria measuring the craniums of thousands of prison inmates, patients in mental institutions and children in orphanages in order to produce a differential ranking that put human beings of lesser intellect nearer to the level of animals, a fact that Gall himself wanted to corroborate, stating that the cranial bone in these cases was much less developed than in men of intellect (Hothersall 2005; Hergenbahn 2001).

Together with his follower Spurzheim, Gall presented his phrenological model in 1808 to the Scientific Committee of the French Institute chaired by the physician Phillippe Pinel. It was rejected at once, however, because of its speculative nature (Pérez and Tortosa 2006). One of the most contentious aspects was Gall's view that the shape of the skull was determined in childhood and that the individual's development was already marked by an innate imprint. This implied a highly pessimistic conception of human beings, in that certain functions of the brain could not be changed despite efforts to correct their deficiencies. Going so far as to describe one of the innate capacities of man as "murderous"—namely the area that governs the impulse for destructiveness—Gall left no doubt about his ethical stance towards human beings or

the highly relative likelihood of reform that he predicted for certain individuals. One example of this can be seen in Gall's detection of a particular bump above the ear. According to him, this bump housed the cerebral locus of greed and power, which would obviously be more pronounced among convicted and recidivist pickpockets (Hothersall 2005).

Beyond the criticism that it received from scientific academies, the *Schädellerhe* or "doctrine of the cranium"—Gall avoided the term "phrenology"—was accused by the Church of being extremely determinist and materialist and of sowing atheism among the population. To circumvent the censure of the Catholic Church, Gall argued in his defence that he had discovered "the organ of religion" in the brain, which proved not only an individual's degree of faith, but also the very existence of God. Despite his arguments, however, his work was put on the Vatican's list of prohibited books (Hothersall 2005). Further, the emperor of Austria, Francis II, decreed that Gall should never again practice medicine in the country, calling his thinking subversive and contrary to the public morals of the era. Nofre (2006) suggests that the decree may have been the result of professional jealousy on the part of the monarch's personal physician. The outcome, however, was that Gall, together with Spurzheim, was forced into exile. Even at Gall's death in Paris in 1828, the Church refused to permit a cemetery burial, reiterating its charges of blasphemy and heresy.

Seen as one of the chief forerunners of the behavioural sciences and criminal anthropology, Gall was unable to see the possibilities offered by phrenology to proponents of social reform. Credit for this must go primarily to Johann Caspar Spurzheim (1776-1832), the first to postulate the applications of phrenology in therapeutic, educational and social settings, steering the discipline towards moral philosophy (Nofre 2006). Unlike his teacher, Spurzheim had a more optimistic, utopian conception of human beings. He started from the premise that everyone can improve and that phrenology could light the new path towards perfection. Unlike Gall, he relied on scientific methods that involved a much more exacting use of dissection to establish the relations between physiological behaviour, the anatomy of the brain, and the makeup of the nervous system.

Perhaps professional jealousy impelled Spurzheim to distance himself from his former teacher. In 1832, while Gall was encountering more controversy than good fortune in Paris, Spurzheim emigrated to the United States, where he was regaled with honours of all sorts. At the universities of Yale and Harvard, for example, he gave a series of lectures attended by a wide array of influential figures in US society who were looking to phrenology for an etiological explanation of human behaviour, a simple predictive technology to evaluate character and intellect, and a biological imprint to justify the urgency of social reform and to correct aberrant patterns of behaviour. In short, phrenology was to provide the foundations of the future behaviouralism (Hergen-

hahn 2001). Unfortunately, six months after his arrival on the American continent, Spurzheim fell gravely ill and died.

His principal follower, George Combe (1788–1858), translated his work, but qualified (and suppressed) some ideas that clashed with the thinking of a certain elite, particularly the psychosexual theories that Gall had passed down to his student. To start with, Combe did not see it as normal that the sexual appetite should appear naturally in early childhood, as Freud would state years later with psychoanalysis. Nor did he accept that sexual activity was beneficial for human health. To the contrary, Combe rejected any display of sexuality in children and women and he even removed from his translation all of Gall's pages on the orgasm (Nofre 2006).

These incremental distortions of the very foundations of phrenology were not to be the only ones to undermine, in a self-serving fashion, the supposedly reformist inspiration that could have shored up the motives of applied phrenology. Despite drastic changes to the original work of Gall and Spurzheim, Combe's manual on phrenology became an undisputed bestseller. By the end of the nineteenth century, it had even overtaken Charles Darwin's revolutionary *On the Origin of Species*. If Darwin's book achieved enviable sales of 50,000 copies, Combe's manual surpassed it by selling 80,500 copies (Nofre 2006). Among its avid readers, we will later find Marià Cubí during his years of residence in the US.

Rapidly, phrenology piqued the interest of many opportunists who saw the newly arrived science from Europe as an easy way to make money, despite the US scientific community's critical view of the validity of phrenology as a reliable psychometric method. The public reputation of phrenology grew in proportion to its disrepute in the scientific arena. Men and women of letters such as Edgar Allan Poe, Mark Twain, Arthur Conan Doyle, Walt Whitman, Herman Melville and Charlotte Brönte not only took a closer look at phrenology out of curiosity, but also made use of facial features and expressions based on its theories in order to construct their fictional characters (Hothersall 2005).

The so-called "new science" gave rise in the US to a plethora of companies dedicated to the profitable exploitation of phrenology. One of the leading brands in phrenological consulting was the firm Fowler & Wells, founded by the brothers Orson and Lorenzo Fowler and their brother-in-law Samuel Wells. By the mid-nineteenth century, they owned a major chain of consulting offices that gave advice on labour issues such as staff hiring, the design of professional profiles and candidate selection for prestigious posts. In some job interviews, it was necessary to submit a detailed phrenological report carrying the Fowler & Wells seal of approval in order to demonstrate the worth of staff being considered for employment and avoid legal repercussions as a result of any negligence or irresponsible conduct on the job.

In addition, Fowler & Wells, which had offices all over the country, carried out educational activities and sometimes acted as marriage brokers, ascertaining the compatibility of a couple that had made the decision to get married. The firm gave a guarantee of its thoroughness at practically 100%. Indeed, among its success stories, Fowler & Wells boasted of having examined Ray Kroc when he was a boy of only four and predicted his fame in the food sector: years later, Kroc would found the world-famous fast-food brand McDonald's (Hothersall 2005).

The business of phrenology was not limited solely to consulting. It also included the publication of informational guides and the marketing of objects, apparatuses and equipment for phrenological measurement and examination, such as maps or charts to do exploratory work and busts with an anatomical distribution and functional classification of the different regions of the skull that could be used as a guide for phrenological analysis. These tools, which were readily available to anyone at a modest price, resulted in the proliferation of "bump-readers", itinerant phrenologists who sold their services from town to town, turning phrenology into a relatively easy way to earn a living. Their use of phrenology as a pseudoscience to predict clients' futures, their lack of technical training and their reputation as fairground hucksters posed even greater obstacles to the acceptance of the discipline among the official human sciences.

Yet even though phrenology's days were already numbered in the US and the rest of Europe, Marià Cubí saw the commercial opportunities offered by its introduction into the constricted panorama of Spain. And he was to enjoy unexpected success.

The introduction of phrenology into Catalonia

Marià Cubí, who is the focus of a later section, was not the only author to spread phrenology in Catalonia. As noted earlier, however, phrenology had made little impact in Spain before Cubí's return from the US, where he discovered its social (and economic) potential. In reality, phrenology had arrived in Spain some time earlier, but prior to Cubí's efforts, publications on the subject largely went unremarked.

By 1806, Gall's theory had been translated and published in Madrid. But neither the first edition nor the second—thirty years later—garnered much interest across the length and breadth of Spain. A critical review by Lelut, entitled "Refutation of Gall's Phrenological Organology", and hand books by Combe and Bessières were forgotten as quickly as they arrived on the shelves of Spanish bookshops. In addition, works such as Debreyne's study did lit-

tle to improve the country's general opinion of phrenology, understood as a pseudoscience—at times even mystical—that sought to embrace all of human complexity, as Debreyne's overreaching title suggests: "Thoughts of a Catholic believer or philosophical, moral and religious considerations on modern materialism, the souls of beasts, phrenology, suicide, grief and animal magnetism" (Domènech and Sáiz 1996).

The widespread indifference to phrenology in Spain was not replicated in Catalonia, where acceptance of the new science was without precedent elsewhere in the country. While the case of Marià Cubí may be the most conspicuous, a sizeable group in the city of Vilanova i la Geltrú should not be forgotten (cited by Nofre 2007; Domènech and Sáiz 1996): Magí Pers, Josep Pers, Narcís Gay, Teodor Creus, Joan Llach, Pau Mimó, and more. In particular, Narcís Gay i Beyà (1819–1872) and Joan Llach i Soliva (1821–1860) collaborated closely with Marià Cubí and oversaw the publication of *El Eco de la Frenología* in 1847. Magí Pers i Ramona (1803–1888) was the editor-in-chief of another critical avenue for disseminating the discipline in the years 1852–1854: the journal *Revista Frenológica*. Author of the bestselling *Manual de Frenología al alcance de todos*, Magí Pers claimed to have identified the functional organ of the brain responsible for national allegiance and a staunch preference for one's own country, which he located in the occipital lobe (Siguan 1981).

In addition to these periodicals appearing in Catalonia, mention must also be made of *La Antorcha*, which Marià Cubí himself edited. In Madrid, however, a number of journals commented on phrenology only very sporadically and in highly critical terms. Significantly, this coincided with the courses that Cubí gave in the Spanish capital between 1840 and 1850. The *Gaceta Médica* and the *Boletín de Medicina, Cirugía y Farmacia* were the two journals most frequently to attack Cubí's work (López 2000). From a comparison of the quite rare opinions that were voiced in these journals, it appears that phrenology in Madrid had become a major *bête noire* to be fought and fought hard.

The list of Catalan authors who defended the newly arrived phrenology did not stop there. The physicians Pere Mata i Fontanet (1811–1877) and Pere Felip Monlau (1808–1871) also contributed their knowledge to the cause of phrenology. The former held a more liberal, progressive stance than many other professionals in his field: he praised phrenology's capacity to provide a scientific explanation of the individual and society. Highly sceptical of its non-professional and unapproved use by charlatans, Pere Mata warned of the perils of dressing up the discipline into an unscrupulous palm reading of sorts. In addition, he was doubtful of the virtues of phrenological cranioscopy (Carpintero 1996).

Nevertheless, Mata saw psychology as a part of physiology, further underscoring the organicist and localist reading of applied phrenology in the study of the mind. For Mata, both psychology and phrenology were supposed to be empirical sciences that treated the human being as a subject of external study, rejecting any temptation to use introspective methods. Unfortunately, when Mata used phrenology to speak in psychological terms, his view of the mind moved so close to the field of physiology that he was often accused of being a materialist and a stark reductionist of the sciences of the mind. The harshest criticism, needless to say, came from more conservative political and academic quarters. By way of evidence, Menéndez Pelayo called Mata the “fervent henchman of Gall’s tenets” (Nofre 2007).

Monlau similarly held phrenology in low esteem because of its treatment of subjects such as the soul or consciousness based on arguments of a supposedly organic or physical nature, which he took issue with in his *Elementos de psicología*. He also concurred with Pere Mata in disapproving of the cranioscopic method and he accused phrenologists of being moralists more than scientists. Contrary to Mata, however, Monlau welcomed the prospect of a science that could provide a simple understanding of highly complex human conditions such as the passions and temperaments, innate traits and personality differences, and he saw in phrenology an excellent approach for the betterment of individuals in the service of public hygiene and social advancement (Nofre 2007).

The long list of prominent Catalan figures in science and medicine who embraced phrenology include such distinguished names as Joan Drument (1798-1863), Ramon Ferrer i Garcés (1803-1872), Agustí Yáñez i Giróna (1789-1857), Ignasi Miquel Pusalgas (1790-1874), Emili Pi i Molist (1824-1892) and Pi’s friend Josep Oriol i Bernadet (1811-1860), the mathematician and architect with whom Pi designed the Mental Hospital of Santa Creu and Sant Pau in Barcelona (Pi i Molist 1860).

Drawing on Nofre (2007) and Domènech and Sáiz (1996), we find a number of key facts about the introduction of phrenology in Catalonia, thanks to the authors mentioned in the previous paragraph. Drument, who was born in Barcelona, was appointed professor of the Faculty of Medicine in Madrid and dedicated a great deal of his academic work to phrenology. This was also true of Ramon Ferrer, a stalwart progressive and a champion of cranioscopy, whose book *Tratado de Medicina Legal* appeared in 1847. *Lecciones de Historia Natural*, published three years earlier and written by Agustí Yáñez, introduced a ranking of the races based on the phrenological analysis of skulls and facial features, while Miquel Pusalgas put forward the suggestion that the anatomy museums scattered across the Iberian Peninsula ought to have a section dedicated exclusively to a good collection of skulls and brains of the mentally

insane and the criminal, and Pi i Molist (1870) devoted his doctoral thesis to the field of phrenology, though he was careful not to mention Marià Cubí at any point. In addition, mention should be made of the contributions of the Majorcan physician Bernat Fiol, the physiology classes given by Joan Magaz at the University of Barcelona in 1860, the book *Exposición del sistema del doctor Gall* published by Joan Mayer in 1822 under the pseudonym Ernest Cook and the kind references appearing in the print media from Josep Maria Pelegrí (physician at the General Hospital in Tarragona), Julián Álvarez (director of the Military Hospital in Tarragona) and Sebastià Vinent (supporter of cranioscopy in *El Eco de la Frenología*) over the course of the nineteenth century.

Phrenology won over many adherents, but it also raised many voices in opposition, such as Joan Ribot i Ferrer (1788–1851), who was openly critical of Gall's original system in the book *Lecciones de Fisiología*, which he published shortly before his death. At the opposite extreme from Joan Ribot, Dr. Baldomero Comulada gave an address at the Royal Academy of Medicine in Barcelona in the late nineteenth century, defending Gall's cranioscopic methods, though he did reject Marià Cubí's classification of 38–40 discrete functional areas. Comulada accepted that the intellectual faculties were located in the frontal region of the brain, the affective faculties were in the upper region and the instincts were in the hind region, but he added that the brow also presented visible traits of the intellectual capacities of the individual. To his understanding, a prominent brow was a sign of higher intellect, a view for which he sought proof in the examples of Kant, Descartes, Cervantes, Fortuny and Zorrilla (Parellada 1986).

There is no doubt, however, that the most important figure in Catalan phrenology was Marià Cubí, schoolmaster, linguist and tireless traveller, who amply introduced the new science to Catalonia, even though his efforts bumped up against the obstinacy of the more reactionary elements in the scientific establishment just when phrenology began to fall out fashion abroad.

Marià Cubí and the heyday of Catalan phrenology

Born in Malgrat de Mar (Maresme), Marià Cubí i Soler (1801–1875) did not leave much of an impression in his place of origin. The writer Josep Pla makes note of this lapse of historical memory in his own inimitable literary style:

Mr. Cubí was a child of Malgrat. On one of my last visits to the village, I tried to discover if there was still any recollection of their illustrious son, and I found that his memory was cloaked in the most absolute oblivion (...). In Malgrat, Cubí is entirely forgotten (Pla 1951).

It should be added, however, that Cubí did not reside long in his native village. While he was still a boy, the family moved to Maó when the Peninsular War against the French broke out (Siguan 1981). Gifted with a fine command of languages, the young Cubí gave private classes in English and French and emigrated to the US when he was only twenty in order to work as a Spanish teacher. He even went so far as to create his own system of spelling based on phonetics. According to Pla, the system had so many letters *z* and *j* that it seemed to be written in some dialect of Andalusia. After living in Baltimore for a long period, Cubí travelled first to Cuba, where he founded the Buenavista School in Havana in 1829, and later to Mexico, where he ran another school. His American wanderings came to an end in New Orleans, where he became a fervent convert to the cause of phrenology as a result of the writings of Combe and the merchandising of the firm Fowler & Wells. Two publications attest to his time in the US: *Introducción a la frenología por un catalán* [Introduction to Phrenology by a Catalan], published in New Orleans in 1836; and *Phrenology*, published in Boston four years later (Siguan 1981).

For some biographers, it is no accident that Cubí came into contact with phrenology in the Caribbean and the American South. Both of these regions were highly susceptible to the influence of certain branches of medicine and homeopathy that were likely to have excited his curiosity before any genuine scientific concern (Nofre 2007; Domènech and Sáiz 1996).

Fully trained in the “new science” by the time of his return to Catalonia, Cubí organised an entire series of private courses with influential members of high society. The cost of tuition was steep and he also sold them his products and books. Nofre (2007) and Domènech and Sáiz (1996) note that these publications were genuine bestsellers—if we discount the relatively more modest success of *La Antorcha*, the weekly journal on the sciences, arts, literature, industry and more, which first appeared in the mid-nineteenth century. Some examples of these texts appear below.

Published in 1842, every copy of Cubí’s book *Sistema complejo de frenología con aplicaciones prácticas para el mejoramiento del hombre, individual y socialmente considerado* was sold out immediately. His short guidebook *Manual de frenología o Filosofía del entendimiento humano sobre la Fisiología del Zélebro*, which came out in the following year, also sold out quickly. *Elementos de frenología, fisiognomía y magnetismo humano en completa armonía con la espiritualidad, libertad e inmortalidad del alma*, of 1846, enjoyed the same good fortune, as did *La frenología i sus glorias* (1852), a hefty tome of a thousand pages, which gathered nearly all of the content from Cubí’s preceding books. This last work sets out his definition of phrenology as “the study of the functions of the soul” and it presents a clear dualist position in which the body and the mind are separate,

with the former being a mobile instrument that is merely in service to the latter, which sits in the driver's seat.

Cubí's students, who included the *crème de la crème* of the Catalan bourgeoisie and aristocracy, were predominantly educators, physicians and lawyers (Siguan 1981; Nofre 2007; Domènech and Sáiz 1996; Carpintero 2004). His classes also went beyond private sessions in homes to include practical lessons in prisons, orphanages and mental institutions, in keeping with the example set by Gall, the founding father of phrenology. Among the clients that he visited, Cubí analysed Eusebi Güell i Bacigalupi (1846-1918) when Güell was 21 years of age. Examining Güell's aptitudes and talents, Cubí singled out the young man's orientation towards the natural sciences, above all the branch of chemistry, and towards commerce and literature. He also highlighted Güell's excellent dealings with people, his discreet but firm character, his tenacious and forceful temperament where required—"courtesy detracts not from bravery", as an old Spanish adage goes—and his values of justice, respect and benevolence, all critical for the diplomatic career that Cubí foresaw for the young man (Peña-Casanova 2009).

Even in the heyday of his services as a phrenologist, Cubí limited his analysis to the most noticeable positive features of his clients. By contrast, he only highlighted the psychopathological and criminal tendencies of prison inmates and mental patients on the basis of his cranial examinations. In this way, he won over many powerful politicians and officials in Catalonia who saw in phrenology an opportunity to carry out social reforms to counteract the failings of the Spanish government.

Things went wrong between 1845 and 1847 when Cubí launched a full-scale campaign to spread phrenology outside Catalonia. He travelled to Saragossa, Madrid, Gijón, León, Lugo, A Coruña and Santiago de Compostela and these were just some of the provinces that had the privilege of witnessing a phrenology event organised or chaired by Cubí, including lectures, courses, empirical demonstrations and more. It was in Santiago de Compostela where he was denounced to the religious authorities by Antonio Severo on suspicion that he was promoting Protestant tendencies veiled behind scientific presuppositions and that he also denied the idea of sin, proposing exculpatory etiologies that were naturalist in character (Siguan 1981; Domènech and Sáiz 1996; Carpintero 2004). A lengthy trial in the Ecclesiastical Tribunal of Santiago stranded Cubí in the home of one of his students there for nearly the entire year of 1847. This unfortunate period is when Cubí wrote *Polémica religioso-frenológico-magnética* (1848) in his own defence. In the work, Cubí clarified his theories. Without denying the bounds of scientific rationality, he argued that his classification of brain functions included the capacity to de-

velop a certain natural degree of religiosity, but his backtracking was ignored and he was forced to pay a symbolic fine.

The social scandal significantly tarnished Cubí's public image. From then on, he was the focus of harsh criticism from some of his colleagues in phrenology who viewed his model as a failure because he sold his services to the highest bidder without maintaining any objective consistency and because he took such fervent inspiration from out-of-date theories on the functional regions of the brain that were hard to prove by cranioscopy. Some of the criticisms had already been suggested in the writings of Mata and Monlau. Theirs, however, were not the only voices to speak out against the man who was the main standard-bearer for phrenology in Spain and Catalonia. Cubí was attacked chiefly for basing his work on unfeasible hypotheses about capricious associations with certain cranial irregularities that were ambiguous to interpret and highly contentious to use diagnostically (Carpintero 2004; Siguan 1981).

At the same time, however, Cubí made little attempt to correct the shortcomings of his theoretical model. Rather, he limited himself to the reproduction of what earlier authors had said about phrenology. Never a brilliant theorist, he was merely a shrewd populariser who, like Fowler & Webb, turned phrenology into good business. At the same time, he tried to make money as a hypnotist, but without any of the therapeutic pretensions of the French school of psychiatry. Taking hit after hit, Cubí's reputation did not improve when he insisted that his greatest contribution to the world was, as he called it, the organ of "deductivity". According to him, this organ had the power to see, by means of logical operations, what would occur in the near future. This idea of Cubí's was not that far removed from the mystical belief in the existence of a certain degree of innate divination. Exploiting the scientific ignorance of the time, Cubí even claimed confidently that the regular application of leeches was necessary to assist in the development of deficient cranial protuberances (López 2000). Anecdotes such as these clearly demonstrate that Cubí's primitive phrenology was unable to keep pace with advances in the neurosciences as they gained ground in Europe and began to have an impact in Spain.

When he had finally fallen into total disrepute, Cubí was spoken of as a wise man who had gone mad, unable to compete with rivals as persuasive in the street as the gypsies who could see the future by reading palms (Pla 1951). In addition to his exclusion from scientific arenas, his desperate attempts to beg for political favours already denied to him in the past entirely overshadowed the publication, in 1952, of *Al pueblo español, sobre las causas que hacen el comunismo imposible y el progreso inevitable* [*To the Spanish People, on the Causes that Make Communism Impossible and Progress Inevitable*]. He was only to regain a modicum of his former credit when the work *La phrénologie régénérée* appeared six

years later in France, a volume which the author dedicated in a blatantly obsequious tone to Napoleon III (Domènech and Sáiz 1996).

His gradually declining numbers of students and the constant attacks from the conservative press shunted Cubí out of public arenas and he turned his full attention towards teaching foreign languages in Spain. Despite the memory of past controversies, Cubí returned to Galicia and opened an office in Ferrol in 1866. Nearly a decade later, Marià Cubí died of a stroke (Siguan 1981).

Phrenology, an ambiguous model for social reform

As it happens, the presumed reformist intentions of Marià Cubí are thrown into question when we review his particular phrenological classification based on Gall's original model (1825). While Gall reduced all mental faculties to 27, later authors including Cubí expanded the total to 37 or even more, depending on their individual interests (Hothersall 2005; Pérez and Tortosa 2006; Sáiz 2008). Cubí (1852) and Gall (1825), however, concurred in drawing a distinction between the three major areas of the brain: the frontal regions, which were dedicated to matters of the intellect; the upper regions, which dealt with moral questions; and the lower regions, which were relegated to the animal instincts. Traits such as tenderness, courage, ingenuity, pride and cunning were, according to these authors, exclusive to human beings. But other capacities like the acquisition of a moral sense, a given degree of religious sentiment, a talent for poetry and even the desire to rob and kill were distinctive only of certain individuals. Hence phrenology's major use as a tool of prevention.

Cubí spoke of rebalancing capacities that had decreased during their development in order to correct and compensate for the aberrance. This was not contrary to the idea that the detection of a slight depression in a specific area of the skull could predict a correlative reduction or weakness in the associated mental faculty. Just to be on the safe side, though, Cubí himself (1852) pointed out that phrenology was more approximate than exact. In addition, unlike the radically determinist position of Gall, he accepted that the individual is more or less responsible for changing his or her behaviour or way of being. That is, freedom can have an influence on the causes and modifications of a particular mindset or character. In this way, Cubí took an ambiguous view of an innate and predictable dimension of humans that was detectable merely by feeling the skull, and yet also opened up the possibility of introducing indeterminate environmental variables that triggered a certain potential or deterioration in some functions of the mind.

Like other authors working with Gall's original model, Cubí distorted some of the categories in Gall's classification for his own material advantage. We should not forget that the catalogues of mental capacities estimated by each phrenologist could vary perceptibly from one to another. In the case of Cubí, however, he not only changed the nomenclature from the one used in the pioneering model, but also added and subtracted some of Gall's categories (Peña-Casanova 2009). Initially, Gall had distinguished between affective faculties—divided into propensities and sentiments—and intellectual or cognitive faculties—distributed into perceptive and reflective capacities. Among the most basic sentiments of humans, Gall (1825) measured prudence, self-esteem, benevolence, respect and hope, for example. Among such propensities, however, Cubí's model reflects substantial differences, particularly in relation to the functional interpretation of each of the included capacities.

For Cubí (1852), these functions did not depend so much on an instinctual foundation that would be same for all individuals, but rather blended moral qualities that were uncommon in certain segments of the population. The ability to be kind to one's fellow man—which Cubí called "Jeneratividad" and "Amatividad"—and the parental love of one's children—"Filojenitura", "Prolevidad" or "Filoprogenitividad", according to Cubí's nomenclature—were located next to the instinct for destruction. Thus, this would account for the fact that, in the individual, a more developed function could come at the expense of neighbouring functions. Though they were mutually exclusive, the development of some functions could affect other functions.

According to Cubí (1852), some of these functions were prominent in people with weak purchasing power or a very low level of culture or education, who might show a high degree of appetitive instinct ("Alimentatividad"), no ability to exercise tact in business dealings ("Estratejividad" or "Secretividad"), a minimal ability to experience aesthetic pleasure in the presence of a work of art ("Sublimividad"), deficits in the acquisition of social manners ("Imitatividad") and in the capacity for public excellence ("Idealidad" or "Mejoratividad"), an impoverished hunger for distinction ("Aprobatividad"), a high degree of inferiority ("Inferiorividad", or a respect for the venerable, submission to authority and a legitimate resignation in the face of frustration) or a meagre fondness for their place of residence or household ("Habitabilidad").

Beyond the ridiculous names given to some of the categories—e.g., "Chistosividad", "Jocosidad" or "Hilaridad" to refer to a sense of humour; "Conyugatividad" to speak of marital fidelity, and "Benevolentividad" with respect to compassion and generosity—the classification system of Cubí (1852) pointed to an intention to establish a clear separation between social classes. It reaffirmed categories such as the development of self-love ("Superiorividad") and of elements of religiosity and devotion ("Maravillosidad", "Realividad")

that went hand in hand with a corrective social model based on values that would flatter the great and the good. Thus, a person with a high coefficient of religiosity, marital fidelity, rectitude and a sense of hope would have a greater chance to triumph in society than a person with a different set of sensibilities.

By contrast, the cognitive faculties relating to the physical environment, in Cubí's system (1852), only circumscribed mental processes such as numerical calculation ("Contatividad"), the measurement of time and speed ("Duratividad"), the discernment of shapes and facial recognition ("Configuratividad") and the ability to predict events ("Movimentividad"). Cubí's notion of perceptual faculties was also limited to the most basic aspects of the senses: "Tactividad", "Visualividad", "Auidividad", "Gustatividad", "Olfatividad".

Cubí had devised his phrenological system not to improve or correct any maladjusted function, but rather to select individuals in accordance with their qualitative status. One needs only to turn to his own definition of his discipline, which Pla gives a sarcastic treatment in one of his novels:

(...) Phrenology brings sound judgment to our selection of rulers, of husband or wife, of friends, acquaintances, servants, for which reason there is no state or condition whatsoever in which this science is not supremely useful (Pla 1951).

Cubí (1848, 1852) took the view that phrenology could be used to re-adjust any political organisation by providing facts on the population to be governed. It could serve to choose the best leaders based on specific analysis and design social reforms à la carte. He understood, however, that the best government is not necessarily one elected by a democratic majority, but one represented by an elite deliberately selected in line with standards that phrenology could legitimate according to supposedly scientific criteria.

Nevertheless, many champions of phrenology latched onto the discipline as a tool for reform in opposition to the conservative policies of the Spanish government, building on the idea that phrenology aimed at the betterment of individuals, not all individuals clearly, but those most able and ready to change for the better. It is no accident that phrenology was highly touted by reformers of the mid-nineteenth century. It offered insights into human behaviour, personality and social organisation, drawing on premises whose roots, when all is said and done, reached back to old Enlightenment thinking that earlier reformers had once fought.

The naturalist view that they supposedly wanted to convey with phrenological principles also used organicist metaphors to explain society. Starting with the notion of the brain as an organ combining all human faculties, as if it were analogous to a parliamentary republic, the body would then act as the functional and applied means of a new social model resulting from the brain's deliberation, in which each specific area would take part equally with

its voice and vote. The similarity between the brain as a society and the collective group of mental faculties as voters engaged in a concerted action is subtly endorsed in the theories of Mata and Monlau, but it is much more ambiguous in Cubí. According to the three authors, if all human beings share the same organ to manage all mental functions, everyone should have the same likelihood of changing. Thus, the nobler their needs are, the more ennobled will be the spirit of those who control society, while the lower their passions, the more debased will be their rulers' social model (Nofre 2007).

In their explanations of phrenology, the cited authors go on to say that the proper expression of moral pleasures leads to the most prized works of art, while the successes of the intellect give rise to the sciences. By contrast, there appears to be no room in the model for thinking that runs counter to the ideal model being sought. It gives no account of human beings, but limits itself to "a better world", and it ignores the supposedly dark or primitive side of human nature, which Gall did consider in his own classification system.

Ideally, phrenology should be thought to contribute to the betterment of an individual by manipulating certain environmental factors that enable the individual's more or less developed capacities to flourish. Ultimately, these ideas at the heart of phrenology are perfectly in keeping with the desire to overhaul the educational systems of the period in order to correct shortcomings and strengthen the most inadequate mental functions through practical exercise, as if the question were one of atrophied muscles (Hergenhahn 2001). Therefore, the pertinent instruction of an individual in favourable conditions would lead in the direction of social betterment, by reversing these shortcomings in many citizens at once.

If we accept this socio-environmental relativism, the presumption that all human faculties have the same value (or right to exist) is thrown into question. Catalan phrenologists, with Cubí at the forefront, considered that the duty of humans was to achieve a balance among all faculties, respecting each and every one in equal measure and preventing some from dominating others. In this case, however, it makes no sense to call for some capacities to enlighten others because of their functional specialisation. This naively suggests that the instincts would not ultimately give in to the designs of the moral regions because they lack the ability to choose rationally; or perhaps the opposite would be the case. Imposing a social ideal, therefore, would lead to the overriding of some areas in the interest of others and the much-vaunted egalitarian balance would be highly unrealistic in the final result.

The science of phrenology did not conceal its interest in stressing individual differences or the intrinsic relationship between political theory and socioeconomic factors. To the contrary, it put within reach of everyone an accessible science that was practical, affordable and understandable, providing a

simple tool for the exercise of social control accredited by improvements in educational psychology. It was no accident that the bourgeois classes were the most receptive to the discipline, given that the aims of phrenology were the reflection of a lens between the desire for power and the emergence and influence of an increasingly industrialised society freed from the feudalist policies of the past.

Like all social sciences, phrenology was no more than a mirror of the zeitgeist of its time, but it emerged in Catalonia specifically under the wing of a bourgeoisie oppressed by a backward State. Catalan phrenology, however, failed to lay out its social programme well enough. It allowed itself to be led by a befuddled liberal thinking that applied its reformist foundations ambiguously, benefiting the elites of one political side as much as those of the opposing side.

This ambiguity is plain to see in an article written by Francisco Ramos in 1846, in which Ramos takes issue with one of the courses given by Cubí in Madrid. The author is ferocious in his attack on the utopian "do-goodism" by which Cubí sought to correct a "sundered" nature in the arenas of education and crime:

In addition, poor behaviour spreads in the lower classes of society, and in the lower classes of society phrenology cannot be spread. The lower classes would give themselves over to fatalism, and saying their makeup led them to do wrong would be to excuse their crimes. (...) Let us forget phrenologies, for he who robs once will rob a second time with cunning, whenever he is sheltered by impunity (cited by López 2000).

Ramos's harsh words challenge the effectiveness of phrenology to correct, but they also support theories that claim that the aberrant character of the criminal's nature is very hard to change, thus even more forcefully rejecting the delinquent's chances of redemption. According to Ramos, if the delinquent were aware of his lack of guilt, he would be made a victim of an innate determinism. At the same time, the best conditions of social life are assigned to the affluent classes, which are, according to the tenets of phrenology, made up of those with the greatest capacities. This opinion both for and against phrenology clearly demonstrates the porous boundary between psycho-physiology and moral philosophy and, in passing, shows an obvious debt to the degenerationist claims of Nordau, Lombroso and Moral in the field of anthropology, the influence of Darwinism by way of Spencer's interpretations, and the eugenicist thinking of Galton, all of which were pervasive in social hygiene campaigns in Catalonia in the nineteenth century.

Phrenology's ambiguous translation in the social sphere, therefore, was equally as attractive to conservatives who dismissed it as it was for reformists who embraced it, because it provided further justification for a natural distinction between classes and it isolated innate traits that impelled one towards

crime or madness, clearing the way for the new bourgeoisie to capitalise on a new social arrangement. Theories derived from phrenology gave legitimacy to the notion that the bourgeois was an agent of progress or that the aristocracy was an agent of tradition, but in either case always with a watchful eye on public health and safety.

As a consequence, phrenology's account of the human being gave arguments for the rise of elites and it stymied social egalitarianism. A glimpse at Gall's, Cubí's and other phrenologists' systems of classification is more than enough to see the lack of community values, such as solidarity. Instead, phrenology was whipped into an ideal science for the development of personal authoritarianism and individualistic betterment. In summary, the Catalan bourgeoisie had found in phrenology a discipline on which to construct their distinctiveness relative to a government that oppressed them. The price to pay, however, continued to be a civilian population where some held sway over others.

“It is necessary to combat it, and combat it forcefully”: the end of Catalan phrenology

As we have seen, the introduction of phrenology in Catalonia was not without controversy. Because it was linked with political opposition to the restoration of the Bourbon monarchy, many champions of the new science were forced to take enormous pains to moderate their position in order to avoid clashes with the conservative establishment of Spain, which often accused them of sowing atheism and spreading an excessively materialist view of the human being. Cubí was one of those affected by the censure of the Catholic Church, which is clear from what happened to him in Santiago de Compostela (Cubí 1848).

Phrenology did enjoy an early prestige in the mid-nineteenth century, together with other disciplines such as mesmerism—a forerunner of therapies using hypnosis—physiognomy and homeopathy. However, it quickly fell into disrepute as a result of a series of critiques levelled at its epistemological principles, which can be summarised in six points:

1. Phrenology was a science focused exclusively on the body and not on the person, starting from a determinist and excessively organicist idea of the mind. The particular conditions of the individual had no place in the general theories of phrenology, a weakness that was exploited by those interested in social reforms contrary to the policies governing the country at the time.
2. Phrenology was used in social hygiene campaigns, which were based on a clearly moralising dimension that used naturalist arguments

to justify the waywardness of certain segments of the population and the mental superiority of other individuals in high society.

3. Phrenology furnished a social philosophy and a guide for self-improvement, placing more emphasis on extremely positive character traits and ignoring or downplaying negative ones, which were only valid to explain the causes of anomalous or aberrant behaviours.
4. Phrenology was a starkly classist and segregationist science, which was built on the foundation that people were born with different characteristics, but were endowed with a common nature. As a consequence, it claimed that the differences among some individuals in society were innate and that society was divided between classes on the grounds of mental and moral superiority.
5. Phrenology did not delve beyond the structure of the skull to understand the etiological motives expounded in its theories. It limited itself to serving as a descriptive analysis, not to finding a satisfactory explanation of the causes. Thus, it provided no response for the therapeutic area, only prescriptions that lacked any experimental backing.
6. Phrenology was underpinned by an associative hypothesis, but it provided no conclusive results. It was able to demonstrate empirically neither the existence of clearly defined functions in the cortical areas of the brain nor a direct relation with the shape of the skull. Apart from any training or definitive diagnosis, evidence was also emerging to support the potential regeneration of certain neurological functions in spite of the severity of injury, a phenomenon that phrenology could not explain as the neurosciences advanced.

At the time Marià Cubí “discovered” phrenology, the theoretical foundations promoted by Gall and Spurzheim had been long superseded and left in the dust. Pierre Flourens, for instance, had already disproved, in 1843, that the cerebellum was the organ of sexual instinct, as Gall had thought, and showed instead that it was responsible for motor functions (Hothersall 2005). The criticisms levelled by religious sectors—such as those of Jaume Balmes and Riera i Comas against Cubí—caused serious damage to phrenology in the public’s estimation and this was compounded by its popular caricaturing as the work of professional hucksters and frauds without any scientific training, as is evident from a well-known piece of comic theatre by Bretón de los Herberos that opened in 1845 with the title *Frenología y magnetismo [Phrenology and Magnetism]* (Siguan 1981).

The growing hegemony of other sciences quickly marginalised phrenology. It did not receive the backing that it had expected from those with

political and social power, who had instead found better allies in the medical establishment. The professionalisation of psychologists and physicians elbowed phrenology aside rather unceremoniously, obstructing its development and blocking its access to the academic world. Once the laboratory had become firmly established as a place strictly for scientific research, phrenology could no longer compete against more persuasive disciplines that required better training. Charged with being a farce by some and a pseudoscience by others, phrenology was gradually eclipsed and by the close of the nineteenth century it had completely vanished from the public sphere. The persecution of phrenology from the loftiest heights of institutional power, however, took on almost political colourings, because phrenology came with the endorsement of liberal intellectuals and it was an attack on the moral and religious ideas associated with the monarchy.

This is evidenced by the verbal assault of the previously mentioned Francisco Ramos on Cubí's approach to phrenology, in which Ramos ironically put himself on the side of the incredulous against the side of the fraudulent:

Those who call his theories science ought to call it a sham (...). It is not science, it cannot be science if the results do not correspond to the principles in each and every case. It is not a sham, it cannot be a sham, if the principles are confirmed by the facts.

But can and must the practical application of this theory lead to some result that is advantageous for mankind or for society? No. When external protuberances do not always correspond to organic development, when these signs are not infallible, to what end do we employ ourselves by establishing a spurious system, a building on the sand, a castle in the air? We combat the theory of phrenology not because it is absurd, but because it is useless. What is useless must be discarded.

(...) If phrenology is flawed in its judgments, if its signs are sometimes wrong, the theory is harmful in practice, and it is useless. It is harmful if education based on it makes a man walk according to a false sign, down a path other than that which leads him to glory; and it is useless because the hypothesis that it is right in some cases, comes together with the hypothesis that it errs in others, which leads to incredulity. If we have no faith in it, the theory is crippled. As its judgments are dreadful, if we believe in it, it is always harmful in practical application, and if we do not believe, it is always useless. Therefore, this theory is harmful, and it is useless.

(...) If there is reason for doubt, and if there exists vagueness in practice when one wishes to apply it to matters as important as education and the prison system, it is necessary to combat it, and combat it forcefully (extract from López 2000; the italics have been added).

By declaring phrenology to be a public danger of the highest order that must be fought forcefully and without mercy, Ramos could not conceal

the preoccupation evident in the environment that phrenology was an approach with the potential to shake the very principles and values of an antiquated society anchored in tradition and conservatism. Phrenology offered arguments to prove the differences between peoples at loggerheads, thus raising the gravest alarm among Ramos and his circle of acolytes. Cubí, protected by his clients and students in the Catalan haute bourgeoisie, appeared to arrive in the Spanish capital with a tool capable of legitimating the need for social change through education, the democratic vote, and equality of opportunity.

Unfortunately, the skewed conception of the common nature of individuals was not properly addressed. The Catalan representatives of phrenology, with Cubí in the lead, were broadly discredited for overstepping the mark in their social ambitions, reducing the capacity for change to a few exceptionally fine minds that were to be determined more by economic status than on purely mental grounds. As a result, the elites of the great and the good selected by phrenology ran straight into a brick wall, one erected by a God and a kingdom that did not care to listen to reason. Or perhaps they both feared the tantalising interpretation that was suggested by having an absolutely smooth skull.

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Translation from Catalan by Joel Graham