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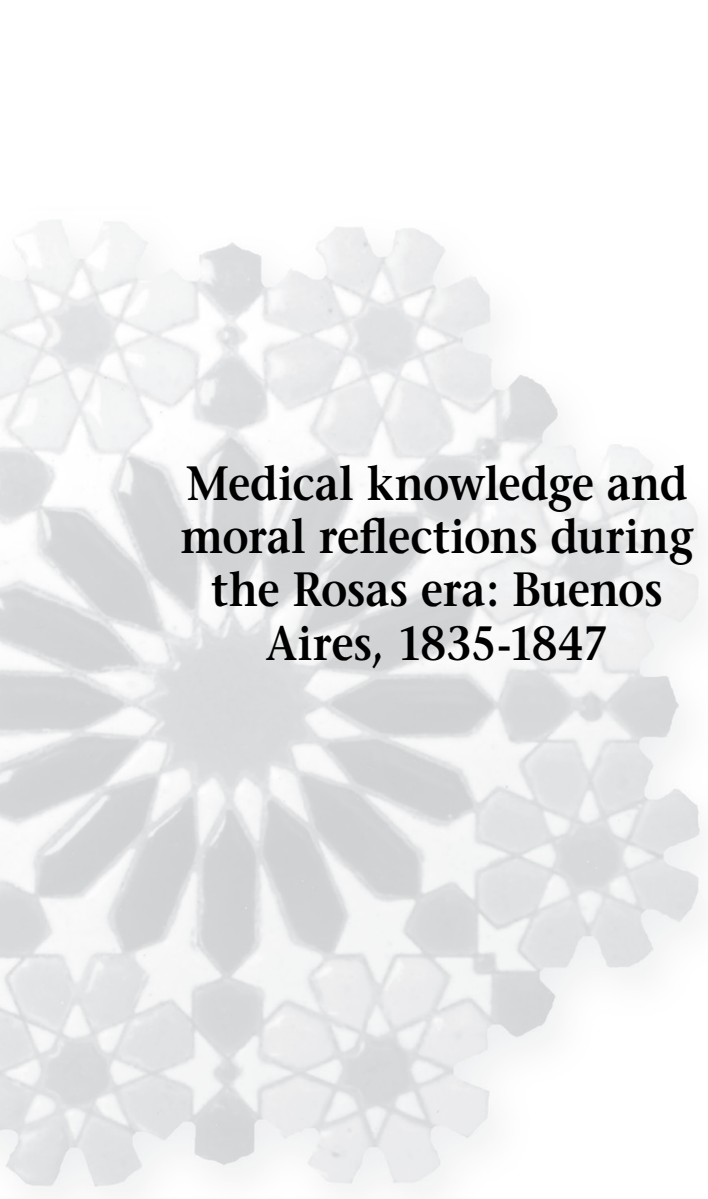
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Medical knowledge and moral reflections during the Rosas era: Buenos Aires, 1835-1847

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Abstract

This article analyzes how medical discourse incorporated a series of reflections on moral behaviors in Buenos Aires in the early nineteenth century. Based on the study of three texts authored by the physicians Diego Alcorta, Guillermo Rawson and Francisco Javier Muñoz, it identifies a series of discursive registers that stress the role of organ functions, the question of heredity and the influence of climate in reflections on the morality of individuals and populations. This phenomenon of knowledge transfer is due to the presence of the French medical tradition, in addition to local factors stemming from the intense process of politicization of society under the second administration of Juan Manuel de Rosas.

Keywords: medical knowledge; moral; politics; Buenos Aires; nineteenth century.

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In the River Plate area in the first half of the nineteenth century, physicians with university medical degrees published a series of reflections that interwove issues related to human social and moral behavior. But this is no surprise, since at that time medicine was torn between remaining a humanistic knowledge or becoming an empiric-experimental one. The phase analyzed here involves a moment when, even in Europe, medicine was still claiming to be a healing art and not an experimental science, as it would become after Claude Bernard (Ramsey, 1988; Haber, 1991; Vigarello, 1993; Bonner, 1995; Grmek, 1997; Gaudillière, 2006; Bynum, 2006; Lindemann, 2010).

Thus, various Buenos Aires physicians, who were closely following references and contributions by Pierre Jean Georges Cabanis, Xavier Bichat, François Magendie y Philippe Pinel – their colleagues in France – believed that, on medical matters, the physical and organic aspects of mankind needed to be studied along with moral ones. But in addition to this phenomenon of receptivity to French medicine, there were local issues stemming from the intense process of politicization that took place during the Rosas era, which accentuated the “use” of these forms of medical knowledge, leading them to be seen as valid sources for offering explanations of a moral nature.

The goal of this article is to explore more deeply the way that medicine offered a series of reflections on moral behaviors, based on the study of three texts produced by local physicians. The analysis focuses on *Lecciones de filosofía* (Philosophy lessons) by Diego Alcorta (1835); the *Disertación para obtener el grado de doctor en medicina* (Dissertation for the degree of Doctor in Medicine) by Guillermo Rawson (1845) and, lastly, the “Apuntes topográficos del centro de la provincia de Buenos Aires” (Topographical notes from the center of the province of Buenos Aires) by Francisco Javier Muñiz (1847) (see Alcorta, 2001; Rawson, 1845; Muñiz, 1944). While these texts cover a variety of topics, they were chosen because they share the intent to present medicine as a valid and viable tool for better understanding the moral aspects of mankind.

This article belongs within a theoretical perspective that seeks to treat “the local” as a fruitful analytic category, proposing the advantages of “situated histories” of science, and referring to it as a practical activity (Van Damme, 2010, p.242-254; Pestre, 2005, p.487-522; Pickering, 1992). From this standpoint, one can see how these texts contain a converging series of texts from the hygiene tradition, sensualism, vitalism (the Montpellier School) and French physiology, but they were adapted to and situated in local reality.

Local historiography sees what is usually referred to as the “hygienist moment” and/or the “alienist/psychiatric moment” as dating back to the late nineteenth and early twentieth century, a stage that coincided with the reception of materialist and evolutionary positivism, a process of professionalization of medical activity, and, at the same time, the appointment of doctors as trained civil servants in governmental positions in the emerging nation-states (Armus, 2007; Di Liscia, 2002; Di Liscia, Salto, 2004; González Leandri, 1999; Zimmermann, 1992). Following those advances closely, I believe it is important to complete the scenario by looking at conditions prior to that moment, and to identify some representative cases to underline the fact that there were important “footsteps” leading up to it. The interrelationships between the world of knowledge and the world of political power came earlier in the case of medical figures, not only because they took part in public life,

but – and I shall concentrate on this – because they offered a set of written interventions in which medical forms of knowledge became foundations for understanding moral issues among human individuals and groups.

The academic and political life of doctors during the Rosas era

It is appropriate to start by listing some general characteristics of the political context and describing the conditions of university life as a backdrop to the lives of the three doctors studied here. The personal trajectories of Alcorta, Muñiz and Rawson crossed at the point when Juan Manuel de Rosas became governor of the province of Buenos Aires, from 1829 to 1832, and during his second administration, from 1835 to 1852.

Among the main characteristics of Rosas' political system were his continuity in the executive branch and his centralization of power. As Marcela Ternavasio (1999, p.119-141; 2002, p.204-205) has shown, the Rosas government did not dismantle the republican, representative system introduced by the reforms of Rivadavia (1821-1824), but reorganized it as a populist, plebiscite model. Likewise, during the first and second Rosas administration, there was high participation by working-class sectors and much politicization of society as a whole. Permanent belligerence towards all attempts at opposition, in addition to warfare against foreign powers, generated a situation of constant political instability (Myers, 1995, p.20).

Intellectual and academic life took place in this particular context. The process of politicization, added to internal and external warfare throughout the period, had a significant impact on the University of Buenos Aires (Universidad de Buenos Aires), which experienced a series of divisions and conflicts (Buchbinder, 2005, p.48-49). The doctors who trained in its lecture halls had first-hand knowledge of these circumstances of public life, and among other things, they participated in it, reflecting and writing about morality and political and social life. In this sense, the underlying content of the texts I shall analyze is connected to this process of politicization taking place in Buenos Aires society.

Three figures were chancellors of the University of Buenos Aires from 1830 to 1852: Doctor Santiago Figueredo, Doctor Paulino Gari and Doctor Miguel García. The first received his doctorate in civil and canonical law at the University of Córdoba and occupied his university position from August 1830 on. Gari did his doctorate in Córdoba and Charcas, and was appointed chancellor by decree on December 13, 1832, after acting as interim chancellor since the death of Figueredo. Doctor García, who studied law and theology at the University of Trejo and in Charcas, ran the leading academic institution in Buenos Aires from December 1849 until June 1852 (Gutiérrez, 1998, p.441).

At the end of 1832, Rosas left power without having passed any significant measures affecting the university during the course of his first administration. The university retained its previous structure and functioned as it had until then. The following year, with the death of Doctor Figueredo, Doctor Gari was appointed chancellor of the university, a position he held throughout the majority of Rosas' tenure. That year, reorganization began. While this reform was proceeding, Rosas was in the midst of his desert campaign. On December 17, 1833, Governor Viamonte approved a reform of the university proposed by a commission

composed of professors José Valentín Gómez, Diego Estanislao Zabaleta and Vicente López y Planes. Under this new regime, the running of the university passed to a Governing Board established by decree on May 15, 1834, and made up of the following professors: in canonical law, Doctor José León Banegas; in civil law, Doctor Rafael Casagemas; in medical nosography, Doctor Cosme Francisco Argerich, and in ideology, Doctor Diego Alcorta (Halperin Donghi, 1962, p.56).

Thus, when Rosas came to power for the second time in April 1835, the University of Buenos Aires had only one year of experience under the new setup. Shortly thereafter, in a decree dated May 11 of that year, the Board was abolished at the request of chancellor Gari (Gobierno..., 1836b). Later that year, a December 14 decree finalized the structural organization of the university's administrative staff as follows: a chancellor, a secretary, an undersecretary and a proctor; the teaching personnel was reduced, since some professorships were abolished, and the service personnel consisted of a concierge and an administrative assistant (Gobierno..., 1836d).

With the appointments of 1834 and 1835, there were changes to the teaching staff, which created certain tensions within the medical school. Diego Alcorta (27 dic. 1834). wrote to his friend Daniel Torres:

The doctors, as you will imagine, have formed two factions: one consisting of Fernández, Montes de Oca, Manuel García, all the students, and various private individuals who support them, in particular Pablo Salvadores, Arana, Balduero, and I think the Anchorenas and the Wrights. The other is made up of Rivera, Montufar, Fuentes Arguivel and private individuals such as Irigoyen, Mansilla, the Queen Mother and Princess Mercedes. Argerich belongs to the latter; but he doesn't write.

The initial cause of this dispute was doubtless related to the hiring and firing of professors by the government. In addition, in June 1835, a decree was passed requiring an oath of loyalty to the "Nationalist cause of the Federation" (Gobierno..., 1836c). Subsequently, article 1 of a decree dated January 27, 1836 stated that:

No one may be granted a doctoral degree in the University in any faculty, nor be issued the title of Attorney or Physician, without previously demonstrating to, and having obtained from the Government, the requisite declaration of having been submissive and obedient to his Superiors in the University throughout the course of his studies, and having been and being plainly supportive of the Federation's nationalist cause (Gobierno..., 1836e).

There were precedents for this type of ruling. In February 1832, a Rosas decree mandated wearing the red ribbon as a symbol of the Federation. This was a way of making visible and identifying supporters of the regime. In the beginning, the measure applied only to civil servants, but it was later extended to society as a whole. Those who did not follow these measures were marginalized from the community, and therefore considered enemies of the nation (González Bernaldo de Quirós, 2008, p.233-234). These decrees sought to elicit obligatory demonstrations of support for the government. Thus, we can infer that during the Rosas era there was strong oversight and control of the running of university and academic life.

The types of social connections established, and professional activities themselves, were impacted by the logic of power and political accommodations. However, it was also necessary to adjust the university budget to cover the deficit affecting the province. In the first three years of Rosas' second administration, the university was able to continue its activities without difficulty, but in 1838, serious measures had to be adopted, which changed the way it functioned. In late March 1838, Vice Admiral Leblanc, commander of the French fleet, announced a blockade of the port of Buenos Aires and the entire river bank; this came on top of the war the Argentine Confederation had been waging for ten days against the Peruvian-Bolivian Confederation. After that, the university lacked sufficient funding and students had to pay a monthly fee. In order to handle this situation, some professors agreed to give their lectures free (Gutiérrez, 1998, p.449).

These combined problems meant that university studies became somewhat disorganized, and the polarization of different positions affected the personal and professional life of a large number of doctors. In 1836, Cosme Francisco Argerich, Juan Antonio Fernández and Juan José Montes de Oca all, under different circumstances, opposed Rosas, left teaching and had to emigrate to Montevideo. Meanwhile, other doctors weathered the ups and downs of Rosas' policy, such as Doctor José María Gómez de Fonseca, who was appointed to the Tribunal of Medicine in 1833 but dismissed by Rosas in 1835 for not following the government line (Fonseca had opposed granting him extraordinary powers), but then the Governor reconsidered and in 1836, named him professor of clinical surgery, a position he retained until his death on November 31, 1843 (Yrigoyen, 24 abr. 1835). Another interesting case was that of the physician and poet Claudio Manerto Cuenca, who, although opposed to Rosas, ended up as his personal physician. Cuenca's career represented a strategic approach pursued by some doctors and scholars who opted not to leave Buenos Aires, resorting to dissimulation.

Despite government control and the budget cuts, the life of the university's medical professors seems to have been more complex and varied than local historiography has suggested. This diversity in the medical universe can be demonstrated using the representative sample of Diego Alcorta, Guillermo Rawson and Francisco Javier Muñiz, since they each had various moments of rapprochement and conflict with the Rosas government, showing different modes of professional behavior and political relations.

Alcorta was briefly involved in politics. He was elected to the Buenos Aires House of Representatives by the San Isidro party in 1832. In that position, he opposed the re-election of Rosas in 1834. Then he decided to abandon public office to focus on teaching and practicing medicine. It is highly likely that this retreat was the reason he remained at the university, as professor of ideology, until 1842.

Guillermo Rawson, however, was more overt in his opposition to Rosas, as shown by his political and military action in San Juan to remove Nazario Benavidez, the Federalist governor close to the governor of Buenos Aires. Rawson's case demonstrates how a doctor could pursue a career that moved closer and closer to the center of political power: he was a provincial legislator in 1844, then appointed representative for the Confederation in 1856; from 1861 to 1862 he was a provincial and then a national senator, and eventually ended up in 1862 as minister of the interior under Bartolomé Mitre.

Lastly, Francisco Muñiz was somewhat sympathetic to Rosas' political agenda. Under the second administration, he was appointed physician to the police force, to guard the health of the population and animals, monitor the practice of medicine, and penalize faith healers. An example of this cordial relationship is the fact that around 1841, Muñiz decided to donate his paleontological collection to Rosas. He was also named his personal physician, and treated him for prostate disease, and was appointed joint magistrate of the Tribunal of Medicine. In the battle of Caseros, he acted as assistant to Rosas' chief army surgeon, Doctor Claudio Mamerto Cuenca, dispensing medical material necessary to treat the wounded. In light of this array of professional experiences, it is easier to understand the fact that in 1853, Muñiz was elected as a congressman for the state of Buenos Aires, for the area including Luján, and the following year, he became a provincial senator.

The careers of Alcorta, Rawson and Muñiz show us physicians' different modes of accommodation to the political power at the time. Despite their different postures and alignments, their lives intersected in the same politicized, sectarian space. And it was against that background that these physicians deployed a series of medical and physiological knowledge-sets in order to reflect upon the problems of their time. In doing so, they believed the world of morality could (and should) be subject to medical explanations, and that it was not the exclusive province of philosophy or theology.

Diego Alcorta, from sensibility to imitation

In the 1820s and 1830s, a group of new fields emerged in university life, and thus the Department of Medical Sciences also. On the one hand, this renovation led to the creation of a chair of ideology, in 1822, when ideology became an obligatory subject for all students, who were taught the premises of Destutt de Tracy and Jean Pierre Cabanis. Furthermore, knowledge from two French medical schools was introduced among the subjects taught in the degree program in medicine: vitalism (or the Montpellier School, especially Xavier Bichat) and experimental physiology (the Paris School, in particular François Magendie and Philippe Pinel).

The tendency in *idéologie* to stress the preponderance of the senses and sensibility in human abilities was strongly linked to the premise of vitalism, in particular its argument about the irreducibility of vital processes and its study of physical or chemical mechanisms that could not be subjected to experimentation, which distinguished vitalism from the Paris School of François Magendie. Based on these postulates, thinkers both in France and the River Plate area pointed to the interaction between the physical and the moral and the encounter between ideology and vitalism.¹

This connection generated a rapprochement between the theories of Cabanis and Bichat, and also conveyed the importance of clinical observation and dissection as methods for learning and professional practice. But, as we shall see, this did not lead people to stop teaching and incorporating the ideas of Pinel and Magendie, who stressed a medical method associated with disease classification (philosophical nosography) and the possibility of experimenting with chemical substances, respectively.

This knowledge was accessed and circulated in Buenos Aires in various ways. One route to the dissemination of ideology was indirectly, via the teachings of Crisóstomo Lafinur at the Colegio de la Unión del Sud, in 1819, and later with the creation of the chair in ideology at the university, held by Juan Manuel Fernández de Agüero from 1822-1827. Lafinur published the *Curso filosófico* (Course on philosophy) in 1819, and Fernández de Agüero's *Principios de ideología* (Principles of ideology) came out 1824 (see Lafinur, 1939; Agüero, 1940). These works, which were financed by the government, were used as teaching manuals in class. In both of them, there were various quotes and explanations based on the ideas of Cabanis, Destutt de Tracy and Condillac (Di Pasquale, 2011, p.63-86).

“Extracts” from the original books, translated by Spanish publishers, complete with commentaries, also appeared in various Buenos Aires newspapers. *La Abeja Argentina* reported that “The ideas of Magendie, Bichat, Richerand, Alibert, Pinel, Tenard, Orfila etc. form the basis for our courses and daily lessons” (La Abeja..., 1960). This kind of reception suggests that French physicians in particular came to be known through re-readings and their repercussion in print media, rather than via direct access to their works.

However, we know that some medical texts were sold in the bookstores of Buenos Aires (Parada, 1998). Likewise, some local physicians had direct access to the works of their French colleagues, since their private libraries contained editions with dates that allow us to infer that they possessed originals or translations into Spanish, as in the case of Cosme Mariano Argerich (1758-1820). Argerich's will lists, among other books, one by Xavier Bichat, *Investigaciones fisiológicas sobre la vida y la muerte*, two volumes; and Philippe Pinel, *La médecine clinique* (Argerich, 1820).²

In his travel notes, the Frenchman Arsène Isabelle mentioned the authors who were being taught in the medical field at the University of Buenos Aires in the 1830s. The names he gives coincide with those we have mentioned, such as: “Anatomy, Maigrier; physiology: Magendie; materia medica: Alibert; medical nosography: Pinel; general pathology: Caillot; hygiene: Rostand” (Isabelle, 2001, p.300). Thus the training of Diego Alcorta, Guillermo Rawson and Francisco Muñiz included a mix of old and new teachings, excerpts and complete works – sometimes translated, and at other times, in the original – as well as the news and information published in the press and interpersonal contacts.

Diego Alcorta studied at the Colegio de la Unión del Sud, where he attended philosophy lectures given by Professor Crisóstomo Lafinur, who inspired Alcorta's great interest in the works of Destutt de Tracy and Cabanis (Gutiérrez, 1998, p.104). In 1824, while he was a student, he and a group of his companions founded the Elemental Society of Medicine (Sociedad Elemental de Medicina), in which each of the invited members was given a number corresponding to his academic rank. They held weekly sessions in which each of the members presented on different themes. Thus, Alcorta (1821) spoke on combined pathological diseases of the organs and the varieties of arterial pulse.

Later, Alcorta was named senior medical assistant (practicante mayor rentado) at the Men's General Hospital (Hospital General de Hombres). It seems his financial situation was precarious, as Alcorta himself recounts. In a letter to the chancellor of the university, Alcorta stated that “having performed all the functions required to receive the degree of doctor in the faculties of surgery and medicine, he finds himself unable to graduate for lack

of the necessary monies to pay the deposit,” and therefore requested that “you graciously concede him the degree of doctor at no charge” (Gutiérrez, 1998, p.610). After this request was granted, in 1827, Alcorta finally presented his thesis, *Disertación sobre la manía aguda* (Dissertation on acute mania), and received his degree in medicine.

In Alcorta’s thesis one can trace the presence of *idéologie*, vitalism and French physiology, as I have shown in an earlier article (Di Pasquale, 2014a). Cabanis (2005, v.1, p.203-214) argued that the organs imprint the sensations of objects and, thus, are responsible for producing human ideas and feelings.³ The model for sensations that Alcorta incorporated was derived from the one laid out by the French physician; Alcorta (1827, p.8) indicates that “the different phases of life are accompanied by the particular development of some of the intellectual faculties, and certain interior feelings produced by the current state of the economy’s organs.”

On the other hand, Alcorta used the classification of mental illness in Philippe Pinel’s *Traité médico-philosophique sur l’aliénation mentale*.⁴ In this work, the French physician distinguished simple melancholy (partial delirium), mania (generalized delirium with agitation), dementia (generalized intellectual debility) and idiocy (complete perturbation of the intellectual functions). He considered mental illness to be a disorder of the cerebral faculties produced by a number of causes, which could be physical (either directly cerebral or sympathetic), hereditary, or moral. He attributes over half the cases to moral causes, which could be separated into those deriving from intense passions and those stemming from excesses of all types (Pinel, 1801, p.135-137). On this topic, Alcorta (1827, p.6-7) stated that:

It is necessary to isolate the objects in order to understand them properly. This is why a classification of mental illnesses is needed; and since this cannot be done based on the organic alterations that cause them, as these are not well understood, it must be done based on the symptoms that characterize them; in my opinion, Pinel’s classification is the preferred one. He separates mental disorders into four different species: mania, melancholy, dementia and idiocy; each of these species may contain infinite varieties.

He accepted Pinel’s “moral treatment” therapy, which consisted of subjecting the patient to a series of ingenious tests, such as agricultural tasks or listening to music, in order to demonstrate the errors in their judgment, as well as a further series of measures, such as blood-letting to release menstrual blood or hemorrhoids, gentle purgatives, or warm baths. But Alcorta (1827, p.5) also questioned this approach for not incorporating the findings of pathological anatomy, in other words, not performing autopsies, “in the belief that it is impossible to establish a relationship between the physical appearances manifest after death and lesions in the intellectual functions observed while living.”

After 1828, Alcorta was given the chair in ideology at the University of Buenos Aires, replacing the clergyman Luis José de la Peña – who in turn had succeeded Fernández de Agüero – and he remained in that position until 1842, the year he died. In that setting, he put together a guide or teaching manual titled *Lecciones de filosofía* (Philosophy Lessons), a work that was later published in 1835.

The crossover between medical knowledge and moral issues can be seen in the *Lecciones* in Alcorta’s (2001, p.73) statement that “the best books on morality are ones about medicine.” He begins with the idea that individual men are granted agency, and that

the primary goal of all actions is the pursuit of happiness, which is inherent in human nature (Alcorta, 2001, p.63). It should be pointed out that the French sensualists, like the British utilitarians, saw morality as based on happiness or self-interest. From this initial standpoint it follows that man must augment, employ and conserve his faculties. Firstly, man must develop his physical strengths (especially his health, without which there is no happiness); and then augment his intellectual capacities (p.70-73).

What happens to man and his search for happiness when faced with the duties involved in living in society? Alcorta (2001, p.74) explains that there is a need for group interaction, that man is social by nature. There is a tacit contract between the people and each individual; common happiness derives from the reciprocal happiness of each party to the contract. There are three elements ruling social conduct: political authority, the law, and the opinions of others.

Following Condillac (1877) and Cabanis (2005, v.2, p.469-504), Alcorta (2001, p.82) introduces the notion of imitation as important to man's upbringing and education, as follows:

Example determines the interplay of our organs, directs moral actions, and even decides opinions. Thus, the child speaks by imitating its nurse; virtue is corrupted by frequenting vice, and man becomes reasonable or credulous according to the ideas that circulate around him.

Thus, Alcorta distinguishes a "dangerous or vicious imitation," that of clinging to others' ideas more tenaciously than one's own, and an "appropriate or useful imitation" arising in the mind that chooses attractive ideas and/or its own example. Man must appreciate what others tell or teach him, discuss with them, and reject their errors, but appropriate their discoveries. Therefore, Alcorta posits a relationship between sensibility and organ functions with his premise of "good" or "bad" imitation at work in the development of moral behaviors. Morality is therefore seen as applied physiology.

Guillermo Rawson, the issue of heredity and predisposition

Another important physician who ventured into the analysis of moral aspects was Guillermo Rawson, who was born June 24, 1821 in the city of San Juan. He spent his childhood and adolescence there, before moving to Buenos Aires to pursue his studies at the Real Colegio de San Carlos (Cutolo, 1958-1985, p.71). He was only 19 when he discovered the basic principles of the telegraph, five years before Samuel Morse transmitted his first message; this occurred in a class on electricity, in which he suggested to Father Gomila, his teacher, that by assigning a conventional meaning to electric discharges, one could transmit words long distance and "I could have a conversation with my father, who is in San Juan" (Rawson, 1927, p.19). After finishing his studies, Rawson entered the faculty of medicine at the University of Buenos Aires. His professors included Claudio Mamerto Cuenca, Teodoro Álvarez, Martín García and Juan José Fontana, and one of his peers was Pedro Ventura Bosch.

The aptitudes that Rawson showed led his professors to write a letter to chancellor Gari, requesting he be granted a degree in medicine without having to present a thesis, based on

article 13 of the decree of June 21, 1827, which allowed the university to grant the degree to anyone who was “illustrious and eminent in any faculty” (Gobierno..., 1836a).

The chancellor declined, since he considered the request beyond his powers; however, he urged Professor Cuenca to speak on behalf of the faculty after Rawson had read his dissertation, and grant him the degree in medicine (Cuenca, 1845). Thus, Rawson graduated in 1844, with a thesis on the transmission of physiological and pathological faculties in man via heredity, which was published in 1845. The topic he chose, the issue of heredity, was one of the great unknowns at that time.

Guillermo Rawson’s (1845, p.25) thesis shows echoes of physiological science and vitalism in his remark that intellectual and moral faculties can be understood within the framework of what he calls “vital physiological communication.” He begins by portraying the brain as the material organ of thought, in which man’s various faculties are each represented by a portion of the encephalic mass. This statement agrees with other local doctors, such as Diego Alcorta. Evidently, the Montpellier School’s vitalism, which was being critiqued and going out of style by that point in France, remained an important reference point for local medicine. But later in his thesis, Rawson unveils a series of premises and concepts that were little known before that in Buenos Aires, such as the following:

Of course, it is well understood why species propagate; because the idea in the germ contains the same name and type of functions as the trunk from which it departs, this idea as it develops must result in the same type and number of organs. But what is most interesting and presents the most difficulties, is the explanation of how individual peculiarities are transmitted. We shall explore this, beginning with the physiological state, and then perform an analytical overview of the diseases that must be, and indeed are, hereditary (Rawson, 1845, p.24-25).

In this paragraph, we can see how the problem has shifted in comparison to Alcorta’s proposal: the important thing is not to identify, observe and classify the patients’ various physical and mental faculties, but to analyze their transmission. According to Rawson, the state of the cerebral organs also influences the appearance in the progeny of permanent qualities, determined primarily by a stimulus at the time of conception, meaning an artificial stimulus in the parents’ brain. This is how the term “heredity” appears linked to vital communication. Rawson argues that there are three significant moments in heredity. The first is during the point when the organic existence of the “germ” begins; the second, during the gestation phase, and the third, during lactation. At these three periods there is a “vital correlation between parents and child” (Rawson, 1845, p.27). Thus, individual intellectual faculties and the moral states of the parents are transmitted via heredity to the children. Heredity acts by passing on the subjects’ particular moral formation because this takes place through cerebral transmission from parents to child. At the same time, physiological diseases are also inherited from one’s forebears: “There is not one of the infinite afflictions that trouble mankind that is not reproduced by heredity” (p.30). But hereditary is not only retrospective, or rather, descendent, it is also a determinant of the present and the future, since it falls on the progenitor’s offspring (p.33-34).

To prove the influence of the parents' mental state on qualities in the offspring and/or the "passing on" of diseases, Rawson relied on a series of differing arguments. The first comes from a story he heard from a professor he knew. Rawson's account begins with a child living in Buenos Aires who distinguishes himself, shortly after starting elementary school, thanks to his ease in solving mathematical problems. The explanation for this phenomenon lies in investigating the circumstances under which his parents had the child: at the time of conception, the father was worried about an important business matter he had to resolve, and every day he calculated the advantages and disadvantages of a purchase he was being offered (Rawson, 1845, p.27-28). The argument of "parental circumstances" taken from everyday life in Buenos Aires is then associated with a more significant case. Rawson (p.28) comments that "Leticia Ramolini carried in her womb the future Emperor of France, the modern conquistador, when she accompanied her husband Charles Bonaparte on their country's glorious campaigns." By returning to this later "historical" episode, Rawson gives more weight to the notion that in all men's life history, there is always a remarkable link concerning the parents.

But up until that point, Rawson (1845, p.28-29) sought to convince by alluding to third-hand narratives or well-known historical facts. It is more intriguing to try to analyze the specific forms of medical knowledge he chose to support his premise. He developed a line of argument linked to different forms of medical knowledge by introducing the following comparison:

The African and the European, so different both in color and in intelligence, share the same origin. But the former lived in a scorching climate that encouraged complete repose of their faculties, which led to a slow but effective degeneration of their race, until they reached the impoverished state in which we now see them, almost on a par with the irrational, thanks to the low, material nature of their instincts. The European, in contrast, is surrounded by needs that must be satisfied through industry and work, which produced the improvement that is now so rapid, thanks to the gifts of civilization ... Thus we see the effects of the accidental state of leisure in which the intelligence of those savage peoples dwells, and as it is communicated to their descendants in the greatest level of torpor, the brain stultifies from one generation to the next, as if a huge weight were gradually crushing it.

In these words we see various types of knowledge originating in medicine that were circulating in Buenos Aires at that time.⁵ Firstly, the register about the primacy of the organs and their function – in particular the brain – and about the intellectual faculties and sensibility (derived from vitalist medicine and the sensualist philosophy of *idéologie*). Then the discourse on issues of environment, public and personal hygiene, climate (which came from more ancient medical sources such as the Hippocratic and Galenic traditions), and lastly, Rawson's own theory about heredity, predisposition, and degeneration, which posits that the type of life inherent in the germ of the new organism is determined by the vital nature of the body from which it proceeds.⁶ We can see how there are different discursive registers, but as they are employed in this thesis they seek to dissolve into a single interpretative level. I say "seek," because despite Rawson's effort to make them compatible and intelligible, there are certain obvious tensions between them.

Especially as regards the particularities of subjects, because there are conflicting explanations as to whether these derive only from heredity or rather originate in issues linked to hygiene and the influence of climate. This problem is certainly not resolved in Rawson's explanation. His brief, provisional solution, given in some but not all paragraphs, is to place environmental conditioning first in shaping certain behaviors and in the appearance of a set of diseases; then, he argued, heredity transmitted those initial properties from one generation to the next. This shows the problem of combining knowledge from the Galenic tradition with forms of knowledge linked to predisposition (Lindemann, 2010, p.99-112; González Recio, 2016, p.104-105).

It should be clarified that, at this point in medicine's development, it was still difficult to distinguish hereditary traits from environmental ones; in other words, to differentiate what belonged to heredity and what to the hygiene-environment argument. On the other hand, heredity was still not inscribed within the parameters of positivist scientific culture, as would be the case by the end of the nineteenth century. For these reasons, Rawson sometimes qualifies his stance: for example, he points out the importance of the family in choosing a lifestyle to prevent future disease in children (Rawson, 1845, p.33-34).

Another issue emerges here, however, and it is not a minor one. Rawson moves from statements about the individual – such as the child in Buenos Aires or the gestation of the future Napoleon – and starts reflecting on the collective. In this register, there are enunciations that do treat heredity as a determining factor. In the preceding quote, we can see how he uses terms like “European,” “African,” “race,” and “peoples.” Thus, he sees heredity not only as shaping certain subjectivities, ways of being in the subject, and the proliferation of diseases; he also uses it to theorize about the characteristics of societies, the perfectibility of peoples, the improvement and regression of human groups. While the influence of heredity on an individual level might present some type of variation based on family treatment, on the level of peoples, on the other hand, that possibility is not present. As Rawson said in the quote earlier, the people of Africa are confined to an “effective degeneration of their race.”

Seen thus, the moral is not only thought of as applied physiology via the imitation of third parties within the framework of interpersonal relations, as in Alcorta's case; by linking it to the question to predisposition, a new internal-organic argument is introduced (the germ of the parents in the new organism), capable of interpreting moral conducts as hereditary practices. In his thesis, Rawson outlines the theme of heredity by creating an explanatory formula under which the moral is a predetermined vital process. The moral is trapped and confined in the subordinate positions of the progenitors, so there is scant margin in the courses of the action taken by the offspring, a stance which would later be widely disseminated and defended in Galenic accounts from the late nineteenth century. Thus, this hereditary morality, by offering the possibility of specifying connections between temperaments and observing continuities in medical conditions, could serve to construct profiles of social behaviors and charts of frequent diseases.

Francisco Javier Muñiz, between climate and the winds

Meanwhile, Francisco Javier Muñiz also added certain formulations and themes of a moral and social nature in his writings on medicine and natural history, although in his case, it was not organs or heredity that encouraged certain forms of behavior in men. Instead, Muñiz offers a new but ancient approach, based on introducing the topic of the effects of nature, especially the winds, on people's daily life.

Muñiz was born in Monte Grande, in the province of Buenos Aires, on December 21, 1795. He studied at the Military Medical Institute (Instituto Médico Militar), founded by Doctor Cosme Argerich to train army surgeons. He received his degree in medicine in 1822, when the Institute had become part of the University of Buenos Aires, created the previous year. In January 1825, he became a surgeon for the Chascomús garrison. There, he devoted himself to observing nature, researching local flora and fauna. When the Brazilian War broke out in 1826, he was appointed chief physician and surgeon to the army, with the rank of lieutenant colonel.

In 1828 he moved to the city of Luján and was appointed administrator of the smallpox vaccine. There, he continued his paleontological research in his free time, digging up an extraordinary series of fossils from the river bank. At his own expense, Muñiz exhumed the remains of various extinct animal species, some already known and others discovered for the first time, reconstructed them and studied them carefully. Among his finds were fossil mastodons, megatherium, glyptodonts, horses and tigers (Podgorny, 2007, 2010). Based on these discoveries, he began an important epistolary connection with Charles Darwin (Novoa, Levine, 2010, p.36-37).

In 1847, Muñiz finished his work *Apuntes topográficos del centro de la provincia de Buenos Aires* (Topographical notes from the center of the province of Buenos Aires). The text is a topographical overview that analyzes soil composition, geology, the effect of climate, nutrition and work. But it also includes a study of the physical and moral characteristics of the inhabitants along with the most common diseases. Muñiz (1944, p.236) indicates that: "We know how diffuse and rich in observations a report on the atmosphere and the various agents that work within it is."

Of course, there were precedents for this proposal. In Antiquity, Aristotle had studied the moral influence of climate (Aristóteles, 1988, I.VII, c.III, IV, V, VI). This ancient foundation had also been recently reintroduced by some enlightenment thinkers such as Montesquieu, who in *De l'Esprit des lois* (The spirit of laws), published in 1748, explained the close relationship between climate, geography and the types of states (Montesquieu, 1995, I, XIV, XV, XVI, XVII).

In the case of Muñiz, however, there is a new component. I am referring to the presence of a new mediating factor used to construct a more solid argument about the relationship between environment and mankind. This interposition, which added a third element to the basic reasoning, comes from the medicine of the time, especially – as we saw in the analysis of Alcorta and Rawson – from the sensualist school, vitalism, and early physiology, and incorporation of notions being disseminated about organ functions, vital force and the formation of ideas through sensibility.

In this vision, climate affects organ functions and thus, also, the moral actions of men. To Montesquieu's climatological determination, Muñiz adds a line of reasoning about the organs and the nervous system, a determinism that as a tool of argument sought to connect the external and the internal, the environment and the body, the inorganic and the organic. Muñiz (1944, p.227) explains that "as for the four main conditions of the winds, their humidity or dryness, their coldness or warmth, they exercise here, as everywhere, a direct influence upon the body."

According to Muñiz, climate and wind action disrupt the nervous system of subjects, affecting bodily sensitivity and the state of organs. Thus, certain symptoms appear, followed by a series of diseases that the physician (and also the politician) could trace in detail, as follows:

The cold, damp North wind in winter, making the nervous system sluggish, diminishing its activity, causing sedation in its properties, excites or predisposes toward the aforementioned nervous effects. At the same time, it relaxes and compresses the curvature of fibers, weakens the epidermis and energy in external life, making bodies very sensitive. Then rheumatic effects follow, pains in various parts etc. We can observe that the North wind in this state irritates the nervous system of those in whom it predominates more than others. Whereas on campaign these disorders are almost unknown, in the Capital episodes of hysteria, hypochondria, mania, certain neuralgias, are provoked by this wind (Muñiz, 1944, p.228-229).

This effect of the climate upon organs allowed Muñiz to establish and verify uniform, stable behaviors in a given population. Once more, we move from the individual to the collective, but this time there is no stress on explaining imitation or the influence of heredity; instead we have the action of the winds and their effect upon the nervous system. The issue of morality arises from this interaction between the organic and the natural. Thus, the study of the natural properties of winds and their location in space served to identify populations with a greater propensity to behaviors associated with transgression and criminality. Muñiz explains that:

The moist, warm North wind arouses irascibility among individuals of a nervous or liverish temperament. Experience has demonstrated that the most atrocious crimes, the kind that are committed due to the exaltation of a momentary passion, the furious explosion of a cruel, bloody sentiment, take place largely when the North wind reigns, and even more so if it has done so for several days in a row (Muñiz, 1944, p. 229).

This paragraph shows how medical knowledge was approached when it could serve as a tool for reflecting on moral and social representations. The concentration of passions and sensibility, heightened by climate, creates cruel, bloodthirsty subjects whose behaviors are shaped by rebelliousness and violence. The North wind provokes irascibility, molding subjects who cannot adjust their behaviors to the law, obedience, the hierarchy.

The thesis that winds activate the interplay of organs, heighten sensitivity, exalt the nervous system and perturb sensory functions, leads to an interpretation in which physical and moral actions are seen as equals. Study of the winds and different climates is seen as central to understanding and describing the characteristics of a given population. For Muñiz, the history of the environment, that is, of all that surrounds us or influences our

organs, is fundamental to understanding the primary qualities of its inhabitants, their propensity for certain diseases, and the moral framework of a social group.

To sum up, it was medicine's job to make people aware of the elements that particularly alter man's level of sensitivity, and to determine the means for restoring it to its natural order. Seen from that standpoint, the study of winds and climates was crucial both for philosophers and for those in power. For Muñiz, this was where new knowledge about human nature could be found, and fundamental observations made about how to "perfect" it.

Final considerations

Firstly, I set out to reconstruct some general characteristics of the Rosas regime and to identify a series of reflections on academic and medical life during that period. At that time, social and political life was becoming increasingly politicized, thanks to Rosas' concentration of power and to the external and civil wars unleashed, which extended to the world of medicine. Despite the institutional modifications, conflicts within the medical profession itself, rules mandating support for the "Federalist cause" at the university, economic problems due to the wars and, above all, tensions and open conflicts between partisan factions, doctors nevertheless played a relatively active role at that time.

Some physicians received government backing; others, however, had to resign from their professional posts and were even obliged to emigrate. Within that framework, we saw that Diego Alcorta, Guillermo Rawson and Francisco Muñiz, who were all affected by political life at the time, came up with different moral reflections based on the medical knowledge-sets they were trained in, which came from European medical traditions, especially the French one.

I analyzed how statements and arguments emerged that tended to generate converging common lines of argument placing man as a living, organic, vital, sentient being. Evidently, the vitalist school and French physiology were a significant presence in medicine in Buenos Aires in the early nineteenth century. But it is also true, when we look more carefully at the texts, that there are variations in terms of how local physicians constructed different ways of understanding the moral from the same shared premises.

Alcorta returns to the question of organs and sensibility to introduce and highlight the social example component. Internal functions are related to the outside world through exterior example; social behaviors and the ways of others lead to an understanding of morality: thus the introduction of the imitation theory. For Rawson, on the other hand, organ dynamics are connected instead to the problem of heredity, so that the moral is seen as something internal and predetermined. Moral traits are "transferred" from parent to child because the behaviors that arise are related to the progeny's predispositions. A third perspective is found in the analysis of Muñiz's writing, which links the postulate of organs and sensitivity to external situations in nature, the atmosphere, climates and winds, as being the source of the type of morality found in an individual and a population.

In these texts, then moral practices start to be seen in terms of matter itself and not as part of a superior spiritual force; but, paradoxically, due to the advance of medical knowledge in these areas, the idea developed that man cannot control the entire course of

his conduct, since his behaviors do not depend exclusively on his will and desires. There are conditioning factors that must be taken into account: contact with other subjects means the possibility of imitation is restricted to the setting in which one was born or grew up (Alcorta); the hidden power of the germ of heredity that appears to be inalterable in the new organism (Rawson) and/or due to the influence of nature and the effects of the environment (Muñiz). Taken together, these factors produce a representation of the moral in terms of a human itinerary that is increasingly less dependent on the self.

On the other hand, analysis of these writings also shows us the rise of moral explanations as a collective phenomenon, in other words, a morality that can be socially studied and typified. This encourages us to keep exploring, because if the moral can be applied to the collective, Galenic knowledge-sets would appear to be useful, practical content, employed as resources or tools not only for the physician's own advancement but also for a possible political "use." These medical knowledge-sets could prove functional in regulating the passions in political life, as in England and France in the eighteenth and nineteenth centuries (Moscoso, 2010).

The phenomenon whereby some representative physicians of the Rosas era began writing and studying questions of a moral nature in human groups suggests that, in future research, we need to introduce the problem of how this phenomenon might connect with what some authors have called the emergence of the "early social question" (González Leandri, González Bernaldo, Suriano, 2010).

NOTES

¹ Vitalism was characterized by postulating the existence of a vital force or impulse without which life could not be sustained. Reviving the ideas of the German physician and chemist Georg Ernst Stahl (1660-1734), its members believed that the soul was the vital principle that controlled organic development. The main proponent of vitalism in France was Xavier Bichat. He believed that biological phenomena were caused by the innate vital properties in all beings. This led him to limit his studies: he observed facts without probing deeper in his research, since he was convinced that neither physics nor chemistry could interpret life. As seen in his work *Recherches physiologiques sur la vie et la mort*, published in 1800, Bichat (1862) argued that life could not be reduced to inert matter. This stance led him to mistrust use of the microscope and to consider dissection a form of demonstration, encouraging histological studies. After his death in 1802, his disciple François Magendie took his mentor's ideas in another direction. For Magendie, organic phenomena could be reduced to physical and chemical explanations, and all his experimental demonstrations tended to prove this assertion. This differentiation permitted the development and construction of another field that became extremely important at the time: experimental physiology (Le Blanc, 2004, p.1210; Normandin, 2007, p.495-528).

² In the case of Bichat's *Investigaciones fisiológicas* into life and death, this was likely a Spanish translation by the physician Tomás García Suelto, published by Imprenta de la Administración del Real Arbitrio, in Madrid in 1806. Argerich's will indicates that Pinel's book was a first edition in French: *La médecine clinique rendue plus précise et plus exacte par l'application de l'analyse, ou Recueil et résultat d'observations sur les maladies aiguës à la Salpêtrière*. Paris, 1802.

³ Pierre Jean Georges Cabanis was born on June 5, 1757 in Cosnac (France) and died June 5, 1808. He studied medicine in Paris. Thanks to his contacts with Helvétius' widow, he was introduced to Diderot, d'Holbach and Condorcet. His method consisted of isolating the elements in order to describe them better and make diagnostic deductions about the physical and moral aspects of humanity. In 1802 he published *Rapports du physique et du moral de l'homme*, which explains how the moral relates to ages, sexes, races and climates. He performed studies of external and internal sensations, the nervous system, cerebral physiology, thought, and the passions (Staum, 1980; Besançon, 1997).

⁴ Philippe Pinel was born April 20, 1745 in Saint-Paul-Cap-de-Joux (France) and died October 25, 1826. He studied in Toulouse and Montpellier. He devoted himself to the study and treatment of mental illness. He was one of those who saw clinical medicine as the observation and systematic analysis of the perceptible phenomena of disease. He favored humanizing the treatment given at the time to people suffering from mental illness, and eliminating their confinement. He believed recovery was possible for a broad group of patients via moral treatment (Lesch, 1984; Weiner, 1999).

⁵ In earlier articles, I have shown in greater depth and at more length how different French medical approaches reached Buenos Aires around 1820 (Di Pasquale, 2014b, 2015).

⁶ The first debates on heredity began taking place in France in 1790 at the Société Royale de Médecine in Paris, which organized a contest on whether hereditary diseases actually existed. The responses were divided into two positions: those who thought of hereditary pathologies in terms of causes or problems in the humors, caused especially by viruses or germs, and those theses that argued for and incorporated the notion of predisposition. This debate became broader and permeated the whole development of medicine during the nineteenth century, until Francis Galton, who ensured the primacy of the second option (Vallejo, 2012).

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