Désiré Bourneville: A Socialist in Charcot's Inner Circle

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Abstract

Désiré Bourneville was one of Jean-Martin Charcot's most important disciples. His previous works as an alienist allowed him to influence his master's interest in hysteria, which led to the creation of a service regarded as a neurological mecca. During his time under Charcot, Bourneville, a passionate left-wing radical, had to coexist with characters representative of the conservative, *bourgeois* Parisian society. The aim of this study is to describe Bourneville's life and work, as well as the ambiguity of a progressive man such as him, immersed within the economic and cultural elites.

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contributions to the description of tuberous sclerosis and his works on public health helped to better develop the specialty of pediatric neurology (Fig. 1) [1–10].

Bourneville had a humble background and was a fierce defendant of socialism. In opposition, the *Salpêtrière* milieu was predominantly composed of the wealthy and powerful. Charcot, despite not coming from a rich family himself (although not as humble as Bourneville), was surrounded by the economic and cultural elite, which was constantly present at his *Leçons du Mardi* and his soirées in his house at Boulevard Saint-Germain [1–15]. The aim of this study is to present the life and works of Désiré-Magloire Bourneville, highlighting the disparities between his sociopolitical profile and the predominantly conservative environment at Charcot's *Salpêtrière*.

Désiré-Magloire Bourneville Biography

Bourneville was born in Garancières, Normandy, on October 20, 1840 [1–3]. He came from a modest family, which was dedicated to production of *poudrette*, a fertilizer derived from latrine waste [1–6, 9]. Although little is known about Bourneville's childhood, it is known that his

Introduction

Désiré-Magloire Bourneville (1840–1909) is regarded as one of the most illustrious disciples of Professor Jean-Martin Charcot (1825–1893) at the *Salpêtrière*. His con-

Fig. 1. Désiré-Magloire Bourneville (1840–1909). Public domain.

decision to attend medical school in 1859 was due to the influence of Louis Delasiauve (1804–1893), an alienist who was a friend of the family and his first mentor, with whom Bourneville studied from 1859 to 1862 [1–3, 9, 16].

In 1865, he finished his basic studies in medicine and started to intern in different services [7–9]. In 1866, he was an intern under Delasiauve, and in 1868, he started his work as an intern under Charcot [9]. In 1870, he presented his thesis, entitled “*Études de thermométrie Clinique dans l’hémorragie cérébrale et dans quelques autres maladies de l’encéphale*” [1–3, 6, 16, 17].

When in 1869 the government decided to close the St. Laure’s building because of structural concerns and consequently closed Delasiauve’s ward, Charcot inherited 150 of his hysterical patients, and Bourneville started to assist him in the care of these recently arrived patients [9, 10]. These events were pivotal to Charcot’s further steps in the study of hysteria. Given that he had no prior contact with hysterical patients or interest in the subject of alienism, his motivation to explore hysteria was due to Bourneville’s influence [18, 19]. Besides, Charcot’s interest on hysteria is resultant of his experiences during the period of the Commune and the siege of Paris, with cases of hysteria among fighters [18]. Another influence to Charcot was the seminal paper by Russell Reynolds (1828–1896), “Paralysis and other disorders of motion and sensation dependent on idea,” published in 1869 [20].

As for Bourneville, his interest in hysteria had academic motivations but also a way of advancing his political agenda of secularization, contributing to the dissociation of hysterico-epileptic phenomenology and religion [9, 10]. During his time at the *Salpêtrière*, Bourneville explored the medical and psychological backgrounds of the pa-

tients admitted to the ward, providing detailed reports with an uncommon sensitivity [21], as can be seen in his documentation of Augustine’s case, describing her as “[...] active, intelligent, affectionate, impressionable and capricious” and adding “[...] Brightly colored ribbons make her happy” [22].

Bourneville had a tremendous impact on Charcot’s career, by not only influencing his interest in hysteria but also publishing many of the master’s lectures and exerting considerable political influence for the creation of the chair of diseases of the nervous system specifically for Charcot and for the improvement of the facilities of the *Salpêtrière* [1, 17]. Bourneville’s writing skills in addition to his experience as a journalist and editor might have played a decisive role to his admittance to the internship at Charcot’s service, considering Bourneville was not the most academically accomplished of the applicants [1]. His relevance in the *Salpêtrière* was sufficient to earn him a rightful place in the famous portrait by André Brouillet (1857–1914), “Une leçon Clinique à la *Salpêtrière*” [2].

He stayed at the *Salpêtrière* for 9 years. Then, he was transferred to the child psychiatric service at the *Bicêtre*, transforming this service into a model of excellence – in the course of 10 years, it was being called “The glory of France.” At this hospital, he conducted most of his research, particularly on the subject of mental retardation and tuberous sclerosis (which was later known as Bourneville’s disease). In 1905, he retired from the *Bicêtre* and was entrusted director of the Foundation Vallée, focusing on the treatment of mentally retarded and epileptic children [6, 7, 9].

His first contact with the disease that carried his name occurred in the *Salpêtrière*, where he attended a 15-year-old girl, named Marie, with psychomotor retardation, epilepsy, and lesions of a vascular nature on her nose, cheeks, and forehead since she was 3 years old. Under Bourneville’s care, she had a growing number of seizures, despite the offered treatments. She died on May 7, 1879, and was submitted to a postmortem examination. Bourneville described hard, dense tubers in the cerebral convolutions, shaped like a walnut, and he attributed the epileptic abnormalities to these lesions [7].

Aside from tuberous sclerosis and mental retardation, Bourneville also carried research on hypothyroidism, describing the *myxœdème congénital*, and was a pioneer on thyroid hormone supplementation in such cases, using an extract of pig thyroid gland [2, 3, 5, 7]. His studies in thermometry allowed him to establish the correlation between *status epilepticus* and hyperthermia, raising awareness for the placement of *status epilepticus* as a life-threatening

condition and paving the way for further studies applying induced hypothermia as a therapeutic possibility [23].

During his lifetime, Bourneville was a prolific writer and editor, in both medicine and politics. Early in his career, he worked as a writer for the *Journal of Médecine Mentale*, directed by Delasiauve, and subsequently for the journals *Mouvement Médical*, *Panthéon de l'Industrie*, and *Le Réveil*. He founded the *Progrès Médical* in 1873, a journal he used to spread Charcot's theories, and in 1880, he co-founded (alongside Jean-Martin Charcot) the *Archives de neurologie* [1, 8, 24].

The relevance of *Le Progrès Médical* must be highlighted, as this journal was the most popular among the *avant-garde* medical community, fostering academic achievements of a young generation of physicians while maintaining a clear progressive political standpoint. Although Bourneville founded *Le Progrès*, the idea and articulation of the project was carried out by Charcot. *Le Progrès Médical* inherited a significant part of his contributors from *Le Mouvement Médical*, a journal that was co-founded by Bourneville and his friend Noël Pascal (1825–1889) [1, 16].

His work includes the *Revue photographique des hôpitaux de Paris*, the *Iconographie photographique de la Salpêtrière*, and the *Bibliothèque diabolique*. From 1872 to 1908, he published every year the *Recherches cliniques et thérapeutiques sur l'épilepsie, l'hystérie et l'idiotie*, a report on his advancements in pediatric neurology and psychiatry [7–9].

Little is known about Bourneville's private life. He was married, and his wife died in 1906, 3 years before his own demise. They had a son, Marcel, who was an infantry sergeant and died at the age of 27 in a military hospital in Toul, in 1914. Bourneville spent his entire time on his political and scientific affairs, not engaging on any leisure or artistic activities. However, he always kept some time for his family practice at No. 6 Rue des Écoles (1871) and after that at No. 14 Rue des Carmes, where he died on May 29, 1909, still poor and isolated [8]. His body was subjected to an autopsy, and his remains were cremated, as requested on his will. His ashes were laid to rest on Père Lachaise Cemetery, where a civil funeral was held. His casket was accompanied by a crowd, composed largely of the nursing staff from hospitals and asylums [6–9].

Bourneville's Political and Social Standpoints

Bourneville was a freethinker, republican, democrat, radical, anticlericalist, and anticolonialist. His life was marked by a large number of political crusades, which he

carried with passion, some of them almost in a quixotic manner. Bourneville's anticlerical views were of the utmost importance in his life, even influencing his work with hysterical patients alongside Charcot, as seen in his "*Bibliothèque diabolique*." His opposition to the church and its privileges bordered the intention of violence. He also disliked the Germans, given the atrocities perpetrated during the French-Prussian war, to the point that he refused to greet German colleagues and dignitaries visiting his service at the *Bicêtre* [5, 8–10].

Bourneville was also a devout freemason, influenced by his friend Dr. Henri Thulié (1832–1916), a humanist, and *Grand Maître du Grand Orient de France* [9]. His political views were partly due to the influence of his first mentor, Louis Delasiauve, who considered that doctors possess an important role in cultural and social progress [9].

He was a member of the extreme left-wing party, and in 1876, he entered municipal politics, achieving membership of the Paris City Council for the fifth *arrondissement*. During his time in the City Council, he acted as a prolific *rapporteur* for the *assistance publique*. His thorough reports allowed him to accomplish several reforms during his mandate. This was followed by a position as a Deputy in the parliament from 1883 to 1889, however with a much less impressive actuation. He lost his seat in 1889 and tried his luck in the senate, failing to be elected in 1896, 1897, 1899, and 1900 [1–4, 7].

As a firm advocate of laicism in the administration of health institutes, Bourneville promoted the secularization of hospitals. Many hospitals in Paris were ran by friars and nuns who had no previous medical or nursing training, which Bourneville found ludicrous and denounced in a series of essays. This process of secularization took 3 decades to be completely achieved and included the creation of formal nursing schools and change in the names of religion-themed hospitals. As a result, the first formal nursing schools were created in 1878 at the *Salpêtrière* and in 1879 at the *Bicêtre* [1, 7, 9].

During this process of secularization, Bourneville's position as head of *Le Progrès Médical* was pivotal for his achievements, as he often utilized the journal as a political stand to defend his ideas. To illustrate this statement, we might refer to a proposition by the *assistance publique*, to place placards in the hospital beds, indicating patient's religion, the name of the chaplain, and other religious details, such as sacraments administered and religion changes. Bourneville denounced and firmly criticized this policy in *Le Progrès Médical*, causing an uprising among students and forcing the authorities to drop this project [1].

Another of his policies was related to public health and the combat of infectious diseases. As a member of the Society of Public Health Medicine and Professional Hygiene (created in 1877), he was familiar with the experiments carried out by Louis Pasteur (1822–1895) on the etiology of puerperal fever and Joseph Lister (1827–1912) who published his seminal paper “On the principle of antiseptics in the practice of medicine” in 1867 with his subsequent ramifications in the 1870s [25]. Bourneville criticized the lack of hygiene omnipresent at the hospital delivery rooms, as well as the interventions made by untrained surgeons. Thus, he founded specific wards for infectious diseases, in addition to wards for sick children. He was president to the Cremation Society, promoting the authorization for the practice of cremation. By their request, he and his wife were cremated [7, 9].

Bourneville invested a good part of his efforts into creating a new model of classification for mentally retarded children, challenging the model previously established by Philippe Pinel (1745–1826) and Jean-Étienne Esquirol (1772–1840), which neglected therapeutic possibilities, assuming all cases were irreversible, hence denying all children with cognitive limitations, slight as they may be, the possibility of education. Bourneville’s medico-pedagogical model was highly successful in the *Bicêtre* and became a reference for the entire country. Unfortunately, after his death, these reforms were not continued by his political and medical successors. Another point raised by Bourneville was the inhuman lodging conditions to which these children were submitted, locked up for their entire lives, sometimes in the same installations as adult patients and in degrading state of hygiene. His denouncement contributed to the improvement of these facilities not only at the *Bicêtre* but also throughout Paris [6, 7, 9]. Other minor reformatations conceptualized by Bourneville were qualifying examination for alienists, the promotion of public libraries, the creation of the first chair of mental illness, the sanitization of the Seine watercourse, the fostering of women’s admissions in medical school, and many others whose full account goes beyond the scope of this study [1, 9].

Bourneville and the Bourgeois *Salpêtrière*

During the 19th century, the selective entrance examination into the medical profession, created by Napoleon Bonaparte (1769–1821), was extremely rigorous to achieve excellence, fostering the admissions of candidates with high academic excellence regardless of factors such

as economic and political influence. That being said, the neurology service at the *Salpêtrière* was marked by a certain degree of heterogeneity. Their ranks included physicians with humble backgrounds, such as Bourneville and Bouchard (1837–1915), and wealthy families, such as Pierre Marie (1853–1940) and Victor Cornil (1837–1908). Certainly, despite this heterogeneity, it was still a predominantly conservative environment [26, 27].

As a member of the lower stratum of the French society, Bourneville started his tutelage under Charcot with firm anticlerical, progressive, and republican sentiments. It is known that Charcot shared his anticlerical and republican beliefs but was opposed to Bourneville’s radicalism, for instance advising his student that his proposition of secularization of hospitals could be, despite its valor, “professional suicide.” Important personality differences (possibly exacerbated by a 15-year difference of age) existed between Bourneville and the *maître*, Charcot being a reserved, authoritative character, and Bourneville a passionate, inflammable, and freethinker. It is remarkable how they could work in such a harmonious manner during their collaboration [9, 10, 15].

As Charcot did not pursue any political aspirations, assuming they would only get in the way of his academic achievements, he did not play any political participation during the Second Republic, the Second Empire, the Third Republic, and the events of the Commune of Paris (despite his memorable work as a military surgeon during the Franco-Prussian war and the succeeding events [28]). Bourneville in contrast actively participated in all the political events that occurred in Paris during this time [9, 10].

It is also noteworthy that despite Bourneville’s radicalism and hatred toward the *bourgeois*, conservative elements of the Parisian society, in the events of the Commune of Paris, he advocated in the sanctity of hospitals as refuge for wounded soldiers, precluding the radical rebels of executing their enemies admitted to the Parisian hospitals. He also exerted his political influence to set free many of his imprisoned enemies [9, 10, 28].

Another dichotomous point in their relationship resided in Charcot’s social ascension, motivated by his academic success, his astounding general culture, and his marriage in 1864 to Augustine Victoire Durvis (1834–1899), a young (she was 10 years younger than Charcot when they married) wealthy widow [29]. Charcot was the physician to several celebrities, such as Dom Pedro II (1825–1891) (emperor of Brazil), the Gran-Duke Nicholas of Russia (1856–1929), Cardinal Lavigerie (1825–1892) (Archbishop of Algiers), and Alphonse Daudet

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

L.C. contributed to research project organization and execution and writing of the first draft. O.W. contributed to research project organization and review and critique and writing of the final manuscript. H.A.G.T. contributed to research project conception and review and critique and writing of the final manuscript.

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