Muscles, Nerves, and Sex: The Contradictions of the Medical Approach to Female Bodies in Movement in France, 1847–1914

Grégory Quin and Anaïs Bohuon

Introduction

In the latter half of the nineteenth century, 'gymnastics' was increasingly seen as an acceptable practice in France. If its institutionalisation generally arose from politico-military considerations, not least the intention to educate better soldiers, the rise of medical hygiene and an increasing concern for good health, underpinned by a strengthening middle-class 'social habitus', expanded the functions assigned to physical exercise. In these new fields, physicians were to become prominent in the development of physical education for women, which was frequently seen as a 'remedy' for a certain number of pathologies, particularly nervous disorders.

In their treatises on gymnastics, doctors discussed the ideal of a 'healthy' female body, especially in its role as an agent of reproduction. Nevertheless a pregnant woman could be viewed as a model of health, but one that required strict medical attention. As Yvonne Knibiehler puts it, 'women's bodies form the matrix of the social system: they must continually be readjusted to their reproductive function'. Doctors aligned their arguments in favour of movement alongside those who emphasised the differences between the sexes.⁴ Physicians involved in the development of physical education were part 'of a movement which sought to define or redefine sexual differences in every part of the organism'. Women's reproductive function obviously became a component of this dynamic as doctors attempted to make specific practical recommendations concerning several physiological characteristics that were 'peculiar' to women. Medical discourse was structured around the core idea that a woman's social and biological function was primarily to give birth and this was viewed as her 'nature' as much as her duty. However, in their roles as agents of a certain 'bodily liberation', physicians began to sketch the outlines of modern physical education for girls and women, while at the beginning of our period the 'body was still the domain of the unspoken and the unnamed: [and] the flesh stayed within the province of the unspeakable'.⁶

Here, we consider the second half of the nineteenth century, from the introduction of gymnastics into Paris hospitals in 1847 up to the years of the belle epoque, when doctors' commitment to the development of physical exercises moved from focusing on curvature of the spine to a more assertive concentration on the nerves and their disorders. During this long half-century, medical discourse surrounding nervous ailments changed and evolved, catalysed by the intensification of 'health panics' and the threat of degeneracy, both individual and social.⁸ Above all, in those years the commitment of physicians to physical education was caught between two very powerful processes: the institutionalisation of an educational field and the structuring and specialisation of a medical field, in a context of major upheavals regarding the 'status' and 'roles' of women in French society. Our goal is then to create the conditions for a dialogue between the history of the practice of physical exercise, the history of medicine and the history of women and of gender, whose interrelationships have still received far too little attention.

In our period, medical thinking on 'hysterical madness' shifted progressively away from locating the causes of the pathology in the reproductive organs, towards the introduction of a neuro-cerebral etiology. Nevertheless images and associations connecting hysteria with the female body still persisted. ¹⁰ Moving from the uterus to the nerves, hysteria was deemed to affect the entire body, even if, like other nervous ailments such as chorea, it remained indelibly marked with the seal of femininity.¹¹ Over the same period, the emergence of a middle class catalysed the process of legitimisation of physical exercise in a dialectic which included the creation of the figure of the bourgeois mother, marked by a dynamic of 'pathologisation' and an emphasis on the body and its functions.¹²

In this article we examine the development of a female 'physical education' in medical discourse about nervous ailments and the resulting conceptualisations of the female body: we will therefore be more interested in Fonssagrives and his Éducation physique de la jeune fille, than in Briquet's Traité de clinique et de thérapeutique de l'hystérie. 13 We will focus on 'physical education' viewed as a remedy for chorea, hysteria and subsequently for neurasthenia. These pathologies appear both as 'movement disorders', including overexcitement and involuntary restlessness (chorea) and a lack of muscle tone interrupted by crises (hysteria and neurasthenia), and as symbols of national decline. To quote the words of Nicole Edelman, they 'both arise from a perception of reality, and create realities'. 14

The formulation of recommendations for physical exercises thus took on very innovative meanings since the movements of female bodies were thereby interpreted both positively and negatively, between idleness and a need for activity, and between cure for pathologies and control of the body. In this article it is precisely these discursive dynamics – sometimes highly ambivalent and contradictory, as we shall see – between nervous pathologies, female bodies and what makes them move, between muscle, nerve and also sex, that we find relevant to this study.

On hysteria and chorea: the possibility of a therapeutic medical 'movement'

In July 1847, the physicians and surgeons of the Hôpital des Enfants Malades established a course of gymnastic lessons for hospitalised children. ¹⁵ Napoléon Laisné, a professor of gymnastics, was placed in charge. Laisné would play a major role in the application of 'movement' in the medical environment and specifically in the treatment of tuberculosis, chorea and other forms of hysteria. Eighteen months after initiating gymnastics at the *Hôpital des Enfants Malades* and obtaining convincing results with scrofulous and choreic children, Laisné established a new gymnastic clinic at the *Salpêtrière* in 1849 for the treatment of epileptic and hysterical women.

Once admitted into the structure of hospitalisation, gymnastics developed into a therapeutic practice of more general application suitable for various nervous disorders, including chorea, hysteria and alienation. As early as 4 February 1849 the second report by the physicians and surgeons of the *Hôpital des Enfants Malades* to the head of *Public Assistance* emphasised that

... among the beneficial effects already obtained, we believe we should make particular mention of the curing of a certain number of choreas ... due exclusively to the use of a perfect combination of exercises, and the notable improvement generally produced in almost all of the children affected by this disease. ¹⁶

In his report on gymnastic experiments applied to chorea, presented to the *Academy of Medicine* and Sauveur-Henri-Victor Bouvier in 1854, Jean-Gaston-Marie Blache, a surgeon at the *Hôpital des Enfants Malades*, noted that in 1834, at the end of his article on 'Chorea' in the *Dictionnaire de médecine*, he had still been far from believing 'that sick little children, incapable of executing regular movements, could be subjected to exercises demanding precision and dexterity'. ¹⁷ However, movement could play a role in a course of treatment. In fact, this 'hospital stage' of gymnastics focusing on nervous disorders was very much a part of the Second Empire dynamics that would see a more detailed medical understanding of alienation and other mental and/or nervous disorders, together with developing knowledge of the nervous system. ¹⁸

At the end of the Second Empire, Fonssagrives's efforts to produce an 'Encyclopedia of Health' would contribute to making scientific knowledge available to the general public ('popularising without debasing' was the motto of his publications).¹⁹ In his book *L'éducation physique des jeunes filles*, he provided a lengthy list of health precepts aimed at mothers and intended to map out a system of physical education for girls.²⁰ Although there is no mention of chorea in his book, on the subject of hysteria he emphasised that it is 'much more a matter of health and temperament than of way of life and education'.²¹ Both physical and intellectual education must therefore be properly conducted, though their effects would primarily be felt in succeeding generations. Fonssagrives played down explanations based on environment and social conditions and placed the emphasis on the mother-daughter relationship:

Her daughter... will stay with her to exercise and satisfy her maternal feelings throughout her passionate young life; she would shield her, shape her to her liking, raise her, that is to say develop in her, in the most perfect possible harmony, the three forms of health: heart, mind, and body, each of which possesses both strength and beauty... A noble task, to prepare for the domestic hearth the ornament of an accomplished girl; for marriage, a robust wife; for the future cradle a mother worthy of that name, one that no duty will surprise. ²²

In fact, it was within the mother-daughter relationship that Fonssagrives located the problem, and it was there that he would spend much of his time because the commitment of physicians to the formulation of a physical education took the form of a campaign for proper education by mothers. In 1854, Laisné dedicated his Gymnastique des demoiselles to mothers, seeking first of all to reassure them about the uses and dangers of gymnastics and reminding them that they were responsible for 'providing [their] daughters with all the strength, all the grace, all the dexterity – in a word, all the development that their physical nature entails'.²³

In taking up these recommendations, physicians and gymnastics professors were thus taking part in the transformation of the image of women (mothers) in the latter half of the nineteenth century. They were providing substance for the rhetoric of sexual differences, the effects of which included both the prioritisation of maternity (and its corollary, education) and an accentuation of the image 'of a woman continuously threatened by illness and by the excesses of her sex'.²⁴ Moreover, this type of discourse was repeated both in the parliamentary debates connected to the institutionalisation of physical education and in the discussions surrounding legislation concerning waged labour of 'children, girls, and women' in 1892.²⁵ Major social changes were under way, even if not everyone was aware of them.

Undoubtedly, the formulation of the need for movement in the case of nervous disorders was complex, perhaps more complex for hysteria than for chorea, since the treatment of the latter by movement seemed quickly to produce very positive effects.²⁶ Although hospitals played a major role in the acceptance of gymnastics into medicine, and more broadly into 'society', there were also discordant paths and strategies, underlying the participation of physicians in this process.²⁷ As we have seen, the etiological theories advanced by Fonssagrives were primarily of interest for the way in which he celebrated the role of the mother in a girl's education; the precepts that he emphasised are much less 'practical' and more 'ideological' (or 'moral') than those of Laisné in his book of 1854. Besides, Fonssagrives's exercises stray far from building a consistent 'medical gymnastics', and even if they may have occasionally succeeded, 'their success should primarily be attributed to massage, combined with exercises'.28

In works by doctors promoting physical education, medical exercises were very often a 'moderate' adaptation of 'civil' or 'military' exercises to the medical environment.²⁹ The female body was saturated with the issue of heredity and it was believed that physical education should accompany a more wide-ranging dynamic for the whole society's rehabilitation.³⁰ Beyond moral prohibitions connected to modesty or proper manners the prescriptions were legitimised by wider objectives for health and procreation. These were based mainly on the Lamarckian idea that a mother's robustness can pass on to the child: preparing girl children for their future role of producing both good soldiers and also daughters who would in turn fulfil their own reproductive destiny.

Le Blond published his Manuel de gymnastique hygiénique et médicale a decade after Fonssagrives, in a climate of national decline following France's 1870 defeat by Prussia. This situation encouraged physicians, who had acquired great symbolic status under the first years of the Third Republic, to press the claims of physical exercise even harder. Le Blond's book is very complete and although it remains his only known publication, the preface by Bouvier – a longtime former physician at the $H\hat{o}pital\ des$ Enfants Malades, and a pioneer in orthopedic gymnastics in the 1820s – gave it genuine authority.³¹ Quoting certain physicians' findings on the extremely sedentary lifestyle of girls, and acknowledging the influence of women in every civilised country, Le Blond said that

... the occupations of girls are so sedentary that their muscular system falls into a sad state of wasting and withering away, while the nervous system, naturally dominant, acquires a truly unhealthy over-excitability; hence the development of a great number of chronic maladies which can attack women either before or after their marriage. Born to endure the painful ordeal of maternity, a woman needs a constitution that, if not necessarily strong, must at least be vigorous.³²

Woman, then, was indeed the linchpin of the family and by extension of society. Ensuring her health constituted one of a physician's essential missions, especially for doctors involved in the formulation of physical education. In the context of these national anxieties, this mission can be considered as a private and public health obligation for doctors. Nevertheless proponents of exercise still debated whether the correct approach should prioritise mental or muscular activity. As early as 1859 Pierre Briquet was developing a detailed theory of balance, to be generated by exercising the various areas of the brain. Le Blond's research was more specific. In his *Manuel de gymnastique hygiénique et médicale*, he emphasised that it

... is recognised that for epilepsy and hysteria the official therapeutic agents are merely inadequate palliatives, whereas movement, distractions, and an appropriate diet are more effective than any of them. It might be assuming too much to definitively credit physical activities with the power to cure epilepsy, but it is certain – judging by the tests conducted in 1851 at the *Salpêtrière* hospital – that this mode of therapy produced a considerable reduction in the frequency of fits, which already represents a genuine success.³⁴

According to Le Blond, gymnastics as a mode of therapy had demonstrated its effectiveness repeatedly: he wrote that it was principally movement rather than gymnastics *stricto sensu* that should be recommended, particularly in the treatment of nervous disorders.

For hysteria, walking, excursions in the mountains, etc. contributed greatly to restoring health and strength, no less by the effect that such exercise had on the organism than by the distraction that they provided for the mind. Moderate exercise could not be too highly recommended for hysterical women. Some should be advised to take up gardening, to dig up the soil, to hoe the garden, and to water the flowers; others, for whom more active exercise was essential, should be told to scrub the apartment, even to split or saw logs.³⁵

So the argument was that movement could be highly effective against hysteria, quite apart from the practice of systematic gymnastics with well-defined exercises. In fact the use of medical exercises was not yet systematic, and whether or not this kind of therapy was used varied according to individual doctors' abilities and predilections. There was no consensus as to its benefit and a discordant note was struck by Eugène Dally (1833–1887) in his article 'Gymnastique' in the *Dictionnaire encyclopédique des sciences médicales*. After reviewing the probable benefits for the less severe forms of chorea, Dally observed that

... in isolation I have never seen an epileptic or a convulsive hysteric benefit from gymnastics, and I even doubt whether it has a strong effect in hysteria or at least in the primitive encephalic form, which does not depend on nutritional disorders: on the contrary, it causes them.³⁶

As the son of a gymnast and physician, Eugène Dally advocated physical exercise for medical use, but the growth of experimental studies and current debates led to the identification of 'grey areas' where its use could be criticised, even if its global dynamic remained unquestioned.³⁷

The 1880s saw a proliferation of studies intended to legitimise and provide a rational, scientific foundation for physical education.³⁸ This expansion followed the 'Loi George' of 1880: the act requiring physical exercises in all primary and secondary boys' schools, extended to girls' secondary schools from 1880 and to primary schools from 1882.³⁹ The act of 8 March 1882, which made primary education mandatory, included physical exercise among the required subjects, specifying 'military exercises' for boys but 'needlework' for girls.⁴⁰ Medical discourse had opened a host of possibilities regarding physical education for women, but the legislators ignored its recommendations. A revanchist spirit prevailed and guided political discourse.⁴¹

Champions of physical activity were able, by the symbolic force of their learned publications, to have physical education included among the hygienic measures introduced to improve the health and power of the 'race'. 42 Doctors vigorously promoted physical education for women as public policy, providing a lever for action in certain political projects that acted on and through bodies.⁴³ The connection between moral virtues and physical practices was thus strongly reaffirmed, but the scientific context gave a new direction to this idea and to its accompanying pedagogic practices. If the action of exercise on the neuromuscular system produced a 'healthy', courageous and determined organism/individual, doctors were equally persuaded of the moral effects of physical practices. These were assumed not only to strengthen the health and the robustness of both male and female bodies, but also to strengthen healthy ideas and thoughts, to promote reason and, especially, procreation. The life sciences were marshalled not only to organise the development of the body, but above all to provide a logical basis for both moral and physical education. Moreover, moral control was regarded as particularly necessary for women who were considered to be so prone to irrationality, sentimentalism and excitability. Thus at the end of the nineteenth century physical and sporting practices became, for many doctors, a genuine option for treating all kinds of nervous disorders.

A process of naturalisation emerges from all these wide-ranging dynamics: the pathologisation of the female body as a preliminary stage in the consolidation of the differences between the sexes. 44 In this process women were continually reduced to their *physiopathological* nature, in this case more specifically via nervous disorders. However, medical treatises on the subject of female physical and sporting practices are nevertheless heavily freighted with contradictions and ambivalences. Such tensions testified to the controversial nature of these activities, whose objectives were 'health – beauty – *virility* – dexterity', recalling a 'normative ideal of virility' as described by Mosse. 45

Therapeutics via physical and sporting activity

In 1884 the physician Alfred Collineau, an inspector for local schools and a member of the French Anthropological Society (*Société d'Anthropologie de Paris*), published a book entitled *La gymnastique*, published by Baillière, one of the longstanding publishers for the Parisian *Ecole de médecine*. In his book, he prescribed gymnastics – in its broad sense of making the muscles work – as a means of curing or treating hysteria.

At that time the well-known physiologist Georges Demenÿ and the positivist Emile Corra, founder of the *Société française d'enseignement populaire positiviste*,

saw gymnastics as a moderator for the nervous system and a prime guide for the passions.

As regards individuals, gymnastics has always acted to curb the reproductive instinct by calming the nervous system which governs the individual; it enables individuals to control their passions, prevents young persons from falling into the mire of base sensuality or the perils of solitary lustfulness which lowers man below the beasts; experience has shown that it makes the schoolboy more studious, more moral, and more worthy.⁴⁷

However, one of the major changes in the practice of physical exercise was the progressive involvement of modern sports imported from England.⁴⁸ These sports would, moreover, produce a profound upheaval in continental societies at the turn of the twentieth century. If the confrontation with traditional gymnastics was sometimes bitter, modern sports would take hold and impose their own 'ethos' on other activities like cycling, which were not directly derived from the English.⁴⁹

In medical texts, the practice of sport was viewed as a means of curing or preventing hysteria. Indeed, Alvin, holder of a doctorate from the University of Montpellier in 1886, who had worked extensively on curing pulmonary tuberculosis, saw women's cycling as an almost 'miraculous' curative exercise for all the diseases that he considered to be 'feminine', from tuberculosis to neurasthenia, and including hysteria. ⁵⁰

In many of the diseases to which women were especially subject, bicycle exercise had an indisputably curative action. These included neurasthenia and nervous disorders, hysteria, morphinomania, intellectual fatigue, spleen, gout, sub-acute and chronic rheumatism, and especially gravel, migraine, recent-onset tuberculosis, and so on. Accordingly, there was hardly a woman who, at one moment or another, might not have need of a bicycle – after all, not an unpleasant remedy – and since its use might play a preventive role, it would always be advisable, for all those who were able and whenever they wished to, to use a bicycle. ⁵¹

The physician Raoul Fauquez, a specialist in gynecology and doctor at *Saint-Lazare*, also championed the curative virtues of the bicycle and supported Alvin's arguments, adding to the list of disorders that might also be curbed: symptomatic amenorrhea, hysteria, epilepsy, anemia, chloroanemia and dyspepsias.⁵² Riding a bicycle became a veritable 'cure-all'.

There was a barrage of contemporary criticism directed towards the 'bourgeoisie' who were regarded as atavistic and idle. Here again, the bicycle was heralded as the remedy for a sedentary way of life and hence as a cure for 'typical' feminine disorders.

Women were frequently affected by anemia and nervous disorders, which were the direct or indirect consequence of a lack of exercise and a sedentary lifestyle . . . [including a]nemia, neurasthenia, and hysteria. As much or even more than any other exercise, cycling was the purveyor of the triad of health.⁵³

These moral and physical virtues – life-saving because curative – were not, however, exclusive to the bicycle. According to doctor Célestin Lecomte, a former veterinarian from Alfort, fencing could perform the same miracles.⁵⁴ This physician claimed that it gave excellent results in curing hysteria, but it was also a sovereign therapeutic resource for the neurological illnesses represented by chorea.

Gymnastics had become a significant component of treatments for chorea. There was no reason to doubt that fencing, which is also an exercise involving rhythmic movements whose varieties

and intensities can readily be modified, could not also have a positive effect on chorea and the muscular manifestations of hysteria... We have so far encountered only two chorea patients and three hysterics affected by spasms and convulsions without losing consciousness. All these patients engaged in fencing in the way that we have found suitable for women. All of them felt better for this exercise and credited it, probably correctly, for their cure.⁵⁵

The experiments conducted by the gymnast Napoléon Laisné under Blache's direction at the Hôpital des Enfants Malades were deemed to provide conclusive evidence for the effectiveness of 'movement therapy' against chorea. 56 By the end of the nineteenth century, doctors were so convinced of the success of physical treatments, that they were less concerned with a search for proof.

However, even if they were prescribed to women for therapeutic ends, physical and sporting activities – the ultimate masculine bastions – presented problems for doctors. Along with the right to pedal, women had won the right to mobility, the right to go where they wished, when they wished. This right granted them a much more tangible, easy, everyday kind of liberty.⁵⁷ However, this posed a problem; the bicycle was a widelyavailable device on which increasing numbers of women of every class were riding astride, wearing the *culotte*. These baggy trousers were designed much like men's and therefore were judged to be too daring and to overstep the dress codes of the period. The bicycle was also accused of taking women away from their reproductive function and worse, of having the power to generate an independent female sexuality.⁵⁸ Cycling encapsulated all the prevailing fears and concerns about women: not only medical but moral. John Carteret, in an 1899 book entitled La Femme en culotte, collected various cartoons which portraved women who infringed the 'fashion code' as threatening the established social order.⁵⁹ Geertje Mak has shown how difficult, historically, it was for nineteenth-century women to embody effective, and potentially radical, gender ambiguity because of prevailing social and cultural constraints. Women who dared to 'transgress' gender norms were instead perceived as 'mannish'. 'Mannish women' appeared to disrupt the 'natural' gender order, and were therefore subjected to many forms of repression.⁶⁰

Indeed, many commentators of the time saw the practice of cycling as a real danger to female identity. De Loris perfectly portrays the fears of the period: cycling as practiced by these culotte-wearing women was accused of abolishing the differences between the sexes, but even more of creating a generation of mannish and feminist women.61

It is certain that the development of this sport took the female sex a long step closer to their emancipation, and the affirmation of their personality. But it is just as certain that the trouser or the very short skirt, so recently inaugurated by our cyclewomen, have given them a hitherto-unknown appearance . . . This revolution in dress could well have a very serious purpose, both morally and knowingly, and many thinking people believe that it is a significant episode in the 'feminist protest'. For the first time, in the absence of a law guaranteeing men monopoly ownership, women are contesting the ultimate masculine attribute: the trouser.62

Facing a boom in women's cycling, which over the final decade of the nineteenth century became an increasingly accessible and cheap mode of locomotion, as well as the visible and rapidly advancing institutionalisation of women's sports, physicians sought to maintain their position as arbiters of bodily movement. They accordingly exploited the connection between nervous disorders and physical and sporting exercises to prohibit or differentiate exercises for women and girls. In so doing they not only pathologised the female body, but also produced sexual bodies in movement.

Anthropological anxieties and the adjustment of discourse and treatments concerning the body

At the end of the nineteenth century Nicole Edelman's work marked a profound transformation in the study of hysteria to the extent that doctors no longer dared to make that diagnosis and it vanished from the hospitals. ⁶³ In medical discourse hysteria finally lost its specificity and became rare in the medical treatises being studied at the dawn of the twentieth century. It seemed to be drowned out by other 'nervous disorders' and medical discourse adopted terms such as, 'nervous system', 'nervosity', 'nervous problems', 'neuroses', 'neuropathy' or 'neurasthenia'. Nevertheless, these remained conditions which female physical activities were still able at least to improve and at best to cure.

In parallel with this, in the 1880s, urbanisation and industrialisation exacerbated worrying problems such as fatigue, neurasthenia and other nervous system disorders, both real and imagined.⁶⁴ While military conflicts destroyed populations and created anxiety regarding depopulation and an inevitable 'national decline', Robert A. Nye shows that the medical language of the time was very often used to generate understanding, advice or reassurance in public debate on social problems.⁶⁵ A veritable biologisation of the social environment was at work.⁶⁶ 'Social pathologies' were made responsible for the perceived decline in the French 'race'.

Neurasthenia is repeatedly mentioned in the treatises; literally considered to be a 'lack of nervous strength', this illness was characterised by nervous exhaustion and might be expressed either by depression or sometimes by over-excitement. The clinical presentation of this disease involved perceptible signs of fatigue, overwork, insomnia, loss of appetite and interest (in work), migraines and neuralgias, hypochondria and so on.

According to Ovide Fache, a doctor in the *Ecole d'application du service de santé militaire*, cycling could cure neurasthenic patients. In this physician's opinion, these (female) patients were

... enslaved by their stomach cramps, multiple transient neuralgias, stubborn headaches, and by a state of bodily lassitude that weakened their slightest act. These torments could surely not all be imaginary. These invalids needed to be treated, and for them the bicycle took on the nature of a first-class medication, which cured or at least provided relief. As soon as exercise began the patients learned to control their members and directed their muscular efforts towards a clearly-defined goal: balance. Confidence grew little by little, and if the training was regular, well directed, and avoided fatigue, the patients soon gained better control of their strength and their will ... Their organs and their spirits emerged from their torpor.⁶⁷

Physical exercise – in this case cycling – enabled patients to recover control and direction of their locomotive systems. As an instrument of self-control, it imposed on the body a balance between strength and will, between organs and mind.

In 1904, the physician Gilbert Lasserre, Chairman of the regional committee (1905–1907) of the *Ligue Girondine d'Education Physique*, praised the effects of physical education on young girls emphasising that after exercise 'the waste products

of the nervous system are eliminated, and after exercises, which must never go as far as muscular fatigue, the girls can resume their scheduled studies'. 68 As an extension of portrayals modeled on the Galenic theory of humours, the menstrual flow was thought of as a valve enabling the removal of tainted materials that congested the organism. If not eliminated these would, according to Professor Brown-Sequard, the President of the Société de Biologie and founder of the Journal de la Physiologie, cause serious damage in particular to the nervous system and the psychic balance.⁶⁹

In fact, the theory of auto-intoxication by the halting of 'natural bleeding' was still in force during the belle epoque and was almost universally accepted. Few specialists doubted its significance, even if they had broken with humoural theory. As Le Naour and Valenti argue:

We may be astonished by the survival, in this specific case, of a general explanatory model which had slowly declined throughout the nineteenth century before receiving the coup de grâce from the revolution after Pasteur, but in the absence of real scientific knowledge and a consistent alternative system for its interpretation, physicians clung to the traditional systems of thought which avoided their having to acknowledge their lack of understanding, or really of knowledge. 70

In consequence, doctors who prescribed cycling as a means of restoring the proper circulation of the blood regularly associated the virtues of exercise with its benefits to the nervous system.

In cases of nervous dysmenorrhea ... cycling must be advised. In the first case because, through the activity which it imprints on the muscular system and on the breathing, and by its action on the blood circulation which makes itself felt even in the nerve centres, it restores balance to all of the organism's functions, and in particular to the nervous system.⁷¹

This restoration prevented women from falling into 'menstrual madness'. This 'madness' was related to the volumetric quantity of the blood. If the brain was involved in the production of madness, a quantitative engorgement might harm its proper functioning. The possibility that the suppression of menstruation might produce insanity remained in doctors' minds, and resurfaced in medical treatises. Physical and sporting activities performed in the open air would have curative properties against this madness. Doctor Ludovic O'Followell, a specialist in medicine and general surgery, secretary of the Société Française d'hygiène, and a member of the Société de l'hygiène de l'enfance, recommended such exercise, stating that the temperament of women affected by nervous dysmenorrhea was very positively influenced by open-air sport.⁷²

According to the gynecologist Jean Doléris, obstetrician in charge of the maternity section of the Hôpital Boucicaut in 1897 and a founding member of the Société d'obstétrique, de gynécologie et de pédiatrie de Paris, if women suffered from nervosity, physical exercise eliminated their psychic illness.

Of course, these common forms of nervosity and neuropathy in women would disappear under modern hygiene, and progress towards an education that was both more physical and more intellectual in its content. On this very subject, physical sports were in themselves a system of health and prophylaxis of the very best kind.73

Swimming, which was already universally known for its physical benefits, offered a perfect illustration of this idea: frequent contact with the water provided girls and women with a comfort that was especially displayed in the nervous system. When this gynecologist saw physical activity as an indisputable regulator for the nervous system which prevented all forms of neurosis, he legitimised the prescription of physical exercises. From a very young age

... a woman's physical culture ... appears both as the counterweight and the necessary assistant for the woman's intellectual development, as the regulator of her nervous system, and the prophylactic par excellence against neuroses. It is designed to produce a regulated harmony between mind and body. Its influence on both moral and physical health is unquestioned.⁷⁴

Doléris believed in the moral effect of female physical activity. Women and girls who were so prone to irrationality and excitability should be supervised physically but also psychically, and physical activity offered the advantage of being able to combine both.

The eugenicist physician Georges Danjou, at the International Congress on Physical Education in Paris in 1913, placed great emphasis on the moral mission assigned to physical exercise explaining that 'the brain must be disciplined by the muscles, *regulating action by control*'. ⁷⁵ Physical exercises also helped to school the passions. They prepared people physically, and kept them on the path of moderation. They tempered the ascendancy of the passions and allowed people to free themselves from their grasp.

All this medical advice had the merit of, even if marginally, offering women access to real physical activity. However, contradictions and ambivalences were always present. Numerous physicians continued to condemn physical exercise for women during their periods because they expected prejudicial effects. In his book *Bicyclette et organes génitaux*, Ludovic O'Followell illustrates to what extent physicians seemed not to want, or not to be able, to separate themselves from a rooted belief that the menstrual flow was the strongest indicator of the natural inferiority of women. The doctor raised the question explicitly: *can a woman ride a bicycle during menstruation or not?* According to this doctor, the general medical agreement on this point was due to a wealth of actual observations. Thus,

... physicians questioned about whether women should interrupt their cycling exercise at the time of their menstruation answer almost unanimously in the affirmative ... In our opinion, it is only prudent to advise women never to get on a bicycle during their menstrual period.⁷⁷

Nevertheless, if the menstrual flux was irregular or absent, and if doctors considered the woman to be 'ill', these same physical exercises – unsuitable where menstruation was 'normal' – then acquired a powerful legitimacy.

Cycling must be prohibited during the menstrual period and during pregnancy, along with any slightly violent physical activity capable of congesting the uterine organ, although in the event of dysmenorrhea it might possibly be advised. By activating the contraction of the pelvis and by the excessive activity that it entails for the organism, since cycling is performed in the open air, it would be liable to reestablish the suppressed or reluctant function.⁷⁸

Ultimately, physical and sporting exercises were considered suitable only for women who were ill, as a means of cure.

Conclusion

Beyond the dynamics both of the consolidation of a 'biopolitics' around the issues of 'sexuality' – described by Michel Foucault in *La volonté de savoir* – and those of

the academic institutionalisation and the social acceptance of physical education for women, the practical recommendations developed by physicians for nervous disorders were still caught between the rhetoric of the eternally wounded woman and the need to develop her entire faculties (intellectual, moral and corporal) to ensure that she had healthy offspring and to ward off 'health panics'. 79 This paradox had been troubled by the promoters of physical education, who relied on knowledges of pathologies (partly constructed by themselves) to demand more physical education for girls and women.

Within the context of a prevailing ideology of degeneration, hysteria, chorea and neurasthenia appear as medical 'constructions' which physicians exploited for their own ends. 80 There were two opposing stances among physicians: some based their views on a threatened female body in need of support and preservation through physical activity, while others thought that a sturdy female body needed strengthening and development through physical exercise. Other physicians positioned their recommendations between these two camps, which itself created a number of ambivalences in their discourse and some truly contradictory injunctions. Consequently, advocates of female physical activities stressed multiple facets, aims and roles: therapeutic, prophylactic and pathogenic. Finally, doctors' recommendations were almost always accompanied by prohibitions. The debate between cycling and horse-riding is highly revealing of the contradictions in this discourse. If a physician recommended one of these practices he automatically opposed it to the other, which then became pathogenic. It is as if there must inevitably be forbidden activities alongside those authorised: go horse-riding to cure uterine disorders but whatever you do, don't get on a bicycle, which would harm your womb – or vice versa.

Physicians evidently struggled to delimit clearly the 'correct' ways of moving the female body because they were unable to reconcile the necessary regeneration of the body of the nation and the quality of the 'race' through promoting a robust, reproductive female body, with the maintenance of 'natural' differences between the sexes, something which itself signified 'civilisational' and 'racial' superiority.

Notes

This article was translated from French by John V. Guy-Bray.

- 1. Alex Poyer, '1854: aux origines de l'institutionnalisation de la gymnastique scolaire. Contexte et portée de l'arrêté Fortoul', Staps 71 (2006), pp. 53-69; Georges Vigarello, Histoire des pratiques de santé (Paris: Seuil, 1999), p.197 Norbert Elias, Mozart: Sociologie d'un génie (Paris: Seuil, 1991); Norbert Elias, La Société de cour (Paris: Flammarion, 2008).
- 2. Anaïs Bohuon and Antoine Luciani, 'Biomedical Discourse on Women's Physical Education and Sport in France (1880–1922)', International Journal of the History of Sport 26 (2009), pp. 573–93
- 3. Yvonne Knibielher, 'Préface: Le corps des femmes', in Marie-Thérèse Coenen (ed.), Corps de femmes: Sexualité et contrôle social (Brussels: De Boeck Université, 2002), pp. 5–12, here p. 8.
- 4. Yvonne Knibiehler, 'Les médecins et la 'nature féminine' au temps du code civil', Annales E. S. C. 31 (1976), pp. 824–45; Thomas Laqueur, Making Sex: Body and Gender from the Greeks to Freud (Cambridge, MA: Harvard University Press, 1990).
- 5. Londa Schiebinger, 'Skeletons in the Closet: The First Illustrations of the Female Skeleton in Eighteenth-Century Anatomy', Representations 14 (1986), pp. 42–82.
- 6. Jean-Claude Caron, 'Jeune fille, jeune corps: objets et catégories (France, nineteenth-twentieth centuries)', in Gabrielle Houbre et al. (eds), Le corps des jeunes filles de l'Antiquité à nos jours (Paris: Perrin, 2001), pp. 167–88, here p. 173.
- 7. Grégory Quin, 'Un professeur de gymnastique à l'hôpital. Napoléon Laisné (1810-1896) introduit la gymnastique à l'hôpital des Enfants malades (1847)', Staps 86 (2009), pp. 79–91. Around 1850 there was

- a change in the pathologies that French physicians attempted to treat (from orthopedic ailments to nervous ones), although this process was not uniform, and from around 1880 (and as a result of the increase in the numbers of children attending school) orthopedic ailments returned to prominence with the development of 'medical exercises'. Anaïs Bohuon and Grégory Quin, 'Des scoliotiques aux hystériques: une histoire de l'éducation corporelle des fillettes et des jeunes filles (Années 1830 Années 1900)', *Revue d'histoire de l'enfance irrégulière* 12 (2010), pp. 181–94.
- 8. Sean Quinlan, *The Great Nation in Decline: Sex, Modernity and Health Crises in Revolutionary France* 1750–1850 (Aldershot: Ashgate, 2007); Jean-Christophe Coffin, *La transmission de la folie, 1850–1914* (Paris: L'Harmattan, 2003).
- 9. Jean-Michel Chapoulie, L'école d'Etat conquiert la France: Deux siècles de politiques scolaires (Rennes: Presses Universitaires de Rennes, 2010); George Weisz, Divide and Conquer: A Comparative History of Medical Specialisation (Oxford: Oxford University Press, 2006); James F. McMillan, France and Women, 1789–1914: Gender, Society and Politics (London: Routledge, 2000).
- 10. Mark Micale, Approaching Hysteria: Disease and Its Interpretations (Princeton: University Press, 1994); Nicole Edelman, Les métamorphoses de l'hystérique (Paris: La Découverte, 2003); Anne Carol, Histoire de l'eugénisme en France: Les médecins et la procréation, XIX^e–XX^e siècle (Paris: Seuil, 1995), p. 87.
- 11. Elaine Showalter, *The Female Malady* (New York: Pantheon Books, 1985); Sylvie Chaperon, *La médecine du sexe et les femmes* (Paris: La Musardine, 2008).
- 12. Michelle Perrot, 'Figures et rôles', in Philippe Ariès and Georges Duby (eds), *Histoire de la vie privée*, vol. 4, *De la Révolution à la Grande Guerre* (Paris: Seuil, 1987), pp.120–85; Patricia Vertinsky, 'Exercises, Physical Capability and the Eternally Wounded Woman in Late Nineteenth Century North America', in Jack Berryman and Roberta Park (eds), *Sport and Exercise Science* (Chicago: University of Illinois Press, 1992), pp. 183–211.
- 13. Jean-Baptiste Fonssagrives, L'éducation physique des jeunes filles, ou avis aux mères sur l'art de diriger leur santé et leur développement (Paris: Hachette-Masson, 1869); Pierre Briquet, Traité de clinique et de thérapeutique de l'hystérie (Paris: Baillière, 1859).
- 14. Nicole Edelman, 'Représentation de la maladie et construction de la différence des sexes. Des maladies de femmes aux maladies nerveuses, l'hystérie comme exemple', *Romantisme* 110 (2000), pp. 73–87, here p. 73.
- 15. Grégory Quin, 'Un professeur de gymnastique à l'hôpital'.
- 16. Rapport des médecins et chirurgiens de l'hôpital des Enfants Malades adressé au directeur de l'Assistance Publique (Report of Physicians and Surgeons of l'hôpital des Enfants Malades sent to the Director of Public Assistance) in: Napoléon Laisné, Du massage, des frictions et manipulations appliqués à la guérison de quelques maladies (Paris: Masson, 1868), p. 15.
- Jean-Gaston-Marie Blache, 'Du traitement de la chorée par la gymnastique', in Académie nationale de medicine, Mémoire de l'Académie Impériale de médecine (Paris: Baillière, v19, 1855), pp. 598–608, here pp. 599–600.
- 18. Jean-Christophe Coffin, 'Sexe, hérédité et pathologies', in Delphine Gardeyand Ilana Löwy (eds), L'invention du naturel: Les sciences et la fabrication du féminin et du masculin (Paris: Editions des archives contemporaines, 2000), pp. 159–86, here p. 164. See also the lectures of Claude Bernard and Etienne-Julers Marey at the Collège de France. Claude Bernard, Leçons sur la physiologie et la pathologie du système nerveux (Paris: Baillière, 1858); Etienne-Jules Marey, Du mouvement dans les fonctions de la vie: Leçons au Collège de France (Paris: Baillière, 1868).
- 19. In the 1860s, Jean-Baptiste Fonssagrives published several books on hygiene and its application to girls, boys and the family. In 1869, Fonssagrives became Professor of Hygiene in the Montpellier faculty of medicine and a few years later became Professor of Therapeutics in the same faculty.
- 20. Fonssagrives, L'éducation physique.
- 21. Fonssagrives, L'éducation physique, p. 134.
- 22. Fonssagrives, L'éducation physique, pp. 45–6.
- Napoléon Laisné, Gymnastique des demoiselles, ouvrage destiné aux mères de famille, contenant la description des exercices avec la construction et le prix des instruments (Paris: self-published, 1854), p. x.
- 24. Edelman, 'Représentation de la maladie', p. 77.
- 25. Thierry Terret, 'Un débat passionné: l'intégration de la gymnastique des filles à la fin du XIX^e siècle', in Pierre Arnaud and Thierry Terret (eds), *Education et politique sportives*, *XIX^e-XX^e siècles* (Paris: CTHS, 1995), pp. 87–95; Michelle Zancarini-Fournel, 'Archéologie de la loi de 1892 en France', in Michelle Zancarini-Fournel and Leora Auslander (eds), *Différence des sexes et protection sociale (XIX^e-XX^e siècles)* (Paris: Presses Universitaires de Vincennes, 1995), pp. 75–92.

- 26. Charles Londe and Sauveur-Henri-Victor Bouvier, 'Du traitement de la chorée par la gymnastique', Bulletin de l'Académie de médecine 20 (1855), pp. 833-71.
- 27. Edelman, 'Représentation de la maladie, p. 75.
- 28. Euguène Bouchut, Leçons cliniques sur les maladies de l'enfance faites à l'hôpital Sainte-Eugénie (Paris: Plon, 1858), p. 41.
- 29. Roberta Park, 'Physiology and Anatomy are Destiny!?: Brains, Bodies and Exercise in Nineteenth-Century American Thought', Journal of Sport History 18 (1991), pp. 31-63, here p. 49.
- 30. Alain Corbin, 'L'hérédosyphillis ou l'impossible redemption. Contribution à l'histoire de l'hérédité morbide', in Alain Corbin, Le temps, le désir et l'horreur: Essais sur le XIXe siècle (Paris: Flammarion, 1991), pp. 141-69; Coffin, La transmission de la folie, p. 101; Carol, Histoire de l'eugénisme en France, p. 87.
- 31. Concerning Dr. Bouvier and the history of orthopedics in the first half of the nineteenth century see: Grégory Quin, 'Le Sexe des difformités et la réponse orthopédique (1819-1862)', Genre et Histoire 4 (2009), http://genrehistoire.revues.org/index523.html; Grégory Quin, 'Genèse d'un champ scientifique : l'Orthopédie comme fabrique d'une gymnastique. Du champ médical, de la spécialité orthopédique et des exercices corporels (1817-1847)', Revue Sciences Sociales et Sports 2 (2009), pp. 171-99.
- 32. N. A. Le Blond, Manuel de gymnastique hygiénique et médicale, comprenant la description des exercices du corps et leurs applications au développement des forces, à la conservation de la santé et au traitement des maladies (Paris: Baillière, 1877), p. 354.
- 33. Pierre Briquet, Traité de clinique et de thérapeutique de l'hystérie (Paris: Baillière, 1859).
- 34. Le Blond, Manuel de gymnastique, p. 415
- 35. Le Blond, Manuel de gymnastique, p. 415.
- 36. Eugène Dally, 'Gymnastique', in Amédée Dechambre (ed.), Dictionnaire encyclopédique des sciences médicales, vol. 47 (Paris: Masson, 1886), p. 838.
- 37. Eugène Dally, Plan d'une thérapeutique par le mouvement fonctionnel (Paris: Rignoux, 1859); Eugène Dally, Sur la nécessité de l'éducation physique et sur l'organisation des gymnases municipaux hydrothérapiques (Paris: Masson, 1871).
- 38. Anaïs, Bohuon and Antoine Luciani, 'Biomedical Discourse'.
- 39. Gilbert Andrieu, 'La gymnastique obligatoire à l'école ou l'application d'une morale revancharde', in Pierre Arnaud and Thierry Terret (eds) Sport, éducation et art, XIXe - XXe siècles (Paris: CTHS, 1996),
- 40. Act No. 11696 of 8 March 1882 concerning mandatory primary education.
- 41. Bertrand Joly, 'La France et la revanche (1871-1914)', Revue d'histoire moderne et contemporaine 46 (1999), pp. 325-47.
- 42. Mary Lynn Stewart, For health and beauty, physical culture for French women (1880s–1930s) (Baltimore: Johns Hopkins University Press, 2001).
- 43. Lion Murard, and Patrick Zylbermann, L'hygiène dans la République: la santé publique en France ou l'utopie contrariée: 1870–1918 (Paris: Fayard, 1996).
- 44. Vertinsky, 'Exercises, Physical Capability'; Park, 'Physiology and Anatomy are Destiny'.
- 45. Georges Demeny, Plan d'un enseignement supérieur de l'éducation physique (Paris: Alcan, 1899); Georges L. Mosse, L'image de l'homme: L'invention de la virilité moderne (Paris: Abbeville, 1997).
- 46. Alfred Collineau, La gymnastique: Notions physiologiques et pédagogiques, applications hygiéniques et médicales (Paris, Librairie Baillière, 1884).
- 47. Georges Demenÿ (with Émile Corra), Effets physiologiques et philosophiques de la gymnastique rationnelle: Communications faites à l'Assemblée générale des Sociétaires, July 11, 1880 (Neuilly: L.Bouzin, printers, 1880), p. 27.
- 48. On the birth of 'modern sports' see especially Norbert Elias and Eric Dunning, Sport et Civilisation, la violence maîtrisée (Paris: Fayard, 1994).
- 49. Eric Dunning and Kenneth Sheard, 'La séparation des deux rugbys', Actes de la recherche en sciences sociales 79 (1989), pp. 92–107.
- 50. Serge Fauché, 'Le médecin et la bicyclette. Le sport vélocipédique entre sciences et idéologies à la fin du 19ème siècle', in André Gounot (ed.), Le sport en France de 1870 à 1940, Stadion XXVII (Sankt Augustin: Academia Verlag, 2001), pp. 201–12.
- 51. Julien Alvin, La femme et la bicyclette: Le cyclisme féminin au point de vue sportif-hygiénique-curatif. Opinions des médecins (Paris: Le vélodrome du Pré-Catalan, 1895), p. 11.
- 52. Raoul-Etienne Fauquez, La bicyclette au point de vue de la femme (Clermont: Imprimerie Daix, 1897).
- 53. Émile Galtier-Boissière, Cyclistes et bicyclette, guide pratique du cycliste amateur (Paris: Librairie Larousse, 1898), p. 26.

- Célestin Lecomte, L'escrime au point de vue médical (unpublished medical thesis, Paris Faculty of Medicine; Director, 1895).
- 55. Lecomte, L'escrime au point de vue médical, p. 70.
- Fulgence Raymond, 'Danse de Saint-Guy ou Chorée', in Amédée Dechambre (ed.), Dictionnaire encyclopédique des sciences médicales, vol. 25 (Paris: Masson, 1880), pp. 457–536, here p. 519.
- 57. Christopher Thompson, 'Un troisième siècle? Les bourgeoises et la bicyclette dans la France fin de siècle', *Le mouvement social* 192 (2000), pp. 9–39.
- 58. Anaïs Bohuon, 'Entre perversion et moralisation. Les discours médicaux sur la pratique physique et sportive des femmes à l'aube du XX^e siècle', *Revue Corps*, *le corps dansant* 7 (2009), pp. 99–104.
- 59. John Carteret, *La femme en culotte* (1899; repr Paris: Côté-femmes, 1993)
- 60. Geertje Mak, *Mannelijke vrouwen: Over de grenzen van sekse in de negentiende eeuw* (Amsterdam/Meppel: Boom, 1997).
- 61. Richard Holt, 'Women, Men and Sport in France, c.1870–1914: An Introductory Survey' *Journal of Sport History* 18 (1991), pp. 121–34.
- 62. C. (de) Loris, La femme à bicyclette: Ce qu'elles en pensent (Paris: May et Motteroz, 1896), p. 36.
- 63. Edelman, Les métamorphoses.
- 64. Anson Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (Berkeley: University of California Press, 1992)
- 65. R. A. Nye, *Crime, Madness, and Politics in Modern France: The Medical Concept of National Decline* (Princeton: NJ, Princeton University Press, 1984); Karen Offen, 'Depopulation, Nationalism and Feminism in Fin-de-Siècle France', *The American Historical Review* 89 (1984), pp. 648–76.
- 66. Quinlan, The Great Nation in Decline, p. 195.
- 67. Ovide-Gustave-Joseph Fache, *De la neurasthénie et de son traitement par les exercices physiques* (unpublished medical thesis, Lyons Faculty of Medicine and Pharmacy; Director: Professor Soulier, 1896), pp. 67–8
- 68. Gilbert Lasserre, La lutte anti-tuberculeuse par l'éducation physique et les colonies scolaires, (Extrait des comptes rendus du Congrès des sociétés savantes en 1903) (Paris: Imprimerie Nationale, 1904), p. 8.
- 69. Séverin Icard, L'état psychique de la femme pendant la période menstruelle, considéré plus spécialement dans ses rapports avec la morale et la médecine légale (Medical thesis in the Paris Faculty of Medicine, 1890), pp. 23–4, cited in Jean-Yves Le Naour and Catherine Valenti, 'Du sang et des femmes: Histoire médicale de la menstruation à la Belle Époque', Clio, Festins de femmes 14 (2001), pp. 207–29.
- 70. Le Naour and Valenti 'Du sang et des femmes', p. 214.
- 71. Fauquez, La bicyclette au point de vue de la femme, p. 14.
- 72. Ludovic O'Followell, Bicyclette et organes génitaux (Pari: Librairie J-B Baillière et fils, 1900).
- 73. Jean Doléris, 'Les sports au point de vue de l'hygiène chez la femme et la jeune fille', in James Kerr (ed.), Second international congress on school hygiène (London, 1907) (London: The Royal Sanitary Institute, Margaret Street, 1908), pp. 21–32, here p. 29.
- 74. Doléris, 'Les sports au point de vue', pp. 239–40.
- 75. Georges Danjou, 'L'éducation physique de la femme', presented to the International Congress on Physical Education, March 17–20, (Paris: F. Bouchy, 1913), p. 19.
- 76. O'Followell, Bicyclette et organes génitaux, p. 120.
- 77. O'Followell, Bicyclette et organes génitaux, p. 40.
- 78. O'Followell, Bicyclette et organes génitaux, p. 40.
- 79. Michel Foucault, La volonté de savoir, vol. 1, Histoire de la sexualité, (Paris: Gallimard, 1976).
- Jens Lachmund and Gunnar Stollberg, The Social Construction of Illness (Stuttgart: Franz Steiner Verlag, 1992).