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To sanitize is to eugenize: the “preventive” eugenics of Belisário Penna at the service of sanitation in Brazil, 1920-1930

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Abstract

The purpose of this article is to discuss the eugenics model used by the medical-sanitarist Belisário Penna during the sanitation campaign in Brazil in the 1920s and 1930s. The article addresses two fundamental concepts for his thinking: “Brazilian race” and “preventive” eugenics. The way in which Penna saw the Brazilian racial issue was fundamental to adhere to the eugenic conception combined with social medicine and its project of “health awareness.” The text offers a perspective of how Penna’s eugenics was conceived and the dialogue established with the Brazilian eugenic movement, especially with the eugenicist Renato Kehl. Thus, the defense of an eugenics classified as “preventive” established a coherence for a social reform project through the sanitation defended by Penna.

Keywords: Belisário Penna (1868-1939); sanitation; eugenics; Brazilian social thought; history.



The sanitation of Brazil proposed by the physician and sanitarian Belisário Penna (1868-1939) drew on a variety of interpretations of Brazilian society, including a move away from racial determinism, a belief in social medicine, the centralization of health service administration, the sanitation of people's habits and behaviors, of "public men," morality, and other considerations (Castro-Santos, 1985; Hochman, 2012; Lima, 1999; Carvalho, 2019). Taking inspiration from the medicine of Oswaldo Cruz, the legal and political theses of Alberto Torres (1865-1917), the literature of Euclides da Cunha (1866-1909), and experience acquired by Instituto Oswaldo Cruz on its scientific expeditions, he forged the concept he termed "sanitary consciousness." Essentially, it consisted of the need to raise awareness of sanitation and social medicine in order to reform the reality in Brazil, which he felt was delayed and lacked a program of national integration. This is what formed the basis for the campaign for the sanitation of Brazil and its subsequent transformation into political action (Sandes, Caixeta, 2016; Lima, 2009; Thielen, Santos, 2009).

This conception of sanitation was influenced by many scientific proposals then in vogue for how to move the country forward. Eugenics, which was institutionalized in the country in the late 1910s in the voice of the physician and pharmacist Renato Kehl (1889-1974), was one such. As far as Penna's view of sanitation was concerned, ideas from eugenics – particularly its "preventive" model – could be harnessed to enable broader interventions focused on individuals, and this in conjunction with transformations to the environment could serve to bring about the "sanitation of heredity."

The bid to make Brazil "sanitary" also chimed with political moralization, authoritarianism, and political and administrative centralization, all of which marked Belisário Penna's trajectory as a public figure. His involvement in movements like the coup of October 1930 and Getúlio Vargas's provisional government administration, and his activism in the Brazilian Integralist Action political movement are clear evidence of how this authoritarian agenda took shape. He saw the state as responsible for guiding both public and private spheres of life. His involvement in the eugenics movement also took on some features of this authoritarianism, since it assumed that the state should regulate society and prohibit certain practices that were harmful to heredity, such as the consumption of alcohol. It was also down to the state, he felt, to take measures to improve social conditions, investing in housing to tackle diseases and in initiatives to reduce illiteracy, so that individuals would develop a "sanitary consciousness."

Another important point is the correlation between hygiene and sanitation. The use of each term should be considered in the context in which it was used; sometimes, the words are used as synonyms, but sometimes they are employed in the discourse of historical agents in different ways.

Hygienism was not an exclusively twentieth-century concern. In his study of the press in the nineteenth century, the historian Luiz Otávio Ferreira (1999, p.333) found that concern with hygiene lasted a long time in Brazil. He argues that this concern about diseases brought the health agenda closer to the population. Through journals, medical science and hygiene began to permeate public life. The existence of the medical-scientific publication *O Patriota* was, in Ferreira's analysis, indicative of physicians' concern with hygiene and the way they associated climate and geography with the spread of diseases

and epidemics. In this context of the first half of the nineteenth century, physicians such as José Francisco Xavier Sigaud subscribed to the neo-Hippocratic explanation of the state of public health in Brazil (Ferreira, 1999, p.335). Later, in the second half of the century, as the “new science of microbes” developed, a host of other battle fronts, controversies, and negotiations entered the hygiene agenda (Benchimol, 1999, p.440).

In the context of the development of scientific traditions, discussions about connections between race and hygiene, especially in the context of the belief that race was a defining characteristic of a society, requires a more accurate analysis. Despite the importance of the study by Sidney Chalhoub (1996), which elucidates different forms of racial segregation, it pays little attention to the impact and continuity of medical traditions in the country, particularly in the field of public health, a component part of the analysis. In this sense, Marcos Chor Maio is circumspect about the thesis that explains racism as intrinsic to the norm of hygienists. While he does not deny the existence of arguments based on racial determinism, he suggests it would be more worthwhile “to focus on the relations between neo-Hippocratic medicine and the then new science of microbes (Pasteurian) – in the interval between the late nineteenth century and the first few decades of the twentieth century – situating them in the national sociopolitical context” (Maio, 2010, p.67). In this period of time, there were two competing nation-building projects, both of which were anchored, among other issues, in hygiene-related issues. One, as Maio points out, drew on a biological deterministic view that was entirely consistent with the physical anthropology of the nineteenth century. The other was based on environmentalist thinking and the medical and hygienic tradition, and saw the race issue from a perspective of redemption rather than condemnation (p.75). This latter formed the basis of the sanitary movement that emerged in the 1910s. Consequently, Belisário Penna’s “preventive” eugenics came to light within this environmental context, which called for radical measures to address the sanitary state of Brazil.

The sanitary movement that marked the First Republic (1889-1930) was connected to a movement of an ideological bent that envisaged the development of the nationality (Castro-Santos, 1985, p.11). Raising the flag of a militant form of sanitation in the first decades of the twentieth century, its supporters based their ideas on nationalist currents to reform a country considered backward, abandoned, and pessimistic about its racial composition. The effects of First World War, their interpretation of an anachronistic federalism, and a desire to centralize public health services – since, gradually, at least since the late 1800s, it had become clear that public health problems could not be solved individually – formed the basis of this movement (Oliveira, 1990; Hochman, 2012). For Penna, the promotion of sanitation had the ideological aspect to which Castro-Santos refers. In other words, it was a blend of the medical-hygienist tradition and nationalist content. This two-pronged approach, these professionals claimed, would be able to alter the social reality. The first paragraph of *Saneamento do Brasil* (Sanitation of Brazil) summarizes how this ideology tied in with sanitation and the demands brought by the new century:

In my wish to play my part in National Defense, an expression which does not mean merely the organization of the armed forces, but a number of elements of a hygienic, political, social, moral, and economic nature, which should come together and

function harmoniously, for long have I been calling for the defense of health, the basis of individual and collective efficiency, a primal element of strength, stamina, labor, and production (Penna, 1918, p.I).

For the sanitary movement led by Penna, the word “sanitize” signified not just a technical and scientific matter, but ongoing action of political and social transformation.

Below, we investigate Penna’s interpretation of the “Brazilian race” and how he saw this notion interconnecting with his understanding of “preventive” eugenics. From his intellectual output, especially the personal archive at the Department of Archives and Documentation of Casa de Oswaldo Cruz (COC), Oswaldo Cruz Foundation (Fiocruz), in Rio de Janeiro, this study offers a discussion of how Belisário Penna interpreted Brazil from the perspectives of race, sanitation, and eugenics. Although his involvement with eugenics is not new to the historiography, this study investigates documents in his personal archive to piece together how this relationship was built, how it was influenced, the context in which these ideas took shape, and their connections with other political demands felt by Penna.

Penna’s conception of the “Brazilian race”

As a representative of the public health campaign in the early decades of the twentieth century, Penna subscribed to the belief that race was an important element of national worth, distancing himself from pessimism and fatalism. It is important to have a clear conception of his views on race if we are to understand the proposals for the regeneration of the Brazilian people and national unity linked to his nationalist sanitation project. Penna moved away from different forms of determinism, preferring to focus on what he called the “accursed trinity:” disease, illiteracy, and alcoholism. If the causes were identified, the application of sanitation actions would reveal the strength of “our race” (Penna, 30 jul. 1921, p.4). The following excerpt synthesizes the central tenet of Penna’s ideas on race (2 ago. 1921, p.4):

The fact is I do not agree with this concept of races and sub-races, with superiority of one over others; I am a revolutionary, if you understand it thus; I admit different peoples, some with a more advanced intellect than others, with a tendency to intermingle, until with the passing of the centuries there is one single race on earth.

Consistent with the perspectives of sanitation, Penna aligned his racial discourse with the principle of the regeneration of the population. The term “revolutionary” indicates his rejection of traditional ideas on race, which had stagnated since the nineteenth century. His words also suggest he was more in line with the culturalist notion of race.¹ Crucially, he accepts miscegenation as a prognosis of the future when he sees human races moving towards homogeneity. The viability of a “single breed” also underpinned his perspective on a “Brazilian race.” Thus, unity became the objective of his racial thinking, with miscegenation as a unifying agent.

When defending racial mixing for the formation of a single race, Penna mentions the pivotal role of the sanitary movement in this purpose. Revisiting racial and climatic determinism was key for the reformist sense of the sanitation campaign. In this sense, there was no reason to subscribe to racist theses.

In Penna's discourse, disease, alcoholism, and illiteracy were the ills that supplanted deterministic understandings of the issue. This view was partially influenced by the travels undertaken by the Oswaldo Cruz Institute in the first two decades of the twentieth century, whose scientists shared this reformist view (Lima, 1999, p.86). The three topics were central to Penna's vision of molding the Brazilian as a "single, strong race." Lima and Hochman (1996, p.23) mention this concern of the sanitarian movement when debating the aspect of disease as a distinctive sense of Brazilianness. The movement proposed centralized, technically autonomous measures for the whole country, reinforcing the role of the state in public health. In particular, alcoholism took prominence in Penna's discourse as having responsibility for the degeneration of the race and as justification for his rejection of deterministic theses. As Nancy Stepan (2005, p.92) has noted, it was believed that racial poisons like alcohol could lead to "permanent, hereditary degenerations that in the long run could affect entire populations or nations."

The issue of alcoholism was present in every stage of the sanitation campaign and in Penna's work as a public figure. In his personal archive there are documents proposing the taxing of alcoholic beverages, speeches condemning their consumption, a list of works he consulted on alcoholism, and his extensive intellectual output. Central to his most important writings is *O Demônio da Humanidade* (The Devil of Humanity), published in 1922. The book has sixty pages devoted to the discussion of alcoholism in Brazil and worldwide. In it, Penna (1922a, p.60) denies that drink could be of a therapeutic nature or have any nutritional value in the diet. He also weighs up the arguments related to alcohol and heredity, as well as the "freedom" of society and the responsibilities of the state for control and surveillance. For him, the fight against alcohol dependency was a fight fought between regeneration and degeneration. The continued existence of alcohol in society would shape the country's future. The following passage sums up how he saw alcohol as a constitutive factor in the condition of being Brazilian, with drink being instrumental in racial degeneration:

We must purge our land of preventable diseases and vice, we must sanitize it physically and morally; dignify it through constant, fruitful work, releasing it to the future to all peoples, so that on this favored soil of the South American continent there may occur the mixing and blending of all races, for the constitution of a single race – the human race – whose characteristics are beauty, vigor, energy, solidarity, faith, good cheer, and altruism, and thus shall we become worthy of the superior psyche, which sets us apart from other beings, and which is surely when healthy our strength, the talent for good, the inspiration for betterment, the divine spark, which should be our guide and protector (Penna, 1922a, p.60).

Once again, we see sanitation being proposed as a vertical action for the racial betterment of the Brazilian population. The assumption of social vices, represented by alcoholism, was transformed into a public enemy standing in the way of the constitution of the "Brazilian race." The formation of a "single race" or "human race" was popularized in the 1925 book *La Raza Cósmica*, by the Mexican José Vasconcelos (1882-1959), who proposed that the "advent of a synthesized race from the mixing of all the types of races that existed, would coincide with the entrance of humanity to its final stage of development" (Zem El-Dine,

2017, p.121). In the mid-1920s, Mexico was in a similar situation regarding its racial identity, in which a portion of the population denied their indigenous roots. Vasconcelos's thesis, according to Stepan (2005, p.161), was designed to foster acceptance of racial mixing in the face of its constant devaluation. Lorena Zem El-Dine (2017, p.121-124) identifies Vasconcelos's influence on authors such as Plínio Salgado, Menotti Del Picchia (1892-1988), and Cassiano Ricardo (1894-1974). As far as Penna was concerned, even in 1922 he was expressing an understanding of race that was very much aligned with Vasconcelos. One notable feature in both is the rejection of racial determinism and the expression of a desired future for the nation based on racial homogeneity.

Alberto Torres was a decisive influence on Penna when it came to the rejection of racial determinism. Penna devoted part of the chapter on "remedy for evil" in *Saneamento do Brasil* to a demonstration of the relevance of Torres to his time, defining him as a patriot and "one of the most notable figures of the present Brazilian generation, for his integrity of character, and for the rare and sublimated culture of his lucid, penetrating, deeply observant and selective spirit, serving an enviable capacity for work and coordination" (Penna, 1918, p.83). Having read *A Organização Nacional* (The National Organization) and *O Problema Nacional Brasileiro* (The Brazilian National Problem), he defines them as a complete study of race, land, trends, and geographical and climatic conditions. Indeed, he qualified *A Organização Nacional* as a "monument of wisdom, the work of a scholar of immense culture and a profound thinker" (Penna, 1918, p.83). Torres disagreed with those who considered adaptation as a problem for Brazil's racial development. The influence of the German-American anthropologist Franz Boas (1858-1942) on the environment in racial formation was something Torres would have known about, and he in turn was read by Penna. As Ricardo Benzaquen de Araújo points out, Franz Boas had a lot of influence on shaping a new interpretation of Brazilian miscegenation, as can be seen, for example in the work of Gilberto Freyre. Neo-Lamarckism – central to Penna's thinking – became a way to explain racial formation tied to cultural, mesological, and biological influences (Araújo, 1994, p.39-40). As George Stocking (1968, p.184) puts it:

There is much in Boas' work to tie him to the tradition of neo-Lamarckian direct environmentalism, which was so widespread in the late nineteenth century. Several of his intellectual antecedents, including Rudolf Virchow, clearly entertained the possibility that certain acquired characteristics were inherited. Boas himself constantly emphasized the functional and environmental modification of physical type.

The influence of the environment on racial formation was fundamental to Penna's project for the development of the Brazilian nationality and to the denial of determinism, since each race would need its own time to develop. It is fair to say that Penna was impacted by Boas's work and understood the issue of race not as something static, but in transformation according to the environment. Sanitation was the tool that could be used to develop a nation in such a way as to prevent racial fusion from constituting a problem. This conception, as we will see below, was decisive in his version of eugenics.

Another important issue was the nation's ruling classes and racial interpretation. According to historian Thomas Skidmore (2012, p.180), Torres displayed an aggressively

anti-imperialistic economic nationalism little seen in Brazil before 1914. In Torres's view, it was the alienation of the Brazilian elite in relation to their own reality that was the main cause of the nation's problem (Skidmore, 2012, p.180). This is also seen in Penna's interpretation, given that "sanitary consciousness" was also aimed at reforming the consciousness of the elites.

This nationalist rhetoric fed into ideas such as the redemption of race and the condemnation of social factors as vectors of degeneration. Penna was responsible for directing practical actions in the social and political field, thereby admitting that responsibility for the way the nation was organized should fall on the shoulders of the ruling classes. Among the three elements responsible for this redemption, sanitation would be responsible for "opening for Brazil the regeneration of its people, the rehabilitation of its land, and the moralization of its politics" (Penna, 1918, p.IV). To regenerate was to believe in the possibility of bettering the Brazilian race through sanitary, educational, and interventionist measures. At the same time, it was about enabling a single and integrated people.

Whether due to the influence of Torres's national organization or the public health orientation proposed by Oswaldo Cruz, Penna, imbued with the nationalist spirit of the late 1910s, denied any argument that would condemn the Brazilian race. As Lima and Hochman (1996) point out, accepting deterministic theses was equivalent to acknowledging the doom of the Brazilian people. For him, sanitation was capable of enabling and shaping the nation. The sanitation advocated by Penna is based on an interpretation of the regeneration of the condemned, relieving them from determinism and pointing out their "real" problems by proposing new solutions (Lima, Hochman, 1996, p.23).

"Preventive" eugenics and sanitation

Penna's acquired his ideas about eugenics in a context in which a broad diversity of discussions were being had on the subject. As in other Latin American countries, eugenics was rarely translated in one homogeneous sense. Its reception depended on the interpretations made by the historical agents who embraced it, adjusting it to their own political and cultural convictions. Penna was no exception, insofar as his understanding of eugenics remained far from racial explanations associated with draconian proposals. This does not mean that his conception of eugenics did not lead to the defense of authoritarian policies. Here, I shall attempt to situate eugenics in his discourse and investigate how it tied in with his vision of sanitation and national unity.

The year 1917 marks the beginning of discussions on eugenics in Brazil. Concerned about consanguinity in marriage, the physician and pharmacist Renato Kehl gathered part of the medical class to discuss the problem. This was when the science of Francis Galton (1822-1911) was referenced as an argument to repudiate such marriages. In line with eugenic discourse, in January of the following year Kehl founded the São Paulo Eugenic Society (1918-1919), a scientific association where Penna served as one of its three honorary vice-presidents (Stepan, 2005, p.55-56).

Eugenics entered the discussion as a potential way of reinventing modern man on a scientific basis. Conditioned by heredity and appropriate to the ideals of a modern scientific

nation, it was a new tool of science to solve the national identity issue. Eugenics represented a symbol of modernity idealized by Brazilian intellectuals (Souza, 2016).

Penna's prestigious position in the newly founded society is proof of his prominence in the medical-scientific field and the need for society to expand its networks to the federal capital. In its scope, the society was understood as a specialized scientific organization dedicated to propagating eugenic principles, especially for the strengthening of the "Brazilian race." This generic model left open the interpretation of eugenics that was becoming institutionalized in the country. As Stepan (2005, p.55) notes, "eugenics in Latin America was largely an 'expert' phenomenon with conservative-reformist tendencies."

This tendency was seen in Brazil, where eugenics was harnessed in medicine to tackle issues such as venereal diseases, tuberculosis, alcoholism, degeneration, childbirth, and other topics that mobilized a large part of the medical, political, and intellectual classes. Eugenics, therefore, represented a reforming solution to social and moral problems.

For the expectations of eugenic propaganda, Penna occupied a geographically and intellectually strategic place, as he was leading a sanitation campaign in Rio de Janeiro. Although São Paulo was a center of political and ideological expansion, with a large literary field and periodicals publications,² Rio de Janeiro had greater medical and scientific articulation for the eugenics project, especially when eugenics was involved in sanitary and mental health reforms. The intellectual social interchange provided by the Brazilian capital city became fundamental for Kehl's project. As Gomes and Hansen (2016, p.24) see it, "intellectual sociability is understood as a constitutive practice of groups of intellectuals, which define their (cultural and political) goals and forms of membership – very variable, with differing degrees of institutionalization – to act within society at large."

When he moved from São Paulo to Rio de Janeiro, Kehl was entrusted by the Ministry of State for Justice and Internal Affairs, under the Epitácio Pessoa administration, to serve as an assistant physician with the medical commission of the city's rural disease prevention services. This commission was run by Penna at the time and it seems to have been he who recommended Kehl (1919). At the time, Penna was organizing the city's prophylaxis posts, and appointed Kehl as head of the posts in Merity and Raiz da Serra (Souza, 2006, p.96). There, he worked on the treatment of parasitic worms, the containment of malaria, and waterworks, following the same agenda as other posts. At the end of 1920, Kehl married Eunice, one of Penna's daughters.

In the theoretical field, Brazilian eugenics was initially aligned with neo-Lamarckian conceptions. Although Kehl demonstrated mastery of Galton's eugenics and the works on heredity by August Weismann (1834-1914) and Gregor Mendel (1822-1884), neo-Lamarckism was traditionally strong among his peers. This is because Brazil was an important representative of a less restrictive model of eugenics, as elsewhere in Latin America, and was not bound to the Mendelian interpretation. Due to the tradition of French science among the region's intellectuals, "many of the doctors and reformers who were drawn into eugenics in Latin America were not readily persuaded of the correctness of the Weismannian-Mendelian point of view" (Stepan, 2005, p.77). This factor reveals the proximity to neo-Lamarckian tendencies, dominant in the interpretation of eugenics until the end of the 1920s.

Given that science is connected to the political values of the society that produces it (Stepan, 2005, p.77), eugenics was linked to the campaigns and ideologies of the medical class of the period. Strictly speaking, neo-Lamarckian eugenics more effectively fulfilled the nationalist ideas of sanitarians who advocated environmental reforms as a precondition for social improvement. At a time when deterministic, racial, and climatic theories were being rejected, eugenics established optimistic dialogue with sanitation, because the combination of both would make it possible to regenerate the population through heredity and the environment.

Penna's involvement was important for the circulation of eugenics in the discourse of other sanitarians (Stepan, 2005, p.98). With its acceptance, eugenics was expressed as an extension of sanitation. This interpretation can be seen in the speech of the vice-president of the São Paulo Eugenics Society, Olegário de Moura, mentioning the mantra "to sanitize is to eugenize" (Stepan, 2005, p.97). According to Vanderlei de Souza (2006, p.78), the invitation for Penna to lead the eugenics campaign in Rio was strategic to get the city's intellectuals on board. By taking sanitation as his core resource, Penna' adopted a form of eugenic discourse that served the purpose of his plans for a sanitized nation.

Speaking at Colégio Jacobina school on the topic of "Teaching Hygiene," Penna recalled the influence of eugenics in a quotation of Francis Galton, referring to him as the "wise founder of eugenics, this painful and unfortunately true concept" (Penna, s.d.a, p.1). In the speech, he recommended women to be mindful of heredity, for it was women who were "mothers of families, with aptitude to generate, raise, and educate children physically, mentally, and morally, which is to say eugenically" (p.4).

The connection between eugenics and sanitation was manifested in the "preventive" mode of eugenics. That is, if the conception of "positive" eugenics was concerned with the reproduction of those who were adequate, and the "negative" was about controlling the reproduction of those deemed inadequate, "preventive" eugenics associated the sanitary practices with the health of the race and social reforms. Although the three currents circulated in Brazil, "preventive" eugenics was the one that operated in interaction with sanitation.

"Preventive" eugenics had been coined by the British eugenicist Caleb Williams Saleeby (1878-1940). From his perspective, eugenics should guide the population as to the dangers of racial poisons. In *Parenthood and Race Culture: an Outline of Eugenics*, published in 1909, he warned that racial poisons had been overlooked by the pioneers of eugenics (Saleeby, 1909, p.238). For Saleeby, this was a pressing consideration when thinking about the issue of heredity. As he points out in the book, "It thus becomes a eugenic duty to recognize and fight those substances which I call the 'racial poisons;' and we find ourselves involved in the task of what I call Preventive Eugenics, which prevents degeneracy due to parental intoxication or malnutrition" (p.18). By "racial poison," he meant substances of any nature that harmed offspring to the point of causing degeneration (p.220). According to Saleeby, alcohol, syphilis, and malaria were examples of racial poisons and venereal diseases that were of concern to "preventive" eugenics.

Penna was also influenced by papers presented by the French psychiatrists Valentin Magnan (1835-1916) and Alfred Fillassier (1871-1953) at the first International Eugenics Congress, held in London in 1912, when he asserted that degeneration by alcohol was one

of the most significant “racial poisons” in his interpretation of eugenics (Penna, 1922a, p.12). At the same event, Magnan and Fillassier introduced the studies of the Norwegian eugenicist Alfred Mjøen (1860-1939) to substantiate the thesis that alcohol was a cause of degeneration and the pressing need for regulatory measures to prohibit it (Penna, 1922a, p.14). For believers in “preventive” eugenics, alcoholism was a hindrance to the conservation of good heredity. We can see Penna seeking theoretical orientation from the results of the congress and dialogue with international intellectuals who worked with heredity and alcoholism. Accordingly, his theses concerning racial poisons – a constant concern in his anti-alcohol crusade – were in line with the principles of “preventive” eugenics set forth by Saleeby, which circulated widely in Latin America.³

Morbid depravity was seen as being represented by the diseases responsible for “hereditary decadence.” In *O Demônio da Humanidade*, Penna (1922a, p.4) identified alcoholism, syphilis, tuberculosis, and consanguinity as the four universal scourges of civilization. As Stepan (2005, p.91) points out, the effects of alcoholism as a racial poison were tributaries of the neo-Lamarckian version of eugenics. Latin American physicians were inclined towards the theory of “blastoforia,” which was held to be responsible for the corruption of germ cells. Penna considered alcohol responsible for reproducing degenerates, a key factor in the propagation of criminals, and a liquid that set the body up for diseases such as tuberculosis. From this point of view he held “ethylic heredity” accountable for the creation of “physical and moral monsters” and urged for state intervention (Penna, 1922a, p.10-11). Considering the effects of alcohol on heredity and society, he saw eugenics as a viable route for pursuing his anti-alcohol sanitation project.

Penna drew on the work of several authors, from eugenics and psychiatry, to corroborate the thesis of the harmful nature of alcohol for the formation of the “Brazilian race” and to suggest sanitary measures for its regeneration. The attention put on the external (environmental) agents of degeneration allowed a proximity to the overall field of sanitation in Brazil at the time. “Preventive” eugenics made sense to part of the medical community, since it was associated with social medicine. In this sense, the beginning of eugenics in Brazil can be identified as occurring in full harmony with sanitary concerns.

In 1920, in a speech entitled “Army and Sanitation” given by Penna (1920a) at the Military Club, on the invitation of General Ferreira do Amaral (1865-1929), he brought sanitation closer to the eugenic ideal of building a nationality. He used the term “eugenization” together with hygiene at the end of the speech, citing it as a principle for the regeneration of society. Although the word appears only in the concluding section, the thrust of the argument ties eugenic and sanitary perspectives together. Penna saw prophylaxis and sanitation as resources to breed a stronger race. Similar to Saleeby’s “preventive” eugenics, he counted diseases such as yellow fever and malaria as eugenic and held them responsible for degrading the species and degenerating the race (Penna, 1920a, p.28).

The beginning of Renato Kehl’s eugenics campaign was also closely linked to hygiene. In two works, *Eugenia e Medicina Social* (Eugenics and Social Medicine) and *Melhoremos e Prolonguemos a Vida: a Valorização Eugênica do Homem* (Let us Improve and Prolong Life: the Eugenic Appreciation of Man), published respectively in 1920 and 1922, the marriage of “preventive” eugenics and sanitation is clear. Penna wrote the prefaces of both books.

In the preface to *Eugenia e Medicina Social*, Penna develops his conception of the “preventive” application of eugenics. He argues that the function of Galton’s science was to extinguish and preemptively tackle diseases. Eugenics, he argues, was responsible for containing “morbidity,” and alcoholism was a key concern. He considers the actions of the National League Against Alcoholism as complementing the Pro-Sanitation League of Brazil and highlights the influence of the environment on the “physical, moral, and intellectual” development of future generations. Finally, he concludes that eugenics was a science “that encompasses the most important social problems, and closely follows hygiene, its ‘precursor’ in the betterment of humanity” (Penna, 1920b, p.IV; emphasis added).

The conception of eugenics was tied to sanitation, and Penna made a point of noting that hygiene was a precursor of eugenics. In his words, “from the flanks of hygiene emerged eugenics and social medicine” (Penna, s.d.b, p.2). In other words, he adjusted eugenics to the perspective of his sanitation campaign, especially in terms of the containment of alcoholism and the prevention of diseases, while also considering the environment as an important factor in the pursuit of the eugenic goals.

Based on these arguments, in the preface of *Melhoremos e Prolonguemos a Vida*, Penna (1922b, p.IV) defines eugenics in terms of hygiene and prophylaxis. Thus, eugenics was responsible for “healing and bettering the race, making it vigorous, fearless, cheerful, productive, and victorious.” It is worth remembering here that Penna’s understanding of race envisaged a future state of racial unity. Consequently, the Brazilian race was not made up of deterministic racial hierarchies based on climate or skin color. Accordingly, “preventive” eugenics was more widely accepted precisely for its social reformist nature.

The relationship with eugenics was a way of extending the sanitation campaign, as it enabled intellectual interchange with other scientific networks and an expansion of its actions beyond Rio de Janeiro. Penna was well aware that propaganda was the cornerstone for the adoption of sanitation measures.

If gaining proximity to the sanitary movement was a strategy Kehl employed to recruit new supporters in Rio’s scientific milieu, ironically, it meant that eugenics became inextricably linked to the sanitation agenda. In theory, due to the neo-Lamarckian character of Latin American eugenics, the union did not seem to represent a problem for Kehl. His writings from 1917 into the 1920s exhibit his neo-Lamarckian beliefs and an alliance with sanitation as an identity marker of Brazilian-style eugenics. To clarify, I reproduce part of an interview Kehl gave to the newspaper *A Noite* on June 3, 1920, entitled “The problems of racial regeneration.” In reference to the health problems and parasitic diseases he encountered in his work at the prophylaxis posts, he said:

Our government is fully apprised of this situation and will, at an appropriate hour, commence the intense sanitation campaign, because sanitation corresponds to the eugenics denominated preventive, whose goals are the defense of the race against all factors of degeneration, be they morbid (tuberculosis, syphilis, malaria, worms etc.), be they social ills. This is why preventive eugenics corresponds to the social medicine defined clearly by Tropiano, and makes endeavors for rural and urban sanitation, the regulation of labor, the protection of childhood; that is, it consists of the active organization of prophylactic hygiene, protective of the health of individuals and the collective (Kehl, 3 jun. 1920).

This excerpt is exemplary for us to observe the proximity of eugenics to sanitation from Kehl's perspective. The logic of "to sanitize is to eugenize" was present in his initial discourse of eugenic propaganda. For Souza (2006, p.117-118), the "preventive" eugenics model was the hallmark of Kehl's eugenic trajectory until 1927, mainly because it was constituted of topics related to the interest of a large portion of the nation's medical class.

Precisely because "preventive" eugenics could be adapted to the sanitation reform program, Penna expanded the notion of "to sanitize is to eugenize," defining its application as an auxiliary measure for sanitation, in conjunction with social medicine. Eugenics would contribute to the moral reform of society, permitting enhanced sanitary awareness. In 1929, after the first Brazilian Congress of Eugenics, he gave a talk entitled "National Canker" in which he stated that "sanitation, hygiene, social medicine, and hygiene education, for the implementation of a sanitary consciousness, constitute the foundation of eugenics, without which it cannot be practiced unless in a deficient manner with a very limited scope" (Penna, 22 jul. 1929, p.17). The same text would be reproduced in the journal *Boletim de Eugenia* in 1929.

Although Kehl initially aligned himself with "preventive" eugenics, his orientation, as Souza (2006, p.117-118) mentions, changed in the late 1920s. Regarding the concept of "preventive" eugenics, Kehl (1929, p.154) went on to argue that its purposes were confused with those of hygiene. However, for sanitarians like Penna who subscribed to this theoretical conception, the issue was never treated as a point of contention, but as consistent with sanitation campaigns and prophylaxis practices. This understanding was appropriate to the place that eugenics occupied in Brazilian and Latin American scientific thinking. Kehl's theoretical shift, around 1927, did not affect Penna's understanding of eugenics. Even in the text reproduced in *Boletim de Eugenia*, a publication run by Kehl, Penna maintained his interpretation of "preventive" eugenics as a way to combat social vices:

The hygienist is responsible not merely for indicating prophylactic measures and preventive techniques for fighting disease and vices, and for propagating the learning of hygiene and eugenics, but above all for scrutinizing the social factors which fertilize or sterilize the terrain, making it refractory or propitious for the development of pests and weeds (Penna, 1929, p.18).

Although he uses eugenic metaphors such as "fertilize or sterilize the terrain" or "development of pests and weeds" to refer to the development of individuals overcome by racial poisons, Penna maintains the initial discourse of eugenics as a preventive practice. As a sanitation official, Penna maintained his affiliation to the mode of eugenics that was allied to the reformist ideas he proposed. Moreover, there was not so much room for eugenics in his sanitation project, where it was considered just another approach for tackling the "hygiene of the race." At the same time, Penna shared interest in topics of great appeal to eugenicists, such as anti-alcohol campaigns, which motivated him to remain involved in the movement for more than a decade. Penna also saw in the constitution of the eugenics movement a way to propagate the ideas of sanitation.

Even after Kehl's theoretical change of heart, Penna's publication in *Boletim de Eugenia* demonstrates his importance as an authority in public health, making it important to

ensure his continued support. Later, in 1931, when the Brazilian Central Commission of Eugenics was created, with the aim of spreading the word about heredity and eugenics and contributing to public policy proposals involving eugenics, Penna was listed as a full member, with his title of director-general of the National Department of Public Health. Penna's "preventive" eugenics was one of several scientific approaches available to contribute to the viability of his plans for a healthy nation. Following its reformist ideology, there was only room for eugenics if it had the power to help transform society, far from any racial or anthropometric hierarchies.

Since eugenics represented a modernizing trend and had a positive qualitative connotation for the population, its agenda was adapted to the debate among the physicians and intellectuals who proposed strategies for transforming society through the science. Strictly speaking, it was a concept used by several historical actors to express the desire for social improvements allied with the idealization of progress. For Penna, sanitizing was synonymous with eugenizing, which justified the need for sanitation. Together with childcare, social medicine, "maternalology," and health education, eugenics was grafted onto the vast trunk of the social intervention and sanitation project.

Final considerations

In this paper I have shown how Penna's conception of race was subservient to his nation-building project, referred to as "sanitary consciousness" (Carvalho, 2019). Thus, it was not possible to condemn race and at the same time to propose its regeneration through public health reforms. The Brazilian race had to be framed as capable of transformation for his reform proposal to make sense. After all, why reform public health if the race was already condemned? Penna therefore put great store on Alberto Torres's works on the environment and racial formation of Brazilians and he incorporated it into his discourse about the sanitation of the country. The marginalization of racial determinism meant valuing the assets the nation had, which, in his reformist interpretation, could be recovered and led towards the longed-for level of civilization.

The discussion about race brought Penna closer to "preventive" eugenics, whose reformist proposal was in line with the idea of the absolution of race. This conception of eugenics suggested making improvements to the environment and fighting racial poisons in order to improve heredity and bring forth a new level of population through state assistance. The adoption of a neo-Lamarckian conception was welcome in the effort to align sanitation and eugenics. This reformist orientation aimed to modify both physical and hereditary conditions and to contribute to the construction of the Brazilian nationality.

As we have seen, Penna used the studies of psychiatrists Valentin Magnan and Alfred Fillassier, published at the first International Eugenics Congress, as a theoretical reference to support his theses about the degeneration caused by alcohol consumption and how drinking constituted a "racial poison" for heredity. Although he did not directly cite the works of the British scientist Caleb Williams Saleeby, who disseminated the idea of "preventive" eugenics, Penna's eugenic discourse was imbued in this debate, which proved decisive for dialogue with Brazilian eugenics. The different conceptions of eugenics in Brazil therefore competed

with the nation-building projects elected by different social groups. That is why many Latin American physicians and reformers diverged from Weismannian-Mendelian thinking.

Following this argument, the formation of eugenics in Brazil, at least in its initial phase, between the late 1910s and early 1920s, was strengthened by its connections with the sanitary movement and Belisário Penna. However, as noted by authors such as Vanderlei de Souza (2006, 2016, 2017) and Pedro Muñoz (2015), Brazil also saw more radical interpretations that attracted psychiatrists, physicians, and scientists, and which were aligned not necessarily only with the sanitary movement. This does not mean that the model of eugenics advocated by Penna was not restrictive enough; on the contrary: for him, the state should assume the surveillance of the population and curb practices that threatened the social reformism it proposed. The argument of “racial poisons” in relation to “preventive” eugenics allowed the appearance of proposals for “anti-alcohol legislation,” which was championed by Penna (Carvalho, 2019, p.122). That is, “the awareness that a sick individual could cause harm to others meant the perception that the health conditions of an individual were not a private matter, much less a natural right, such as individual freedom” (Hochman, 2012, p.83-84).

As for its influence in rallying the sanitarian movement led by Penna, eugenics was a scientific theory that was held to have the power to help in the social regeneration of Brazilians through sanitation. That is why it was not central to his discourse, operating always in a supporting role for the proposal of “sanitary consciousness.” Despite Kehl’s change of theoretical orientation to Mendelian eugenics in the late 1920s, Penna stayed true to his original understanding of eugenics, which was consistent with the majority who engaged in the sanitation debate. This factor did not mean Penna abstained from participating in eugenic projects, since he was a prominent figure in the national scenario in terms of public health (especially in the 1930s, when he was director of the National Department of Public Health). In any case, it was coherent for Penna to say that “to sanitize is to eugenize” because it set a hierarchy in which the application of eugenics was conditioned by sanitation.

NOTES

¹ This interpretation of Penna is based on *O Problema Nacional Brasileiro*, by Alberto Torres. In this context, Torres (1914, p.49-50) cites Boas and Ratzel to state that “the relative position, the hierarchy of races, at different times, is a simple phenomenon of social evolution.” This point, Torres concludes, indicates that science views the human species from the perspective of complete equality. Penna (31 ago. 1918, p.1) also cites Herbert Spencer to justify the need for social and human unity: “To be a good animal is the first precondition for success in life; to be a nation of good animals is the first precondition for national prosperity.” For a discussion about Penna’s medical and sociological (or “sociological by conviction”) nature, see Carvalho (2019).

² The periodicals in which scholarly ideas were circulated include *O Estado de S. Paulo*, from the Mesquita Group, and *Revista do Brasil*, edited by Monteiro Lobato.

³ The scientific discussion on the effects of alcoholism brings to mind authors who used the concept of degeneration, like Bénédict Morel (1809-1873), Valentin Magnan (1835-1916), and Emil Kraepelin (1856-1926). Penna used the latter two when discussing the heredity of alcoholism. These authors influenced medical and psychiatric research in the nineteenth and twentieth centuries. With the advance of these theses and the consolidation of psychiatry in Brazil with Juliano Moreira and Afrânio Peixoto, for example, concern with organic causes and the questioning of racial or climatic determinants for mental diseases

gained notoriety in the realm of science (Silva, 2014, p.190). It was argued that degeneration was influenced by external elements in the corruption of individuals. This implied it was possible for a population to be regenerated, with the principles of hygiene playing a fundamental role. Both Morel and Magnan saw alcoholism as an eminently hereditary pathology (Caponi, 2012, p.103). Citing Magnan at length, Penna (1922a, p.23) appropriated the thesis that any individual in society was subject to degeneration by alcohol. Meanwhile, Penna drew on Kraepelin for statistical data on alcoholic degeneration and social phenomena and their contexts. Similarly, he cited the work of Afrânio Peixoto to argue that the Brazilian climate tends to induce alcohol consumption, especially because of its thermogenic effect (Penna, 1922a, p.25).

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