

The political-scientific context of eugenics in the Brazil-Uruguay axis: a critical analysis of the political quadrant proposed by Maurizio Meloni

O contexto político-científico da eugenia no eixo Brasil-Uruguai: uma análise-crítica do quadrante político proposto por Maurizio Meloni¹

Leonardo Dallacqua de Carvalho*
<https://orcid.org/0000-0002-7893-3092>

Angelo Tenfen Nicoladeli**
<https://orcid.org/0000-0003-3242-2606>

Abstract

This article aims to test the political quadrant developed by Maurizio Meloni as an analytical and didactic tool to understand the political perspective of eugenics. Considering the intricate political and scientific complexity of the eugenics movement, the political quadrant is presented as an analytical structure aimed at delving into different concepts of heredity and eugenic policies defended by different positions in the quadrant. Although it was originally conceived based on cases of European and American eugenics, one must ponder the question of whether or not Latin American experiences can be contextualized within this framework. In this article, we will briefly present four prominent figures in the field of Latin American eugenics in Brazil and Uruguay, namely, Renato Kehl in his different phases, Roquette-Pinto, Paulina Luisi and Belisário Penna, and position them within the quadrant as a way of exemplifying the application of this analytical structure. Lastly, we examine the issue of whether the proposal of Maurizio Meloni's political quadrant is applicable in case studies of Latin American eugenicists or if it is actually an inaccurate tool, given the contextual plurality of eugenics.

Keywords: Eugenics. Brazil. Uruguay. History of Sciences.

¹ Research funded by CAPES and Oswaldo Cruz Foundation/FIOCRUZ.

* Holder of a Ph.D. in History of Science from Casa de Oswaldo Cruz. Professor of the Postgraduate Course in History, at the State University of Maranhão (PPGHIST/UEMA). E-mail: leo.historiafiocruz@gmail.com.

** PhD student in History of Sciences and Health (PPGHCS/COC/FIOCRUZ). E-mail: angelonicoldeli@hotmail.com.

Resumo

Este artigo tem como objetivo testar o quadrante político desenvolvido por Maurizio Meloni como uma ferramenta analítica e didática para a compreensão política de eugenia. Considerando a intrincada complexidade tanto política quanto científica do movimento eugênico, o quadrante político é apresentado como uma estrutura analítica que visa aprofundar diversas concepções de hereditariedade e das políticas eugênicas defendidas por diferentes posicionamentos no quadrante. Embora tenha sido originalmente concebido com base em casos da eugenia europeia e estadunidense, é necessário considerar se as experiências latino-americanas podem ser contextualizadas dentro desse quadro. Neste artigo, apresentaremos brevemente quatro figuras proeminentes no campo da eugenia latino-americana do Brasil e do Uruguai e as posicionaremos dentro do quadrante como forma de exemplificar a aplicação dessa estrutura analítica: Renato Kehl, em suas distintas fases, Roquette-Pinto, Paulina Luisi e Belisário Penna. Ao final, queremos questionar se a proposta do quadrante político de Maurizio Meloni é eficaz para os estudos de caso de personagens eugenistas da América Latina ou se, na verdade, é uma ferramenta imprecisa dada a pluralidade contextual da eugenia.

Palavras-Chave: Eugenesia. Brasil. Uruguai. História das Ciências.

Introduction

What is new in discussions about the political aspect of eugenics? More than three decades ago, literature claimed that eugenics and political projects were inseparable. However, eugenic ideals remain present in public debate and are adopted by certain groups, whose purpose leads to population control policies. Questions arise concerning eugenics-based public policies, such as the possibility of legislation for the abortion of fetuses with congenital anomalies. In the field of contemporary politics, eugenic ideas are endorsed by far-right groups that propose exclusion policies for refugees, immigrants and racial and gender groups. Given this scenario, how does one deal with discussions that cast the political spectrum into the historical past of eugenics, particularly in the first half of the 20th century? Today, the term “eugenics” carries a historical and ideological stigma that serves to link political opponents to their practices and condemn them for acts against humanity. Thus, in the historical sense, eugenics is seen as a science used only by extreme right-wing groups.

The risk of anachronism is practically inevitable when one attempts to project the political past of eugenics into the present in search of ruptures or continuities. Although there are similarities and differences, the historian's role is to contextualize within the scope of a selected past. Hence, the idea is not to disqualify the contemporary appropriations of eugenics associated with far-right groups, for example, but rather to address the connections between eugenics and political ideology from a historical perspective, as proposed by Maurizio Meloni in his analysis of the first half of the 20th century.

In an article published in 1894, Diane Paul² stated that eugenics was widely shared by the left, in the figure of Marxists and Fabians. To exemplify, she mentioned people such as Beatrice Webb, Sidney Webb, George Bernard Shaw, Havelock Ellis, H. J. Laski, Graham Wallas, Emma Foldman, H.G. Wells, Edward Aveling, Julian Huxley, Joseph Needham, Muller, Paul Kammerer, among others.

In the collection *The Wellborn Science*³, Mark Adams examined the political relationships between eugenics and political ideologies. In his historical and conceptual review, he mentions that one of the great myths surrounding eugenics was to characterize it as an exclusive product of a reactionary or right-wing policy. Adams⁴ recalls that geneticists such as Russian geneticist Alexander Sergeevich Serebrovsky, American geneticist Hermann Joseph Muller and British-Indian scientist John Burdon Sanderson Haldane declared themselves communists and defenders of eugenic principles. By pointing out the multiple facets of the political nature of eugenics, Adams sought to distance himself from essentialism and propose a broadening of the investigative and comparative methods of these studies.

Not surprisingly, in the same collection, Adams dedicates a chapter to the study of eugenics in Russia between 1900 and 1940. The example of geneticist Hermann Muller with Soviet eugenics reveals how eugenics and politics were related. Muller was a staunch eugenicist and placed Galton's theory in a social economic perspective. For him, genetic selection represented the final step of the communist revolution.

² PAUL, Diane. Eugenics and the Left. *Journal of the History of Ideas*. [S.l.], v. 45, n. 4, 1984, p. 567-590.

³ ADAMS, Mark. Toward a comparative history of eugenics. In: ADAMS, Mark (org.). *The Wellborn Science: eugenics in Germany, France, Brazil, and Russia*. New York: Oxford University Press, 1990.

⁴ *Ibid.*, p. 220.

In the same vein, Véronique Mottier⁵ maintains that, from the outset, eugenics has been intertwined in society and politics, constituting both a science and a social movement. Following Adams' perspective, the author cites French anthropologist, co-founder of the French Workers' Party and socialist Georges Vacher de Lapouge, whose ideas suggested that men should engage in "selective breeding," that is, a kind of "sexual service" on behalf of the nation. Another case mentioned by Mottier⁶ concerns a Bolshevik movement that emerged in the USA and the United Kingdom in the 1930s, which 'considered the Soviet Union the only country that had favorable conditions for the application of a scientifically based policy for population improvement.

Leo Lucassen⁷ joins this debate to discuss the importance of theories of social reform, from a eugenic standpoint, for Fabians, Marxists and social democrats. This author comments on the divergence of opinions about the meaning of eugenics for the left. According to him, there is a group that considers biological theories in their diffusion through Europe and the Americas in the first half of the 20th century, which strongly appealed to left-wing social reformers. Another group believes that the relationship between eugenics and the left was simply an "opportunistic flirtation" and did not constitute a structural position in the philosophy of these ideologists. Lastly, Lucassen outlines a third group that argued that the Fabians were not "true socialists." The author suggests that in countries such as Germany, Switzerland or Scandinavia, eugenic ideas and programs were easily co-opted within the ideologies of welfare states and in dialogue with social democrats.

The interactions between the eugenics movement and feminisms have been a hotly debated topic among historians. According to Nancy Stepan⁸, some scholars argue that eugenics is explicitly anti-feminist and conservative, for it seeks to control female sexuality and restrict women's roles to the maternal and reproductive sphere. On the other hand, some researchers highlight eugenic initiatives in maternal and child health, sexual hygiene and sexual education, interpreting eugenics as more reformist and associated with the agendas of the political left, even suggesting a proto-feminist attitude.

⁵ MOTTIER, Véronique. Eugenics and the State: Policy-Making in Comparative Perspective. In: BASHFORD, Alison; LAVINE, Philippa Levine (orgs.). *The Oxford Handbook of the History of Eugenics* (Oxford Handbooks). Oxford: Oxford University Press, 2010.

⁶ Ibid.

⁷ LUCASSEN, Leo. A brave new world: the left, social engineering, and eugenics in twentieth-century Europe. *International Review of Social History*. [S.l.], v. 55, n. 2, 2010, p. 269-296.

⁸ STEPAN, Nancy Leys. *The hour of eugenics': race, gender, and nation in Latin America*. Ithaca: Cornell University Press: 1991, p. 104.

However, given the diversity and complexity of the eugenics movement in more than 30 countries, it is possible that eugenicists were anti-feminist in some regions, while in others they adopted a proto-feminist stance.

Upon examining the relationship between feminism and eugenics, Klausen and Bashford⁹ identify two perspectives in historiography. One of them minimizes the genuine interest of many feminists in eugenic ideas and policies aimed at improving the race through selective breeding. It is argued that the relations between feminism and eugenics were strategic, a tactic within the great struggle for the emancipation of women.

In the midst of this debate, we position the quadrant put forward by Maurizio Meloni, who, based on his intellectual actors, intends to create a didactic proposal in the form of a political quadrant for eugenics. To begin with, although the success of his choices can be considered in the analysis of some recognized intellectual and political figures in dialogue with the social engineering of eugenics, the formula cannot be extended to other contexts, such as that of the formation of Latin American eugenics.

Although Meloni recognizes that his quadrant cannot be generalized, it is perilous to suggest a complete and defined eugenics. This hypothesis is in line with the historiography of comparative eugenics, in which the contextual particularities and those of its intellectual actors lend shape to what we call polymorphous eugenics.

In this article, we will briefly present four prominent figures in the field of Latin American eugenics and position them within the quadrant, in order to exemplify the application of this analytical structure: Renato Kehl in his different phases, Roquette-Pinto, Paulina Luisi and Belisário Penna. Lastly, we will ponder whether the proposal of Maurizio Meloni's political quadrant is applicable to case studies of eugenicists from Latin America or whether it is, in fact, an inaccurate tool given the contextual plurality of eugenics.

Eugenics and the Political Quadrant

So far, based on recent historiography, we have sought to demonstrate how broad, complex and diverse the eugenic movement was. As Vanderlei de Souza¹⁰ stated, eugenics is characterized precisely “[...] by its chameleon-like

⁹ KLAUSEN, Susanne; BASHFORD, Alison. Fertility control: Eugenics, Neo-Malthusianism, and feminism. In: BASHFORD, Alison; LEVINE, Philippa. *The Oxford handbook of the history of eugenics*, 2010, p. 109-110.

¹⁰ SOUZA, Vanderlei Sebastião de. Por uma nação eugênica: higiene, raça e identidade nacional no movimento eugênico brasileiro dos anos 1910 e 1920. *Revista Brasileira de História da Ciência*, [S.l.] v. 1, n.

ability to serve different ideological projects.” Thus, the idea is not to downplay eugenic projects historically linked to the right and the extreme right, but rather to expand the scope of analysis of eugenics based on Meloni’s quadrant.

Maurizio Meloni and the significance of his work

Maurizio Meloni is a sociologist and social theorist who studies the relationships between biology and society. He is currently Associate Professor at the Alfred Deakin Institute for Citizenship and Globalization at Deakin University in Australia, and holds a PhD in Social Theory from the University of Catania in Italy and a Master’s in Philosophy from the University of Naples.

Meloni is the author of several books and articles on the history and philosophy of biology and medicine, with emphasis on epigenetics. One of his most important books is *Political Biology: Science and Social Values in Human Heredity from Eugenics to Epigenetics*¹¹, in which he analyzes how conceptions of heredity and biological plasticity have changed over time and how they have been influenced by social and political values. In this book, he proposes a political quadrant for eugenics, based on two axes: the degree of human intervention in inheritance and the degree of social equality sought through intervention. Meloni shows how different forms of eugenics fit into this quadrant and how they relate to dominant political ideologies. The political quadrant appears as a didactic and theoretical tool to frame intellectual actors involved in eugenics and its possible association with certain political spectrums.

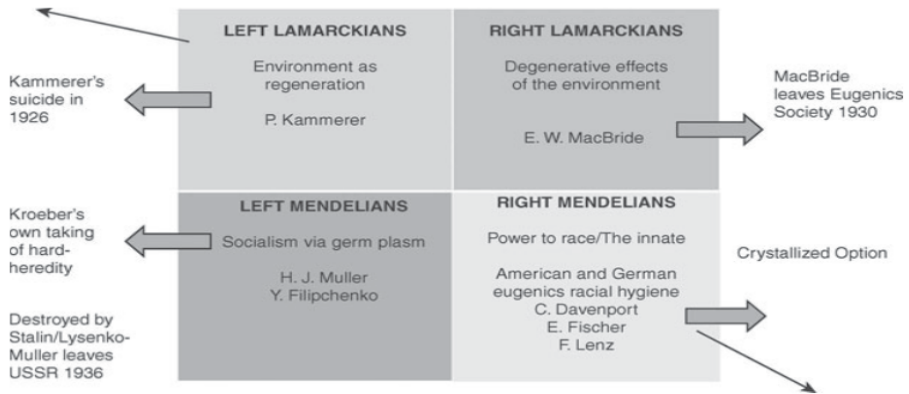
Considering the various eugenics that emerged in different contexts, allied to different ideological political-scientific movements, the author creates what he calls a political quadrant (Figure 1) of eugenic movements, which, on the “x axis,” differentiates between political right and left, and, on the “y axis,” illustrates the difference between Mendelians and neo-Lamarckians. In general terms, the author characterizes four possible eugenics: right-wing and left-wing Mendelians, and right-wing and left-wing neo-Lamarckians. Each of the four positions in the quadrant has its own distinct conception of heredity and defends specific eugenic policies, consistent with its worldview and the societal project it believes in, and all of them differ from the others.

2, 2008, p. 146-163.

¹¹ MELONI, Maurizio. *Political biology: Science and social values in human heredity from eugenics to epigenetics*. Basingstoke: Palgrave Macmillan, 2016.

Although Meloni developed his quadrant by analyzing cases of European and American eugenics, we believe it is essential to bring this formula to Latin American experiences, since its application may be problematic precisely because of the way eugenics developed in those countries.

Figure 1: Maurizio Meloni's Political Quadrant of Eugenics



Source: Meloni¹²

According to Meloni¹³, up to the 1930s, the debate about sociopolitical implications deriving from studies on human heredity was plural and complex. The interpretations of August Weissmann's theories of the continuity of germplasm, Mendelian laws, and acceptance or repudiation of the inheritance of acquired characteristics, or even the scope of the Darwinian theory of evolution, were not at first obvious and indisputable. Although eugenics today is often associated with a right-wing phenomenon whose discourse involves scientific precepts of "hard" or Mendelian heredity, other interpretations of both a scientific-epistemological and political nature were possible in the early days. Over time this plurality was lost; however, in the first half of the 20th century, both the right and the left managed to politicize Mendelian and neo-Lamarckian¹⁴ heredity. By Mendelian heredity we understand the notion of heredity that necessarily excludes any inheritance of acquired characteristics, i.e., inheritance is defined by the content of the germ cells.

¹² Ibid., p. 216.

¹³ Ibid., p. 93.

¹⁴ Ibid.

Neo-Lamarckian heredity recognizes the influence of the environment and the transmission of characteristics acquired throughout the life of an organism to its descendants. In other words, characteristics developed during life can be inherited by descendants.

As Maurizio Meloni¹⁵ points out, before the notion of eugenics became crystallized¹⁶, that is, before this notion was associated with right-wing politics, which is based on Mendelian heredity, conceptions were varied. According to the neo-Lamarckian notion of heredity, both racist and reactionary political beliefs could be mobilized in the name of environmental effects. On the other hand, egalitarian, radical and communist discourses were also defended by eugenicists who adopted Mendelian heredity¹⁷.

In the following sections, we will place greater emphasis on lesser-known eugenic beliefs. Right-wing Mendelian eugenics, or the “crystallized” conception of the movement – the one characterized by the search for racial purity, eternalized in the Nazi Holocaust, in nationalist, anti-communist and anti-Semitic ideology, which resulted in forced sterilizations and genocide in concentration camps, and which banned marriages and carried out horrible experiments on twins in the Auschwitz camp¹⁸ – will be given little space in the following pages.

Part of the objective of this article is to criticize the dimensions of the eugenics movement that fall within three of Meloni’s four quadrants: right-wing neo-Lamarckian Eugenics, left-wing neo-Lamarckian Eugenics and left-wing Mendelian Eugenics.

Right-wing neo-Lamarckian eugenics

Lamarckian ideas are generally associated with social reforms, and are not linked to political radicalism and socialism¹⁹. This apparent affinity of Lamarckism with left-wing notions seems coherent when one examines how Nazi eugenics embraced a completely anti-Lamarckian Weismannian

¹⁵ Ibid.

¹⁶ Using the term “crystallized” coined by science historian Loren Graham, Meloni argues that crystallized eugenics refers to the set of beliefs that became widely known after the end of World War II, which many considered to be the only valid example of eugenics. Crystallized eugenics, represented on the spectrum by right-wing Mendelian eugenics, reflects a particular alignment between science and political values that culminated in the Nazi Holocaust (Ibid., p. 94).

¹⁷ Ibid.

¹⁸ LEVINE, Philippa. *Eugenics: a very short introduction*. Oxford: Oxford University Press, 2017.

¹⁹ MELONI, op. cit., p. 96.

defense. However, this conception is misleading. Neo-Lamarckism was an important element of a 19th century racist and classist agenda that continued throughout the 20th century²⁰.

However, this should be explained properly, as Meloni points out²¹:

To be fair to Lamarck, however, we must add that his brand of Lamarckism was a truncated version of the inheritance of acquired characters, which emphasized the passive reception and transmission of deleterious characteristics rather than the acquisition of positive characteristics in active response to their environments.

In other words, Meloni's interpretation is that right-wing neo-Lamarckian eugenics focused on how the environment would be a constant source of morbidity, able to permanently alter, weaken and poison heredity. Therefore, to be identified as belonging to this current of eugenics, a person would necessarily have to emphasize the pathogenic properties of the environment, often referred to as "racial poisons," and highlight the hereditary transmission of these acquired deleterious characteristics, believing that this irremediable process prevents the affected groups from fully exercising their citizenship²².

The first school of thought that fits these criteria is medical degenerationism, a belief that circulated widely in medical and social literature in the 19th and early 20th century. Degenerationists assumed the presence of "racial poisons," which included alcohol and venereal disease, in addition to accelerated industrialization, poor hygiene conditions, overpopulation, and the presence of slums, whose inhabitants were considered addicts and ignorant²³.

Another distinct variant of right-wing neo-Lamarckism, which emerged after medical degenerationism, was neo-Lamarckian racism. This ideology was based on the idea that races were formed directly through the inheritance of acquired characters and through environmental influences. Races were believed to develop through the inheritance of locally determined adaptations²⁴.

²⁰ Ibid., p. 97.

²¹ Ibid., p. 97.

²² Ibid., p. 98.

²³ Ibid., p. 98.

²⁴ Ibid., p. 99.

Both medical degenerationism and neo-Lamarckian racism shared the belief that positive habits and benefits of education and moral progress could only be inherited by so-called “superior races” or advanced cultures. As Meloni points out, it was “progress for some, not for all.”²⁵

Left-wing neo-Lamarckian eugenics

Trust in the power of regeneration is the distinctive feature of left-wing neo-Lamarckian eugenics. While right-wing Mendelian eugenics defended the permanence of pure racial lineages and right-wing neo-Lamarckians assumed a certain asymmetry, in which only the “superior races” could progress, left-wing neo-Lamarckian eugenics recognized the remarkable regenerative power of the environment.

Common environments could thus transform distinct races into homogeneous ones. Instead of emphasizing degenerative processes and harmful environmental influences, they focused on environmental regeneration and rejuvenation, which would, thereby, favor a transformation in humanity²⁶.

Meloni²⁷ highlights this eugenicist current through the example of Austrian biologist Paul Kammerer. The author draws attention to the fact that it is important to understand Kammerer’s theory not as a departure from the eugenics movement, but as an alternative form of it, just as eugenic as Davenport in the USA or Pearson in England. According to Meloni²⁸:

... rejuvenation and regeneration would promote the biological transformation of humanity. These were not merely abstract ideas, but also a series of invasive techniques. Steinach’s methods of rejuvenation included testicular transplantation, vasoligation, and vasectomy. Kammerer suggested using testicular implants to influence sexual desire in homosexuals and hermaphrodites and administering mild radiation to women’s ovaries to increase their breastfeeding ability.

In other words, Kammerer’s eugenics may be understood as “productive.” Far from being simply a critique of the selectionist bias of

²⁵ Ibid., p. 100.

²⁶ Ibid., p. 113.

²⁷ Ibid., p. 117.

²⁸ Ibid., p. 113.

right-wing Mendelians, who could only alter the distribution of good or bad genes without creating traits, Kammerer's eugenics could transform political action into an "organic technology," leaving a positive legacy for subsequent generations²⁹.

An intellectual who helps us complexify this distinction between left- and right-wing neo-Lamarckism is Belisário Penna, who can be classified as either right-wing or left-wing, according to Meloni's quadrant. This is because he saw the environment from the standpoint of both degeneration and regeneration. The author of *Saneamento do Brasil* (1918) (*Sanitation in Brazil*) believed that, through the development of a national "awareness about sanitation" aligned with preventive eugenics, the Brazilian race could be transformed by the environment. Thus, health reforms led by the State enabled the regeneration of the Brazilian race. Restrictive measures, in turn, were also an important method to prevent degeneration, as in the case of alcoholism or malaria³⁰.

By choosing awareness about sanitation as a proposal for environmental regeneration, Penna can be seen as flirting with the quadrant on the left. However, this viewpoint disappears when one analyzes his political path and intellectual productions. Penna's political activity and speech condemned left-wing movements, and at the end of his life, he allied himself with the integralists who, on the political spectrum, were antagonistic to what we consider left-wing at that time. His political thinking involved nationalist ideas, so racial regeneration was influenced by this position. According to Castro-Santos³¹, the health movement of the First Republic, led by Penna, occupied itself with an ideological project for the construction of nationality.

At a conference held at the University of Paraná in 1921, Penna explained that he considered his notions revolutionary, admitting that there is no such thing as racial superiority, but rather mindsets that are more advanced than others. In the same lecture, he stated that the human process was moving

²⁹ Ibid., p. 111.

³⁰ CARVALHO, Leonardo Dallacqua de. Sanear é eugenicar: a eugenia "preventiva" de Belisário Penna a serviço do saneamento do Brasil, 1920-1930 [To sanitize is to eugenize: Belisário Penna's "preventive" eugenics in the service of sanitation in Brazil, 1920-1930]. *História, Ciências, Saúde-Manguinhos*, v. 29, n. 3, p. 645-660, 2022. Se also: CARVALHO, Leonardo Dallacqua de. *O saneador do Brasil: saúde pública, política e integralismo na trajetória de Belisário Penna (1868-1939)* [The Brazilian sanitarian: public health, politics and integralism in the trajectory of Belisário Penna (1868-1939)]. Thesis (Doctorate in History of Science) – Casa de Oswaldo Cruz/Fiocruz. Rio de Janeiro: 2019.

³¹ CASTRO-SANTOS, Luiz Antonio de. O pensamento sanitariano na Primeira República: uma ideologia de construção da nacionalidade [Sanitarian ideas in the First Republic: an ideology of nationality construction]. *Dados – Revista de Ciências Sociais*, v. 28, n. 2, p. 193-210, 1985.

towards racial mixing, so that, in the future, there would be a single race³². Any attempt to frame Penna exclusively as a right- or left-wing neo-Lamarckian ignores his own medical and political thinking, as well as the variations that were common in the context of Brazilian eugenics.

Left-wing Mendelian eugenics

The brief experience of Soviet eugenics is perhaps the best example, according to Meloni, of one of the forgotten chapters in the history of eugenics: left-wing Mendelism, which occupies the lower left corner of the political quadrant³³. Left-wing Mendelian eugenicists refer to “a direct and unambiguous commitment to a eugenic project aimed at socialist transformation.”³⁴

Unlike neo-Lamarckians, who prioritized environmental processes, Mendelians argued that germplasm was the most important element³⁵. These eugenicists did not see heredity as slavery to the genetic past, but rather as the ability to shape the future³⁶.

Although hierarchical discourses of racial and social inferiority and superiority were absent from discussions of eugenics in Soviet Russia, compulsory sterilization laws along the lines of American legislation were occasionally proposed³⁷. Throughout the 1920s, Soviet eugenics began to come under open ideological attack.

In the words of Meloni³⁸:

The Nazi seizure of power in 1933, the importance of genetics and biology to Nazi ideology, and the emergence of Lysenkoism after 1934 brought further public disgrace to Soviet eugenics, although genetics somehow survived in disguise.

The cancellation of the International Genetics Congress, which was to be held in Moscow in 1937, represented the final defeat of Soviet genetics and

³² PENNA, Belisário. *Lecture given by Dr. Belisário Penna at the University of Paraná*. (Fundo Belisário Penna, DAD-COC). 2 Aug. 1921, p. 4.

³³ Meloni, op. cit., p. 118.

³⁴ Ibid.

³⁵ Ibid., p. 119.

³⁶ Ibid., p. 121.

³⁷ Ibid.

³⁸ Ibid., p. 122.

eugenics³⁹. The disappearance of this last quadrant of eugenics is symbolized by the departure of Muller and Lysenko from the USSR in 1936⁴⁰. Strictly speaking, the eugenicist intellectuals chosen by Meloni seem to fit his quadrant, but he is perhaps unable to apply a single quadrant as a formula for eugenicists in other contexts.

Hermann Joseph Muller, an American geneticist, is a good example of a left-wing Mendelian eugenicist. Muller was one of the pioneers of classical genetics, a student and collaborator of Thomas Hunt Morgan, between 1912 and 1915, in the famous “fly room” at Columbia University. The two men were fundamental to the development of chromosome theory and to establishing *Drosophila* flies as a model organism for genetic studies: “Against the reactionary tendency of American eugenics, Muller wanted to show how genetics ‘belonged to the political left’”⁴¹.

In Muller’s view, since acquired characteristics were not hereditary, upbringing or education could contribute little to the racial social transformation he dreamed of⁴². In a letter to Stalin, Muller tried to persuade him that genetics would represent the final step of the communist revolution. However, Stalin was not convinced. In fact, he was quite displeased, which culminated in Muller’s unavoidable departure from Communist Russia⁴³. Nancy Stepan⁴⁴ describes Muller as follows:

Herman J. Muller, winner of the Nobel Prize in genetics (for the discovery, in 1927, of the genetic mutation induced by X-rays), was a socialist who, in the 1930s, actively defended a scheme of genetic selection through artificial insemination with the superior sperm of “great men.”

Edgard Roquette-Pinto, in turn, can be considered, in general, a left-leaning Mendelian eugenicist in Brazil, who stood out in the debates of the 1st Brazilian Congress on Eugenics. However, the imprecise and generalized approach of the quadrants does not adequately reflect the diversity of approaches taken by eugenicists in their respective countries, shaping eugenic projects according to specific social, economic, and racial contexts.

³⁹ *Ibid.*, p. 122.

⁴⁰ *Ibid.*

⁴¹ *Ibid.*, p. 125.

⁴² *Ibid.*, p. 127.

⁴³ *Ibid.*

⁴⁴ STEPAN, *op. cit.*, p. 217.

As pointed out earlier, in the Brazilian context, Roquette-Pinto could be placed, somewhat laboriously, within the quadrant of a “left-wing Mendelian.” This is due to the fact that, unlike neo-Lamarckism, the Brazilian anthropologist did not adopt this perspective, making it completely erroneous to classify him as a “right-wing Mendelian.” In fact, he represents a case of an important intellectual who does not easily fit into this quadrant. Roquette-Pinto’s eugenic approach would surprise Meloni with the different variants of eugenics present in Brazil, as specified by the Brazilian intellectual himself. This is evident, for example, in his conclusions that eugenics had become a fashionable theme, with zoologists and botanists writing about it⁴⁵. Even considering the mindset of a “left-wing Mendelian,” it can be argued that his project of human improvement based on eugenics represents a “direct” and “unequivocal” commitment to a socialist transformation.

Roquette-Pinto, according to Vanderlei Sebastião de Souza, used eugenic arguments to oppose the entry of “mentally ill” immigrants, whose condition was considered hereditary. Although he defended public policies such as health and education for the national population, the anthropologist also believed in racial whitening. Souza stated that, in his discussions about crossbreeding between whites and blacks, Roquette-Pinto “[...] usually tended toward the prevalence of the anthropological characteristics of the former”⁴⁶.

Albeit classified as belonging to “left-wing Mendelian eugenics,” Roquette-Pinto is a strange personality in Meloni’s quadrant. His interest focused more strongly on gaining a social and biological understanding of the national population than on adhering to a specific political spectrum. The anthropologist was a Mendelian concerned about the confusion between eugenics and biological inheritance — indeed, it is no coincidence that his references were Charles Davenport and Eugen Fischer. As Souza explains, progress in Roquette-Pinto’s Brazil was much more a problem of “[...] disorganization of national politics, lack of education and health”⁴⁷ than a question of biological inheritance and miscegenation.

Roquette-Pinto exemplifies how the discussion about eugenics should be analyzed within the political, racial and scientific contexts of each country. While Hermann Joseph Muller attempted to persuade Stalin

⁴⁵ SOUZA, Vanderlei Sebastião de. *Em Busca do Brasil: Edgard Roquette-Pinto e o retrato antropológico Brasileiro (1905-1935)*. Rio de Janeiro: FGV Editora e Editora Fiocruz, 2017, p. 365.

⁴⁶ *Ibid.*, p. 334.

⁴⁷ *Ibid.*, p. 378.

that eugenics was the final phase of the communist revolution, there is no evidence that Roquette-Pinto adopted a similar approach in his intellectual output. His analysis of populations, Mendelian eugenics and Brazil is rooted in anthropological and genetic issues, through a militant nationalist discourse typical of the early 20th century in Brazil. The sciences guided his national mission of (re)discovering the country and its population, considered to be at a racial disadvantage.

Right-wing Mendelian eugenics

This current emerged at the early 20th century in Europe and the United States, and was characterized by a conservative and elitist view of society. Supporters of right-wing Mendelian eugenics held the belief that human characteristics were determined by hereditary factors and that it was feasible to improve the human race through reproductive selection and control. They promoted policies such as compulsory sterilization, banning of interracial marriages, and encouraging childbearing among individuals considered superior. Principles such as genetic determinism, racial hierarchy and profound elitism underpinned the ideas of these eugenicists.

This mindset played a significant role in the rise of Nazi fascism in Europe. In Nazi Germany, right-wing Mendelian eugenics was used to justify the persecution and extermination of Jews, Gypsies, and other groups considered inferior. The Holocaust and racial hygiene represent two of the most tragic consequences of right-wing Mendelian eugenics. The Holocaust was the systematic genocide of around six million Jews by the Nazis during World War II. Racial hygiene involved Nazi policies of forced sterilization and euthanasia of people considered genetically inferior, including those with intellectual disabilities, mental illnesses, and congenital disorders. According to Stefan Kühl⁴⁸, more than 1% of Germans were officially sterilized.

On the other side of the Atlantic, the United States, starting in the early 20th century, led a Mendelian program that aimed to sterilize the “incapable.” States such as North Carolina, Michigan, Virginia, and California are among the many that adopted sterilization policies in the name of “eugenic correction” of the incapacitated. Protagonists of American eugenics, such as zoologist

⁴⁸ KÜHL, Stefan. *The Nazi connection: Eugenics, American racism, and German National Socialism*. New York: Oxford University Press, 1994.

Charles Davenport, believed that inferiority was a permanent trait dominant in the Mendelian context⁴⁹.

However, one of the problems pointed out regarding Meloni is his tendency to believe in a single agenda for the quadrants in the context of global eugenics, ignoring the fact that one of the fundamental principles of its success stems from its ability to adapt easily to different contexts.

Renato Kehl's case is even more impactful, as it challenges at least three aspects of the structure proposed by Meloni. An analysis of his trajectory, initially linked to the health movement and later to the Brazilian League of Mental Hygiene, and considering his change in outlook in the late 1920s after a trip to Europe, indicates the implausibility of classifying Renato Kehl in a single way.

Vanderlei Sebastião de Souza's work on Renato Kehl offers a comprehensive analysis of the author's thinking. To avoid repetition, we offer three examples of Kehl's intellectual output: *Eugenia e Medicina Social*⁵⁰ (Eugenics and Social Medicine) (1923 [1920]), *Como escolher um bom marido*⁵¹ (How to Choose a Good Husband) (1935 [1924]), and *Aparas eugênicas*⁵² (Eugenic Cuttings) (1933). Were one to attempt to place them in the proposed quadrants, each one could easily occupy a different position from the others.

Initially, if we look at the "left neo-Lamarckism" quadrant, whose notions suggests that environments can shape different races in a single direction, *Eugenics and Social Medicine* could be a work that fits within this context. In this book, Kehl argues that the Brazilian would be a strong race and representative of resistance, were it not for environmental evils such as diseases, food, organism and climate⁵³. At the time, Kehl saw eugenics and sanitation as similar concepts, aligned with patriotism.

From another perspective, the title *Como Escolher um Bom Marido* may fit if one considers the "right-wing neo-Lamarckian" quadrant, in which the environment is defined as a harmful source that can modify, degenerate and impair heredity. In this case, the eugenic doctor would play a comprehensive

⁴⁹ BLACK, Edwin. *A guerra contra os fracos: a eugenia e a campanha norte-americana para criar uma raça superior*. [War Against the Weak: Eugenics and America's Campaign to Create a Master Race] São Paulo: A Girafa Editora, 2003, p. 101.

⁵⁰ KEHL, Renato. *Eugenia e Medicina Social*. [Eugenics and Social Medicine] 2nd ed. Rio de Janeiro: Livraria Francisco Alves, 1923 [1920].

⁵¹ KEHL, Renato. *Como escolher um bom Marido*. 2ª ed. Rio de Janeiro: Ariel Editora LTDA, 1935 [1924].

⁵² KEHL, Renato. *Sexo e civilização: aparas eugênicas*. Rio de Janeiro: Francisco Alves, 1933.

⁵³ KEHL, op. cit., 1923, p. 223-224.

role involving medical profiles such as sanitarian, clinician, experimentalist and sociologist. His mission, based on modern knowledge of heredity, would consist of “[...] studying defects and vices; concerned particularly with the individual, seeing him from a collective point of view; seeking to resolve his underlying problems for the purpose of ensuring the continuous and safe selection of his offspring”⁵⁴. Therefore, the proposal of a health certificate for marriage falls within the scope of the eugenicist to identify elements that weaken and impair heredity, especially those pertaining to the environment.

Lastly, Kehl also fits the category of “right-wing Mendelism,” especially in view of the uncompromising element of heredity that gave rise to racial and classist agendas. In *Aparas eugênicas*, he recommends “Avoiding marriage with a person of a lower class, and above all, with individuals of a different race and with first generation half-castes. Such marriages are provenly dysgenic, giving rise to physically, psychically and morally inferior types”⁵⁵.

Each of these works corresponds to a phase in Renato Kehl’s life trajectory, so that Meloni’s quadrant would overshadow his understanding of eugenics. Vanderlei Sebastião de Souza points out that Brazilian eugenicists believed that eugenics served different concepts of nation, for “[...] the strength of the eugenic movement gained prominence precisely due to this chameleon-like ability to serve different expressions of ‘biosocial’ knowledge”⁵⁶.

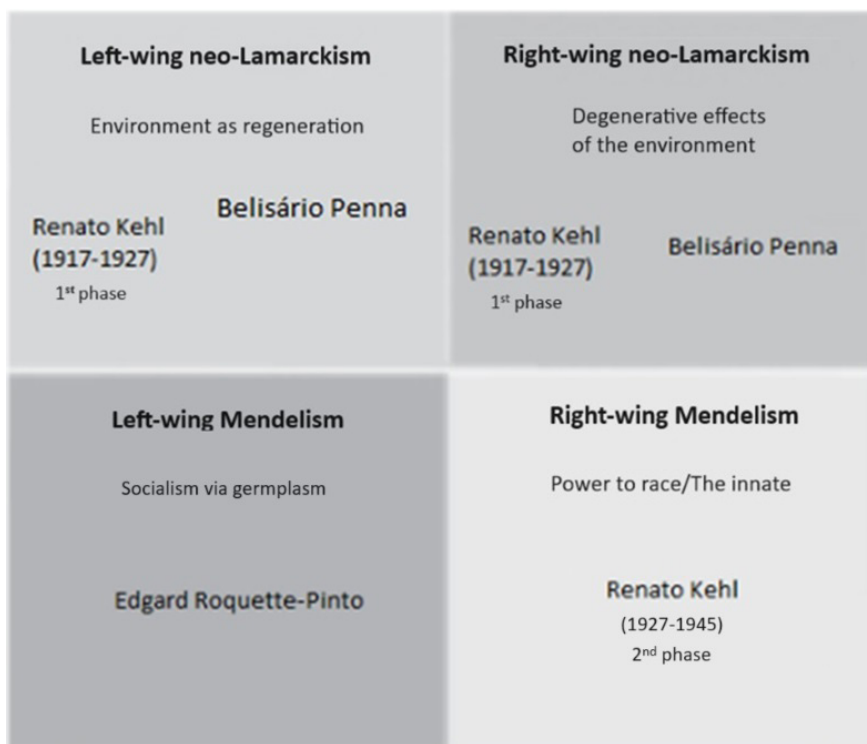
Figure 2 illustrates out how the three main Latin American eugenicists discussed so far herein — Renato Kehl, Belisário Penna and Roquette-Pinto — can be classified.

⁵⁴ KEHL, Renato. *Como escolher um bom Marido*. 1ª ed. Rio de Janeiro: Ariel Editora LTDA, 1924, p. 36.

⁵⁵ KEHL, op. cit., 1933, p. 86.

⁵⁶ SOUZA, op. cit., 2019, p. 303.

Figure 2: Political Quadrant of Eugenics with Brazilian Eugenecists



Source: Adapted from Meloni⁵⁷.

The case study of Paulina Luisi and the Political Quadrant of Eugenics

Paulina Luisi was a distinguished Uruguayan liberal feminist who defended eugenics even in her last book, published in the year of her death in 1950⁵⁸. Considering the political quadrant we described, in what position would this author be located? Luisi is an intriguing character, for she offers significant challenges to the quadrant. She was a prominent Uruguayan feminist leader, involved in the formation of the socialist party and recognized

⁵⁷ MELONI, op. cit., p. 94.

⁵⁸ LUISI, Paulina. *Pedagogia y Conducta Sexual* [Pedagogy and Sexual Behavior]. Montevideo: El Siglo Ilustrado, 1950.

for her fight for women's suffrage. However, she also defended "negative" eugenics practices, such as abortion and sterilization.

The essay *Algumas ideias sobre eugenia*, by Paulina Luisi⁵⁹, fits into the right-wing neo-Lamarckian quadrant, as indicated in Figure 1. Although she aligned herself politically with progressivism and adopted a neo-Lamarckian position about human development, the author also advocates "negative" eugenics policies that highlight the degenerative impact of the environment.

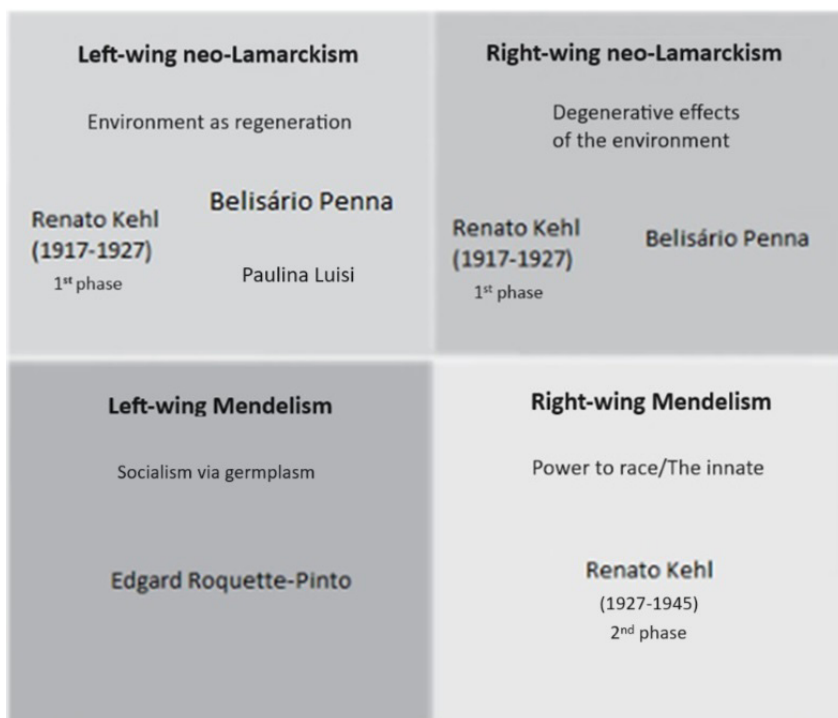
Although the text does not contain direct passages that characterize it as linked to the political left, its conceptions can be inferred indirectly in excerpts, such as when it advocates for the improvement of working conditions for men and women in favor of the race⁶⁰:

It is a vital need for the future of the race that States urgently provide an improvement in professional environments, in order to suppress or reduce all the causes that act extrinsically upon the organisms of parents, weakening or impoverishing them.

⁵⁹ LUISI, Paulina. *Algumas ideias sobre Eugenia* [Some ideas about Eugenics]. Montevideo: El Siglo Ilustrado, 1916; NICOLADELI, Angelo Tenfen. Tradução comentada do artigo de Paulina Luisi publicado em 1916, "Algumas ideias sobre Eugenia". *Revista Brasileira de História da Ciência*, [S.l.], v. 15, n. 1, p. 233-248, 2022; NICOLADELI, Angelo Tenfen. *O pensamento de Paulina Luisi (1875-1950) em "Algumas ideias sobre eugenia": uma análise das potencialidades para discussão de história da ciência na educação científica*. Dissertação (Mestrado em Educação Científica e Tecnológica) PPGECT/UFSC. Florianópolis: 2023.

⁶⁰ NICOLADELI, op. cit., 2022, p. 257.

Figure 3: Political Quadrant of Eugenics with Paulina Luisi



Source: Adapted from Meloni⁶¹

At one point, Luisi argues that men are more harmful to the human species than women⁶²:

Let us note, in passing, that sterilization does not pose equal dangers to both sexes; while it is completely harmless to men, the operation is delicate in women, although the danger is lessened with the progress of modern surgery. We also observe that men are much more harmful to the species than women, given the larger number of beings they can generate.

In another excerpt, Luisi expresses concern for mothers: “It is not uncommon among certain people that a man, under the influence of alcohol, seeks, precisely in this state, to exercise his conjugal rights over his wife, who

⁶¹ MELONI, op. cit., p. 94.

⁶² NICOLADELI, op. cit., 2022, p. 243.

under the pressure of violence surrenders to the reproductive act, dominated by fear”⁶³.

In another text by Paulina Luisi, entitled *Para una mejor descendencia*, published in 1919, her affinity with the political left appears more evident. After discussing the degenerative effects of alcoholism, tuberculosis and syphilis, and presenting possible solutions, the author concludes her essay with the following passage⁶⁴:

In short, all those reforms aimed at tackling the three terrible plagues mentioned, as well as improving the living conditions of the proletarian class, which, worthy of its name, is scanty in resources, abundant in descendants, are appropriate. The electoral platform presented to the people by the Socialist Party in the last elections has courageously faced many of these problems with the height and knowledge worthy of the high purpose pursued by its efforts, nobly oriented towards obtaining the broadest well-being and greatest happiness of our species.

Christine Ehrick⁶⁵ argues that Luisi began to adopt a softer stance on eugenics from 1916 onwards; however, over the decades, this stance dwindled even further. In her 1919 essay, *Para una mejor descendencia*, the author’s analysis reveals a change in perspective, with a more preventive approach to eugenics, emphasizing education, access to health and the improvement of housing and work conditions, instead of supporting practices such as eugenic sterilization and abortion, as in 1916. This change in position becomes evident upon comparing the two texts.

By way of comparison, as we mentioned previously, a preeminent Latin American eugenicist who changed his position in the political sphere of eugenics was Renato Kehl⁶⁶. According to Vanderlei Sebastião de Souza, Renato Kehl, in his first phase (1917–1927), can be classified as a right-wing neo-Lamarckian, since he followed the motto “Sanitizing is Eugenizing,” fighting mainly against the potentially degenerative effects of the environment.

⁶³ Ibid.

⁶⁴ LUISI, Paulina. *Para una mejor descendencia* [For a better descendance]. Buenos Aires: Casa Editora Juan Perrotti, 1919, p. 29, our translation.

⁶⁵ EHRICK, Christine. *The shield of the weak: Feminism and the state in Uruguay, 1903-1933*. New Mexico: University of New Mexico Press, 2005, p. 100.

⁶⁶ SOUZA, Vanderlei Sebastião de. *Renato Kehl e a eugenia no Brasil: ciência, raça e nação no período entreguerras* [Renato Kehl and eugenics in Brazil: science, race and nation in the interwar period]. Guarapuava: Editora Unicentro, 2019.

According to Souza, “Thus, they focused on combating ‘eugenic environments’ and diseases such as syphilis, tuberculosis, hookworm, malaria and leprosy”⁶⁷. In his second phase (1927–1930), Kehl approached the right-wing Mendelian quadrant, starting to defend an innate notion of race, endorsing Mendelism as the basic theory of heredity, and ended up defending more authoritarian, restrictive and radical measures⁶⁸.

However, the suitability of the political quadrant of eugenics proposed by Meloni to the Latin American context is brought into question. It is important to recognize that the author developed this model based on examples of European and American eugenicists, who conceived their eugenic theories and practices in different scientific, political and social scenarios.

Final remarks

The main arguments against Meloni’s political quadrant of eugenics⁶⁹ are as follows: 1 – The quadrant is simplistic and generalizing, dividing eugenics into four categories, each with a set of associated political and scientific characteristics. However, reality is more complex and fluid. 2 – Eugenicists do not always fit perfectly into a single category. 3 – The quadrant does not take into account the historical and political context. Eugenics is a social and cultural phenomenon that develops in specific contexts. Meloni’s quadrant ignores this fact, which may lead to inaccurate interpretations of the history of eugenics. 4 – The quadrant is Eurocentric. Meloni based his model on examples of European and American eugenicists. This may limit its usefulness for understanding eugenics in other contexts, such as the Latin American one.

The examples of Paulina Luisi, Belisário Penna, Roquette-Pinto and Renato Kehl illustrate some of the problems of Meloni’s quadrant. Paulina Luisi, was a liberal feminist and supporter of socialism and social reforms, but she also supported negative eugenics policies such as eugenic sterilization and abortion. Renato Kehl, along his career, changed his stance regarding eugenics. Initially, he could be considered both a right-wing and a left-wing neo-Lamarckian, advocating sanitation as a means of improving the race but also concerned about the dangers of racial degeneration. Later, his stance shifted closer to right-wing Mendelism and he advocated more

⁶⁷ Ibid., p. 87.

⁶⁸ Ibid., 185.

⁶⁹ Ibid.

authoritarian and restrictive measures. An analysis of Belisário Penna's intellectual trajectory indicates that he can be associated with a "left-wing" political spectrum, due to his militant reformist nationalism, although his neo-Lamarckian approach could be seen as aligned with a "right-wing" perspective if considered within a political context.

These examples suggest that Meloni's quadrant may be useful for understanding some general trends in eugenics, but should not be accepted as a single interpretation. It is essential to consider the specific historical and political context in which eugenics appeared, as well as the nuances of the positions of individual eugenicists.

The examples of South American intellectuals who promoted eugenics reveal that the quadrant proposed by Meloni is not universally applicable. This underscores one of the main conclusions of Mark Adams, who emphasized that "[...] eugenics was a single and coherent, mainly Anglo-American movement, with a specific set of common goals and beliefs"⁷⁰. To believe in a single approach to eugenics is to ignore the varied political and cultural context in which it developed and was adopted in different countries. Moreover, it would ignore the actions of institutions and their relationships with a variety of political authorities and sectors of society, including business, industrial and civil society. Therefore, this emphasizes the importance of case studies for the interpretation of eugenics in its political and cultural contexts to enable historical comparisons. Despite the coherence of the model in some specific cases, case studies and comparative analyses of Latin American eugenics reveal that Meloni's quadrant loses its effectiveness.

As discussed, these issues are not new in eugenics studies, and such research problems have been debated for more than three decades. In chapter 4 of his book *Political Biology: Science and Social Values in Human Heredity from Eugenics to Epigenetics*, Meloni demonstrates his clear awareness of this debate. The author does not hesitate to contextualize the experiences of both the Mendelian left and the Lamarckian left within the quadrant's political debate. At the same time, he recognizes that these discussions illustrate how scientific opinions have influenced politics and shaped political agendas⁷¹.

⁷⁰ ADAMS, op. cit., p. 217, free translation.

⁷¹ MELONI, op. cit., p. 131.

References

- ADAMS, Mark. Toward a comparative history of eugenics. In: ADAMS, Mark (Org.). *The Wellborn Science: eugenics in Germany, France, Brazil, and Russia*. New York: Oxford University Press, 1990.
- BLACK, Edwin. *A guerra contra os fracos: a eugenia e a campanha norte-americana para criar uma raça superior*. São Paulo: A Girafa Editora, 2003.
- CARVALHO, Leonardo Dallacqua de. *O saneador do Brasil: saúde pública, política e integralismo na trajetória de Belisário Penna (1868-1939)*. Tese (Doutorado em História das Ciências) – Casa de Oswaldo Cruz/Fiocruz. Rio de Janeiro: 2019.
- _____. Sanear é eugenzar: a eugenia “preventiva” de Belisário Penna a serviço do saneamento do Brasil, 1920-1930. *História, Ciências, Saúde-Manguinhos*, v. 29, n. 3, p. 645-660, 2022.
- CASTRO-SANTOS, Luiz Antonio de. O pensamento sanitarista na Primeira República: uma ideologia de construção da nacionalidade. *Dados – Revista de Ciências Sociais*, v. 28, n. 2, p. 193-210, 1985.
- EHRICK, Christine. *The shield of the weak: Feminism and the state in Uruguay, 1903-1933*. New Mexico: University of New Mexico Press, 2005.
- KEHL, Renato. *Eugenia e Medicina Social*. 2ª ed. Rio de Janeiro: Livraria Francisco Alves, 1923.
- _____. *Sexo e Civilização: Aparas Eugênicas*. Rio de Janeiro: Francisco Alves, 1933.
- _____. *Como escolher um bom Marido*. 2ª ed. Rio de Janeiro: Ariel Editora LTDA, 1935 [1924].
- KLAUSEN, Susanne; BASHFORD, Alison. Fertility control: Eugenics, neo-malthusianism, and feminism. In: BASHFORD, Alison; LEVINE, Philippa (Orgs.). *The Oxford handbook of the history of eugenics* (Oxford Handbooks). Oxford: Oxford University Press, 2010.
- KÜHL, Stefan. *The Nazi connection: Eugenics, American racism, and German National Socialism*. New York: Oxford University Press, 1994.
- LEVINE, Philippa. *Eugenics: a very short introduction*. Oxford: Oxford University Press, 2017.

LUCASSEN, Leo. A brave new world: the left, social engineering, and eugenics in twentieth-century Europe. *International Review of Social History*. [S.l.], v. 55, n. 2, p. 265-296, 2010.

LUIZI, Paulina. *Algumas ideias sobre Eugenia*. Montevideo: El Siglo Ilustrado, 1916.

----- . *Para una mejor descendencia*. Buenos Aires: Casa Editora Juan Perrotti, 1919.

----- . *Pedagogia e Conducta sexual*. Montevideo: El siglo ilustrado, 1950.

MELONI, Maurizio. *Political biology: Science and social values in human heredity from eugenics to epigenetics*. Basingstoke: Palgrave Macmillan, 2016.

MOTTIER, Véronique. Eugenics and the State: Policy-Making in Comparative Perspective. In: BASHFORD, Alison; LAVINE, Philippa Levine (Orgs.). *The Oxford Handbook of the History of Eugenics* (Oxford Handbooks). Oxford: Oxford University Press, 2010.

NICOLADELI, Angelo Tenfen. Tradução comentada do artigo de Paulina Luisi publicado em 1916, “Algumas ideias sobre Eugenia.” *Revista Brasileira de História da Ciência*, [S.l.], v. 15, n. 1, p. 233-248, 2022.

----- . *O pensamento de Paulina Luisi (1875-1950) em “Algumas ideias sobre eugenia”*: uma análise das potencialidades para discussão de história da ciência na educação científica. Dissertação (Mestrado em Educação Científica e Tecnológica) PPGECT/UFSC. Florianópolis: 2023.

PAUL, Diane. Eugenics and the Left. *Journal of the History of Ideas*. [S.l.], v. 45, n. 4, p. 567-590, 1984.

PENNA, Belisário. *Conferência realizada pelo Dr. Belisário Penna na Universidade do Paraná*. (Fundo Belisário Penna, DAD-COC). 2 ago. 1921.

SOUZA, Vanderlei Sebastião de. *Em Busca do Brasil: Edgard Roquette-Pinto e o retrato antropológico Brasileiro (1905-1935)*. Rio de Janeiro: FGV Editora e Editora Fiocruz, 2017.

SOUZA, Vanderlei Sebastião de. Por uma nação eugênica: higiene, raça e identidade nacional no movimento eugênico brasileiro dos anos 1910 e 1920. *Revista Brasileira de História da Ciência*, [S.l.] v. 1, n. 2, p. 146-166, 2008.

SOUZA, Vanderlei Sebastião de. *Renato Kehl e a eugenia no Brasil: ciência, raça e nação no período entreguerras*. Guarapuava: Editora Unicentro, 2019.

Leonardo Dallacqua de Carvalho; Angelo Tenfen Nicoladeli

STEPAN, Nancy Leys. *'The hour of eugenics': race, gender, and nation in Latin America*. Ithaca: Cornell University Press, 1991.

Article submitted for publication on 11/07/24

Approved on 24/07/24.