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**Dissertation Title**

**Francis Galton, Alfred Ploetz, and the History of Early Eugenics**

**Constantin David Kilcher**

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This dissertation is the result of my own work and includes nothing which is the outcome of the work done in collaboration except where specifically indicated in the text.

## **Content**

<b>Introduction</b>	<b>1</b>
<b>Chapter 1 – Early Eugenic Biographies</b>	<b>15</b>
<b>Chapter 2 – Early Eugenic Theory</b>	<b>24</b>
<b>Chapter 3 – Early Eugenic Epistemology</b>	<b>34</b>
<b>Chapter 4 – Early Eugenic Utopia</b>	<b>42</b>
<b>Chapter 5 – Early Eugenics in Context</b>	<b>57</b>
<b>Conclusion</b>	<b>72</b>
<b>Bibliography</b>	<b>76</b>

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## Introduction

On Sunday, 3 July 1910, the geographer, statistician, and eugenicist Francis Galton threw a cosy afternoon tea party in honour of an esteemed guest from Europe, the German doctor and eugenicist Alfred Ploetz. The old man, by then bestowed with most honours of English society, welcomed a fellow soldier in the fight which, throughout his later life, became his fixation: bettering the hereditary quality of the race. Meeting a mere six months before the Englishmen would die, these two men – whose theories are the subject of this thesis – were the fathers of the European movement of early eugenics.<sup>1</sup> The attribute ‘early’ can be applied from approximately 1880, when Galton coined the term ‘eugenics’, until after the First World War, at which point the movement’s institutionalisation was well under way and its influence on society greatly increased.

The master narrative of the early eugenic movement, still reiterated in historiography today, understands early eugenics as an important link in the course of historical developments that made Nazism possible.<sup>2</sup> While this dissertation suggests a re-assessment of this master narrative, it is worthwhile first to sketch out the predominant view of the literature. The ‘barbarous utopias’, as the visions of the late nineteenth century Darwinian theorists have been called, that advocate for racial enhancement through state control over human reproduction, are assigned to the dark chapters of the history of modernity.<sup>3</sup> The reason for the negative reputation of early

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<sup>1</sup> Francis Galton to A(lfred) P(loetz), 29.06.1910, N(achlaß) Pl(oetz)-1/7.

<sup>2</sup> Philippa Levine argues that the dominance of this narrative can be partly traced to the Nuremberg trials and the role that was asserted to eugenics during the trials. Levine, *Eugenics*, p. 97-99.

<sup>3</sup> ‘Barbarous utopias’ is a term Burleigh and Wippermann use in their ‘Racial State’. ‘Early eugenics’ is not a fixed concept, but a contested one used in different contexts, as will become clear below. Placing eugenics in the dark chapters of modernity is closely connected to demonstrating the close relationship of the Holocaust and modernity, a project of sociologist Zygmunt Bauman’s. Bauman, *Dialektik der Ordnung*, p. 25. Repp also proposes to ‘uncover modernity’s dark side’, considering Foucault and Bauman as pathbreakers in this endeavour. Repp, *Paths of German Modernity*, p. 10. See also Nate, *Biologismus*, p. 13; Turda, *Modernism*, p. 2, 7-9, 120.

eugenics is its firm place within a National Socialist trajectory, and its allegedly necessary connection to right wing movements in general.<sup>4</sup>

The apparent intellectual proximity to the Hitler regime's exterminatory policies greatly contributed to this teleological perspective on early eugenics. Particularly by providing a foundation for the notion of 'life unworthy of life', eugenic thought can indeed be said to have contributed to the systemic elimination of innocent people.<sup>5</sup> Even though only a few early eugenicists actually promoted euthanasia, or selective killing of any kind, their rhetoric of crisis and degeneration made even the most extreme solutions to the perceived racial threat more feasible.<sup>6</sup> In this way, they contributed to the killings of homosexuals, the so-called 'feeble-minded', and many other people deemed racially unfit in Germany. The techniques and apparatus developed in these programs were later transferred eastwards, extending the systematic killing operations to include Gypsies and Jews.<sup>7</sup> After the war, the master narrative continues, the horrors of eugenic thought were exposed, stripping the barbarous utopias of their (false) scientific and moral legitimacy. This dark chapter of modernity could finally be closed and become part of history.

A powerful example of such a story, that views the history of early eugenics as a preamble to the exterminatory policies of the National Socialists, is Michael Burleigh and Wolfgang Wippermann's *The Racial State*.<sup>8</sup> In fact, a chapter on early eugenics

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<sup>4</sup> Philosopher Wilkinson, relying on historian Diane Paul, shows how the negative connotation of eugenics combined with its definitory vagueness. When conducting oral interviews, he found that people would often say eugenics was bad without knowing what it was. Wilkinson, *Eugenics Talk*, p. 467. In his recent novel, the German author Uwe Timm reiterates this story, presenting the biography of Alfred Ploetz as a slow perversion of an original socialism to a distorted, barbarous racism leading into Nazism. Timm, *Ikarien* (2017).

<sup>5</sup> Karl Binding's infamous *Die Freigabe der Vernichtung lebensunwerten Lebens* is central. Levine, *Eugenics*, p. 60. Junginger, for instance, speaks of the scientific rhetoric of Rassenhygiene, legitimising racial policy, as one of the 'unabdingbaren Voraussetzungen' that made the Holocaust possible. Junginger, *Verwissenschaftlichung der "Judenfrage"*, p. 6. See also Friedlander, *Von „Euthanasie“ zur „Endlösung“* (2008); Kaiser, *Widerspruch und Widerstand* (2008).

<sup>6</sup> Henke, *Wissenschaftliche Entmenschlichung*, p. 18.

<sup>7</sup> Friedlander, *Origins of Nazi Genocide* (1995).

<sup>8</sup> Other examples include Barret, Kurzman, *Globalizing Social Movement* (2004). Because they use quantitative research tied to the usage of the term 'eugenics', they find a sudden stop after 1945. However, eugenics thought might have lingered although the name was abandoned. In fact, this dissertation and most historiography would argue that it did indeed continue. See Introduction, footnote 16, 17.

opens the book, identifying eugenic thought as the cornerstone of the racial state. In this chapter, entitled 'Barbarous Utopias', early eugenics becomes a mere pseudo-science of racism in which nascent Nazi tendencies were already visible. Although they acknowledge the appeal of eugenic thought to other, especially more leftist movements, they elegantly embed this relationship in the overall Nazi narrative.<sup>9</sup> In doing so, diverging trajectories, like the one culminating in a socialist eugenics, are muted and incorporated in the teleological path toward the racial state, which is posited as the only possible outcome of early eugenic thought. Early eugenics, the subsequent chapter 'Barbarism Institutionalised' continues, only waited to be transformed into official state policy through the unholy alliance of academic experts and policy-makers.<sup>10</sup>

Undeniably, eugenic thought and rhetoric provided a useful resource for Nazi policy-makers. Eugenic vocabulary allowed for a grounding of Nazi racial policies in scientific language and eugenic arguments provided a welcome legitimisation.<sup>11</sup> Furthermore, many leading eugenicists, including Ernst Rüdin, Fritz Lenz, and Alfred Ploetz, one of the subjects of this thesis, embraced the new regime, and actively contributed to racial legislation such as the 1933 *Gesetz zur Verhütung erbkranken Nachwuchses* (Law for the Prevention of Hereditarily Diseased Offspring) or the 1935 Nuremberg laws. At the same time, eugenics and its practitioners profited greatly from their newly gained state approved authority.<sup>12</sup> Beyond Germany, the young regime's 'valiant efforts' at preserving the integrity of the race were applauded by an international group

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<sup>9</sup> 'Where science led, socialism followed.' Burleigh, Wippermann, *Racial State*, p. 33.

<sup>10</sup> *Ibid.*, *Racial State*, p. 26-57.

<sup>11</sup> Nate, *Biologismus*, p. 9. 'In general,' Burleigh and Wippermann state, 'it can be said that there were few areas of Nazi racial policy which did not involve academics in its formulation and legitimisation, and that many of the latter were culpably involved in its implementation.' Burleigh, Wippermann, *Racial State*, p. 56, see also p. 27, 142-150; Evans, *German Social Darwinism*, p. 79.

<sup>12</sup> The story is additionally complicated by the fact that important German eugenicists like Fritz Lenz already tried to rewrite the history of *Rassenhygiene* into the history of Nazism in 1933, when it was politically advantageous to have this close connection. Weingart, *German Eugenics*, p. 269; Burleigh, Wippermann, *Racial State*, p. 80-81.

of respected scientists.<sup>13</sup> As many historians like Henry Friedlander and Sheila Weiss demonstrate, these exemplary instances form part of a systemic incorporation of eugenic thought, at least where it complemented the greater Nazi design.<sup>14</sup>

This dissertation will not attempt to argue against the mutual embrace of Nazism and eugenics. The link between the two must obviously loom large in any argument making a case for the historic relevance of early eugenics. However, this dissertation will argue that there was no necessary path leading from early eugenics to Nazism, and that this openness itself carries explanatory potential. A reassessment of the necessary link between early eugenics and Nazi exterminatory policy is needed, in order to understand the history of eugenics in the twentieth century. Viewing the matter in this way opens eugenics to a new kind of contemplation. Freed from its teleological frame, it becomes broader and less well-defined, open to reappraisal. And this, in turn, can help us to understand why the debacle and disgrace of Nazism did not put an end to state-sponsored eugenics after the Second World War.

### **Historiographic Expansion**

With regard to the continuation of eugenics after 1945, there is already a large historiography. Beginning around 1980, historians have questioned the identity of inter-war eugenics with extreme right-wing policies. A threefold expansion of research on eugenics has since taken place. First, historians became attentive to the sheer breadth of intellectual, social, and even religious movements that incorporated eugenic thought. Various progressive currents, like feminism or socialism, but also seemingly unlikely

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<sup>13</sup> Weingart, *German Eugenics*, p. 274-275. Furthermore, historians Barret and Kurzman claim that the 1933 law was basically copied from a proposition of a group of American eugenicists. Barret, Kurzman, *Globalizing Social Movement*, p. 510. See also Burleigh, *Wippermann, Racial State*, p. 45.

<sup>14</sup> Friedlander, *Origins of Nazi Genocide*, p. 12-17; Weiss speaks of a 'Faustian bargain' struck between the regime and hereditary theorists. She counts over 200 historic works written on this connection. Weiss, *Nazi Symbiosis* (2010), p. 8.



political projects like Zionism, and even religious traditions like Protestantism and Judaism, to name a few examples, have their own eugenic past. Different, even contradicting intellectual traditions, like socialism and *völkisch* nationalism, were coqueting with eugenic ideas in the beginning of the twentieth century. A great number of empirical studies revealed the multitude of eugenic trajectories in the twentieth century.<sup>15</sup> Second, there has been a growing awareness of the persistence of eugenics after 1945,<sup>16</sup> and in some cases until the present, even in quite progressive or ‘modern’ environments.<sup>17</sup> Post-war sterilisation practices in Scandinavian countries and the U.S. continued into the 1970s, and global population control measures could serve as another prominent example for post-1945 eugenics.<sup>18</sup> In Finland, for instance, out of 56,000 eugenic sterilisations, 54,000 took place after 1955.<sup>19</sup> Third, the eugenics

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<sup>15</sup> For feminist and socialist implications see, for example, Freedon, who links differing ideologies like eugenics and feminism through common policies like birth control. Freedon, *Eugenics and Ideology*, p. 960. Historiography has since embraced the linking of progressivism and inter-war eugenics Freedon proposed in 1979, exemplified by Dikötter fifteen years later: ‘Far from being a politically conservative and scientifically spurious set of beliefs that remained confined to the Nazi era, eugenics belonged to the political vocabulary of virtually every significant modernising force between the two world wars.’ Dikötter, *Race Culture*, p. 467-470. Clausen shows how the combination of socialism and Darwinism was facilitated by the fact that the working class was actually well versed in evolutionary theory, mainly through the evolutionary theorist and populariser Ernst Haeckel. Clausen, *Woltmann*, p. 21-25. Bugmann grounds the special attention and embrace of eugenics and women in the strong story of their ‘natural’ role as caretakers and mothers, which was considered highly suitable for the advancement of the race. Bugmann, *Forel*, p. 259-260. Nate emphasises the revolutionary aspect of eugenics to explain its attraction to socialism. Nate, *Biologismus*, p. 129-141; Schwartz, *Sozialistische Eugenik* (1995). Evans showed in 1997 how the link between national socialism and many streams of eugenics had been long broken, and a new, more progressive history allowed for, even though the National Socialist implications are not forgotten. Evans, *German Social Darwinism*, 57-70. Kilcher, demonstrates how Zionist doctors took the category ‘race’ directly from Ploetz and applied it to a Jewish *Volkskörper*. Kilcher, *Kranke Mann*, p. 189-190. Rosen accounts for the wide acceptance of eugenics in Christian confessions and Judaism. Rosen, *Preaching Eugenics*, p. 14-20.

<sup>16</sup> Even though the persistence of eugenics is beginning to be widely accepted, the way in which eugenics continued to be effective after the war is part of an ongoing debate. Barret and Kurzman, for instance, argue that eugenics’ ‘biggest opponent was the new ‘ideology of personhood’, promoted by the UN. Barret, Kurzman, *Globalizing Social Movement*, p. 512-514. Spektorowski and Ireni-Saban, on the other hand, argue that the individualist rhetoric was nothing more than a politically correct garment by the regulator, with eugenic measures hiding beneath. They call it the ‘guise of the individual right’. Spektorowski, Ireni-Saban, *Politics of Eugenics*, p. 166. Levine argues that eugenics after 1945 could survive mainly in population control. Levine, *Eugenics*, p. 101-106.

<sup>17</sup> In 2001, Allen asked rhetorically ‘Is a New Eugenics Afoot’, detecting an increase in eugenic arguments hidden in human genetics around the turn of the millennium. Allen, *New Eugenics*, p. 59, 61. Cullen agrees that the human genome project brought eugenics back to the fore. Cullen, *Back to the Future*, p. 164, 166, and 174. Spektorowski and Ireni-Saban argue that eugenic thought survived in social democratic regimes. Spektorowski, Ireni-Saban, *Politics of Eugenics* (2014).

<sup>18</sup> The sterilisation of women of colour in the Deep South after the war was so common, that it eventually gained its own name: the Mississippi appendectomy. Levine, *Eugenics*, p. 105. Dikötter, *Race Culture*, p. 469.

<sup>19</sup> This was the result of a eugenic sterilisation law passed in 1950. Dikötter, *Race Culture*, p. 468. Finland was no isolated example, Indiana, too, only really commenced on its eugenic programme until after the war. Bruke, *Public and Private History*, p. 11.

movement has been globalised, with an impressive volume of studies demonstrating eugenic policies not just in Europe and the U.S., but also in China, Latin America, Israel, and beyond.<sup>20</sup>

Confrontation of the eugenic past was, and is, far from uncontroversial or unpolitical in many countries.<sup>21</sup> A new historiographic consensus on the plurality of eugenics, at least since the 1920s and 1930s, and its geographical and temporal depth, has raised questions about the suitable approach to one's own eugenic history. The revelation of post-war eugenic programmes was attended by media outrage and a sense of public scandal. The scope and intensity of the interaction with eugenic history is impressive, and bears witness to the complexity and wide usage of eugenic thought in the twentieth century. Possible compensations and public memory became a matter of parliamentary debate circa 2000.<sup>22</sup> Places such as Switzerland, Sweden, and the U.S. state of Indiana have considered and partially approved monetary compensation for the victims of compulsory sterilisation, or have at least agreed on funding for historiography on the eugenic past.<sup>23</sup>

However, this growing body of literature focuses almost exclusively on interwar and post-1945 eugenics, meaning that its potential value for a reappraisal of early

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<sup>20</sup> For Israel and the Nordic countries see Spektorowski, Ireni-Saban, *Eugenic Politics* (2014). For global issues see Jones, *Eugenics in Ireland*, p. 81, especially footnote 3. Eugenics served as the primary example in a paper on global social theory by Barret and Kurzman. They count at least 30 countries with active eugenic policy. Barret, Kurzman, *Globalizing Social Movement*, p. 497. For China see Dikötter, *Race Culture*, p. 469. For Latin America see Stepan, *Hour of Eugenics* (1991), especially p. 3-19.

<sup>21</sup> Freedon, for instance, faced serious backlash over his article on eugenics and progressive thought. He was accused of 'revisionism' of the 'traditional approach', that places eugenics overall firmly within the right-wing corner, when he suggested its close relationship with progressive movements. Freedon, *Eugenics and Progressive Thought*, p. 645; Freedon, *Eugenics and Ideology*, p. 959.

<sup>22</sup> In 2002 and 2003, for instance, governors of Virginia, Oregon, North Carolina, South Carolina, and California publicly apologised, following parliamentary debate. Burke, Castaneda, *Public and Private History*, p. 10. These apologies were not always welcomed: Wilson, for instance, argues that they create a false sense of eugenics being over, which is highly criticised by the disability community, among others. Wilson, *Eugenic Mind*, p. 11. Historian Weingart finds clear words for stories that cast eugenics to the fringes of history: 'While these strategies of *setting aside as an exception* may serve to preserve the identity of science as a moral institution, they are both historically wrong and misleading.' Weingart, *Science and Political Culture*, p. 164.

<sup>23</sup> For Swiss case see Meier, *Zwangssterilisation*, p. 130 and Wecker, Braunschweig, Imboden, *Nationalsozialismus und Eugenik* (2009). For Sweden case see Weingart, *Science and Political Culture* (1999); Broberg, Roll-Hansen, *Welfare State* (1996). For the case of Indiana, that includes a series of public events in 2007 in memory of the 1907 sterilization law, resulting in 2500 eugenic sterilizations, see Stern, *Improving Hoosiers*, p. 220.

eugenics remains underexploited. The notion of ‘reform eugenics’, popularised by the historian Daniel Kevles, might appear to provide a way out of this impasse, but in fact obscures a proper understanding of *early* eugenics. In the 1930s, Kevles suggests, early eugenics, which he calls ‘mainline eugenics’, had ‘generally been recognized as a far-rago of flawed science’.<sup>24</sup> While the ‘original’ thrust of eugenics, and especially *Rassenhygiene*, were set on the Nazi trajectory, reform eugenics, its more scientific, less racially focused, and more liberal twin forged a path beyond Nazism into the post-war world. This line of argument was recently reiterated, for example, in Alberto Spektorowski and Liza Ireni-Saban’s *Politics of Eugenics*, which argues that early eugenics, based on a racial paradigm, was replaced by a productivity-based reform eugenics in the inter-war years everywhere but in Nazi Germany. In Germany, in other words, the original racial eugenics had found a temporary refuge, while reform eugenics, its ethical reputation intact, enabled the persistence of eugenic practice after 1945 in other countries.<sup>25</sup> Anybody who subscribes to the ‘continuity hypothesis’, they argue, cannot avoid also accepting Kevles’s notion of reform eugenics.<sup>26</sup>

The idea that early eugenics, especially the German movement of Alfred Ploetz’s, led directly into Nazism thus remained largely undisturbed by historical reflection on inter-war and post-1945 eugenics. Yet, as this dissertation claims, as long as early eugenics remains a mere step on the path to Nazism, historians will continue fundamentally understating the complexity and range of early eugenics, and the resulting developments in the twentieth century.

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<sup>24</sup> Kevles, *Name of Eugenics*, p. 164.

<sup>25</sup> German historiography also subscribes to the notion of ‘reform eugenics’, exemplified by Nate, who builds on Stefan Kühl’s work. Nate, *Biologismus*, p. 183. Weingart thinks that reform eugenics was not actually suppressed in Nazi Germany, but ‘radicalised’. Weingart, *Science and Political Culture*, p. 170.

<sup>26</sup> Spektorowski, Ireni-Saban, *Eugenic Politics*, p. 4-5, 13-15. However, diverging views are strong in historiography. Historian Mazumdar, for instance, shows how reform eugenics itself corresponds to some changes in the eugenics movement but cannot be said to have heralded a new age in eugenic thinking. Most sterilisations in the US, for instance, were carried out between 1930 and 1960. While Mendelism was challenged, the status of eugenics in society and sterilisation remained. Mazumdar, *Reform eugenics*, p. 49-51. Historian Jones shows how catholic acceptance of eugenics decreased rather than increased in Ireland when, according to the ‘reform eugenics’ argument, acceptance should have increased. Jones, *Eugenics in Ireland*, p. 93-94.

As emphasised above, the thesis neither disregards nor denies the links between early eugenics and National Socialism. However, it does suggest that we need to think again about the breadth of intellectual and policy trajectories latent in early eugenics. The complexity and the diverging developments found in the 1920s and 1930s were already apparent thirty years earlier, as the chapters below will show. An unstable and partial, but hopefully productive constellation of related ideas will emerge, a constellation that links early eugenics and post-1945 biopolitics in unexpected ways. The underlying question of this dissertation is about how a reconsideration of early eugenics can modify our perception of eugenic trajectories in the twentieth century.

### **Towards a reconsidered History of Early Eugenics**

The reappraisal of early eugenics that follows is based on a comparative study of the ‘founding fathers’ of Rassenhygiene and English eugenics respectively, Alfred Ploetz and Francis Galton. The sources analysed comprise first their scientific texts, in which they coined the terms ‘eugenics’ and ‘Rassenhygiene’, second their more utopian writing, and third correspondences and notes.<sup>27</sup> Throughout the dissertation, the term ‘scientific’ is used not to designate an objective, autonomous category, but rather a discursive mode through which particular bodies of knowledge are constructed. This, in turn, necessitates the same contextualisation and historic criticism for the scientific texts that the utopian theories and the letters receive.

By means of the international comparison the dissertation establishes a European frame for early eugenics, relativising the anticipatory link to a necessarily Germano-

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<sup>27</sup> The term Rassenhygiene – race hygiene – is used in the German original, because to Alfred Ploetz, who coined the term, it was simply a direct translation of the English eugenics. Translating it as ‘race hygiene’ thus seems to divide eugenics and Rassenhygiene more than the sources allow. Ploetz defends the term Rassenhygiene in a letter to Eugen Fischer in a letter from the spring of 1930, when the Fischer petitioned to change the name to eugenics. Especially, Jews, Ploetz claimed took more liking to Rassenhygiene, because it was less anti-Semitic. AP to Eugen Fischer, 9.3.1930, NPl-1/6.

centred history.<sup>28</sup> While some excellent studies explore the international and transnational European context, the majority of research on eugenics is still nationally focused, and this is especially true of the work on early eugenics.<sup>29</sup> This dissertation traces the informal, and especially the intellectual ties between Galton and Ploetz, and thus hopes to contribute to our understanding of what motivated their internationalism prior to the First World War.

Primarily, however, the dissertation tries to use the comparison to reassess early eugenics as a *kind of knowledge*, that is to say as a contingent and culturally specific system of basic tenets and beliefs about the world that yield a specific outcome. The eugenic kind of knowledge is founded on a European ‘eugenic epistemology’, and on their utopic visions of society. I borrow the term ‘eugenic epistemology’ from historian Marius Turda, who uses it to break with the idea of autonomy of science, emphasising its contingent, social creation.<sup>30</sup> The aim is not to produce a comprehensive overview of their respective theories, but to open the history of early eugenics up and demonstrate the range of trajectories latent within it.<sup>31</sup> The dissertation wants to give to the study of early eugenics what inter-war eugenics has plentifully received: complexity, nuance, and a form of historical ‘denazification’. Its role in the discussions around the emerging welfare state, the role of the expert in modern societies, or nationalism cannot be fully developed in the following pages, but the potential of these links can nonetheless be accounted for. Ultimately, the shortcomings of a narrowly deterministic interpretation ought to become visible by the end of this dissertation.

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<sup>28</sup> The term ‘early eugenics’ is used to describe the shared, European project Ploetz and Galton pioneered. In case more clarity is needed, the reference will be made either to Ploetz’s *Rassenhygiene* or Galton’s eugenics.

<sup>29</sup> The best in-depth study of Ploetz’s circle is still Weindling’s 1989 *Health, Race and German Politics*. For an international study see Kühl, *Betterment*, p. 22-27.

<sup>30</sup> Turda introduces it in this context in *Modernism and Eugenics*, in order to challenge the notion of scientific autonomy. With the concept of ‘eugenic epistemology’, he aims to place the scientific idea of eugenics in a social context, as historically produced. Turda, *Modernism*, p. 13-15.

<sup>31</sup> Stepan has called this to tell the story prospectively rather than retrospectively. Stepan, *Hour of Eugenics*, p. 6.

Early eugenics can be grasped as a two-fold kind of knowledge, wrapped in an easily adaptable, medicalised rhetoric. First, it presented a framework for structuring and describing the world (diagnostics). It could incorporate existing fears and perceived threats in objectifying, scientific terms. To the peers of Galton and Ploetz, for instance, eugenic thought offered a way of conceptualising and coping with the challenges of a rapidly changing world. It provided tools for both understanding and managing the effects of industrialisation, urbanisation, differential birth-rate, and a range of related social questions.<sup>32</sup>

Second, early eugenics produced a kind of knowledge that could do more than describe, it could also prescribe. It included an activist and interventionist aspect; the imperative to amend and correct biologized social ills (therapy). Eugenic theories understood the problem and named the solution. The activist and action-based aspect of eugenic knowledge made it especially attractive to policy-makers and other agents of the state. Based on its description of the world, eugenics could formulate concrete recommendations for policy-makers, concrete research programs for scientists, and concrete behavioural norms for the people of a given population, as the dissertation sets out to show. Both of the founding fathers reviewed here laid out their long-term visions in utopian texts that proposed significantly different regimes. Galton thought of the ideal eugenic community as organised in a small, privately controlled nucleus, while Ploetz envisioned a complete United States of Western Europe. Yet both utopic visions are combined in their holistic attempt to create societies in which all action is geared toward the betterment of the race, including policy and science. In this holistic sense, the example of early eugenics can be placed in the ongoing historiographical

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<sup>32</sup> For an analysis of the fears of their times see Nate, *Biologismus*, p. 27-36. For the differential birth rate see Soloway, who says that 'the fall in the birth-rate was the catalyst that transformed eugenics from a relatively obscure, Neo-Darwinist, statistically based science into an organised propagandist movement and, more important, into a credible biological way of explaining social, economic, political, and cultural change'. Soloway, *Demography*, p. 18; see also 3-10, 37, 41-56.

discussion around the development of the relationship of science and politics in the twentieth century.

The classification of eugenic epistemology under the two rubrics of diagnosis and therapy should help to make sense of both the shared European aspects of the eugenics movement and of the durability of its appeal. Thinking about early eugenics as proposing a kind of knowledge rather than about its more manifest programme enables the historian to understand the flexibility and adaptability of the eugenic project, that could partner up with diverse and even contradicting movements like Zionism and *völkisch* nationalism, feminism and natalism, and took root in democracies as well as fascist dictatorships.<sup>33</sup> An exploration of early eugenics ought to help us make sense of the mutability of a repertoire of theories and measures that exercised broad and lasting appeal.<sup>34</sup> Contrary to the claim of Spektorowski and Ireni-Saban, the lasting influence of eugenics on people's lives after 1945 did not, this dissertation will argue, develop out of a more benign reform eugenics that emerged, chastened, out of the catastrophic failure of its racist antecedent. The enduring appeal was due to elements of eugenic thought that were already apparent in early eugenics.

Looking at early eugenics from a fresh angle can serve a dual purpose. First, in the case of intellectual trajectories leading into and out of Nazi racial thought, continuities can be just as interesting as differences. Tracing the links between early eugenics and post-1945 biopolitics will enable us to rethink the place of early eugenics in the history of the twentieth century. The early eugenics movement becomes more complex, and its relationship both to Nazism and to post-1945 eugenic thought less clearly

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<sup>33</sup> Weingart explains how after the population decline resulting from the First World War, eugenics joined forces with natalism for some time, yet went back to emphasising qualitative aspects after 1922. Weingart, *German Eugenics*, p. 262. In a comparative study, Nate shows natalist rhetoric to be especially strong in the U.S. Nate, *Biologismus*, p. 159-166. Puschner shows the connections between the *völkische* movement and *Rassenhygiene*. Puschner, *Völkische Bewegung*, p. 173-187. See Introduction, footnote 15.

<sup>34</sup> One study counts 30 countries with active eugenic policy. Barret, Kurzman, *Globalizing Social Movement*, p. 497.

demarcated. The hard rift of 1945 is softened, allowing for comparisons and links across biopolitical regimes of the twentieth century. The introduction of a somewhat tamer, more scientific reform eugenics, in combination with the story of the complete end of racial eugenics after the war, can be seen in the wider context of human genetics and biology trying to actively separate their histories from racial early eugenics. Practitioners in this mould strove to confine racist eugenics to the past, something for historians but not for their own disciplines to face.<sup>35</sup> Criticising a narrative of early eugenics as a fringe event, as an exceptional history, ties into the critique, raised by academics and activists alike, of a political way of dealing with eugenics as if they were a thing of the past. The field of disability studies, for example, is one that has placed emphasis on the continued pervasiveness of eugenic thought today. By reassessing early eugenics from its very conception and making it comparable to post-1945 biopolitics, including academic disciplines like human genetics and public health, I hope to destabilise this certitude.

Secondly, this dissertation aspires to make a small contribution to a discussion that is based on what Lutz Raphael called the *Verwissenschaftlichung des Sozialen* – the scientisation of society.<sup>36</sup> In 1996, he showed how ‘scientific knowledge’ could claim more and more ground in the political realm during European modernity, exemplified by the expert’s handling of ‘social problems’.<sup>37</sup> His concept has since become highly influential, especially in the interplay with the sister concept of a *Politisierung der*

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<sup>35</sup> Raphael speaks of a *Dämonisierung*, that itself can become the focus of historiography. Raphael, *Verwissenschaftlichung*, p. 185. Cullen agrees that all of the second half of the 20<sup>th</sup> century, historians have been busy separating the history of human genetics from that of eugenics. Cullen, *Back to the Future*, p. 166. See also Burke, Castaneda, *Public and Private History*, p. 11.

<sup>36</sup> The term *Verwissenschaftlichung* will be used in German.

<sup>37</sup> Raphael himself says: ‘Verwissenschaftlichung des Sozialen bezeichnet also konkret die dauerhafte Präsenz humanwissenschaftlicher Experten, ihrer Argumente und Forschungsergebnisse in Verwaltungen und Betrieben, in Parteien und Parlamenten, bis hin zu den alltäglichen Sinnwelten sozialer Gruppen, Klassen oder Milieus.’ Raphael, *Verwissenschaftlichung*, p.166.



*Wissenschaft* – politicisation of science.<sup>38</sup> Together, they emphasise a reciprocal relationship between scientific knowledge and politics, with policies being scientifically informed, as well as research programs driven by political motivation. This was further developed by Mitchell Ash, who thought of science and politics as resources for one another.<sup>39</sup> The holism of the early eugenic project, as will be demonstrated in the following pages, includes a specific interpretation of the relationship between science and politics. This resource-based view holds additional explanatory power with regard to why eugenics was so effective in the first half of the twentieth century.

In order to adequately place early eugenics within the broader history of European eugenics, we need first to determine what early eugenics was. What theories did these men propose? What was the shape of the underlying kind of knowledge? What was the proposed relationship between science and policy? What were the links between the two thinkers? Having reassessed early eugenics, the thesis will reflect on the implications of this study for the broader sociological and historiographical debate over the relationship of science and politics in modern society.

The dissertation is structured in five chapters. Chapters two and three compare mainly the scientific and published texts of Galton and Ploetz, and the two subsequent ones primarily discuss their utopian and unpublished works. Chapter 1 draws heavily on archival material, such as letters between the two men, in order to expose relevant biographical themes and drivers. Because both have received ample biographical attention, the first chapter adopts an eclectic approach and focuses on exposing relevant similarities, such as the disillusionment with medical practice that the two men shared. The three subsequent chapters develop a new understanding of early eugenics, focusing on the shared elements of their scientific theories, the underlying

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<sup>38</sup> The term was first used in this context by Weingart, who understood it as a form of moral constraint on science. Weingart, *Verwissenschaftlichung - Politisierung* (1983); Sala, *Wissenschaft und Politik in der Geschichtsschreibung*, p. 336.

<sup>39</sup> Ash, *Wissenschaft und Politik* (2010); Ash, *Ressourcenaustausche* (2017).

European eugenic epistemology, and their visions of society. What did their theories look like? What measures did they propose? Was there a specific early eugenic use of language? How can the kind of knowledge they produced be understood? What kind of societies did they think eugenic knowledge would result in? What was the role of the state, and what kind of state should it be? How did early eugenics imagine the relationship between science and politics? In casting its subject matter within a transnational frame and focusing on differences and divergences across the spectrum of eugenic beliefs and practices, this dissertation aims to achieve for early eugenics what interwar eugenics has enjoyed for a long time: a revision of the teleology that dominates the literature and the return of historical contingency to the study of a form of thought that bears like no other the imprint of modernity's ambivalence.

## Chapter 1 – Early Eugenic Biographies

### Two Eugenic Visionaries

A great number of biographies have been written about both Galton and Ploetz, many of them stemming from outside classical historiography.<sup>1</sup> Instead of reproducing their biographies in condensed form, this chapter aims to highlight thematic similarities that only appear through the juxta-positioning of the two men. First, the role of utopic dreams in their life is considered.

During his high school years in Breslau, the son of a factory worker Alfred Ploetz was already politicised.<sup>2</sup> Together with his friend Carl Hauptmann, he inaugurated a secret society based on a wild mixture of Germanic, Darwinist, and socialist ideas.<sup>3</sup> It was inspired as much by the French utopian author Étienne Cabet, often considered among the earliest socialists, as it was by the glorifier of the Germanic, Felix Dahn.<sup>4</sup> In 1877, the young men, barely at adulthood, took a blood oath under an old oak tree on a plain outside Breslau, pledging to commit their lives to the resurrection of a mythical Germanic people in a socialist society. Ploetz later remembered:

To give our community and our firm conviction to spend our lives according to our goals a joyous and meaningful expression, we swore to dedicate our lives to the resurrection of the Germanic.<sup>5</sup>

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<sup>1</sup> For Galton these include the eugenicist Blacker, *Eugenics* (1952); the psychologist Forrest, Galton (1974), the geneticist Gillham, Galton (2001); the biostatistician Bulmer, Galton (2003); the journalist Brookes, *Extreme Measures* (2004); Challis, *Archaeology* (2014). For Ploetz these included the doctor Doecke, Ploetz (1975); the geneticist Becker, *Rassenhygiene* (1988); Weindling, *Health* (1989); Bleker, Ludwig, Agnes Bluhm (2007).

<sup>2</sup> His high-school friend Gerhart Hauptmann noted: 'In diesem sehr einfachen Hauswesen [...] gab es keine Enge der Geistigkeit. Der Siedemeister und sein Sohn standen zu einander wie Kameraden.' Hauptmann, *Beichten*, p. 247. Various authors have emphasised on the middle-class origins of eugenics. See Weindling, *Health*, p. 19, 61, 65; Burgmair, Weber, *Nachlaß*, p. 13; Soloway, *Demography*, p. 27-38, 62.

<sup>3</sup> They ardently read Ernst Haeckel, with whom Carl Hauptmann would later study.

<sup>4</sup> Felix Dahn glorified in idealised Germanic culture in his historic novel *Kampf um Rom*. See Frech, Dahn (1996).

<sup>5</sup> 'Um unserer Zusammengehörigkeit und unserem festen Willen, unser Leben nach unseren Zielen zu gestalten, einen feierlichen und sinnfälligen Ausdruck zu geben, [schwuren wir] unser Leben der Wiederaufrichtung des Germanischen zu weihen.' Ploetz, *Lebenserinnerungen*, quoted from Doecke, Ploetz, p. 4-5.

The society was called *Ikarier* (Icarians) after Cabet's socialist novel *Voyage en Icarie*. The goals and structure of the group were modelled after the book, and aimed to institute an ideal society, both in racial as well as societal terms. A central element of the young men's society was the reconciliation of socialism with Darwinism through policies that were supposed to be firmly based on science.<sup>6</sup> In this way, Ploetz already began seriously exploring utopias as a form of writing geared less to the aesthetic pleasing of an audience than at inspiring and provoking real-world implementation of a vision.

By November 1883, when he established a second and more serious society, he was studying economics in Breslau. This group, called *Pacifica*, was larger and registered with the police.<sup>7</sup> Their vision was to implement a socialist-racist colony, in preparation of which their president, Ploetz, was sent to study such colonies in the U.S. He set out from Bremen in March 1884, his hopes high. However, these hopes were disappointed. As Ploetz noted later in an autobiographical account:

Considering today's average human material, the cohesion of such colonies, especially those with larger individual freedom, is no longer feasible. [For this reason, I think that our plan] would fail on account of the quality of the people, and that I would therefore have to direct the focal point of my efforts on the attempt not only to protect the race, but also to improve it. The conflation with real economic factors and the human nature, to put it simply: reality, summoned a complete change within me.<sup>8</sup>

After spending months among an Icarian community in Iowa, he was convinced of the inferior racial qualities of its members, which, he believed, manifested in the

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<sup>6</sup> For a description of the group see Weindling, *Health*, p. 63-64.

<sup>7</sup> Tschörtner, *Sieben*, p. 70; Weindling, *Health*, p. 67.

<sup>8</sup> 'Mit dem heutigen durchschnittlichen Menschenmaterial [ist] der Zusammenhalt solcher Kolonien, besonders solcher mit grösserer individueller Freiheit, nicht aufrecht zu erhalten. [Deshalb entstand die Überzeugung, dass] der Plan, den wir durchführen wollten, an der Qualität der Menschen scheitern würde, und dass ich deshalb den Schwerpunkt meiner Bestrebungen auf Bemühungen richten müsste, die nicht bloss die Rasse schützen, sondern auch sie verbessern müssten. Der Zusammenstoss mit den realen Faktoren der Wirtschaft und der menschlichen Natur, mit einem Wort: der Wirklichkeit, brachte eine vollständige Umwälzung in mir hervor. [...] Meine Ansichten über die für mich notwendige neue Entwicklung brachte mich folgerichtig zum Studium der Medizin.' Ploetz, *Lebenserinnerungen*, quoted from Doecke, Ploetz, p. 13.

catastrophic state of the colony. This journey marked a decisive and disillusioning turning point in his thinking; it solidified the primacy of biological over social issues. The newly arisen racial convictions brought Ploetz 'consequentially to the study of medicine'.<sup>9</sup>

Francis Galton, thirty-eight years older than Ploetz, only detected his utopian streak late in his life. After he had already contributed to fields as diverse as geography, statistics, medicine, and had even made some technical inventions, he turned to heredity in 1869. Ten years after the publication of his cousin's *The Origin of Species*, Galton wrote his first major contribution to evolutionary theory, *Hereditary Genius*, in which he attempted to find a measurement for 'ability'. He advocated for using a man's reputation as the best indicator for his racial worth.<sup>10</sup> In the attempt to prove the hereditary nature of genius, he analysed the familial connections between judges since the reformation.<sup>11</sup> Darwin himself reacted enthusiastically to the book, writing 'I do not think I ever in all my life read anything more interesting and original'. He congratulated Galton on making him a 'convert', now convinced of the hereditary nature of talent.<sup>12</sup> Galton returned to heredity only in 1883 in *Inquiries into Human Faculties*, in which he coined the term 'eugenics', earning him the title of the 'father' of eugenics. While he was a student of genius in *Hereditary Genius*, he is often remembered as a 'genius' himself and spared from the moral accusations and Nazi connotations with which early eugenics at large, but more so Rassenhygiene, are charged.<sup>13</sup>

*Hereditary Genius* and *Inquiries* draft up the basic premises of Galton's eugenic theory; they were written with a clear scientific and political agenda. Nonetheless, they

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<sup>9</sup> Ploetz, *Lebenserinnerungen*, quoted from Doecke, Ploetz, p. 13.

<sup>10</sup> Forrest, Galton, p. 92.

<sup>11</sup> *Ibid.*, p. 93. Galton, *Hereditary Genius* (1869).

<sup>12</sup> Charles Darwin to Francis Galton, quoted from Forrest, Galton, p. 101.

<sup>13</sup> His most important biographer Forrest, for instance, calls his entire biography *Francis Galton – The Life and Work of a Victorian Genius*. Galton's major investigations into heredity dealt with the hereditary quality of genius which makes invoking the term as a description of Galton himself seems problematic. Forrest, Galton, p. 1.

already contain visionary aspects, most noticeable in the way in which Galton aimed to establish a new eugenic religion, that promised redemption to the world, as chapters two and three show. However, it was in his unpublished writing where Galton revealed his utopian thoughts, beginning with notes on an alien race from Mars invading earth from 1895, and taking their most remarkable shape in *Kantsaywhere*. In this utopian novel, he explained the workings of a perfect eugenic community. Unlike Ploetz, whose juvenile romanticism led him to establish publicly active societies, Galton, who was in his high eighties when he wrote *Kantsaywhere*, kept the project hidden even from his close companions.<sup>14</sup>

### Two Disillusioned Doctors

*Pacifica*, Ploetz's second society, had been registered with the police, and could thus catch the attention of the authorities when Bismarck introduced a new anti-Socialist law in 1878.<sup>15</sup> Forced to leave Breslau for his socialistic inclinations, Ploetz sought refuge in Zurich, a liberal safe-haven in nineteenth-century Europe. During his subsequent medical studies, he took up lively contact with a web of artists, philosophers, doctors, and writers around him. The most important figure in this group was psychiatrist Auguste Forel, who, in his capacity as head of the University of Zurich Psychiatric Hospital, pioneered eugenic sterilization in the German-speaking parts of Europe. Forel was well connected among European hereditary scientists; he was, for instance, a friend and colleague of Ernst Haeckel. Together with Ploetz, he inspired and led a diverse group, leaving a permanent imprint on the feminist and one of Germany's first female practising doctors Agnes Bluhm, the naturalist writer and Nobel

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<sup>14</sup> Forrest, Galton, p. 237, 284-286.

<sup>15</sup> The *Gesetz gegen die gemeingefährlichen Bestrebungen der Sozialdemokratie* led to the arrest and imprisonment of another leader of *Pacifica*. See Weindling, Health, p. 69; Koller, Gesetz, p. 34.

laureate in literature Gerhart Hauptmann, and the psychologist Ernst Rüdin, whom we already encountered as one of the contributors to the 1933 Nazi legislation.<sup>16</sup> Not just a scientist, Forel was also involved in a campaign against alcoholism, and eventually resigned from his academic position to devote his energy to the public advancement of eugenics.<sup>17</sup> The decision to exchange academia for applied science, in Forel's case a prestigious position as president of the Psychiatric Hospital, is a recurring element in the biographies of Ploetz and Galton.

In 1890, shortly after finishing his medical doctorate, Alfred Ploetz, and his newlywed wife Pauline Rüdin (the older sister of Ernst Rüdin), left Zurich to work in Paris, supported by Forel's contacts in France. Their long-term goal, however, was not to practise medicine, but to work as scientists, as Ploetz told his high-school friend Carl Hauptmann.<sup>18</sup> Nonetheless, when the couple moved to the United States in the winter of 1890, they opened a small doctor's practice, first in Springfield, Massachusetts, and subsequently in Meriden, Connecticut.<sup>19</sup> In a letter to Carl Hauptmann, he conveyed his disappointment with the medical practice, which he considered 'conflated with too much deceit', and even worse, as interfering with natural breeding habits, because it allowed 'the procreation of an increasingly despicable offspring'.

As good as the practicing doctor is for the individual in single cases, just as damaging is the doctor for the good of the next generation, if he does not enter zealously into a hygiene of breeding. [...] People are really too stupid. Now through daily contact with them and through complete insight into their family lives, one gets to know the so-called masses [Volk] and does not love them at all. There is much more egotism and ignorance than I could ever have dreamed of.<sup>20</sup>

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<sup>16</sup> Levine, *Eugenics*, p. 62. Wottreng even speaks of Forel's 'Jünger', hinting at the central place of their mentor in their political, scientific, and spiritual outlook. Wottreng, *Hirnriess*, p. 70.

<sup>17</sup> For an informative introduction to problems regarding historiography on Forel see Leist, Forel (2006).

<sup>18</sup> AP to Carl Hauptmann, 29.4.1891, NPI-1/25.

<sup>19</sup> AP to Carl Hauptmann, 14.1.1892, Carl Hauptmann Archiv-K121; AP to Maria Hauptmann, 22.7.1892, Carl Hauptmann Archiv-K321; AP to Carl Hauptmann, 29.4.1891, NPI-1/25.

<sup>20</sup> 'Im Grossen und Ganzen ist die Geschichte [the medical practice] zu viel mit Betrug verquickt, ausserdem kann es Einem unmöglich behagen, das Verhalten der natürlichen Zuchtwahl auf Schritt und Tritt zu durchkreuzen und einem immer jämmerlicheren Nachwuchs die Geburtswege zu ebnet. So gut der praktizierende Arzt in einzelnen Fällen für das Individuum ist, so schädlich ist er für das Wohl der Nachkommen, wenn er nicht eifrig für eine Hygiene der

They stayed in the U.S. short of five years, returning to Europe unhappy and disillusioned with their American experience. In the spring of 1895, Alfred Ploetz published his first book, the *Tüchtigkeit der Rassen oder der Schutz der Schwachen* (The Fitness of the Races or the Protection of the Weak), which along with Galton's *Inquiries into Human Faculty* will be the focal point of the two subsequent chapters. It is crucial to remember that the *Tüchtigkeit* was written in the immediate context of a practising doctor's experience whilst living in a foreign country.

A highly ambivalent relationship to medical practice, disillusionment with its effect on the race and with the practice itself, are also recurring themes in the early life of Francis Galton. Unlike Ploetz, Galton was born in 1822 into a propertied family. His father, a famous doctor, as well as his mother, a Darwin by birth, wanted him to continue their family traditions and study medicine. His family connections remained a strong source of identity throughout his life, especially the relationship with his cousin, Charles Darwin. Thus, at the age of 16, upon his parent's explicit wish, he began pursuing a doctor's career at Birmingham General Hospital, where he witnessed operations and took on small nursing tasks. However, he demonstrated more interest in science than in the practice of medicine.<sup>21</sup>

The young Galton, like the young Ploetz, was heavily disappointed and frustrated with his experience in the medical world. In the quest to understand the underlying eugenic epistemology, the purpose of the next two chapters, this shared biographical element is extremely illuminating. Not only the rhetoric, but also the logic of diagnosis and therapy, reveals that as much as eugenics became a movement directed against

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Zeugung eintritt, was er nicht kann, weil nichts Positives darüber bekannt ist, und wenn dies der Fall wäre, seine Praxis und sein Ansehen bei den Leuten darunter leiden würde. Diese Leute sind nämlich wirklich zu dumm. Jetzt durch die tägl. Berührung mit Ihnen und durch den völligen Einblick in Ihr Familienleben lernt man das so genannte Volk kennen und ganz und gar nicht lieben. Viel mehr Egoismus und Unwissenheit als ich mir träumen liess.' AP to Carl Hauptmann, 4.7.1891, NPI-1/25.

<sup>21</sup> Blacker, *Eugenics*, p. 21.



the discipline of medicine, it was also born in medical practice.<sup>22</sup> Biographies on Galton and Ploetz often mention their medical experience more as a curious artefact of their youths, rather than a useful key to understanding their lives and theories.

Attaining his father's consent, Galton suspended his medical degree and matriculated at Trinity College in Cambridge to read mathematics.<sup>23</sup> The young man, convinced of his genius, found his mediocre results at Cambridge frustrating to the degree of depression, manifesting in a deterioration of his mental and physical health.<sup>24</sup> For a young man with a tendency to megalomania, not being the best at Cambridge was a painfully sobering experience. The death of his father in 1844 marked a profound changing point in his life, because it relieved the paternal pressure to return to a medical practice, with which he had grown utterly disillusioned.<sup>25</sup> Galton left the unloved career behind and used his substantial inheritance to go on extended adventures in Egypt and Syria in 1846, and on a longer journey through South West Africa in 1850.<sup>26</sup> This latter trip amounted to a report sent to and subsequently published by the Royal Geographical Society, with whom he would stay closely connected for many years.<sup>27</sup>

Even though Galton had first-hand experience of the colonial situation, the primary 'other' of his thought remained the British underclass. Preoccupied above all with elevating the quality of the *British* race, he believed that it was threatened from degenerative elements within rather than from outside.<sup>28</sup> In fact, he held a favourable

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<sup>22</sup> Weindling even thinks that eugenics developed as a kind of anti-medicine, because employment opportunities for young university graduates were so limited. This, however, is a very German centred perspective and does also not account for their time as practising doctors. Weindling, *Health*, p. 63.

<sup>23</sup> Blacker, *Eugenics*, 16-23.

<sup>24</sup> He got migraines and nervous breakdowns. Galton always wanted to be the best and had a talent to remember his life in this way. Although he finished second in an anatomy contest, for instance, his autobiography recounts him winning it. Forrest, *Galton*, p. 15-22.

<sup>25</sup> *Ibid.*, p. 27.

<sup>26</sup> Blacker, *Eugenics*, p. 27; Forrest, *Galton*, p. 35, 45-54.

<sup>27</sup> Forrest, *Galton*, p. 54, 67-77.

<sup>28</sup> *Eugenics* was not tied to the colonial situation. This will stay true for the Eugenics Education Society, leading Soloway to call the English eugenics 'remarkably insular'. Soloway, *Demography*, p. 61. Turda points to how the creation of the 'other' was fundamental to eugenics. Turda, *Modernism*, p. 66.

opinion of migration, arguing that only the best specimen of other races were capable and willing to take on the challenge, improving the local hereditary quality. Having said this, colonial demography did have its roots to a great extent in the early eugenic thinking of Galton's, as Karl Ittman explains. Especially important for the development of demography and population science at large were his quantitative methods, among them the statistical and classificatory tools he had devised for eugenics.<sup>29</sup>

Both Galton and Ploetz had thus received a rigorous scientific training in medicine in their youths, and simultaneously nourished their capacity for grand societal visions throughout their lives. Deeply disillusioned with the state of the medical practice, and in fact society at large, the two men found a common answer to the problems of their time: eugenics. Before their theories will be explored in the subsequent chapters, the interactions between them are briefly investigated.

### **Two Fighters United for the Betterment of the Race**

By 1910, when they first met, both men were already accomplished scientists and public figures known for advocating control over Darwinian mechanisms to further the biological quality of the race. They were among the most important founding members, respectively, of the Eugenics Education Society and the *Gesellschaft für Rassenhygiene* and had by then written all of the above-mentioned texts. Nonetheless, their first direct communication did not occur until Ploetz's letter to Galton on July 18, 1909. Ploetz invited Galton to become honorary president of the *Internationale Gesellschaft für Rassenhygiene*, which Ploetz had established to offer a 'spiritual centre, consciousness, a conscience, and an organ of desire' to the white race.<sup>30</sup> We will return to this

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<sup>29</sup> Ittman, Problem of Great importance, p. 4-15.

<sup>30</sup> ...'ein geistiges Zentrum, ein Bewusstsein, ein Gewissen und ein Willensorgan'. Ziele der Rassenhygiene, March 1911, p. 3, NPL -5/4; AP to Francis Galton, 18.7.1909, NPL-1/7. Kühl, Betterment, p. 15.

quest for purpose, a central aspect of early eugenics, below. The official goal of the *Internationale Gesellschaft* was to combine the best quarter of the European population in a single institution.<sup>31</sup>

Galton, thinking the goals of the *Internationale Gesellschaft* worthy undertakings in need of his support, accepted the offer for the honorary presidency only four days later. In his acceptance letter, he also raised concerns about the standards of measurement, engaging in questions of European standardisation of scientific testing procedures. In his enthusiastic and lengthy reply, Ploetz began to forge plans with his English counterpart for their joint European project of racial enhancement, and planned a personal meeting for further discussions in London that coming autumn.<sup>32</sup> Born out of the disillusionment with the medical practice, the two men considered themselves engaged in the same project, with the paramount objective of elevating the European race(s). Their relationship was marked by mutual respect and a conscious affirmation of their shared vision.<sup>33</sup>

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<sup>31</sup> After the *Internationale Gesellschaft* had centred its (quite successful) recruiting efforts on Scandinavian countries, the dawning of the First International Congress in London pushed the English movement and thus the *Eugenics Education Society* and Galton himself to the forefront of its activities, leading to the letter from Ploetz to Galton. Kühl, *Betterment*, p. 17-19.

<sup>32</sup> They discussed the optimal testing methods to determine racial worth. AP to Francis Galton, 3.08.1909, NPI-1/7. The only meeting confirmed by the sources was a visit of Ploetz's in June 1910. Francis Galton to AP, 29.06.1910, NPI-1/7.

<sup>33</sup> While Galton was honorary president of the *Internationale Gesellschaft*, Ploetz was himself honorary president of the international congress of 1912 along people like Winston Churchill. AP to Francis Galton, 3.08.1909, NPI-1/7.

## Chapter 2 – Early Eugenic Theory

It was only a footnote in Galton's 1883 *Inquiries into Human Faculty* that formally introduced the term eugenics in the context of hereditary improvement of the race. Derived from the Greek *eugenes*, translated as 'good in stock', the term was meant as an abbreviation for 'the science of improving stock'.<sup>1</sup> As a book, *Inquiries* is more of a collage than a coherent theory, presenting a collection of smaller studies conducted and published over the preceding years, all of which deal with concrete abilities and the extent to which they are heredity, like the capacity to hear shrill notes or the ability for mental imagery.<sup>2</sup> Nonetheless, across the various inquiries, common denominators can be discerned, allowing for a comparison with the more structured theory that is presented in Ploetz's 1895 *Tüchtigkeit*. The two books are considered the founding texts of the respective national movements of eugenics and Rassenhygiene, both coining the terms and providing a theoretical framework. This chapter will closely follow and juxtapose the two texts, building a baseline understanding of the early eugenics project, out of which the epistemology is developed in chapter three.

Early eugenics worked under a number of premises, two of which are especially fundamental and will be briefly investigated here. Combined, they already demarcate the main themes of early eugenic theory, which will be explored in the remainder of the chapter. First, both considered Darwin's word close to Gospel. To Galton, his cousin Charles Darwin was one of the only proper geniuses of his time, propelling humanity and history forward. Throughout the *Inquiries*, quotes from Darwin are used to resolve fundamental questions; whatever Darwin said must be right. Ploetz, similarly, had

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<sup>1</sup> Galton, *Inquiries*, p. 17.

<sup>2</sup> *Ibid.*, p. 26-28, 58-72.

read Darwin since he was a schoolboy, and even without the close familial connection Ploetz considered Darwin's laws the most basic truth of the world's fabric.<sup>3</sup> All life, the two authors agreed, was governed by heredity as laid out by Darwin.<sup>4</sup> As this chapter will show, Darwinist ideas were applied to much more than the rules of change in the animal kingdom. Within eugenic discourse, central elements like the struggle for existence ceased to be only scientific premises, but served a broader, value-laden purpose. They actually gave meaning to life and even determined men's place in the universe.<sup>5</sup> Simultaneously, the constant evocation of Darwin granted their theories scientific legitimacy; it placed early eugenic theory firmly in an academic discussion.

Second, both authors held the premise that the European race(s) was (were) degenerating.<sup>6</sup> Various effects at play in modern society resulted in a weakening of the struggle for existence, leading to degeneration. Examples of these causes were urbanisation, but also the medical profession as an agent of misled 'humanist values', keeping the weak elements alive and thus enabling them to reproduce.<sup>7</sup> Socialist institutions like health insurance had the same deleterious effect on the quality of the race. Modern warfare, giving a last example, was considered among the worst of all degenerative factors, because it killed the most able, leaving the weak behind to reproduce.<sup>8</sup> War was thus 'counter-selectory' in Ploetz's jargon, or 'dysgenic' in Galton's, both denoting social interventionist mechanisms that do not further, but rather diminish the

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<sup>3</sup> Galton, *Inquiries*, p. 129; Ploetz, *Tüchtigkeit*, p. 4, 208.

<sup>4</sup> Galton, *Inquiries*, p. 220; Ploetz, *Tüchtigkeit*, p. 231.

<sup>5</sup> Galton, *Inquiries*, p. 194; Ploetz, *Tüchtigkeit*, p. 13-16, 91-97.

<sup>6</sup> In Western Europe alone, it was highly unclear if Ploetz considered the English and the Germans, for instance, distinct races, or they both belonged to the 'west-Aryan race'. Ultimately, though, the primary concern was the elevation of the white man. Ploetz, *Tüchtigkeit*, p. 65, 80-86. See Petermann, *Begriffe* (2012).

<sup>7</sup> Ploetz wrote from his practice in the U.S.: 'Im Großen und Ganzen ist die Geschichte zu viel mit Betrug verquickt, außerdem kann es Einem unmöglich behagen, das Verhalten der natürlichen Zuchtwahl auf Schritt und Tritt zu durchkreuzen und einem immer jämmerlicheren Nachwuchs die Geburtswege zu ebnet. So gut der praktizierende Arzt in einzelnen Fällen für das Individuum ist, so schädlich ist er für das Wohl der Nachkommen...' AP to Carl Hauptmann, 4.7.1891, NPI-1/25. See page 19 for a translation.

<sup>8</sup> Due to this pacifist aspect of eugenics, a clear line needs to be drawn between eugenics and Social Darwinism. While the latter favours war, the other peace. See also Kühl, *Betterment*, p. 3.

racial quality. The purpose of eugenics was to find a lever to increase the value of the race. After the First World War, when eugenics had gained much ground in terms of political legitimacy, the London *Spectator* published a short epigram, summarising the criticism of the medical sciences voiced by eugenics.

Science finds out ingenious ways to kill  
 Strong men, and keep alive the weak and ill –  
 That these a sickly progeny may breed  
 Too poor to tax, too numerous to feed.<sup>9</sup>

For similar reasons, early eugenics proponents were outspoken against Malthusian calls for a limitation of birth rates. They were afraid that only the more considerate and more intelligent among the race would honour the call for limitation, and therefore worsen the gap in the birth rate between the fit and the unfit.<sup>10</sup> Notions of class and race were combined and mixed in vague and underdefined ways, contributing to the adaptability of eugenic thought to various progressive and reactionary movements alike.<sup>11</sup>

In combination, these two premises set out the basic rules of the eugenic theory. Against the background of a degenerating modern society, scientific Darwinism guaranteed the changeability of the quality of the stock by human action, for better or worse.<sup>12</sup> Biology made up the entire world, including the social aspects, which determined everything but simultaneously promised an avenue for change and a cure for

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<sup>9</sup> London *Spectator*, 1918, quoted from Dubos, *Medical Utopias*, p. 410.

<sup>10</sup> There is a broad literature on population control and the differential birth rate. It also contributed to the conflict with Malthusianism. Freedman, *Eugenics and Progressive Thought*, p. 662. Soloway devoted an entire chapter to this relationship: *Demography*, p. 86-109.

<sup>11</sup> See Introduction, footnote 15; Chapter 5, footnote 44. Clausen places his account of Ludwig Woltmann, a colleague of Ploetz's, in a context marked by a strong tension: 'the specific context of the fin-de-siècle in which increasing rationalisation and scientific progress clashed with the strong desire for religious redemption and a mystical return to nature.' Clausen, Woltmann, p. 60. Nate devotes an entire book to show how eugenics could combine *Biologismus*, a progressivist, scientific ideology, and *Kulturkritik*, a romantic criticism of modernity. Nate, *Biologismus*, p. 16. These contradictory elements of eugenic thought were also analysed influentially by Soloway. Soloway, *Demography*, p. xi; Barret, Kurzman, *Globalizing Social Movement*, p. 503. Schwartz describes eugenic thinking overall as 'fortschritts-optimistische Antwort auf eine spezifische Krisendiagnose der Moderne'. Schwartz, *Sozialistische Eugenik*, p. 328.

<sup>12</sup> Galton, *Inquiries*, p. 218-220; Ploetz, *Tüchtigkeit*, 224-229.

the modern situation. Consequently, early eugenics was a highly interventionist, activist movement, providing both scientists and policy makers with ideal topics and policies, proposing a specific relationship between the scientific and the political.<sup>13</sup> If early eugenics was a biological treatment to a degenerative modernity, the internal logic of early eugenics raised as the first, most pressing practical and theoretical concern the measurement of racial fitness. The two authors held similar answers, though with different names.

### **Energy and Constitutionskraft – how to assess racial value**

[Energy] is the measure of fullness of life; the more energy the more abundance of it; no energy at all is death; [...] In any scheme of eugenics, energy is the most important quality to favour; it is, as we have seen, the basis of living action, and it is eminently transmissible by descent.<sup>14</sup>

Galton's currency of eugenic worth was energy, the measurement of which was accomplished through assessing reputation and societal success, since 'energy is the capacity for labour'.<sup>15</sup> Success implies not just the ability, but also the willingness, to work hard, making it the most reliable indicator, according to Galton. The class-based advantages a person might enjoy didn't strike Galton as problematic because he considered social mobility reliable enough to guarantee the social success of a person who was biologically predestined for greatness.

The historian Richard Soloway disagrees, arguing that eugenics 'from the beginning appealed to self-serving, professional middle-class interests who wanted a greater say in the building of a future in which they would play a role commensurate with their alleged abilities.'<sup>16</sup> The historiography on English eugenics has emphasised

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<sup>13</sup> See chapter 5 below.

<sup>14</sup> Galton, *Inquiries*, p. 17.

<sup>15</sup> *Ibid.*, p. 17.

<sup>16</sup> Soloway, *Degeneration*, p. 27.

its class-, as opposed to race-based focus. Whereas German eugenics was primarily occupied with race, and thus more susceptible to cooperate in support of an exterminatory policy, so the argument goes, English eugenics was class-based and thus tamer. This view had already been expounded by Carlos Blacker, the long-time secretary of the Eugenics Education Society.<sup>17</sup> The narrative of an English class focus offered a convenient distance from German Rassenhygiene, which seemed to carry racist prejudice in its very name. This was a useful move at a time when Blacker was trying to save the term eugenics from the horrors of the Second World War.<sup>18</sup> Ultimately, these are not the questions this dissertation set out to address. However, it can be said that both Rassenhygiene and English eugenics inspired progressive, as well as reactionary thinkers, with a broad range of political systems that applied it for differing purposes. Polarising the two between 'race' and 'class' will result in a drastic oversimplification.

*Constitutionskraft* (Power of Constitution, general fitness), Ploetz's unit of measurement, was vague enough to accommodate a great number of differing and even contradictory notions.<sup>19</sup> He introduces it as a mixture of both *Erhaltungskraft* (Power of Maintenance, survival) and *Fortpflanzungskraft* (Power of Procreation), understood respectively as the power to be a strong and successful individual within a given population, and the power to produce just as strong or even stronger offspring.<sup>20</sup> *Constitutionskraft* was affected by several Darwinist factors, both 'selectory' (deaths that increase the general fitness) and 'non/counter-selectory' (deaths that have no effect / a

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<sup>17</sup> Soloway, *Degeneration*, p. 10, 16, 27, 60-85. Spektorowski and Ireni-Saban argue that, with reform eugenics, there was an overall change from race to productivity-based eugenics, that was mainly motivated by social democracy. Spektorowski, Ireni-Saban, *Politics of Eugenics*, p. 13-16. See also Blacker, *Eugenics* (1952).

<sup>18</sup> The term 'eugenics' has regularly been reintroduced since 1945, usually by people who favour its implementation. Recent examples include Richard Lynn, *Eugenics: A Reassessment* (2001) and Spektorowski, Ireni-Saban, *Politics of Eugenics* (2014). Historian Stone even argues that the exterminatory elements of eugenics were a 'homegrown' English invention, negating any claims to an English morally clean slate. Stone, *Superman*, p. 93, 124-134.

<sup>19</sup> Kilcher shows how the category 'race' is similarly undefined and can thus be incorporated into Zionism. Kilcher, *Kranke Mann*, p. 189-190. Henke shows how this vagueness was programmatic for the inclusion of other racist movements within Germany itself. Henke, *Wissenschaftliche Entmenschlichung*, p. 15; Ploetz, *Begriff 'Rasse'*, p. 7-15.

<sup>20</sup> Ploetz, *Tüchtigkeit*, p. 43.



negative effect on the general fitness), and overall Ploetz was certain that racial worth was deteriorating.

This decline, however, could not be empirically observed, both authors agreed. A number of non-selectory factors obscured indicators of general fitness, like advances of medicine, which resulted in a higher survival rate of humans without actually furthering their racial qualities. Thus, as more inferior people reach the age of potential procreation, the racial worth of the race actually declined, as less Darwinist pressure was exerted upon its population. War was even worse, because it had clear counter-selective effects on the race. Ploetz used the example of the French people to describe a race caught in heavy decline, because of the ill-effects of the Franco-Prussian war that asymmetrically took the best specimens, leaving only the weak Frenchmen behind to reproduce. To Ploetz, war was the single most important counter-selectory factor of modern societies.<sup>21</sup>

Early eugenics could scientifically describe a situation in which mechanisms of modernity cause racial degeneration in a Darwinian logic of decreasing fitness for survival. Urbanisation, war, differential birth rates, capitalism, and socialism loomed large in the list of worries of the *fin de siècle*. Early eugenics provided a biologized, scientific framework to conceptualise a society in which these fears were influential and effective.<sup>22</sup> The two main categories used to assess racial worth were flexible enough to accommodate a wide range of social movements from the start, not only after reform eugenics tamed early racial eugenics. As hinted at above, the appeal of early eugenic theory lay firstly in its descriptive power. It could harness social fears and scientifically legitimise them. Secondly and equally important, it offered a

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<sup>21</sup> AP to Prof. Numin and Prof. Gapati, 12.11.1900, NPI-4/2.

<sup>22</sup> Overy, too, shows how there was 'a medicalisation of much of the language of crisis', which also 'suggested the possibility of a cure', which we will more systematically investigate in chapter 3. Overy, *Morbid Age*, p. 2-3. See Introduction, footnote 32.

roadmap for the cure.<sup>23</sup> Their books, laden with concrete policy advice, made early eugenics all the more useful to politicians, offering scientific legitimisation of biopolitical practices and power. The remainder of this chapter examines the concrete measures the authors proposed.

### **Marriage laws and *Fortpflanzungshygiene* – how to fix a degenerating race**

Broadly speaking, there were two main distinctions within eugenic policies, albeit not very explicitly articulated in these early texts: positive and negative eugenics. While positive eugenics was directed at the encouragement of good and many children, negative eugenics was concerned with the ‘weeding out’ of unwanted elements deemed harmful. Both authors considered some kind of combination of the two kinds of policies to be ideal, even though both were concerned and conscious about the uncertain and possibly troublesome effects of negative eugenics on the eugenically inferior. The lives of the people that were deemed inferior were greatly threatened by marriage and child-bearing constraints, and even by forced sterilisation or euthanasia.<sup>24</sup>

Despite the voluminous pages of policy advice, both men were theorists by necessity and had only the most limited actual practical experience as eugenicists. Even though eugenic sterilisation and legislation was slowly becoming a more frequent occurrence in Europe by 1900, eugenic policy and practice were still mainly theoretical and programmatic, with their books forming the basic framework of the incipient European movement.<sup>25</sup> Nonetheless, they did propose concrete measures, centring on the control of sexuality, commonly through the control of marriage. By this mechanism, early eugenics intruded into classic church domain, threatening clerical

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<sup>23</sup> Nate, *Biologismus*, p. 9.

<sup>24</sup> Ploetz, *Tüchtigkeit*, p. 238.

<sup>25</sup> Meier, *Zwangssterilisation* (2004); Levine, *Eugenics* (2017)

authority over the most intimate private sphere. Galton, for example, undertook a statistical analysis of the effect of early and late marriage on the number of children born in a given marriage. Revealing a high correlation between the date of marriage and its regenerative productivity, he identified various policy measures to amend late marriages among the able.

Because he thought career situation and corresponding financial needs keep the most able couples from marrying early, he wanted to amend the situation through a marriage bonus for young couples with a high score on some form of ancestry report.<sup>26</sup> This was to be combined with raising awareness among young people to the utter importance of the ancestry report of their future spouse, comparable to reports Galton himself generated in and issued from his anthropometric laboratory.<sup>27</sup> He hoped to be able to ‘breed down the others’, meaning the racially less valuable, in a matter of a few generations.<sup>28</sup> Additionally to their immediate content, these reports were an exercise in the production of personalised data, that could then be used for eugenic purposes encompassing both scientific and political practices. To Galton and Ploetz, data production became an end in itself.<sup>29</sup> In *Kantsaywhere*, Galton’s utopic vision, the functions and mechanisms of the ancestral reports is explained, shedding light on eugenic institutions as giant data management and assessment centres.

While Ploetz, too, proposed the control of marriage, he thought it an insufficient tool to turn around the degenerative trends of his time. Additionally, he was concerned about the moral and social effect of a prohibition of procreation on the unfit elements of society.<sup>30</sup> From his high-school days on, Ploetz was not just an evolutionary biologist, but also an ardent socialist. The coming of socialist institutions was a

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<sup>26</sup> The implications of this idea will be developed in the utopian novel *Kantsaywhere*, discussed in chapter 4.

<sup>27</sup> For a description of the laboratory see Forrest, Galton, 180-186.

<sup>28</sup> Galton, *Inquiries*, p. 210, see also 200-220.

<sup>29</sup> Galton even closes his book with a general call to start collecting data. Galton, *Inquiries*, p. 220. See also Levine, *Eugenics*, p. 26.

<sup>30</sup> Ploetz, *Tüchtigkeit*, p. 217-220. 114-115, 196-198, 212, 223.

historic certainty, based in the laws of class struggle.<sup>31</sup> This dawn of socialism was as certain as its degenerative (counter-selectory) effect on the race. Thus, Ploetz tried to combine what he considered the social facts of history with the natural facts of biology in order to prevent a racial meltdown.<sup>32</sup>

The solution to this problem was called *Fortpflanzungshygiene* (reproductive hygiene). Ploetz envisioned control of hereditary improvement through control of procreation, where he located a primary source of variation. Factors like time of day, temperature, alcohol consumption, and the age of the parents defined the hereditary quality of sperm cells.<sup>33</sup> Controlling this aspect of variation would make it unnecessary to resort to more extreme measures like sterilisation or even euthanasia, and nonetheless guarantee a steady *Vervollkommnung* (perfection) of the race.<sup>34</sup> The undeniable end of the capitalist system and the dawn of the socialist system could therefore be placed on what he calls a 'Darwinist footing'.<sup>35</sup> Rassenhygiene combined the perfection of the social system on a 'humanitarian' basis with the perfection of the Darwinian evolutionary processes of the race. The exact mechanism by which *Fortpflanzungshygiene* could work was left open. Nonetheless, he voiced complete confidence in humanity's ingenuity to create solutions to this problem, which he wanted to explore in a second volume to *Tüchtigkeit* – drafts of which are discussed alongside Galton's *Kantsaywhere* in chapter four.<sup>36</sup> Due to limitations in the science of his time, however, Ploetz opted for the same concrete policy recommendations as Galton; a mix of sterilisation and marriage certificates, of negative and positive eugenics.<sup>37</sup>

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<sup>31</sup> Ploetz, *Tüchtigkeit*, p. 207, 212.

<sup>32</sup> *Ibid.*, p. 195.

<sup>33</sup> AP to Prof. Numin and Prof. Gapati, 12.11.1900, NPI-4/2; Ploetz, *Tüchtigkeit*, p. 230-231.

<sup>34</sup> Ploetz, *Tüchtigkeit*, p. 224-230.

<sup>35</sup> *Ibid.*, p. 231. Galton similarly take scientific legitimacy from an unshakable belief in the authority of numbers. Galton, *Kantsaywhere*, p. 54.

<sup>36</sup> *Ibid.*, p. 239.

<sup>37</sup> *Ibid.*, p. 145-146. Ploetz already tried to popularise *Fortpflanzungshygiene* in 1892, while practising medicine in the US. In an article in the *New Yorker Volkszeitung* he presents the worker's uprising as a call of history, balanced only by either brutal selection on the individual level, or much better, selection on the cell level. Ploetz, *Hamlet*, NPI-4/1.

This chapter has provided a basic insight into early eugenic theory. It can be argued that it was more than either science or policy but consisted of a flexible framework to conceive the world, and to deduct prescriptive statements to amend it. Early eugenics was thus far from being an immediate blueprint for Nazi policy. While the notion of life unworthy of life is doubtlessly accepted in the early eugenic outlook, and other connections like euthanasia clearly exist in Nazi racial policies, early eugenics was vague and flexible enough to accommodate a range of progressive movements, from socialism to feminism, anti-alcoholism, and even Zionism.<sup>38</sup> *Constitutionskraft* and *Energy*, as well as other terms like *race* were vague enough to allow for appropriation and reconfigurations. The actual measures proposed were incomparable to the extremes of the racial state, limited as much by the technical abilities as well as the moral code of their time. Ploetz, the father of Rassenhygiene and thus the alleged father of some Nazi racial policy, explicitly tried to allow for care of the weak and to accommodate what he called 'humanist values' within the logic of the struggle for existence.

Early eugenics, it seems, provided tools to describe existing fears and anxieties in Darwinian terms, and thus to grant them scientific legitimacy. Its great appeal, however, lies in the combination of this authoritative description with its interventionist, action-based emphasis. Potential trajectories of early eugenics begin to open up, based less on its immediate content than its structural approach to the world. This structure will be the object of the investigation in the following chapter, centring in on the eugenic epistemology.

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<sup>38</sup> See Introduction, footnote 15.

### Chapter 3 – Early Eugenic Epistemology

Despite the tendency in historiography to put an emphasis on policy, a first glance seems to suggest the two authors explicitly founded a science, at least in their own words. Galton defined eugenics as the ‘science which deals with all influences that improve the inborn quality of the race’, and Ploetz, too, was explicit about it being first and foremost a science.<sup>1</sup> Policy, in early eugenics, was supposed to be scientifically informed. In other words, what made eugenic policy advice special was that it was also scientific, granting it the air of objective truths, free from ideology.<sup>2</sup>

In this line of argument, science becomes a signifier for the kind of knowledge that can claim the highest possible ontological legitimacy. Eugenics, by calling itself a science, intrudes into the political sphere with a special, scientific authority. Alongside this narrative of science intruding into politics, however, the history of science offers the methodological instruments that can help to crack open the implicit nimbus of scientific autonomy. One could think about ‘science as politics’, as the historian Michael Hagner put it.<sup>3</sup> Early eugenics was a contingent, political, and social undertaking as much as it was based on empirical data production. Political processes mattered in early eugenics, not least because it proposed a complete system of morality. Its class-based prejudice, for instance, was already criticised as a flaw by the contemporaries of Galton and Ploetz.<sup>4</sup> Conceptualising eugenics as a social and cultural movement does not disqualify it as a science, but enables us to take the knowledge it produced –

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<sup>1</sup> Galton, *Eugenics Definition*, p. 1. In the *Inquiries*, where he introduced the term, he also presents eugenics as the ‘science of improving stock’. Galton, *Inquiries*, p. 17; see also Ploetz, *Tüchtigkeit*, p. 229-235.

<sup>2</sup> This carried through to inter-war eugenics, when Eugen Fischer, then director of the Kaiser-Wilhelm-Institute für Anthropologie, Germany’s most important centre for eugenic research, clarified in a programmatic paper from 1926, that all racial questions should be investigated ‘purely scientifically without regards for political and other tendencies’. Fischer, *Von wissenschaftlichen Instituten*, p. 315, quoted from Weingart, *German Eugenics*, p. 264.

<sup>3</sup> Hagner, *Forschung als Politik* (2006).

<sup>4</sup> Contemporary criticism, both from socialism, but also from biology or ethics, has received a growing share of scholarly attention. Soloway, *Demography*, p. 71; Nate, *Biologismus*, p. 367-378; Levine, *Eugenics*, p. 22-23.

its eugenic epistemology – into account as an object of study itself. If knowledge can be contingent and culture specific, what did eugenic knowledge look like? What made it a science and why was it useful to carry this attribute? To answer these questions and arrive at an early eugenic epistemology, the chapter starts with the system of morality the two authors propose. In their value sets, basic assumptions about the world are already visible. These will guide the analysis further in an investigation of the underlying epistemological premises.

### **Eugenic morality and eugenic language**

Galton's eugenics was very explicit in its general aspiration to produce a eugenic morality, even to form a full-fledged religion. At the end of the *Inquiries*, he speaks of a religious duty to advance the hereditary value of the race, closing the book with:

[...] the chief result of these Inquiries has been to elicit the religious significance of the doctrine of evolution. It suggests an alteration in our mental attitude, and imposes a new moral duty.<sup>5</sup>

To Galton, humans needed to be educated about the importance of eugenics first, before it could become possible to impose the measures upon them. It needs to first become the morally right thing to do, Galton would argue, before it can become the legally required thing to do.<sup>6</sup> Ideally, however, it would be religious and moral rigour and not law enforcement that ensured the constant betterment of the race. When describing the diffusion of eugenic morality in society he made the analogy of a ship that turned so slowly no one on board actually realised that a complete reversal of its course had taken place. Once eugenics was ingrained in people's minds, once it

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<sup>5</sup> Galton, *Inquiries*, p. 197, 220.

<sup>6</sup> *Ibid.*, p. 207.

became part of a shared morality, the ship would have turned and, by virtue of human ingenuity, eugenics would be successful.<sup>7</sup>

The central foes in this battle over moral codes were Christian morality and institutionalised churches. Eugenics was a double threat to the church, first because it claimed authority over some traditionally religious domains like marriage and sexuality, second because it explicitly wanted to be a form of religion; it provided answers in a quest for purpose.<sup>8</sup> In an attack on the established church and belief system, Galton tried to destabilise the practice of praying, arguing for its superstitious character and utter dysfunctionality: because vessels filled with praying monks were just as likely to sink in a storm as merchant's ships, appealing to God seemed to have no impact whatsoever on the outcome of a given situation. Additionally, since deaf children sat through church service without comprehending anything or developing any form of Christian sentiment, there could be nothing 'natural' about Christianity.<sup>9</sup> Therefore, his conclusion went, religion was a societal 'add-on', and as such could be moulded into any shape. Christianity could easily be replaced by a biologized eugenic religion, goes the implicit conclusion.

Alfred Ploetz agreed with Galton about the dysgenic (or in Ploetz's jargon, counter-selectory) effects of traditional religion. He cites the example of the French Huguenots, fine specimens of the French race, that were killed for no other reason than practising

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<sup>7</sup> Galton, *Inquiries*, p. 207, 220.

<sup>8</sup> Nate and Raphael argue that in the process of secularization, the retreat of religion leaves a vacuum to be filled by science. Nate, *Biologismus*, p. 17-18, 160-176; Raphael, p. 183. Soloway quotes the English eugenicist Caleb Saleeby saying that eugenics was 'terrestrial in its chosen theatre, celestial in its themes'. Soloway, *Demography*, p. 31. He himself considers 'Eugenics [...] more of a secular religion born of twentieth century anxieties than a science fixed on provable natural laws'. Soloway, *Demography*, p. 80. Puschner shows for the case of the völkisch movement how religiosity was the 'Triebfeder jedweden Handelns und Denkens'. Puschner, *Völkische Bewegung*, p. 204. Turda and Quine argue that the new 'secular religion' is made up scientism, but equally so of nationalism. Turda, Quine, *Historicizing*, p. 52-55. Rosen, trying to understand the appeal eugenics held to religious leaders, found that 'to practice eugenics was, in some sense, to play God'. While eugenics was religious, religion itself became eugenic, she shows. Rosen, *Preaching Eugenics*, p. 22; see also p. 6, 183. Harrington takes a fruitful approach and uses the concept of 'holism', that will be explored in chapter 4 and 5, to think about eugenics as a 'reenchanted science', programmatically directed against the separation of spheres as conceptualised by Weber. Harrington, *Reenchanted Science*, p. xv-xxi.

<sup>9</sup> Galton, *Inquiries*, p. 150-152.



the wrong kind of Christianity. Their emigration from France was a serious blow to French *Constitutionskraft*. Religion in its present form was consequently, Ploetz explained, a major counter-selectory factor in the world.<sup>10</sup> Yet he was much more sceptical than Galton about the feasibility of turning Rassenhygiene into a religion. Even if it were possible to change the morality of people, this would be an extremely lengthy progress, Ploetz thought.<sup>11</sup> Consequentially, Rassenhygiene tried to preserve both the so-called 'humanist values', denoting first and foremost the care of the weak, while implementing a strict eugenic programme on the cell level that would ensure racial *Vervollkommnung*. This is what Ploetz meant with placing the inevitable dawn of socialist institutions on a Darwinist footing. He emphasised, however, that it was not out of care for the weak that he wanted to spare them, but purely because he dreaded the social unrest. If it needed to be done, the primacy of the Darwinist principles was unquestioned.<sup>12</sup>

As we know from the previous chapter, Ploetz's solution to this dilemma was *Fortpflanzungshygiene*. For this cure to work, a central principle had to be accepted. This element, shared in early eugenics, took the shape of a metaphor: the organicist metaphor of the racial body (the *Volkskörper*) being made up of humans like the individual body of cells. When early eugenics referred to a nation, a race, or a population, as made up by its individuals like the cells of a body, this analogy contains more than a rhetorical figure. A core concept of early eugenics is conveyed, something that could be called the game of scales. It states that the same biological laws apply at different levels of human organisation. While a single human is made up of cells, the race is

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<sup>10</sup> Ploetz, *Tüchtigkeit*, p. 70.

<sup>11</sup> *Ibid.*, p. 74. The different convictions with regards to establishing a new eugenic morality translate into differences in the national movements in the early 20<sup>th</sup> century. While the *Eugenics Education Society* focused on public education, the various *Gesellschaften für Rassenhygiene* were more policy and science oriented. However, the 'Berlin fraction' of German Rassenhygiene adopted a more Galtonian stand after the First World War, when Fritz Lenz wrote his 1917 essay *Zur Erneuerung der Ethik* (republished 1933 as *Die Rasse als Wertprinzip*) advocating for a basic change in the moral system. See Weingart, *German Eugenics*, p. 269.

<sup>12</sup> Ploetz, *Tüchtigkeit*, p. 231.

equally made up of humans-as-cells, and the species is the aggregate of various races. The difference between these layers is only one in scale, with the same basic laws about the struggle for existence applying equally to all of them. Ploetz, for instance, explains, 'like humans are the cells of a state, the cells of the human constitute the human'.<sup>13</sup> Galton's notion is even more mythical, as he noted in his *Inquiries*:

We only know that the cells form a vast nation, some members of which are always dying and others growing to supply their places, and that the continual sequence of these multitudes of little lives has its outcome in the larger and conscious life of the man as a whole. Our part in the universe may possibly in some distant way be analogous to that of the cells in an organised body, and our personalities may be the transient but essential elements of an immortal and cosmic mind.<sup>14</sup>

He uses the idea of composite portraiture as an approximation of the nature of the state, and even truth itself. By blending many similar things together, the weighted average between them becomes its truest version. The character of many British people, for instance, would in a weighted aggregate be a representative image of the British character itself.<sup>15</sup> It is for the game of scales that Ploetz can transfer the struggle for existence on the germ cell level, thereby sparing humans from brutal eugenic measures, while reaching the same effect as actual euthanasia would.<sup>16</sup> Strong germ cells are passed on, and weak cells kept from procreation, just like humans would be selected in hard natural selections. While Ploetz had sympathies with the humanitarian position, possibly because of his early connection to socialism and his father's factory work, the absolute primacy of the biological effects of degeneration in

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<sup>13</sup> ...'so wie der Mensch die Zellen des Staates ist, so sind die Zellen des Menschen konstitutiv für den Mensch'. Ploetz, *Tüchtigkeit*, p. 230. Turda also notes how the human body becomes more than a metaphor for the nation, it becomes identical with it. Turda, *Modernism*, p. 6.

<sup>14</sup> Galton, *Inquiries*, p. 196.

<sup>15</sup> *Ibid.*, p. 196.

<sup>16</sup> Ploetz, *Tüchtigkeit*, p. 210-239. In a 1904 article Ploetz explained 'Es liegt ferner kein prinzipieller Grund vor, die Anschauung der Zellstufe nicht auf die nächst höhere Organisations-, die Personalstufe, auszudehnen. Ploetz, *Begriff 'Rasse'*, p. 20.

Rassenhygiene was never in doubt.<sup>17</sup> Therefore, while humanity was lucky that it could transfer the struggle for existence to the cell level, there was no moral code preventing the decimation of the bad humans from the body of the race. Sparing them was merely instrumental, a means to the end of avoiding social unrest.

The eugenic morality was facilitated by a specific use of language, with value-laden and very consciously used analogies.<sup>18</sup> Ploetz especially developed a new nomenclature; children, for instance, were referred to as *Devarianten* (Devariant), and contemporaries were *Convarianten* (Covariant). These neologisms created an effect of estrangement. Children were not really children anymore, no longer connected to ideas of family, parental love, and vulnerability. As *Devarianten* they served one purpose only: to be racially superior, on average, to their parents (the *Convarianten*). Adding to the neologism was his usage of many terms borrowed from gardening and breeding. Thus Rassenhygiene aimed at an *Aufzucht* (Breeding) of the human stock, and promoted the *Ausjäte* (Weeding Out) and *Ausmerze* (Extermination) of its inferior elements.<sup>19</sup> Applying these terms to humans devalued them; eugenic language was thus a necessary condition for the success of the eugenic morality, that needed to rid the *Volkskörper* of its inferior members. In combination, eugenic language and eugenic morality made the application of the idea of unworthy life thinkable on a yet unknown scale. The appeal of early eugenics, however, was even broader, and resulted from its epistemology, which we will finally develop properly in the remainder of this chapter.

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<sup>17</sup> In a passage on humanist ideals of care of the weak Ploetz wrote: 'Die Forderung des Rassenwohls bleibt also die Grundbedingung und der Prüfstein aller anderen. Ploetz, *Tüchtigkeit*, p. 207. The socialist eugenicists Ludwig Woltmann also conceptualised the problems of modernity as first and foremost biological. Clausen, Woltmann, p. 13, 60.

<sup>18</sup> Historian Dikötter calls eugenics a 'modern' way of 'talking about social problems in biologizing terms.' Dikötter, *Race Culture*, p. 467.

<sup>19</sup> Ploetz, *Tüchtigkeit*, p. 110, 116, 164, 224-231; also in NPI-4/2.

## Eugenic epistemology

Instead of drawing a definitive line between science and policy and wondering which side these eugenic theories might be on, it is more enlightening to understand them as kinds of knowledge that reorganised the way science and policy interact. Marius Turda uses this approach to characterise eugenics as an inherently modern way of thinking, as a comprehensive answer of modernists to the challenges of modernity itself.<sup>20</sup> Galton made this aspect of eugenic theory explicit when he called for a complete change in the value system of a given society in order for eugenics to work. This is what he meant by eugenic religion: a change in the way the world is thought and perceived in order to facilitate a reversal of Christian morality. Galton wanted to transform the value system into one that directs all human activity in some way toward the ideal of racial enhancement.<sup>21</sup> This system of morality was singular because it was built on empiricism and facts, undeniable truths therefore, and as such posed the ultimate value system. Eugenics redefines the place and function of man in the world, a profoundly ontological project. As Galton wrote:

The fact that the very foundation and outcome of the human mind is dependent on race, and that [...] humanity taken as a whole is not fixed but variable, compels us to reconsider what may be the true place and function of man in the order of the world.<sup>22</sup>

Yet what more concrete shape did eugenic epistemology take? Early eugenics can be conceptualised as a two-fold kind of knowledge, much like the main activities of the doctor: diagnosis and therapy. Naturally, this is an ideal-typical separation, and in all instances and examples, one will be influenced by the other. However, this structural approach facilitates an understanding of the appeal of early eugenics beyond its

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<sup>20</sup> Turda, *Modernism*, p. 70, 118-126.

<sup>21</sup> Galton, *Inquiries*, p. 150-152.

<sup>22</sup> *Ibid.*, p. 220.

immediate content, and beyond the Nazi trajectory. The diagnostic or descriptive part of eugenic knowledge provided a way of translating existing fears and convictions over social issues, like the differential birth rate, into a scientific framework. The medicalised, but also dehumanised eugenic language was crucial in this process, giving a seeming scientific legitimacy to fears of moral and biological decay. It could thus transform other kinds of knowledge, like the political and moral conviction of white supremacy, to a scientific kind of knowledge.<sup>23</sup> Yet this alone could not explain the enormous success of early eugenic thought. The descriptive aspect of eugenic knowledge was combined and complemented by a prescriptive one, by therapy. This goes beyond an overambitious application of science to politics, because early eugenics actually provided both policy makers as well as researchers with ideal political programs and research topics. The eugenic epistemology did not work along a separation of these spheres but operated from the premise of the wholeness of all biological and social entities, as will be elaborated below. It generated a kind of knowledge that could describe a situation and immediately deduct the appropriate action, yet remained scientifically grounded and legitimised. This duality in eugenic epistemology goes a long way in explaining the breadth and longevity of the appeal of eugenics.

The game of scales is a necessary element of the eugenic kind of knowledge, making an equation between the rules on the cell level and the rules on the social level feasible. Referring to the state as a human body is thus more than rhetoric. While Ploetz and Galton were doctors of the single body as young men, they extended their spheres of interest in their later lives and proposed to perform the same job on the racial body, with the same underlying logic. Early eugenic epistemology could thus comprehend, control, and amend perceived crisis and convictions, without necessarily predefining what this crisis consists of, guided by the logic of diagnosis and therapy.

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<sup>23</sup> Ploetz, Begriff 'Rasse', p. 3. Racial ideas of white supremacy were mixed with class-based notions of success being biological, as historian Jones shows for the Irish case. Jones, Eugenics in Ireland, p. 82-84.

## Chapter 4 – Early Eugenic Utopia

We have to feel like knights of life itself, of healthy and blossoming, of strong and beautiful life, out of which all the joys of the world emerge und whose victorious thrust upwards alone [gives us hope]. – Alfred Ploetz<sup>1</sup>

Eugenics is a virile creed, full of hopefulness, and appealing to many of the noblest feelings of our nature. – Francis Galton<sup>2</sup>

The eugenic epistemology forms the premise and basis of Galton and Ploetz's worlds, but how does that translate to the organisation of society? In order to complete the reassessment of early eugenics, the form of the state, the role of science in society, and the question of eugenic agency need to be considered, as well. Fortunately, both authors left utopic texts that can be used to approach these questions.

Galton and Ploetz were far from alone in producing a medicalised utopic vision. In fact, as Fabiola López-Durán shows, writing about utopias based on science and medicine was extremely common around the turn of the century. Furthermore, these literary utopias were created more 'as ideological products than as aesthetic ones'.<sup>3</sup> These texts, similar to *Kantsaywhere* and Ploetz's untitled utopian sketches, lacked plot and linguistic sophistication because they were intended as manuals for the creation of a perfect society.<sup>4</sup> Lutz Raphael goes further, stating nineteenth-century science, in general, was heavily involved in creating *kulturelles Orientierungswissen* (knowledge providing culture orientation), for which it would produce utopian visions of

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<sup>1</sup> 'Als Ritter des Lebens müssen wir uns fühlen, des gesunden und blühenden, des Starken und schönen Lebens, aus dem alles irdische Glück quillt und aus dessen sieghaften Aufwärtsstreben allein [wir Hoffnung speisen].' Ploetz, *Denkschrift über die Ziele der Rassenhygiene*, in Lenz, Alfred Ploetz, p. VII.

<sup>2</sup> Galton, *Essays in Eugenics*, p. 70.

<sup>3</sup> López-Durán, *Eugenics in the Garden*, p. 22, 24. In fact, *Kantsaywhere* followed a tradition of various guidebooks written by Galton. After his journey in South West Africa he had written the enormously successful *The Art of Travel* (1855), and the *Knapsack Guide to Switzerland* (1864). Forrest, Galton, p. 64, 76.

<sup>4</sup> López-Durán, *Eugenics in the Garden*, p. 22.

*wissenschaftliche Politik* (scientific politics).<sup>5</sup> In this way, they are well-suited for the questions of this chapter about the long-term, macro vision of early eugenics, that form part of the reassessment of early eugenics.

### The histories of two fragments

In 1905, Galton received a request to write a comprehensive overview of his theory of eugenics. Despite developing a partial draft, he never properly tackled the task, much to the disappointment of his colleagues and friends at the Eugenics Education Society.<sup>6</sup> However, the need to characterise an ideal eugenic community led him to write the utopian novel *Kantsaywhere* a year before his death. He considered the resulting text unsuited for publication, an assessment his niece, who lived with him after the death of his wife and took care of his documents, agreed with. Galton's student Karl Pearson, who eventually published *Kantsaywhere* in memory of his mentor and friend, alleged Galton's niece destroyed parts of the manuscript before sending it to him.<sup>7</sup> Nonetheless, it conveys the third phase of his eugenic thinking (after *Hereditary Genius* and *Inquiries*), and Carlos Blacker, secretary of the Eugenic Education Society from 1931–1952 and later apologist of eugenics, considered it the best account of the eugenic long-term vision.<sup>8</sup>

In Ploetz's work, there is no clear utopian text that can be singled out. He included a short sketch of an ideal race-hygienic society in *Tüchtigkeit I*. This chapter, however, mainly considers *Tüchtigkeit der Rassen II*, which, like *Kantsaywhere*, survived only in

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<sup>5</sup> Raphael, *Verwissenschaftlichung*, p. 169.

<sup>6</sup> Forrest, Galton, p. 264, 283.

<sup>7</sup> Clayer, *Utopian Texts*, p. 189; Forrest, Galton, p. 285; Sargent, *Kantsaywhere*, p. 191-192; Gillham, Galton, p. 344.

<sup>8</sup> Blacker, *eugenics*, p. 119. Kevles recounts how Blacker tried to save eugenics after the war by distancing it from the Nazis. Kevles, *Name of Eugenics*, p. 171-175. Wilkinson shows the term 'eugenics' is used today by the critiques of existing scientific and reproductive practices. They invoke 'eugenics' precisely because of its negative connotations. Wilkinson, *Eugenics Talk*, p. 468. Freedon demonstrates the revolutionary momentum of eugenic utopias. This progressive, reformist character accounts for the link to socialism. Freedon, *Eugenics and Progressive Thought*, p. 660.

fragments. Part of Ploetz's original race-hygienic program, *Tüchtigkeit II*, was announced as ready for imminent publication in the last pages of *Tüchtigkeit I*. It appears *Tüchtigkeit II* reached a state of relative maturity by the beginning of the twentieth century, when personal issues and the founding of the main race hygienic newspaper, *Archiv für Rassen- und Gesellschaftsbiologie* (Journal for Racial and Social Biology), caused him to abandon the project.<sup>9</sup> Judging by the running page numbers on the manuscript, he had written nearly half of *Tüchtigkeit II*. At least 100 manuscript pages were lost, presumably during Second World War, when Ploetz's eldest son, Ulrich, sank his father's scientific and personal documents in a lake near Munich in spring 1945 to prevent them from falling into the hands of allied troops.<sup>10</sup> In the process of conceptualising this second volume, Ploetz envisioned a third, which according to sources, never had more than a title and loose topic.

Ploetz produced fewer books and articles than his English counterpart, his influence lay in personal mentorship and guidance more than scientific output, as his student and co-author of the 1933 Nazi law Fritz Lenz related.<sup>11</sup> In fact, after failing to complete the *Tüchtigkeit II*, he would contribute only small articles and lectures to the *Archiv für Rassen- und Gesellschaftsbiologie* and not publish another major book. Along with second volume outlines and the unbound collection of Ploetz's papers, *Vorträge, Veröffentlichungen, Korrekturfahnen* (Lectures, Publications, Corrections), the Max Planck archive contains a range of documents and notes that help to understand Ploetz's specific societal vision. Programmatic sketches to win over eminent men of the time for the race hygienic project are as valuable as notes on presentations of the optimal measurement of *Constitutionskraft*. In combination with *Kantsaywhere*, they provide an image of the shared elements that make up the macro vision of early

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<sup>9</sup> Ploetz, *Tüchtigkeit*, p. 236. Most of the documents in the Max-Planck Archiv stem from around 1900. NPl-4/2.

<sup>10</sup> Burgmaier, Weber, Nachlaß, p. 16.

<sup>11</sup> In a jubilee publication eugenicist Fritz Lenz emphasised how Ploetz was the 'spiritual leader' with a 'heart full of faith', that he could pass on to others. Lenz, Ploetz, p. IX.



European eugenics. In grasping early eugenics as a utopic vision of society, this chapter will complete the reassessment of early eugenics with a focus on the societal implications they imagined.

### **The Eugenic College of Kantsaywhere**

As a novel, *Kantsaywhere* retains an almost naive air. Its main character, the English professor of statistics I. Donoghue (I don't know who), is presented as a completely flat personality with no development or real profile. Naturally, this has to do with Galton's niece destroying the frivolous parts, leaving only bare descriptions of the ideal country of Kantsaywhere.<sup>12</sup> The text is written as Professor Donoghue's journal, 'revised and edited, in accordance with his request, by Sir Francis Galton', so the title informs the reader.<sup>13</sup> The first three chapters, which are missing, possibly contained the story of the professor's arrival in the small country of 10,000 inhabitants. The fragment now opens with a description of the societal structure of the country.

Two big institutions dominate the politics of the ideal eugenic community, the town and the eugenic college. It is not wrong to think of this as an ideal version of the English university town Cambridge.<sup>14</sup> Yet the relationship between college members and townspeople in Kantsaywhere, he wrote, 'is more like that between the Fellows of a College and the undergraduates, than between the Gown and the Town'.<sup>15</sup> It is a relationship of respect and potential, rather than a yawning class divide. In Kantsaywhere, the 'Eugenic College of Kantsaywhere' owns all the land and thus controls the politics and society. The college is a model for the ideal eugenic government, responsible for the formulation and execution of eugenic measures. Most importantly, it

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<sup>12</sup> Clayes, *Kantsaywhere*, p. 189.

<sup>13</sup> Galton, *Kantsaywhere*, front.

<sup>14</sup> Blacker, *Eugenics*, 16-23.

<sup>15</sup> Galton, *Kantsaywhere*, p. 17.

oversees and maintains the hereditary standards of people in Kantsaywhere. To this end, it conducts a series of tests and produces diplomas attesting racial worth, that decide the life of the people. Upon surpassing a certain grade, for instance, one is awarded 'various social and material advantages', like the prestigious college membership.<sup>16</sup> High-scoring people of Kantsaywhere are strongly encouraged to marry other high-scoring individuals, and depending upon the combined score of the young couple different child-bearing restrictions are at play.

The college focuses almost exclusively on positive eugenic measures. If there should or could be care for the weak is left in a legislative vacuum; the constitution of the college does not completely forbid private charity, except for its own activities. However, Professor Donoghue explains, since all the land is owned by the college, there is no actual possibility to operate an aid centre. Humanitarian aid benefiting the weak is thus practically unheard of.<sup>17</sup> This example illustrates Galton's idea that eugenic morality could work as a function of the paramount goal of enhancing the hereditary value of the populace. With eugenic norms forming the basis of a community, there was no need for a strong state to enforce the betterment of racial quality. Instead of writing disregard of the weak into law, he aimed at writing it into the fabric of society. People of Kantsaywhere accepted the cruel reality of eugenics because it was grounded on the absolute objectivity, and thus metaphysical authority, of scientific knowledge. Stated differently, without the eugenic epistemology to objectively and scientifically generate knowledge about the world, the acceptance of intrusive policies would be unimaginable.<sup>18</sup>

In order to achieve an appreciation of the impartiality of eugenic policies, Galton spends many pages explaining testing procedures. Despite the aristocratic setup of

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<sup>16</sup> Galton, *Kantsaywhere*, p. 15.

<sup>17</sup> *Ibid.*, p. 16-17.

<sup>18</sup> The complex relationship between scientific and literary discourses is investigated further in Nate, *Biologismus* (2014). Galton, *Kantsaywhere*, p. 38.

the college, he needed to make clear that entry requirements were completely egalitarian, and that discrimination could only be based on biological grounds. 'Prairie value' is what the eugenic college considered, a raw, biological criterion undisturbed by differential training, as it might result from better but more expensive private schools.<sup>19</sup> For this reason endurance tests were dropped from the physical examination, Donoghue recounts, because 'they [the college's examiners] had not as yet succeeded in eliminating the effect of practice'.<sup>20</sup> Other aspects of the tests, essay writing and singing, for example, are considered unproblematic and the overall test is accredited with the highest professionalism and objectivity.<sup>21</sup> The results of this honours examination, taking place only once in life at the beginning of adulthood, are publicly announced and determine social standing, college membership, and most importantly reproductive rights.<sup>22</sup> The number of children is dependent on the joint score of a young couple. Acceptance of these enormously intrusive policies was conditional on their scientific authority, and on unconditionally placing nature over nurture.

Regarding the most private aspects of the citizens of Kantsaywhere, the role of the eugenic college can hardly be overestimated. But ultimately, the college was a private institution, running on its endowment and private investments.<sup>23</sup> The state, on the other hand, was almost a non-issue in the ideal eugenic country. It appears only twice in the remaining fragments of text, and both times in the context of negative eugenics. The people of Kantsaywhere regard the 'propagation of children by the Unfit', Donoghue explains, as nothing short of a 'crime to the state'.<sup>24</sup> In the second reference, the state appears as the operator of labour colonies, to which one is sentenced for not

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<sup>19</sup> Galton, *Kantsaywhere*, p. 20.

<sup>20</sup> *Ibid.*, p. 37.

<sup>21</sup> *Ibid.*, p. 29-32

<sup>22</sup> *Ibid.*, p. 49-54.

<sup>23</sup> The beginning of the college was through a single donation, that laid out its purpose. Galton, *Kantsaywhere*, p. 15.

<sup>24</sup> Galton, *Kantsaywhere*, p. 44

repaying debts.<sup>25</sup> Even combined, these passages on the state and negative eugenics cover minimal space of the fragment; they are dwarfed by description of the customs and rules of the eugenic college. Unlike private cooperation, the state, it seems, was more of a necessary evil to Galton than a solution to implementation of eugenic utopia. The ideal eugenic community was to be brought about by moral education, and even more encompassing, through a eugenic religion. Eugenic agency resided with the people, not with a central authority. The size of Kantsaywhere is a central factor in this outlined community, 10,000 inhabitants allows for effective peer to peer monitoring. The eugenic religion, instilled into the habits and value systems of the people of Kantsaywhere, makes Galton's eugenic utopia possible.

### **The United States of Western Europe**

In the collage of Ploetz's texts, mainly the notes to *Tüchtigkeit der Rassen II*, a rather different ideal eugenic state structure emerges. An undated document, probably created circa 1899–1901, gives a chapter overview with details for *Tüchtigkeit II*, and the title and topic of *Tüchtigkeit III*. Combined with *Tüchtigkeit I*, they were meant to present a comprehensive theory of Rassenhygiene. The chapters of *Tüchtigkeit II* are separated into two parts, of which only the first was developed.

The book, according to the overview, was supposed to start with a sketch of Ploetz's theory on various forms of selection, recounting his concepts of non-selection, counter-selection, and most importantly sexual selection, that were already partially introduced in *Tüchtigkeit I*.<sup>26</sup> The second part would contain more practical advice on the appropriate methods of procreation, including dietary aspects and time between pregnancies. It contained chapters about rules for the pregnancy and ideal childcare.

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<sup>25</sup> Ibid., p. 16.

<sup>26</sup> Chapter breakdown sketch, NPI-4/2.

Although the overview implies that the majority of the first part was written, only the introduction and sub-chapters on counter-selection and sexual selection survive.<sup>27</sup> Nonetheless, a coherent picture of the aims, fears, and general line of argument of *Tüchtigkeit II* emerges from the fragmentary evidence. In combination with other documents this evidence allows for development of Ploetz's ideal society, thus making a comparison with the similarly fragmented *Kantsaywhere* worthwhile.

Among the three degenerative factors on modern societies, big cities, contraception (by means of coitus interruptus), and war, the latter was the most important contributor to counter-selection, and also the least ambivalent.<sup>28</sup> As we learned above, it was predominantly the best specimens (*Convarianten*) that died in war, leaving behind weaker and less fit people to reproduce, thus lowering the racial value of the entire stock.<sup>29</sup> The only way to make war useful would be to use the weak elements of a population as cannon fodder, but he doubted that this was a feasible way to wage successful wars. Out of concern for the degenerative effect of war, Ploetz formulated hope that:

war itself, at least among the civilised people, finally ends up in its rightful place, the historic attic [die geschichtliche Rumpelkammer], and becomes unnecessary through international courts and permanent great state unions.<sup>30</sup>

The call for unification of small states was more than a pragmatic tool to stop degeneration, it was part and parcel of the progression of European history. This continuous process of ever-growing state structures was exemplified by the ongoing unification of many small German states. Once separated into many small entities, all German people now lived in three large states: the German Reich, Switzerland, and Austria-

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<sup>27</sup> Judging from the running page numbers in these chapters, at least 100 pages were lost. NPI-4/2.

<sup>28</sup> NPI-4/2.

<sup>29</sup> Draft of *Kontraselektion*, p. 112, NPI-4/2; Ploetz, *Tüchtigkeit*, p. 147.

<sup>30</sup> [...] the hope that 'Krieg selbst, wenigstens unter zivilisierten Völkern, endlich dahin gerät, wohin er gehört, in die geschichtliche Rumpelkammer und unnötig wird durch Internationale Schiedsgerichte und dauernde große Staatenbünde.' Draft of *Kontraselektion*, p. 116, NPI-4/2. Ploetz, *Tüchtigkeit*, p. 60-65.

Hungary.<sup>31</sup> Ultimately, Ploetz was certain, all the 'enemies of war' would join forces in the implementation of their true hopes, a United States of Western Europe.<sup>32</sup> From Rassenhygiene to the European Union, this is an unfamiliar trajectory.<sup>33</sup> But on second thought, it is less absurd than it might seem. A trans-European project to prevent war, further research, ease communication and travel, and nourish a new European identity is not far off from the current goals of the European Union or Ploetz's vision. Elements of his later life, like the nomination for the Nobel Peace Prize in 1936 and pacifist writing in newspapers as unlikely as *Völkischer Beobachter*, can thereby be reconsidered in a more complex light.<sup>34</sup> Ploetz's Zurich mentor August Forel went even further and published a programmatic essay in May 1914, shortly before the onset of World War One, entitled *Die Vereinigten Staaten der Erde* (The United States of the World). Eugenics, Forel hoped, would cure humanity's beastly nature and bring peace to the world.<sup>35</sup>

The ideal eugenic society, to Ploetz, was centred around a strong state, where eugenic agency resided almost exclusively. In fact, Ploetz seems to have been trying to circumnavigate the stage of the individual human being as thoroughly as possible. He was either theorising on the state level, like in this macro vision, or on the cell level, in the case of sexual hygiene in *Tüchtigkeit I*. The organicist metaphor of cell-structure, that we called the game of scales above, guaranteed translatability from one level to the next, while maintaining the same biological principle: the struggle for existence. Measures implemented at the cell and state levels can therefore produce the same desired results at the individual level as individual selection. Unlike Galton's utopic

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<sup>31</sup> Draft of *Kontraselektion*, p. 117, NPl-4/2.

<sup>32</sup> Draft of *Kontraselektion*, p. 118, NPl-4/2. This was also rationalised economically.

<sup>33</sup> Richard von Coudenhove-Kalergi, a central pan-Europeanist and accredited with choosing the European hymn, provides a possible link connecting eugenic thought and the European project. Historian Nate shows how Coudenhove-Kalergi was an ardent advocate of breeding. Nate, *Biologismus*, p. 54.

<sup>34</sup> *Völkischer Beobachter*, 31.8.1935, NPl-4/1. In a letter to his friend Agnes Bluhm he relates how he thought he would surely win the Nobel peace prize. AP to Agnes Bluhm, 24.11.1936; Agnes Bluhm to AP, 26.11.1936, NPl-1/25.

<sup>35</sup> Bugmann, Forel, p. 256.

vision, the eugenic aspects of the United States of Western Europe are not sustained through the peer-to-peer control of a eugenic morality. The degenerative forces are kept in check, at least in his utopic vision, through the state-level enforcement of a cell-level selection.<sup>36</sup> For this reason, Ploetz's entire project is directed against the individual human. *Individualhygiene*, Ploetz's word for medicine, and *Rassenhygiene* 'are in direct competition to one another, because the survival of weaker humans has the tendency, to weaken the progress of a race'.<sup>37</sup> Ploetz's programme is on a greater scale than Galton's, driven by the idea of an ideal and gigantic state that accommodates the entire West-Aryan race in order to prevent war among them and, centrally, to ensure the betterment of the race.

### Reconciling Two Visions

At first glance, the two programmes lie far apart. Can one still speak of European early eugenics, or are these utopic visions too disparate? To answer the rhetorical question: yes, one can reconcile them, because the similarities remain substantial. Simultaneously, however, the observed differences between the two visions can themselves be used as an argument. The varying state structures they propose serve as an indicator of the wide applicability of early eugenic thought with regards to political regimes.

On the level of similarities, two elements must be emphasised. On the one hand, both thinkers proposed a utopic vision based on the shared eugenic epistemology of biologized diagnostics and therapy. In both cases, the existing world was conceptualised under the assumption of an imminent threat of racial degeneration. Both offer a

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<sup>36</sup> Through the principle of state-implanted *Fortpflanzungshygiene*, which, as seen above, transfers the selection process to the best germ cells and thus spars the individual human. Ploetz, *Ableitung einer Gesellschafts-Hygiene*, p. 255-259; Ploetz, *Tüchtigkeit*, p. 224-231.

<sup>37</sup> In a letter advocating for his programme he writes that medicine and *Rassenhygiene* 'stehen [...] in einem direkten Gegensatz zueinander, da die Bewahrung der schwächeren Individuen die Tendenz hat, den Fortschritt einer Rasse zu hemmen.'. AP to Prof. Numin and Prof. Gapati, 12.11.1900, NPI-4/2.

pessimistic, even fatalistic diagnosis at first, but present utopian visions to lead the way out. The dark present was contrasted with the possibility of racial enhancement. *Kantsaywhere*, for instance, was primarily directed at an English audience, drawing its attention to the dangerous and eugenically unsatisfactory state of affairs in England, which was saturated with omnipresent degeneration. Similarly, Ploetz's outlined the world as not far from falling into complete decay.<sup>38</sup> These utopic visions can be read as package inserts for the magic bullet called 'eugenics'. The inherent similarities become even more striking, on the other hand, when the proposed measures are brought into the picture. Because, as Ploetz admitted, the technical possibilities of implementing sexual hygiene were as of yet unavailable, it was 'for the moment necessary to still work with a certain measurement of excision of the weak'.<sup>39</sup> Ultimately, he ended up suggesting extremely similar measures to the ones implemented in *Kantsaywhere*: a commission of doctors that determines the number of children a couple may produce, age limits for procreation, creation of social institutions guaranteeing fair comparisons, abolition of capitalism, etc.<sup>40</sup> Both operated under the assumption of complete primacy of nature over nurture, and both were constrained by the same technical limitations. In this light, it is not surprising that they ultimately resorted to the same therapeutic measures, even though in vastly different frames.

The comparison shall not, and needs not, overstate the similarities between the two visions. In fact, the considerable differences between the two proposed political systems can serve to shed light onto the mechanisms that made the immense applicability of the eugenic epistemology possible. Eugenic thought could fuel both a small-state,

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<sup>38</sup> Galton, *Kantsaywhere*, p. 39-42. Ploetz, *Tüchtigkeit*, 149-151.

<sup>39</sup> This made it 'vorerst noch nötig, mit einem gewissen Quantum der Ausmerzungen von Schwachen zu wirtschaften'. AP to Prof. Numin and Prof. Gapati, 12.11.1900, NPI-4/2.

<sup>40</sup> Ploetz, *Tüchtigkeit*, p. 143-147. Capitalism involved an unfair advantage in the struggle for existence due to the right to inherit. In order to assess what Galton had called the 'prairie value', these systems had to be abolished. Galton, too, believed socialism would fail not because it was a bad ideology, but because humanity was biologically not ready for it. Blacker, *Eugenics*, p. 94.



private college approach based around a eugenic religion and agency of the individuals, as well as Ploetz's grand vision of a United States of Western Europe with a much larger population, using state-enforced control over reproductive cells. By virtue of the same underlying mechanism of broad applicability, eugenics would go on to forge allegiances with a wide range of diverging and even contradicting movements, exemplified by its simultaneous connection to feminism, socialism, nationalism, and pan-Europeanism.<sup>41</sup> Additionally, this can help explain why eugenics, especially in its early phase, was attractive not only to national governments, but also to sub-national bodies. In fact, up until the 1930s, eugenics was exclusively implemented on sub-national level.<sup>42</sup>

These differing notions of state authority and agency carry over to a central conflict in the institutionalisation of European eugenics on an international level early in the twentieth century. While both Rassenhygiene and English eugenics would favour internationalism, they did so for differing reasons. Migration, to Galton, was a mechanism by which the most able people could demonstrate their worthiness in the world, because it created a feedback loop about the relative performance of the people of a nation in an international comparison. Ploetz's vision, on the other hand, was based around creating a unified state structure for the West-Aryan race as a means of preventing an internal war. Stefan Kühl characterises these two disparate motivators of internationalism as the 'Knights Tournament' version, in which internationalism was mainly a form of information exchange to be applied back home, and the 'racist internationalism' founded by Ploetz and favoured by the *Internationale Gesellschaft für Rassenhygiene*.<sup>43</sup> Simultaneously, though, internationalism provided a valuable tool for both movements, a means to gain scientific and political credibility. As Ploetz noted

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<sup>41</sup> See Introduction, footnote 15; Chapter 4, footnote 33.

<sup>42</sup> Barret, Kurzman, *Globalizing Social Movement*, p. 499.

<sup>43</sup> Kühl, *Betterment*, p. 15-17.

in his chapter on counter-selection, the establishment of ever greater state structures was an actual historic necessity, it was already in the air.<sup>44</sup> Historic research has since supported this claim with numbers: between 1900 and 1914, 50 international organisations were founded annually.<sup>45</sup>

In order to adequately grasp the way in which these early eugenic utopias worked the notion of 'holism' becomes key. Despite apparent differences in state structures, both authors developed holistic utopias of a scientifically ideal society that were strictly based on the biological principles of Darwin as they understood them. Both utopic visions are equally grounded in the above developed eugenic epistemology; both also surpass what one might expect from a scientific theory, or even from a political theory, and actually provide a complete model of society, even if only in sketches for the most part. Their scientific belief in generating eugenic knowledge and answering all the world's questions by scientific means allowed them to go beyond empirical description and suggest a strategy to organise all life.<sup>46</sup> Some might go so far as to say they attempted to redeem society.<sup>47</sup>

While this is more explicit in Galton's theory, which calls for the founding of a eugenic religion, Rassenhygiene also operated within the rhetorical framework of *Auslese* (selection) creating proximity to notions of the chosen people.<sup>48</sup> Additionally, both promise eternity (through a focus on the race) and wholeness of all existing beings. In these considerations, biology provides the uncontested basis for the new society, while morality, be it Christian or eugenic, can be nothing but a functional add-

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<sup>44</sup> Draft of *Kontraselektion*, p. 117-118, NPI-4/2.

<sup>45</sup> Kühl, *Betterment*, p. 20. Barret and Kurzman report over 300 INGOs for the same period. Barret, Kurzman, *Globalizing Social Movement*, p. 500.

<sup>46</sup> Galton, *Inquiries*, p. 194.

<sup>47</sup> Compare to the way in which eugenics can be thought of as a quest for purpose. See Chapter 3, footnote 8. Blacker says that to Galton, eugenics posed a 'mystic' union of first and foremost religion, and only secondarily science and policy. Blacker, *Eugenics*, p. 125.

<sup>48</sup> This observation even came from the Jewish side: German-Jewish editor and publisher Oscar Levy, living in the UK, criticised his own people for supplying Nazi ideology with the idea of 'chosenness'. Stone, *Superman*, p. 12-32.

on.<sup>49</sup> The holistic vision of early eugenics could provide meaning, orientation, and explanation founded on the authority of science. Yet it goes beyond science, this was project based in a notion of ‘wholeness’, that could be described with the term *Entdifferenzierung* (de-differentiation). In this way, early eugenics was programmatically directed against a Weberian notion of secularisation, a retreat of religion from society predicated on the process of an increased differentiation of societal spheres.<sup>50</sup> Contrary to this development, early eugenics could provide purpose and answers to all questions of existence; in incorporated both spheres of science and of politics in a holistic vision.<sup>51</sup> The entire early eugenic project was based not on a different logic to the separation of spheres, early eugenic kind of knowledge was a based on *Entdifferenzierung*. In combination with the definitory vagueness of central categories like race or energy, this helps to explain the integratory potency of the early eugenic movement, and thus its effectiveness and prevalence in the twentieth century. Not only in the utopic visions, but also in its actual implementation did eugenics demonstrate great flexibility; regimes ranging from democracies to dictatorships adopted eugenic laws.<sup>52</sup>

Centrally, these three chapters aimed to achieve a reconsideration of early eugenics. The European movement, which is often considered as part of a specifically German trajectory leading to Nazism, has now become visible in a new, radically more open

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<sup>49</sup> Ploetz points to the connection between eternity and race when theorising about the term race. Ploetz, Begriff ‘Rasse’, p. 5-6. In a contribution to the *Archiv*, Ploetz, too, became more explicit with regards to the status of Christian morality. He considers it too altruistic to guarantee the swift actions necessary to save the race from its weak elements. However, completely abandoning it seemed to be just as dangerous. This dilemma, as has been shown above, leads to sexual hygiene. Ploetz, *Gesellschafts-Hygiene*, p. 258-259. He coined it for the first time in Ploetz, Hamlet, NPL-4/1, and based the article in the *Archiv* on an 1895 article in the *Vierteljahresschrift für wissenschaftliche Philosophie*, Ploetz, *Rassenhygiene*, p. 372-373, 377. Nate, *Biologismus*, p. 16-18, 260-276. See Chapter 3, footnote 8.

<sup>50</sup> Raphael says science inherits the ‘Zukunftshoffnungen, Glückserwartungen, und Sicherheitswünsche’ from religion during secularisation. Raphael, *Verwissenschaftlichung*, p. 183. Galton himself has called eugenics ‘virile creed, full of hopefulness’. Galton, *Essays in Eugenics*, p. 70. The term *Entdifferenzierung* is borrowed from Buß and Schöps, who aimed at an evolutive concept that could break with the dominance of the notion of *Differenzierung*. *Entdifferenzierung* focuses not on autonomy, but on connections between subsystems that reduce incoherence in the system. Buß, Schöps, *Entdifferenzierung*, p. 315-320. See also Harrington, *Reenchanted Science*, p. xv-xxi.

<sup>51</sup> López-Durán even shows how in this holism lies a key to understanding how these ‘elitist phantasies’ of medicalised utopias could appear ‘as if they were empirical facts’ López-Durán, *Eugenics in the Garden*, p. 36.

<sup>52</sup> Laws in Switzerland, Sweden, the UK, Germany accounts for the plurality. See Introduction, footnote 15, 17, 23.

way. This in turn enables the historian to use it as a lens, and to understand bigger European developments from the newly gained perspective. The profound similarities make it improbable, for instance, to think of English eugenics and German Rassenhygiene as separate histories. It proves more insightful to place them in the context of European knowledge production. It was the eugenic epistemology and the holistic vision it produced, and not being a blueprint for Nazi racial policy, that account for the deep imprint eugenic thought left on the twentieth century. As a tool to generate and legitimise scientific programmes and political action, eugenics did not just remain attractive after 1945, but was already incorporated into wildly diverging movements before 1910.<sup>53</sup> This new perspective on early eugenics makes it possible to place it anew. Its intricate relationships with progressive movements like socialism and feminism, usually understood as the antagonists of Nazism, become apparent, and it simultaneously becomes comparable to post-1945 biopolitics.

No attempt is made to relativise eugenics, or even to produce an apologetic narrative. To the contrary, the unstable continuity of eugenic thought through the twentieth century shall destabilise the hard rift of 1945, spanning an arch that includes, not excludes, Nazism from the story. It became apparent that early eugenics could be placed in a number of historical trajectories. It was instrumental, for instance, in producing large amounts of data that could be used for biopolitical policy, an important state-building mechanism.<sup>54</sup> Eugenic thought reinforced narratives of nationhood in biological terms, intricately connected to the success of the nation state as the primary political state structure.<sup>55</sup> All of these historic trajectories become visible in early eugenics when it is understood as a widely applicable toolbox, ready for the historical agents to use. The reassessment is now operationalised in an exemplary historical discussion.

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<sup>53</sup> See Introduction, footnote 15.

<sup>54</sup> Scott, *Seeing like a State* (1998).

<sup>55</sup> A growing literature deals with questions of nationalism and eugenics, like Turda, Quine, *Historicising* (2018).

## Chapter 5 – Early Eugenics in Context

When Alfred Ploetz began *Tüchtigkeit I* by announcing that ‘this study stems from the needs of the doctor’, but then states in the subsequent paragraph that ‘this book addresses not only the scientist, but mainly the social practitioner’, it becomes tangible how early eugenics has the potential to add to the discussion on the relationship between science and politics.<sup>1</sup> Was early eugenics something like an applied science, with massively overblown ambitions? It certainly did not want to produce research for library shelves or drawers, but from its outset aimed to be used to provide a bridge between science and politics. While historiography agrees that eugenics was some combination of science and policy, exemplified by Peter Weingart’s ‘the history of eugenics is one of a reciprocal involvement of science and politics’, it is unclear how this involvement worked or what it contained.<sup>2</sup>

This question and the place of early eugenics within the corresponding historiographic discussion are tackled from three conceptual frames. All three are to some extent ‘interactionist’ models, meaning that they are grounded in some form of interactionist conceptualisation of the relationship between science and politics. The first model explored here is based on the *Verwissenschaftlichung des Sozialen* and thus closely connected to a notion of ‘scientism’, while the second model is based on the *Politisierung der Wissenschaft*, a second powerful concept often reiterated in

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<sup>1</sup> [...] he announced that ‘die vorliegende Arbeit aus den Bedürfnissen des Arztes entsprungen [ist]’, but then states in the subsequent paragraph that ‘das Buch sich nicht nur an den Wissenschaftler, sondern hauptsächlich an den sozialen Praktiker [wendet]’. Ploetz, *Tüchtigkeit*, p. v-vi.

<sup>2</sup> Kühl said ‘this merger of science and policy at the beginning of the twentieth century essentially established eugenics’. Kühl, *Betterment*, p. 19. Weingart similarly opens an 1898 article on German eugenics with the words ‘the history of eugenics is one of a reciprocal involvement of science and politics’. Weingart, *German Eugenics*, p. 260. In the honour of Ploetz’s 70s birthday, a contribution to the *Nationalsozialistische Monatsheft* reads: ‘Ploetz und sein Kreis [sahen] die Rassenhygiene nicht nur als Wissenschaft, sondern auch als **sittliche Forderung**’. NPI-4/1.

historiography.<sup>3</sup> Finally, following suggestions from Mitchell Ash, a reconciliation of the two processes is suggested using the concept of ‘resources’.

### **Model 1: *Verwissenschaftlichung***

The first two models to be discussed operate under the assumption, based on sociologist Max Weber, that two separated, independent spheres exist, the political and the scientific.<sup>4</sup> Both spheres have distinct roles to play; one generates metaphysical truths, while the other produces contingent compromise. A rather crude, first approach to model one can be based around the term scientism, which the Oxford Dictionary of Public Health defines as ‘the belief that scientific methods can be applied to all problems, with the consequent application of inappropriate scientific methods in unsuitable circumstances.’<sup>5</sup> The words ‘inappropriate’ and ‘unsuitable’ already relate to the reader how scientism denotes something bad, an intrusion of one thing (science) into a domain where it does not belong (politics).<sup>6</sup> It is used heavily in historiography, mainly because it relates some basic assumptions of early eugenics quite well; it is an idea with legs. Undeniably, scientific knowledge had unchallenged primacy over all other kinds of knowledge; basing all decisions on scientific knowledge was precisely what early eugenics proposed and advocated for. Both Galton and Ploetz set out theories that were premised on *being* scientific, that is to say they based their assumptions

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<sup>3</sup> The term ‘Interactionist models’ is borrowed from historian Ash. Ash, *Wissenschaft und Politik*, p. 11.

<sup>4</sup> Ash, *Wissenschaft und Politik*, p. 12; Ash, *Ressourcenaustausche*, p. 307.

<sup>5</sup> Porta, Miquel; Last, John, ‘Oxford Dictionary of Public Health’, Oxford References, 2018 [<http://www.oxfordreference.com/view/10.1093/acref/9780191844386.001.0001/acref-9780191844386-e-4046>, accessed 19.05.2019].

<sup>6</sup> Philosopher Kidd defines: ‘Scientism can therefore usefully be thought about in terms of an excessive admiration for science grounded in an erroneous conception of the history, nature, and methods of science.’ He criticises scientism because of its exclusionary character with regards to knowledge about the world (scientism negates the validity of historic and philosophical knowledge). Kidd, *Scientism*, p. 31. Kühl emphasises the usefulness of the history of eugenics to shed light on ‘scientism’. He characterises the scientific as a practice that tests the truth content of a statement, while the political wants to govern and enforce laws, without evaluating the metaphysical status of these laws. Kühl, *Betterment*, p. 5. Eugenics has also been modelled as another kind of intrusion, of the public into the private. Sex and family became public policy. Barret, *Globalizing Social Movement*, p. 511; Burke, Castaneda, *Public and Private* (2007); Turda, *Modernism*, p. 13-17.

(diagnostics) on what they considered to be metaphysical certainties. Ploetz, for instance, begins the *Tüchtigkeit I* with the words:

Rassenhygiene is primarily concerned with all attempts to define its goals [maintaining and enhancing the race] in scientific terms, as well as the generation of all causal chains leading to this goal, including the controllable material and psychological factors of the present, be it about the individual, the family (reproductive hygiene), society, or states, with all the implications on morality, law, and politics.<sup>7</sup>

The Darwinian struggle for existence, and the problem of degeneration resulting from the lift on it through modern institutions, was not thought of as a debatable statement of compromise but as scientific fact. The policy advice that followed from the eugenic diagnosis, consequentially, came with the authority not of an opinion, but of the expert. The people of Kantsaywhere, and the entire eugenic morality, were accepted and promoted exactly and only because they corresponded to objective truths acquired through the scientific eugenic epistemology; this was how they gained political momentum. Science became part and parcel of people's lives, woven into their every action. We remember how in Kantsaywhere, even the most intimate and private is regulated and controlled scientifically through the college.<sup>8</sup>

A more refined and more historical version of the 'intrusion' of science into politics is Lutz Raphael's dictum of *Verwissenschaftlichung des Sozialen*. His argument charts a developmental path of the relationship of science and politics through European modernity, in which scientists take an ever increasing role in forming the social world, most commonly so as in the function of the expert.<sup>9</sup> Raphael uses Social Darwinism as

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<sup>7</sup> 'Zur Rassenhygiene gehören zunächst alle Versuche, ihr Ziel [maintaining and enhancing the race] wissenschaftlich festzustellen, sodann aber die Herstellung aller von diesem Ziel ausgehenden Kausalketten bis zu beherrschbaren materiellen und psychologischen Faktoren unserer Gegenwart, mögen sie die Einzelnen, die Familie (Fortpflanzungshygiene), Gesellschaften oder Staaten betreffen, mit allen ihren Ausstrahlungen auf Moral, Recht und Politik'. Ploetz, *Tüchtigkeit*, p. iv-v. Galton has an almost identical paragraph, in which he states that eugenics had to primarily be made 'familiar as an academic question until its exact importance had been understood and accepted as a fact; secondly it must be recognised as a subject whose practical development deserves serious consideration; and thirdly it must be introduced into the national consciousness as a new religion', Galton, quoted from Blacker, *eugenics*, p. 104.

<sup>8</sup> See above and Galton, *Kantsaywhere*, p. 38.

<sup>9</sup> Raphael, *Verwissenschaftlichung*, p. 167; Sala, *Wissenschaft und Politik in der Geschichtsschreibung*, p. 333.

an example for a conceptual merger of science and politics, that, like Positivism or Marxism, produced powerful visions of 'scientific politics'.<sup>10</sup> Connected closely to development of the welfare state, these scientists became increasingly more influential, and their status grew up until the late 1970s, heralding a new period of *entzauberter Wissenschaften* (disenchanted science), that also corresponds to a time when historiography of eugenics first embarked on the above-described expansions.<sup>11</sup> In this new period of disenchanted sciences, two seemingly contradicting developments occurred: on the one hand, inter-war and post-war eugenics received renewed scrutiny. On the other hand, however, eugenic arguments witnessed a renaissance that has lasted until today. In light of the human genome project, among others, credibility was restored to strong notions of hereditary determinism, as reflected in publications like Charles Murray and Richard Herrnstein's *The Bell Curve* or Richard Lynn's *Eugenics: A Reassessment* attest.<sup>12</sup>

The grand narrative of *Verwissenschaftlichung*, spanning European modernity, allows us to zoom in on the role of early eugenics as providing expertise to policy, and thereby granting it scientific legitimacy. We have already mentioned the 1933 *Gesetz zur Verhütung erbkranken Nachwuchses*, which was written mainly by leading eugenicists like Ernst Rüdin. Furthermore, the law contained the establishment of so called 'health courts', where medical experts assigned marriage certificates to young couples and monitored the racial quality of the population. Thus, the experts' high standing in society and politics was solidified; they now directly (and scientifically) governed people's lives. Yet this story must not be limited to the Nazi context. *Verwissenschaftlichung* is a model geared to European modernity at large. This claim can be backed

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<sup>10</sup> Raphael, *Verwissenschaftlichung*, p. 169.

<sup>11</sup> *Ibid.*, p. 178.

<sup>12</sup> Lynn, *Eugenics* (2001); Murray, Herrnstein, *Bell Curve* (1994). In the context of *The Bell Curve*, the historian of eugenics Diane Paul reminded in 1998: 'The nature-nurture controversy has never been, and is not now, *simply* a matter of good versus bad science. The views of all the participants are necessarily informed by their politics.' Paul, *Politics of Heredity*, p. 91.



by studies like Barret and Kurzman's *Globalizing Social Movement*, which counts roughly 30 countries in which eugenic laws were put in place.<sup>13</sup> With this model, fundamentally different questions can be posed to early eugenics, leaving the narrow perspective of the traditional question 'How did we get from Rassenhygiene to National Socialism?' as only one option among many. Instead of early eugenics being a blueprint for exterminatory racial policy, it becomes linked to developments shared across Europe, if not beyond. Its history can thus illuminate the growing role of the expert in society in far wider terms.

In the theoretical frame of *Verwissenschaftlichung*, the term 'scientism' shows its shortcomings. Scientism operates within the dichotomy of actual science and pseudo-science, of good and bad science, and is thus not as flexibly applicable as Raphael's term. *Verwissenschaftlichung* can speak about the changing role of the expert and of scientific knowledge, without the need to qualify these.<sup>14</sup> Additionally, *Verwissenschaftlichung*, unlike scientism, is not a value concept, which is advantageous because Galton and Ploetz, for instance, would have likely embraced the accusations of being scientific experts trying to inform politics. As the beginning of this chapter showed, Ploetz took great pride from having developed a kind of knowledge that was primarily scientific, but equally able to inform politics directly.<sup>15</sup> The two authors believed to have overcome vagueness in politics, promising the optimal process of structuring a society. Even though questions remained with regards to implementing these structures, their metaphysical status and absolute necessity for the preservation of the race was a given. While eugenics adds to our understanding of *Verwissenschaftlichung*, the model in turn can capture the programmatic character with which early eugenics penetrated the political – not as an intrusion, but as a betterment, as perfection.

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<sup>13</sup> Barret, Kurzman, *Globalizing Social Movement*, p. 497.

<sup>14</sup> Raphael considers this one of the strengths of his approach: It can serve as a tool to analyse the demarcation lines of the battles between realms of authority of the social and the political. Raphael, *Verwissenschaftlichung*, p. 166.

<sup>15</sup> Ploetz, *Tüchtigkeit*, p. iv-v.

## Model 2: *Politisierung*

However, the process of *Verwissenschaftlichung* misleadingly evokes an image of scientists pushing into the political sphere against the policymakers' wills, when early eugenics was rather an embrace of a mutually beneficial kind of knowledge. *Verwissenschaftlichung* thus hints at only one side of a two-sided coin, and the first model is ideally complemented by a second model, based on the notion of *Politisierung der Wissenschaft*.<sup>16</sup> Albeit *Politisierung* is often used in historiography, there exists no definitional consensus on what it means; it can denote different effects of the political on the scientific, of which two will be discussed below.<sup>17</sup>

According to historian Ariane Leendertz, *Politisierung* is the 'orientation of science towards politically relevant topics and questions'.<sup>18</sup> In the case of early eugenics, this can easily be shown to be the case.<sup>19</sup> Paramount to all human activity, including all science, was the principle of racial betterment. This goal was as much political as it was scientific, with all questions eugenics asked geared towards it. Additionally, the goal itself, as the discussion of eugenic morality has shown, was more of a spiritual calling than empirical fact.<sup>20</sup> Thus, according to Leendertz's definition, eugenic science would qualify as a well-suited example of the process of *Politisierung*.

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<sup>16</sup> In fact, historian Weingart conceptualised the two notions alongside one another in his 1983 paper. Weingart, *Verwissenschaftlichung - Politisierung* (1983); Sala, *Wissenschaft und Politik in der Geschichtsschreibung*, p. 336.

<sup>17</sup> Additional to the two notions discussed in the dissertation, one could give the examples of Cullen, who used the term to point out that science needed to be paid for, and that through funding came political influence. Cullen, *Back to the Future*, p. 174. Another example is Bourdieu, who argues that the negotiation tactics and alliances within the academic discipline resemble the politics of a state. This aspect can be exemplified by the internal fight between the Munich and the Berlin fractions of *Rassenhygiene*, who became increasingly alienated during the Weimar years. The Berlin group ultimately changed its name to include the term 'eugenics' rather than Ploetz's '*Rassenhygiene*'. AP to Eugen Fischer, 6.3.1930, NPI-1/6; see also Weingart, *German Eugenics*, p. 265. Ash criticises this understanding, arguing that science is more than a negotiation room for power structures. Ash, *Wissenschaft und Politik*, p. 14.

<sup>18</sup> [...] the 'Ausrichtung der Wissenschaft auf politisch relevante Forschungsthemen und Fragestellungen'. Leendertz, *Experten*, p. 339.

<sup>19</sup> Mazumdar shows how even the methodology of eugenics was political: Ernst Rüdin, for instance, developed a method of 'empirical prognosis', geared towards boosting the numbers of hereditarily inferior people in order to gain political momentum. Mazumdar, *Reform Eugenics*, p. 50.

<sup>20</sup> Galton; *Human Faculties*, p. 194; Ploetz, *Tüchtigkeit*, p. 13-16, 91-97.

The basic premises and questions of early eugenics did not arrive out of thin air; they came in the form of values and political principles, which were translated and infused into the scientific programme. In the visions of Galton and Ploetz, the importance of the political in setting their research goals is striking. An example of this is provided by the complete disregard of the individual that results from the focus on a collective body of people (be it the nation or the race) that early eugenics entailed.<sup>21</sup> Galton explains how ‘in Kantsaywhere, they think much more of the race than of the individual’.<sup>22</sup> More concretely, this holds implications for the way the individual case counts to the statistician, and also to the entire moral system. Galton admits that there was the statistical chance of an exceptionally great baby born to unfit parents (as well as the other way around). However, in the grand scheme of things, or differently put in the statistical law of big numbers, these individual cases were insignificant exceptions to an overall rule. The moral system was based on the logic of the care of the racial body, not on the concern for the individual case.<sup>23</sup> In this way, the political determined the focus, possibilities, and limits of scientific research. *Politisierung* thus goes beyond an orientation of science towards policy; it could further be conceptualised as a form of political and moral constraint on scientific practice itself, which leads to the second notion of *Politisierung*.

Peter Weingart, the first theorist of *Verwissenschaftlichung* and *Politisierung* in this context, understood the latter term not so much as a matter of setting research agendas, but as introducing moral limits to what science can and should accomplish. *Politisierung*, to him, is the moral constraint put, for instance, on medicine by the Hippocratic

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<sup>21</sup> Galton, for instance, says that ‘the word “self” ceases to be wholly personal’, proposing a notion of wholeness of the racial body. Galton, *Inquiries*, p. 194. Weingart, Kroll and Bayertz call this a ‘double reductionism’: biologically people are no more than their hereditary material, economically no more than their value added to the economy. Weingart, Kroll, Bayertz, *Rasse, Blut und Gene*, p. 254; Nate, *Biologismus*, p. 20.

<sup>22</sup> Galton, *Kantsaywhere*, p. 22.

<sup>23</sup> *Ibid.*, p. 44.

Oath.<sup>24</sup> Yet *Politisierung* can do more than destabilise the scientific autonomy, or question if their theories were scientific, at all. Differently put, this is not an attempt to find a way of saying that eugenics actually was not scientific, because it was really just disguised politics, and therefore needs not be taken seriously.<sup>25</sup> As said above, no assumptions are made about what qualifies as science and what can be discarded as mere pseudo-science. In fact, the story of eugenics being a pseudo-science, perverted by ideology, is in itself a narrative that requires historicization, especially with regards to its instrumental value to human genetics, which could frame early eugenics as an unscientific other, with which it had nothing in common.<sup>26</sup>

Rather, the application of a notion of *Politisierung*, in Weingart's sense, to early eugenics can hint at a normative deficit of scientific early eugenics. Given Darwin's laws, there remains a peculiar dependency within the theoretical body of the two authors to an outside source of normativity; early eugenics cannot be said to have been a scientifically self-sustaining movement.<sup>27</sup> As we have seen, the two authors were not equally outspoken about this. Galton, on the one hand, was explicit about eugenics fundamentally requiring a new set of values, a complete system of morality. His understanding of early eugenics led him to suppose a holistic overhaul of society, including its value sets, as attested by his utopian vision of society. Ploetz, on the other hand, tried to accommodate for what he calls 'humanist' Christian values, yet in a

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<sup>24</sup> 'Political' and 'moral' constraint mean the same thing in this context. Weingart, *Verwissenschaftlichung - Politisierung*, 233-234. Later, Weingart changed his opinion on this relationship significantly, believing politics only to be able to hold up the development of science, and *not* to change or alter it significantly, mainly because its international setup relativises national idiosyncrasies. Weingart, *Science and Political Culture*, p. 163, 174-176.

<sup>25</sup> In fact, the idea that science is politics needs not result in a disregard of science, but can be epistemologically stimulating in breaking with a supposed scientific autonomy. See Hagner, *Forschung als Politik*, p. 57-60.

<sup>26</sup> An example of this would be Propping and Heuer's 1991 article, in which they try to explain the special case of German eugenics through the lack of high-quality, actual science: human genetics. It was for the lack of this good science that the German population did not understand the perversions of *Rassenhygiene*. Propping, Heuer, *Schwäche der Genetik in Deutschland*, p. 79-80, 91-92. The 'Corruption' of 'pure science', as a narrative of eugenics, is determined 'nicht mehr erzählbar' by Ash. Ash, *Ressourcenaustausche*, p. 309.

<sup>27</sup> Carlos Blacker hints at that when he emphasises the religiousness of Galton's propositions. Blacker, *Eugenics*, p. 84-86. Nate also draws our attention to what he calls a eugenic misunderstanding of Darwinism, in which adaption is confused with perfection. Nate, *Biologismus*, p. 51.

roundabout way. They hold no value in and of themselves but become functions of the overarching goal of racial betterment, keeping inferior elements from revolting, as we have seen above.

The infusion of values and political goals into science by mechanisms of *Politisierung* was a necessary element of both their theories. This goes even further than posing moral limits; their basic premise can be shown to be 'political' in Weingart's sense. The early eugenic understanding of the struggle for existence and the corresponding principle of evolution were morally inflated. On their own, these notions hold no telos; Darwinism has no necessary direction leading toward an end-goal. Taken seriously, the principle of adaptability could easily mean an endlessly changing system, one always in the process of catching up with its transforming surroundings. In order to speak of *Vervollkommnung*, or perfection, as both authors do, an outside measure of goodness needs to be introduced, elevating the white man to the crown of evolution.<sup>28</sup> Similarly, because degeneration was not an empirically observable phenomenon, this central element of early eugenics is introduced to science as an outside conviction.

### Model 3: Resources

Both models, it has become clear, hold high epistemological merit and facilitate our understanding of early eugenics, just as early eugenics can add nuance to these models themselves. Nonetheless, they can both be criticised for not overcoming the Weberian separation of the political and scientific spheres, and thereby keep misunderstanding the core of eugenic epistemology, captured by the term *Entdifferenzierung*.

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<sup>28</sup> Ploetz and Galton seem to model this outside element on an intuitive, aesthetic understanding, rather than highly scientised models. Beauty and pleasantness on the outside are reliable measures, both authors argue, to assess hereditary quality. Ploetz quotes Cesare Lombroso, a proponent for the possibility of 'the villain's face', who argues that he could detect character traits in the physiognomy. While desirable traits show aesthetically, so do undesirable ones. Ploetz, *Tüchtigkeit*, 108-110; Galton, *Inquiries*, p. 38-41. To Soloway, however, these measures only hide the fact that they model the category for racial worth after themselves. Soloway, *Demography*, p. 26-29.

Differently stated, both models suppose some kind of natural state in which the scientific and the political are autonomous, even though they acknowledge certain degrees of interaction.<sup>29</sup>

Following historian Mitchell Ash, a third way of thinking about the relationship of science and politics is proposed. It shall not be used to nullify the other two processes but instead explore the possibility of incorporating both models into a story of how early eugenics actually redefined these categories and their relationship. Rather than fitting early eugenics into preconceived notions of *Verwissenschaftlichung* or *Politisierung*, the rest of this chapter is devoted to comprehending how, embedded within the holistic vision, early eugenics was actually able to reimagine science and politics, and thus to shape the two processes in a more active way. This accounts for the contingency embedded within the creation of the relationship, while preserving the explanatory potential of the models one and two. In an almost dialectical manner this implies a synthesis, based on the reassessment of early in the holistic frame and the notion of 'resource'.<sup>30</sup>

In a simplistic version, the diagnostic description of a given social situation could be seen as the more scientific aspect of early eugenics, while the therapeutic measures developed out of this diagnosis as the more political one. The process of *Verwissenschaftlichung*, in this version of the story, is the application of scientific premises on therapeutic measures, that is to say policy processes. *Politisierung*, on the other hand, describes the reverse effect of a kind of moral and political backlash into the research programs themselves. The two thus almost become comparable to the contemporary notions of *Grundlagenforschung* – fundamental research – and *angewandte Forschung* – applied science.<sup>31</sup>

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<sup>29</sup> Ash, *Wissenschaft und Politik*, p. 11.

<sup>30</sup> Ash borrowed the term 'resource' from Bruno Latour and Andy Pickering. Ash, *Wissenschaft und Politik*, p. 16.

<sup>31</sup> Weingart considered eugenics an applied science. Ploetz and Galton, however both favoured research on the fundamental principles of heredity as much as on policy advice. Weingart, *German Eugenics*, p. 268.

Intriguing and enlightening as this might be, this cannot properly encapsulate the holistic approach of early eugenics to science and politics. In fact, politics and science alike were resources for both the diagnostic and the therapeutic aspects of early eugenics, rather than diagnostics being identical with science and therapy with politics. In the holistic vision, both realms were subject to the same overarching axiom of racial improvement. Thus, when Ploetz spoke of the ‘consequences of Rassenhygiene for ethics, social policy, and ultimately all of political life’, these included optimal marriage and family policies, the generation of comprehensive statistics by the state, research programs for animal breeding (in order to learn about heredity and degeneration), as well as socio-political investigations into the effects of policy on the breeding habits of humans.<sup>32</sup>

The paramount objectives of Rassenhygiene dictated both the scientific and the political program, with each gaining legitimacy from the other. It was a mutually reinforcing relationship. On the one hand, early eugenics could thrive as a scientific discipline by establishing international institutions and gain legitimacy and authority from its proximity to and embrace by the political sphere. On the other hand, eugenicists became experts and could give policy advice founded on their scientific experience, backing up biopolitics with scientific legitimization. When Hitler appointed Ploetz to a professorship in 1936, he simultaneously profited from the domestic and international reputation of Ploetz as a scientist, while Ploetz himself could use his new title to advance his authority in the scientific realm.<sup>33</sup>

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<sup>32</sup> [...] spoke about the ‘Konsequenzen der Rassenhygiene für Sitte, Sozialpolitik, und schliesslich das gesamte politische Leben’. AP to Prof. Numin and Prof. Gapati, 12.11.1900, NPI-4/2.

<sup>33</sup> Weingart summarises this similarly: ‘Scientists used eugenics as a vehicle for their political convictions and social biases, just as politicians used its scientific framework, sketchy as it was, to advance their particular causes’. Weingart, *German Eugenics*, p. 260. Social scientist Prewitt says: ‘Objectivity produces credibility; credibility establishes legitimacy; legitimacy is the basis for applying social science knowledge to social purposes and political goals.’ Prewitt, *Two Projects*, p. 226. See also Kühl, *Betterment*, p. 5; Soloway, *Demography*, p. xviii.

These processes were deeply contingent, and the relationship of science and policy was actively shaped by early eugenics; it changed in the course of, for instance, 1933. This becomes apparent in the complete reappraisal of priorities of the *Kaiser-Wilhelm Institute*, the most important research institute for eugenics in Germany. When Eugen Fischer, president of the institute, said on its inauguration in 1926 that their science would ‘not pass value judgements’, he set up both spheres in a state of separation, in which science was supposed to produce an independent body of truths; their research was to be ‘purely scientific without regards for political and other tendencies’. In July 1933, however, the institute was fully ready to subject itself to ‘the necessities of the state’, renegotiating the relationship completely.<sup>34</sup>

Within the holistic scheme, both science and politics were tools to be used for the end-purpose of furthering the race, relying as much on developing a religious zeal for the eugenic cause, as on legitimising the cause through science.<sup>35</sup> Thus, in this greater quest, political and scientific techniques were used, mutually reinforcing each other, but they were also reinterpreted and formed. Eugenics can be conceptualised as a lubricant between the two realms of science and politics, that actively brought them together by providing a shared language and an overarching end-goal. What politics could do and how science should supplement it was being defined, not as the interaction between two separate spheres, but as part and parcel of the same overarching project. Yet early eugenics went beyond combining the spheres under a shared banner; its very logic was directed against a separation of spheres. This aspect of the eugenic epistemology has been called holistic, grounded in the project of *Entdifferenzierung*. In this de-differentiated way, early eugenics could combine the mobilising force of the fear of degeneration with the sheer unlimited optimism in scientific progress.

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<sup>34</sup> Fischer, quoted from Weingart, *German Eugenics*, p. 264, 271.

<sup>35</sup> Sala criticises that most existing models based on *Vermischung* or *Politisierung* assume a natural state, in which politics and science exist in autonomy, with linear developments in their interactions. Sala, *Wissenschaft und Politik in der Geschichtsschreibung*, p. 343.



## Nationalism and other trajectories

The reassessment of early eugenics made it possible to place it within a historiographic discussion far removed from debating its proto-Nazism. Yet the story of this chapter is but an example of the multitude of possible histories early eugenics could inform. It could, for instance, also be placed within the historiographic discussion around nationalism. Marius Turda and Sophia Quine, in *Historicizing Race*, dedicate much space of their book to demonstrating the potency of biologised notions of nationhood, facilitated by eugenics.<sup>36</sup> Much research has focused on regions that are often thought of as peripheral, yet in which the process of nation building was clearly visible around 1900, like Argentina, Brazil, and Mexico in Nancy Stepan's *The Hour of Eugenics* or Hungary in Turda's *Eugenics and Nation in Early 20<sup>th</sup> century Hungary*.<sup>37</sup> Nationalism, like *Verwissenschaftlichung*, was a development that, even though dealing with nations, could bridge national histories, being itself a deeply transnational phenomenon.

In fact, nationalism was a motivating factor for science and politics to join forces.<sup>38</sup> While we have put great impetus on the instrumental value of science to politics and vice versa, eugenics contributed on a more pragmatic level to the blurring of the line between the terms 'nation' and 'biological race'. Because the nation state produces all the data that eugenicists so desperately need, the simplifying assumption of an identity between nation and race was an easy solution, even though this was problematised by eugenicists themselves.<sup>39</sup> Thus, as historian Philippa Levine and many others

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<sup>36</sup> Turda and Quine emphasise how it was the elusiveness of race that made it so useful for nation building. They even base their version of the continuity hypothesis on the prevalence of race. Turda, Quine, *Historicizing*, p. 1, 3, 49-51, 74-78.

<sup>37</sup> Stepan, *Hour of Eugenics* (1991); Turda, *Eugenics and Nation* (2014). Both demonstrate the power of the connection between eugenics and nationalism.

<sup>38</sup> Raphael, *Verwissenschaftlichung*, p. 173, 179, 182.

<sup>39</sup> In the central definitory article on race Ploetz conceptualised race firstly as the biological *Erhaltungseinheit* and *Entwicklungseinheit* of all life, but secondly begins to develop sub-classes along climate divides. Ultimately, he concludes that those who help each other belong to the same race. This leads to the state as the container of the race. Ploetz, *Begriff 'Rasse'*, p. 15-26.

show, race and nation meant increasingly the same, or in other words, 'national' became an increasingly ethnocentric category.<sup>40</sup> Eugenics profited from these developments, as much as it actively shaped them in willingly providing a scientific basis. Additionally, eugenics was to a large extent an activity dedicated to the production of biographical and biological data on as many people as possible. In this regard, too, eugenics was a welcome ally to the evolving nation state, which greatly relied on the production and management of data on its populace.<sup>41</sup>

However, this is but one example of the inherent trajectories of early eugenics, and one that is actively researched. In various instances we showed how the eugenic nationalism of Galton and Ploetz was fundamentally different from the racial nationalism of the Nazis. They promoted a curious form of pan-white nationalism, which was not at all about Teutons fighting the Saxons, but about white people fighting their own inferior elements.<sup>42</sup> As we have shown in their utopic visions, but also in their societies like the *Internationale Gesellschaft für Rassenhygiene*, which wanted to be a home to all racially fit white people of Europe, their form of nationalism even gives rise to a curious link between early eugenics and the process of European unification. The coercive measures of eugenic pan-white nationalism are profoundly different from the violence of National Socialist nationalism based on Teutonic supremacy.

The reassessment of early eugenics thus opened up a number of trajectories diverging from the master narrative, which tied early eugenics to Nazism in a deterministic way. Traditionally, early eugenics was actively excluded from the history of the

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<sup>40</sup> Levine, *Eugenics*, p. 73; Nate, *Biologismus*, p. 116-128.

<sup>41</sup> Sala, *Wissenschaft und Politik in der Geschichtsschreibung*, p. 335; Scott, *Seeing like a State*, p. 2-8.

<sup>42</sup> A growing field of 'Whiteness Studies' began to investigate how notions of whiteness are constructed and how they can refine an understanding of race. Kolchin shows in this context how the 'messiness' of whiteness, its lack of clear definition, has bothered most authors. Kolchin, *New History of Race*, p. 157, 163; Kolchin, *Whiteness*, p. 144, 149, 152. This dissertation has treated the vagueness of the early eugenic category not only as a problem to be explained away, but in an instrumental way, it shows how it profited from this vagueness.

welfare state, as in the central study from Nils Roll-Hansen. He emphasises how it was reform, and not mainline eugenics, that was instrumental in the establishment of the welfare state. Confusing the two, he says, is like confusing proponents and critiques of the Nazi state.<sup>43</sup> The connections of Nazism and early eugenics have been shown to be more complex, however, in the course of these pages, creating a connection between Galton's and Ploetz's project and post-1945 biopolitics. The reassessment therefore has implications that can soften the hard rifts of 1914, 1933, and 1945, emphasising the continuity of eugenic thought throughout the twentieth century.<sup>44</sup> The diverging trajectories, based on the reconsideration of eugenics, thus hold the potential to complicate the story of biopolitics in European modernity.

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<sup>43</sup> Broberg, Roll-Hansen, *Eugenics and the Welfare State*, p. 259-266.

<sup>44</sup> Dikötter, for instance, shows how up until the 1950s, 'eugenic sterilisations were presented as a fundamental aspect of a desirable social welfare state'. Dikötter, *Race Culture*, p. 468. See also Raphael, *Verwissenschaftlichung*, p. 186-187. This 'applied' character is also used to create a link between eugenics and socialist progressivism, for instance by Schwartz. Schwartz, *Sozialistische Eugenik*, p. 13. However, as shown above, eugenics was more than an applied science. See Chapter 5, footnote 32.

## Conclusion

Probing and destabilising the dominating history of early eugenics, which places it within a Nazi teleology, this dissertation asked how a reconsideration of early eugenics could modify our perception of eugenic trajectories in the twentieth century. Neither the immediate content of early eugenic theory and practice, nor its identity with the racial state were the dominating factors that made it such a broadly applied concept. Instead, the results of this comparison have pointed toward the structure of the eugenic epistemology as an explanatory factor in the persistence of eugenic thought in the twentieth century. The empirical observations of the broadness of eugenic movements in the first half of the twentieth century, as well as their sustained importance after 1945, can thus be explained not through the introduction of some kind of reform eugenics in the 1930s, but through this reassessment of early eugenics.

Early eugenics was like medicine for society, in rhetoric, logic, scientific legitimacy, and to an extent, morality. This metaphor accounts for the findings of the preceding chapters: the biographies of Galton and Ploetz, the eugenic epistemology, and the holistic vision of society that thinks of the national body as something curable, even perfectible.<sup>1</sup> The eugenic doctors of society operated on the race, on the *Volkskörper*, like they would operate on an individual. And just as medicine allows for the amputation of a foul part of the body, the eugenic morality that was to make its infamous career in the years to come allowed and even called for the elimination of unwanted elements of the *Volkskörper*.

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<sup>1</sup> Weingart also raises awareness to the similarities between eugenics and medicine. To him, they lie in the same techniques of professionalisation. This included the creation of textbooks, a monopoly on treatment, and other state endorsement. Weingart, *German Eugenics*, p. 274-276. Raphael emphasises how *Verwissenschaftlichung* also meant professional practice. Raphael, *Verwissenschaftlichung*, p. 180. A central tool of professionalisation was the scientific journal, used by both English and German eugenics. Ploetz, for instance, founded the *Archiv* in 1904. Stöckel, *Verwissenschaftlichung – Vergesellschaftung*, p. 9-19. Like medicine, early eugenics tried to establish a professional practice. Additionally, eugenics enjoyed immense popularity among doctors. Jones, *Eugenics in Ireland*, p. 85.

In this way, it also took part in the complex history of the interactions between the scientific and the political. As a holistic vision of society, early eugenics used both realms as resources, its history can thus contribute to a thriving discussion around the role of the expert, the emergence of the welfare state, and the role of morality in science. The logic of its knowledge was shown to be based on wholeness, on *Entdifferenzierung*, directed against a rigid separation of societal spheres. Science, it became clear, is far from an autonomous, ahistorical realm, but a broad discursive web with specific kinds of knowledge, like eugenics, entering and leaving the body of scientific certainties. Simultaneously, placing early eugenics within this historiography can additionally help to change the perspective on early eugenics itself, to Europeanise and to break the necessary link to National Socialism.

However, in the reassessment of early eugenics, we must be careful not to re-essentialise it within European modernity, and not to deny its close links to policies of racial extermination. The above pages accounted for the contingency of early eugenics, by including, for instance, the close connection of Galton and Ploetz to the medical practice and their frustration with it, Ploetz's early fascination with socialist utopian writing, and the role of growing internationalisation all over Europe circa 1900. Eugenic thought took many shapes, and these shapes were not necessarily exterminatory. In fact, as has been shown in various instances, early eugenics favoured so-called positive eugenic measures, like family bonuses to early marriages of able parents. The shared elements of post-1945 eugenics, when, because of changing systems of morality, biopolitical measures had to be primarily based on positive eugenics, and pre-World War One eugenics, are necessarily unstable and partial. Nonetheless, these pages offer one way of defending a continuity hypothesis and thus of offering trajectories of eugenic thought in the twentieth century outside its usual frames. The trajectories presented here are in no way exclusive. Questions connecting early eugenics

and nationalism are as promising as the question of early eugenics and supranationalism, and these will hopefully be further investigated by future research.

Undeniably, the implications of this are considerable. The concluding thoughts of this dissertation, which take the shape of questions and hypotheses rather than empirical observations, bear witness to the historiographical possibilities that remain embedded in the history of eugenics. The above pages have frequently pointed to an important, maybe the most important, result from the reassessment: a softening of the hard ruptures in the history of the long twentieth century, especially the rupture of 1945. This date is crucial for maintaining a clear moral watershed in European biopolitics, in which Nazi measures were morally bad, while later human genetic research and biopolitics were and are morally unproblematic. Naturally, this dissertation does not claim to hold an answer to what is good or bad. It is a piece of historical writing, and thus, as Marc Bloch reminds us, not in pursuit of a value judgement.<sup>2</sup> However, these continuities, if they are accepted, require a reassessment and a discussion of the nature and role of post-1945 biopolitics. Despite banning the terms 'race' from the scientific and 'eugenics' from politics, the biopolitical care for the *Volkskörper* remained part of policy on a global stage, like sterilizations in Sweden or global population control.<sup>3</sup>

In a humble way, the implications of a new view on early eugenics has extended even to our own discussion of biopolitical measures today. New technological possibilities, like CRISPR, make selection on the germ cell level, Ploetz's grand vision, not a question of if, but a question of when and, most importantly, how and under which regulations. The best-selling historian Yuval Harari posits the most central question

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<sup>2</sup> Bloch, *Historian's Craft*, p. 160.

<sup>3</sup> The eugenicist Fritz Lenz, for instance, became *Professor für Humangenetik* at the University of Göttingen soon after the war, to name just one example. Nate, *Biologismus*, p. 385. Turda and Quine remind us that a lot of what is socially relevant lies below the politically correct. Turda, Quine, *Historicising*, p. 4. Weingart, *Science and Political Culture*, p. 169.

of the twenty-first century laconically as ‘what to do with all the superfluous people?’<sup>4</sup> Convinced that the majority of the world population is at risk of becoming useless in an economic and military logic, he sketches a world in which a new breed of superhumans emerges in a post-liberal society.<sup>5</sup> The birth of a genetically modified baby in China in 2018 has truly shaken contemporary discussion, marking the return of eugenics into the heart of public discourse.<sup>6</sup> The alleged identity of *early* eugenic arguments and Nazism has occluded this history from our view. In a way, softening the divide of 1945 brings the theories of Ploetz and Galton, including the Nazi usage of them, not just closer to the biopolitics of the 1950s and 1960s, but in fact also to us today. Their arguments and theories, and also the dangers that are hidden beneath the scientific surface, should factor into the contemporary discussion. Writing the history of early eugenics has thus been as important as never before, not just for the sake of history, but to guarantee an informed discussion about the appropriate usage of our own growing power over heredity.

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<sup>4</sup> Harari, *Homo Deus*, p. 370, see also p. 356, 370-390.

<sup>5</sup> *Ibid.*, p. 403-408.

<sup>6</sup> Examples from *Zeit Online*: Evans, Rassenlehre, 31.3.2018; von Randow, Baby, 28.11.2018; Assheuer, Sklavenhaltergesellschaft, 6.12.2018; Schadwinkel, Gentechnik, 13.3.2019; Bahnsen, Politik von Gestern, 15.5.19. From *New York Times Online*: Editorial Board, Toy with Secret to Life, 28.1.2019; Belluck, Rogue Gene-Editing, 23.1.2019. From *NZZ*: Schär, Rassen, 20.4.2018. From *NZZ Folio*: Wick, Strohsack, 6.5.2019.

## Bibliography

### Unpublished Primary Sources

Akademie der Künste, Carl Hauptmann Archiv, K11 – K321, selected correspondences, personal documents.

Max Planck Institut für Psychiatrie, Nachlass Alfred Ploetz, 1/4 – 10/1, selected correspondences, personal documents, miscellaneous material.

### Published Primary Sources

Galton, Francis, *Hereditary Genius. An Inquiry into its Laws and Consequences* (London, New York 1892 [1868]).

—, 'Eugenics: Its Definition, Scope, and Aims', *American Journal of Sociology*, 10 (1904), 1-25.

—, *Inquiries into Human Faculty and its Development. Second Edition*, (London, New York 2012 [1907]).

—, *Essays on eugenics* (London 1909).

Galton, Francis; Sargent Lyman (ed), 'The Eugenic College of Kantsaywhere', *Utopian Studies*, 2 (2001), 191-209.

Hauptmann, Gerhart, *Die Grossen Beichten. Das Abenteuer meiner Jugend* (Berlin 1966 [1937]).

Lenz, Fritz, 'Alfred Ploetz zum 70. Geburtstag am 22. August 1930', *Archiv für Rassen- und Gesellschafts-Biologie. Einschliesslich Rassen- und Gesellschafts-Hygiene*, 24 (1930), VII-XV.

Ploetz, Alfred, *Die Tüchtigkeit unserer Rassen und der Schutz der Schwachen. Ein Versuch über Rassenhygiene und ihr Verhältnis zu den humanen Idealen, besonders zum Socialismus* (Berlin 1895).

—, 'Ableitung einer Rassenhygiene und ihre Beziehung zur Ethik', *Vierteljahresschrift für wissenschaftliche Philosophie*, 19 (1895), 368-377.



—, 'Die Begriffe Rasse und Gesellschaft und die davon abgeleiteten Disziplinen. Einige Worte der Einführung', *Archiv für Rassen- und Gesellschafts-Biologie. Einschliesslich Rassen- und Gesellschafts-Hygiene*, 1 (1904), 2-26.

—, 'Ableitung einer Gesellschafts-Hygiene und ihrer Beziehung zur Ethik', *Archiv für Rassen- und Gesellschafts-Biologie. Einschliesslich Rassen- und Gesellschafts-Hygiene*, 3 (1906), 253-259.

## Secondary Sources

Allen, Garland, 'Is a New Eugenics Afoot?', *Science*, 194 (2001), 59, 61.

Ash, Mitchell, 'Wissenschaft und Politik. Eine Beziehungsgeschichte im 20. Jahrhundert', *Archiv für Sozialgeschichte*, 50 (2010), 11-46.

—, 'Ressourcenaustausche: Die KWG und MPG in politischen Umbruchszeiten – 1918, 1933, 1945, 1990', Hoffman, Dieter; Kolboske, Birgit; Renn, Jürgen (pub), "Dem Anwenden muss das Erkennen vorausgehen". *Auf dem Weg zu einer Geschichte der Kaiser-Wilhelm -/ Max-Planck-Gesellschaft* (Edition Open Access 2015), 307-342.

Assheuer, Thomas, 'Crispr. Die neue Sklavenhaltergesellschaft', *Zeit Online*, 6.12.2018 [https://www.zeit.de/2018/51/crispr-china-biotechnologie-genomveraenderung-ethik-gentechnik, accessed 25 May 2019].

Bahnsen, Ulrich, 'Crispr. Politik von Gestern', *Zeit Online*, 15.5.2019 [https://www.zeit.de/2019/21/crispr-genschere-keimbahn-gentechnik-ethikrat-biopolitik, accessed 25 May 2019].

Barret, Deborah; Kurzman, Charles, 'Globalizing Social Movement: The Case of Eugenics', *Theory and Society*, 33 (2004), 4875-527.

Bauman, Zygmunt, *Die Dialektik der Ordnung: Moderne und der Holocaust* (Hamburg 1992).

Becker, Peter Emil, *Zur Geschichte der Rassenhygiene. Wege ins Dritte Reich. Band 1* (Stuttgart, New York 1988).

Belluck, Pam, 'How to Stop Rogue Gene-Editing of Human Embryos?', 23.1.2019 [https://www.nytimes.com/2019/01/23/health/gene-editing-babies-crispr.html, accessed 25 May 2019].

Blacker, Carlos, *Eugenics. Galton and After* (London 1952).

- Bleker, Johanna; Ludwig, Svenja, 'Biographische Einführung', Bleker, Johanna; Ludwig, Svenja (pub), *Emanzipation und Eugenik. Die Briefe zwischen der Frauenrechtlerin, Rassenhygienikerin und Genetikerin Agnes Bluhm an den Studienfreund Alfred Ploetz aus den Jahren 1901 – 1938* (Husum 2007), 11-77.
- Bloch, Marc, *The Historian's Craft* (Manchester 1954, French original Paris 1949).
- Broberg, Gunnar; Roll-Hansen, Nils (pub), *Eugenics and the Welfare State. Sterilization Policy in Denmark, Sweden, Norway, and Finland* (East Lansing 1996).
- Brookes, Martin, *Extreme Measures. The Dark Vision and Bright Ideas of Francis Galton* (New York 2004).
- Bugmann, Mirjam, *Hypnosepolitik. Der Psychiater Auguste Forel, das Gehirn und die Gesellschaft (1870-1920)*, PhD 2011, University of Zurich (Köln, Weimar, Wien 2015).
- Bulmer, Michael, *Francis Galton. Pioneer of Heredity and Biometry* (Baltimore 2003).
- Burgmair, Wolfgang; Weber, Matthias, *Vorläufiges Nachlaßverzeichnis Alfred Ploetz (1860-1940)*, Max Planck Archiv für Psychiatrie, Historisches Archiv (München 2003).
- Burleigh, Michael; Wippermann, Wolfgang, *The Racial State. Germany 1933-1945* (Cambridge 1991).
- Burke, Chloe; Castaneda, Christopher, 'The Public and Private History of Eugenics: An Introduction', *The Public Historian*, 29 (2007), 5-17.
- Buß, Eugen, Schöps, Martina, 'Die gesellschaftliche Entdifferenzierung', *Zeitschrift für Soziologie*, 8 (1979), 315-329.
- Challis, Debbie, *The Archeology of Race. The Eugenic Ideas of Francis Galton and Flinders Petrie* (London, New York 2013).
- Clausen, Thomas, *Ludwig Woltmann's social Darwinism and the German Social Democratic Party, 1890-1914*, Dissertation for Tripos Examination, presented to the Faculty of History of the University of Cambridge, April 2013.
- Clayes, Gregory, 'Utopian Texts: Introduction. Francis Galton, "Kantsaywhere" and "The Donoghues of Dunno Weir"', *Utopian Studies*, 12 (2001), 188-190.
- Cullen, David, 'Back to the Future: Eugenics – A Bibliographic Essay', *The Public Historian*, 29 (2007), 163-175.
- Dikötter, Frank, 'Race Culture: Recent Perspectives on the History of Eugenics', *The American Historical Review*, 103 (1998), 467-478.

Doeleke, Werner, *Alfred Ploetz (1860-1940). Sozialdarwinist und Gesellschaftsbiologe*, PhD 1975, University of Frankfurt (Frankfurt 1975).

Dubos, Rene, 'Medical Utopias', *Daedalus*, 88 (1959), 410-424.

The Editorial Board, 'Should Scientists Toy with the Secret to Life?', 28.1.2019 [<https://www.nytimes.com/2019/01/28/opinion/crispr-genes-babies.html>, accessed 25 May 2019].

Evans, Gavin, 'Rassenlehre. Die Rückkehr einer Bullshit-Wissenschaft', *Zeit Online*, 31.3.2018 [<https://www.zeit.de/wissen/2018-03/rassenlehre-abstammung-intelligenz-rassismus-usa-rechtsruck>, accessed 24 May 2019].

Evans, Richard, *In Search of German Social Darwinism. The History and Historiography of a Concept*, Berg, Manfred; Cocks, Geoffrey (pub), *Medicine and Modernity. Public Health and Medical Care in Nineteenth- and Twentieth-Century Germany* (Washington D.C., Cambridge 1997), 55-79.

Forrest, Derek, *Francis Galton: The Life and Work of a Victorian Genius* (London 1974).

Frech, Kurt, 'Felix Dahn. Die Verbreitung völkischen Gedankenguts durch den historischen Roman', Puscher, Uwe; Schmitz, Walter; Ulbricht, Justus (pubs), *Handbuch zur "Völkischen Bewegung" 1871-1918* (München, London, Paris 1996), 685-698.

Freeden, Michael, 'Eugenics and Progressive Thought', *The Historical Journal*, 22 (1979), 645-671.

—, 'Eugenics and Ideology', *The Historical Journal*, 26 (1983), 959-962.

Friedlander, Henry, *The Origins of Nazi Genocide. From Euthanasia to the Final Solution* (Chapel Hill, London 1995).

—, 'Von der „Euthanasie“ zur „Endlösung“', Henke, Klaus-Dietmar (pub), *Tödliche Medizin im Nationalsozialismus. Von der Rassenhygiene zum Massenmord* (Köln, Weimar, Wien 2008), 185-202.

Gillham, Nicholas Wright, *A Life of Sir Francis Galton. From African Exploration to the Birth of Eugenics* (Oxford 2001).

Hagner, Michael, 'Forschung als Politik? Zur historischen Kontamination der wissenschaftlichen Praxis', Leist, Anton (pub), *August Forel – Eugenik und Erinnerungskultur* (Zurich 2006), p. 55-77.

Harari, Yuval, *Homo Deus. A Brief History of Tomorrow* (London 2017, Hebrew original Tel Aviv 2015)

- Harrington, Anna, *Reenchanted Science. Holism in German Culture From Wilhem II to Hitler* (Princeton 1996).
- Henke, Klaus-Dietmar, 'Einleitung: Wissenschaftliche Entmenschlichung und politische Massentötung', Henke, Klaus-Dietmar (pub), *Tödliche Medizin im Nationalsozialismus. Von der Rassenhygiene zum Massenmord* (Köln, Weimar, Wien 2008), 9-30.
- Herrnstein, Richard; Murray, Charles, *The Bell Curve. Intelligence and Class Structure in American Life* (New York, London 1994).
- Ittman, Karl, *A Problem of Great Importance. Population, Race, and Power in the British Empire, 1918-1973* (Berkley, Los Angeles, London 2013).
- Jones, Greta, 'Eugenics in Ireland: The Belfast Eugenics Society, 1911-15', *Irish Historical Studies*, 28 (1992), 81-95.
- Junginger, Horst, *Die Verwissenschaftlichung der "Judenfrage" im Nationalsozialismus* (Darmstadt 2011).
- Kaiser, Jochen-Christoph, 'Widerspruch und Widerstand gegen die Krankenmorde', Henke, Klaus-Dietmar (pub), *Tödliche Medizin im Nationalsozialismus. Von der Rassenhygiene zum Massenmord* (Köln, Weimar, Wien 2008), 171-184.
- Kevles, Daniel, *In the Name of Eugenics. Genetics and the Uses of Human Heredity* (Cambridge (MA), London 1885).
- Kidd, Ian, 'Doing Away With Scientism', *Philosophy Now*, 102 (2014), 30-31.
- Kilcher, Andreas, 'Der Kranke Mann im Golus', *Aschkenas*, 29 (2019), 175-195.
- Kolchin, Peter, 'Whiteness Studies: The New History of Race in America', *The Journal of American History*, 89 (2002), 154-173.
- , Peter, 'Whiteness Studies', *Journal de la Société des américanistes*, 95 (2009), 117-163.
- Koller, Christian, 'Das "Gesetz gegen die gemeingefährlichen Bestrebungen der Sozialdemokratie"', *Rote Revue*, 81 (2003), 34-37.
- Kühl, Stefan, *For The Betterment of the Race. The Rise and Fall of the International Movement for Eugenics and Racial Hygiene* (London 2013, German Original Frankfurt 1997).
- Leendertz, Ariane, 'Experten – Dynamiken zwischen Wissenschaft und Politik', Reincke, Christian; Mergel, Thomas (pub), *Das Soziale Ordnen. Sozialwissenschaft und gesellschaftliche Ungleichheit im 20. Jahrhundert* (Frankfurt, New York 2012), 337-370.
- Leist, Anton (pub), *August Forel – Eugenik und Erinnerungskultur* (Zurich 2006).

- Levine, Philippa, *Eugenics. A Very Short Introduction* (Oxford 2017).
- López-Durán, Fabiola, *Eugenics in the Garden. Transatlantic architecture and the crafting of modernity* (Austin 2018).
- Lynn, Richard, *Eugenics: A Reassessment* (London 2001).
- Mazumdar, Pauline, ‘“Reform eugenics” and the decline of Mendelism’, *Trends in Genetics*, 18 (2002), 48-52.
- Meier, Marietta, ‘Zwangsterilisation in der Schweiz: Zum Stand der Forschungsdebatte’, *Traverse: Zeitschrift für Geschichte*, 11 (2004), 130-146.
- Nate, Richard, *Biologismus und Kulturkritik. Eugenische Diskurse der Moderne* (Würzburg 2014).
- Paul, Diane, *The Politics of Heredity. Essays on Eugenics, Biomedicine, And the Nature-Nurture Debate* (New York 1998).
- Petermann, Heike, ‘Das Verständnis der Begriffe “Eugenik” und “Rassenhygiene” im “Archiv für Rassen und Gesellschaftsbiologie” zwischen 1904 und 1944’, Kesper-Biermann, Sylvia (pub), *Bevölkerung in Wissenschaft und Politik des 19. und 20. Jahrhunderts* (München 2012), 104-134.
- Prewitt, Kenneth, ‘The Two Project of the American Social Sciences’, *Social Research*, 72 (2005), 219-236.
- Propping, Peter; Heuer, Bern; Heuer, Bernhard, ‘Vergleich des „Archivs für Rassen- und Gesellschaftsbiologie“ (1904-1933) und des „Journal of Heredity“ (1910-1939): Eine Untersuchung zu Hans Nachtheims These von der Schwäche der Genetik in Deutschland, *Medizinhistorisches Journal*, 26 (1991), 78-93.
- Puschner, Uwe, *Die völkische Bewegung im wilhelminischen Kaiserreich. Sprache. Rasse. Religion* (Darmstadt 2000).
- Von Randow, Gero, ‘Crispr. Baby nach Wunsch’, *Zeit Online*, 28.11.2018 [[www.zeit.de/2018/49/gentechnik-genveraenderte-babys-crispr-china-ethik-forschung-moratorium](http://www.zeit.de/2018/49/gentechnik-genveraenderte-babys-crispr-china-ethik-forschung-moratorium), accessed 25 May 2019].
- Raphael, Lutz, ‘Die Verwissenschaftlichung des Sozialen als methodische und konzeptionelle Herausforderung für eine Sozialgeschichte des 20. Jahrhunderts’, *Geschichte und Gesellschaft*, 22 (1996), 165-193.
- Repp, Kevin, *Reformers, Critics, and the Paths of German Modernity. Anti-Politics and the Search for Alternatives, 1890-1914* (Cambridge (MA), London 2000).

- Rosen, Christine, *Preaching Eugenics. Religious Leaders and the American Eugenics Movement* (Oxford 2004).
- Sala, Roberto, 'Verwissenschaftlichung des Sozialen – Politisierung der Wissenschaft? Zum Verhältnis von Wissenschaft und Politik in der Geschichtsschreibung des 19. und 20. Jahrhunderts', *Berichte zur Wissenschaftsgeschichte*, 40 (2017), 333-349.
- Sargent, Lyman, 'The Eugenic College of Kantsaywhere', *Utopian Studies*, 12 (2001), 191-192.
- Schadwinkel, Aline, 'Gentechnik. Crispr Entdecker fordern weltweiten Stopp von Embryonenversuchen', *Zeit Online*, 13.3.2019 [<https://www.zeit.de/wissen/gesundheit/2019-03/crispr-genschere-gentechnik-keimbahn-menschenversuch>, accessed 25 May 2019].
- Schär, Markus, 'Der Genetiker David Reich löst in den USA einen Intellektuellen-Streit über Erbgut und Rassen aus', *NZZ Online*, 20.4.2018 [<https://www.nzz.ch/feuilleton/der-genetiker-david-reich-loest-in-den-usa-einen-intellektuellen-streit-ueber-erbgut-und-rassen-aus-ld.1378433>, accessed 25 May 2019].
- Schwartz, Michael, *Sozialistische Eugenik. Eugenische Sozialtechnologie in Debatten und Politik der deutschen Sozialdemokratie 1890-1933* (Bonn 1995).
- Scott, James, *Seeing Like a State* (New Haven, London 1998).
- Soloway, Richard, *Demography and Degeneration. Eugenics and the Declining Birthrate in Twentieth-Century Britain* (London 1990).
- Spektorowski, Alberto; Ireni-Saban, Liza, *Politics of Eugenics. Productionism, population and national welfare* (London, New York 2014).
- Stepan, Nancy, *The Hour of Eugenics. Race, Gender, And Nation in Latin America* (Ithaca, London 1991).
- Stern, Alexandria Minna, 'Improving Hoosiers: Indiana and the Wide Scope of American Eugenics', *Indiana Magazine of History*, 106 (2010), 219-223.
- Stöckel, Sigrid, 'Verwissenschaftlichung der Gesellschaft – Vergesellschaftung der Wissenschaft', Stöckel, Sigrid; Lisner, Wiebke; Rüge, Gerlind (pub), *Das Medium Wissenschaftszeitschrift seit dem 19. Jahrhundert. Verwissenschaftlichung der Gesellschaft – Vergesellschaftung von Wissenschaft* (Stuttgart 2009), 9-24.
- Stone, Dan, *Breeding Superman. Nietzsche, Race and Eugenics in Edwardian and Interwar Britain* (Liverpool 2002).

- Tschörtner, Heinz, *Gespräche und Interviews mit Gerhart Hauptmann (1894-1946)* (Berlin 1994).
- Turda, Marius, *Modernism and Eugenics* (New York 2010).
- , *Eugenics and Nation in Early 20<sup>th</sup> Century Hungary* (Hampshire 2014).
- Turda, Marius; Quine, Sophia Maria, *Historicizing Race* (London, New York 2018).
- Wecker, Regina; Braunschweig, Sabine; Imboden, Gabriela (pub), *Wie nationalsozialistisch ist die Eugenik? What is National Socialist about Eugenics? Internationale Debatten zur Geschichte der Eugenik im 20. Jahrhundert. International Debates on the History of Eugenics in the 20th Century* (Wien, Köln, Weimar 2009).
- Weindling, Paul, *Health, Race, and German Eugenics between German Unification and Nazism. 1870-1945* (Cambridge 1989).
- Weingart, Peter, 'Verwissenschaftlichung der Gesellschaft – Politisierung der Wissenschaft', *Zeitschrift für Soziologie*, 12 (1983), 225-241.
- , 'German Eugenics between Science and Politics', *Osiris*, 5 (1989), 260-282.
- , 'Science and Political Culture: Eugenics in Comparative Perspective', *Scandinavian Journal of History*, 24 (1999), 163-177.
- Weingart, Peter; Kroll, Jürgen; Bayertz, Kurt, *Rasse, Blut und Gene, Geschichte der Eugenik und Rassenhygiene in Deutschland* (Frankfurt am Main 1988).
- Weiss, Sheila, *The Nazi Symbiosis: Human Genetics and Politics in the Third Reich* (Chicago 2010).
- Wick, Hanna, 'Heiliger Strohsack', *NZZ Folio*, 6.5.2019 [<https://www.folio.nzz.ch/2019/mai/heiliger-strohsack-das-wird-krass>, accessed 25 May 2019].
- Wilkinson, Stephen, "'Eugenics Talk" and the language of bioethics', *Journal of Medical Ethics*, 34 (2006), 467-471.
- Wilson, Robert, *The Eugenic Mind Project* (Cambridge (MA), London 2018).
- Wottreng, Willi, *Hirnriss. Wie die Irrenärzte August Forel und Eugen Bleuler das Menschengeschlecht retten wollten* (Zürich 1999).