

Conceptualising Eugenics and Racial Hygiene as Public Health Theory and Practice (from *Conceptualising Public Health : Historical and Contemporary Struggles over Key Concepts* / edited by Johannes Kananen, Sophy Bergenheim and Merle Wessel (Routledge, 2018))

Paul Weindling

Linking race to hygiene

Eugenics arose at a crucial historical juncture in terms of demography (with the declining birth rate) and morbidity (with the shift to the greater prevalence of chronic diseases) in the early twentieth century. These epidemiological transitions, in turn, shaped public health measures and associated rationales. This chapter will examine eugenic concepts of population health, and how these entered public health in terms of concepts and practices, especially as deriving from the founders of eugenics – notably Francis Galton in Britain and Wilhelm Schallmayer and Alfred Ploetz in Germany. Their theoretical writings provided fundamental concepts of how population health could be sustained in an emergent welfare state. Eugenic ideas of eradicating physical and mental disabilities, and overall improvement of reproductive and population health, became norms embedded in public health concepts, structures and interventions, persisting until at least a new critical awareness from the mid-1960s which was less directive and more oriented to the person and his or her rights.

Historical interest in a critical history of eugenics and the associated ideology of Social Darwinism dates from the mid-1960s' era of civil rights protests in the USA. A new critical epistemology marked the ending of a positivistic and progressivist approach to the history of eugenics. The view of eugenics as a progressive science was typified by C.P. Blacker, the British eugenicist and psychiatrist. Blacker saw expert-driven eugenics as enlightened and necessary, although he was careful to separate eugenics from National Socialism in his chronicle *Eugenics: Galton and After*.¹ The alternative critical position was at first to critique eugenics and Social Darwinism as movements primarily concerning the racist ultra-right in a progression from Darwin to Hitler. Although such highly questionable interpretations survive, a range of challenging methodologies and historiographies uncovered far wider issues in eugenics, concerning coercive institutions and racially and genetically legitimated interventions in fertility. The insights of Michel Foucault and others on authoritarian strategies of experts, as well as the ground-breaking ideas of Donald MacKenzie on social constructions of statistical science as expressing conflicting professional interests, influenced historical reconstructions of German eugenics during the 1980s. They led to a critical assessment of eugenics as an expression of middle-class power strategies in a modernising state and society.² The history of eugenics, race and hygiene came to be recognised as having coercive implications, especially for public health issues as related to reproduction, heredity, ethnicity and gender.

The German concept of *Rassenhygiene* (in English *racial hygiene*; in Swedish *rashygien*) was a composite linking the idea of race with the German concept of Hygiene as the new science of disease control and cure. *Rassenhygiene* covered various approaches to public health and population during the upheavals of industrialisation and urbanisation of the later nineteenth century. The term *Rassenhygiene* made its first appearance in 1895 after the spectacular successes of the microbiologists Robert Koch and Louis Pasteur. *Rassenhygiene* as a hybrid concept implied

that hereditary particles could be somehow cleansed from the inherited genetic material – just as the germs of infectious diseases such as cholera, diphtheria and tuberculosis (TB) could be identified and eradicated. The physician, biologist and utopian enthusiast Alfred Ploetz outlined how hereditary health problems could be ‘humanely’ solved by chromosomal engineering.³ The vision was futuristic in that Ploetz had only a very limited evidence-basis for a hereditary component to disabilities and disease. How the pathogens in the germplasm could be ‘humanely’ eliminated was a matter of speculation.

Ploetz saw Scandinavia as the motherland of the *Germanen*: he admired the Nordic type to which he ascribed racial superiority in terms of psychology, physique and fitness. In any event, the term *Rassenhygiene* was projected to appeal to professionals and scientists inclined to social reform. A wider public was prepared to place its faith in scientifically based solutions to social problems of poverty, crime, insanity and disease.⁴

Since the successes of Max von Pettenkofer from the 1860s and Robert Koch in the later nineteenth century, *Hygiene* achieved immense success in Germany as a new academic discipline.⁵ A contrast emerged with Anglo-American concepts of hygiene, which meant general cleansing and improved sanitation. Thus, the German sense of *Hygiene* had a laboratory basis, in contrast to the more public oriented Anglo-American sense of the term as a general cleansing. This difference can be found in contrasting German and Anglo-American approaches to eugenics. Ploetz launched the periodical *Archiv für Rassen- und Gesellschaftsbiologie* (Archive for Racial and Societal Biology) in 1904 to cover inheritance of diseases and physical traits, as well as the declining birth rate among elite population groups. In 1905, Ploetz founded the *Gesellschaft für Rassenhygiene* (Racial Hygiene Society) in Berlin (the name was universal rather than specifically German). He regarded the Society as a breeding group, and encouraged not only professionals to join, but also their wives and children, and students – effectively as an elite breeding group – in the hope that those in the group would procreate mentally and physically superior offspring. The German Racial Hygiene Society had a larger number of biologists and medical specialists than its equivalent in Britain and its Empire – the Eugenic Education Society, launched in 1907.⁶

Ploetz was concerned about health conditions in Germany, and of the ‘white races’ more generally. He conceptualised how *Rassenhygiene* would become a new medical specialisation at a crucial juncture of demographic change with the declining birth rate and increasing life expectancy. Eugenicists recognised a ‘modern’ morbidity pattern with the shift to chronic diseases. Whereas Ploetz was a visionary, his scientific ally, Ernst Rüdin, applied genetics in researching the supposed hereditary component of ‘schizophrenia’, understood in a narrowly biologicistic sense.⁷ Rüdin took matters forward in terms of implementation by advising on German sterilisation legislation in 1933, which designated ‘schizophrenics’ as a target group. The proportions of ‘schizophrenics’ who were sterilised varied at each tribunal – for example nearly 30 per cent in Bremen and 7 per cent in Halle.⁸

The responses to fundamental shifts in mortality, morbidity and the changing population structure, in turn, shaped public health measures in the early twentieth century in looking to biology for technical ‘solutions’ to intractable problems of poverty and physical and mental illness. The approach was preventive, and required a directive from the scientific elite dictating biomedical regulations. Indicative of the collectivist implications of eugenics, there emerged socialised models of annual health examinations linked to health passports, indicating that only the eugenically healthy could have full civic freedoms. The Bavarian psychiatrist Wilhelm Schallmayer pronounced that the physician had a primary responsibility to society, rather than to the sick individual.⁹ Around 1890, Schallmayer outlined a collectivised system of public health in which eugenically trained physicians served the state as a biomedical entity, rather than caring for the individual sick person: indeed,

keeping carriers of pathogenic genes alive could damage future generations. Schallmayer developed a scheme of corporate national racial service, and the purification of hereditary elements in the population by means of health passports. These had to be kept up to date with an annual medical inspection. This collectivist model opened the way to stigmatise a range of medical conditions, behaviours and identities as pathological threats to the body politic, or *Volkskörper*. This strategy represented a fundamental shift in terms of the socialisation of health within the emerging welfare state – welfare itself became, over time, regarded as a combined state and professional responsibility, rather than a private duty. The approach could be seen as the assertion of power by scientifically oriented professions armed with new diagnostic and preventive techniques within a variety of political frameworks.

German–British distinctions

The question arises whether a distinction can be drawn between the German models of Ploetz and Schallmayer and the British model of Francis Galton, who indeed coined the term *eugenics* in 1883. Galton, a statistician, was concerned with heredity and reproduction within a wider context of demography and epidemiology, as well as the psychology of behaviour and intelligence as determined by inheritance. Galton's starting point was a critique of his cousin Charles Darwin's ideas of natural and sexual selection. Galton objected to Darwin's speculative theory of circulating 'pangenes' transmitting environmentally acquired traits from one generation to another. Instead, Galton substituted a statistical scheme of gemmules transmitting hereditary traits. He argued that these would account for traits distributed according to a Gaussian or Bell curve. As there was reversion towards the mean (i.e., the average) from the low or high ends of the population distribution, each person in every generation required expert assessment to determine schooling and occupation. Galton's 'biometrical' approach correlated mental and physical traits. He stressed the need to limit the reproduction of less desirable physical and mental qualities, which he saw as proliferating with industrialisation. The distribution of biological traits went with concepts of population health. Galton (and, similarly, Darwin) was interested in *race* in the sense of a population with distinctive ethnic characteristics: Darwin was, in any case, inconsistent in the meanings he ascribed to the term *race*. Galton had geographical and anthropological interests, and drew a distinction between those he viewed as more 'primitive' races, such as the 'Negro', and more evolved, such as Chinese and Jews.¹⁰

In social terms, Galton offered a critique of liberal notions of individual selfimprovement by positing a deterministic model of a 'natural' social order with inherited traits distributed on a Gaussian or Bell curve. The combining and distribution of traits varied over generations: what was necessary was to assess talent in each generation. Those more talented would be selected for elite education and take expert roles in directing society. Galton's utopia, *Kantsaywhere*, advocated a social model which was 'modern' with regard to the power accorded to scientifically expert social elites.¹¹ The new model of social order challenged aristocratic privilege and mass democracy as degenerative: Galton limited the proliferation of a social underclass whose 'excess' reproduction distorted the presumed natural balance of society. Implicit in this expert-administered model was a regulatory state with directive roles taken by selected technocrats.

A further fundamental difference between Britain and Germany was the organisation and financing of health care. Germany – with the introduction of sickness insurance in 1883 – initiated a durable model of medical provision. This strengthened the medical profession overall, while the sickness insurance funds were autonomous corporations, independent of the state. Sickness insurance was

not eugenic in itself: it drew financial resources into medicine. Germany extended benefits to family dependants and maternity provision, and to treat sexually transmitted diseases: all this was 'ahead' of Britain. Eugenists demanded that resources be focused on those deemed 'fit', and that those deemed 'unfit' should be excluded from resources. A paradox was that in order to exclude the presumed defective from procreation, social segregation incurred costs. The Mental Deficiency Act of 1913 established a system of life-long detention, affecting some 65,000 persons until its repeal in 1959. The trend in Britain was ultimately towards a unitary state-financed and state-regulated health service, although this was finally achieved only with the new National Health Service (NHS) in 1948. Medical institutions such as sanatoria and psychiatric hospitals proliferated throughout Europe and North America. Eugenists were divided in their opinions regarding the benefits of custodial institutions that prevented those deemed unfit from reproducing; but, at the same time, eugenists condemned the costs of these institutions as imposing burdens on the fit. One set of eugenists advocated custodial detention for the feeble-minded, whereas others from around 1900 lobbied for sterilisation. Here a contrast emerged among British eugenists who advocated 'colonies' for mental defectives, as opposed to German and US advocates of sterilisation, which rendered institutional containment superfluous.¹²

The Galtonian model required scientifically trained oversight, not just in medicine but also in psychology, statistics and the sciences. Ploetz, by comparison, had a more biological approach. Comparing the Eugenic Education Society (EES) to the Racial Hygiene Society, we find both include doctors; but the German society had more notable biologists (not least the leading Darwinists, Ernst Haeckel and August Weismann), and overall a higher proportion of medical professionals. Ploetz targeted academic recruits to validate his new science. By way of contrast, the EES was unable to recruit Karl Pearson, whose statistical approach continued Galton's legacy at the Francis Galton Eugenics Laboratory at University College London (UCL). Pearson certainly cultivated links to medical officers, as in *Eugenics and Public Health*, which originally was a lecture addressed to public health officers, delivered at the York congress of the Royal Sanitary Institute in 1912.¹³ For their part, British medical officers were responsive to eugenics in 1912 in the build-up to the International Congress of Eugenics, which was held in London.¹⁴ The initiative for a public association passed to the lay enthusiast and founder of the Eugenics Education Society, Mrs Sybil Gotto (later Neville-Rolfe), whose approach was more moralistic on reproductive morals than that of the often more pragmatic public health professionals. She was a formidable figure on international committees concerned with sexually transmitted diseases, but she was slow to eventually accept the medical benefits of contraception.¹⁵ While there were prominent women among German racial hygienists (such as the biologist Agnes Bluhm), Sybil Gotto exemplifies how women achieved greater influence in British eugenics. It should also be noted that, by the early twentieth century, women in Britain advanced further than in Germany in terms of academic studies; Marie Stopes, a palaeobotanist before becoming a noted campaigner for contraception, exemplifies this. In Germany, a patriarchal public health establishment espoused eugenic views to curb birth control: figures like Hans Harmsen clashed with a libertarian movement for 'sexual reform'.¹⁶

Eugenics as public health

Eugenics became a norm embedded in public health concepts, structures and interventions. Around 1900 in Germany (but in the morally more censorious UK, only during the First World War) eugenists became concerned with sexually transmitted diseases. The ever-inventive Galton had already devised practical eugenic measures – such as health examinations prior to marriage – to

screen for sexually transmitted diseases and hereditary abnormalities. The implementation of health measures was designed to limit a range of 'racial poisons' such as alcohol, tuberculosis and sexually transmitted diseases, as well as 'mental deficiency' and 'feeble-mindedness'. In Germany, eugenic concerns with physical and mental degeneration resulted in high-profile campaigns against these 'racial poisons'. Only during the First World War did state authorities contemplate disease control from a reproductive perspective. During the war, eugenically minded experts acted as guardians of national health by serving on committees on the declining birth rate.

At one level, the idea of *Rassenhygiene* dealt with a population in the sense of a breeding group. It considered conflicting approaches to public health, notably the shift to chronic degenerative diseases, and the diminishing of infant mortality. German eugenics intertwined with the Nordic in several ways: as a physical and psychological model. The Secretary of the new Racial Hygiene Society, Ernst Rüdin, travelled to Norway and Sweden in 1907 and 1909 to recruit members. In the event, the Swedish Racial Hygiene Society was founded in 1910 as a branch affiliated to the German society.¹⁷ It had high numbers of physicians and medical students among its members.

The idea of a 'hereditary constitution' allowed for a 'hereditarian', but not necessarily racist, form of eugenics. The term was introduced by Ferdinand Hueppe, a lapsed follower of Robert Koch concerned about the limitations of the causality of infectious bacteria, and was widely taken up. The idea was developed by Adolf Gottstein, who was the medical officer of Berlin-Charlottenburg and, from 1919 to 1924, director of the Prussian medical department. Other public health reformers who gravitated to eugenics include the university professors of hygiene Carl Flügge in Berlin and Max von Gruber in Munich. The social hygienist Alfred Grotjahn prioritised fertility control from a eugenic perspective, as did the Vienna anatomist and social reformer Julius Tandler. The idea of a 'constitution' allowed for combinations of hereditary and environmental factors whereby eugenics became mainstream.¹⁸

Race became an ambivalent term – on the one hand, meaning a population as a breeding group and, on the other, a mystic spirit. To a wider academic public, Ploetz spoke of race as a breeding group. In this sense, it was a collective concept of a population. In Germany, a lurking racist ideology became radicalised: Ploetz took note of which of the Society's members were Jewish, and he sought to curb Jewish influence. From 1912, Ploetz and Lenz developed an inner Nordic grouping known as *Der Bogen* (the Bow) centred on secret Nordic rituals (the bow was a fertility symbol); after the First World War, they formed a Widar-Bund, honouring Widar, the Norse god of light. There was thus a collectivist idea of population health and, at the same time, a racist model of eugenics in Germany. For a while, there were two eugenics societies in Weimar Germany: the Racial Hygiene Society and the *Bund für Volksaufartung* (League for Regeneration), which was more oriented to public health and welfare.¹⁹

German ideas of Scandinavia show a polarity between Nordic racism and Nordic eugenics. Until the 1980s, the historical focus was on Nordic racism – notably the writings of the anthropologist Hans F.K. Günther, who in 1922 idealised the Nordic race in his widely read *Rassenkunde des deutschen Volkes* (Racial Knowledge of the German People). The Nordic psychology ultimately fed into the writings of the SS and ideas of sustaining the German peasant. These ideas were certainly shared by racial hygienists Eugen Fischer and Fritz Lenz. For the Germans, Nordic values were linked to an idealising of rural populations, rather than to admiration for welfare initiatives.

A valued recruit was the *völkisch* publisher Julius Lehmann, who forged alliances among the racial ultra-right while developing racial hygiene as a science of preventive medicine and communicating it through his medical publications to the wider profession. In 1911, he published the catalogue of the

section on racial hygiene at the International Hygiene Exhibition, held in Dresden. Ploetz encouraged liberal and left-wing advocates of social medicine to join in the imperialist agitation. Before the First World War, racial hygiene acquired support among ultranationalists. All members of the German Racial Hygiene Society had to have the German 'mother tongue' and belong to the 'white race'. The incorporation of Nordic members can be seen as part of a strategy to promote a Greater German approach to racial hygiene.

Jewish members were experts in the prevention of chronic degenerative diseases. Among them were dermatologist Alfred Blaschko; ophthalmologist Arthur Czellitzer, founder of the *Gesellschaft für jüdische Familienforschung* (Society for Jewish Family Research) and later killed at the Sobibor extermination camp in 1943; and Adolf Gottstein, epidemiologist and medical officer of Charlottenburg. Max Hirsch, the pioneer of 'social gynaecology' was concerned with the reproductive risks to women in hazardous situations, for example due to manual labour. Medical statistician Wilhelm Weinberg (who was 'half Jewish') dealt with statistics of maternal mortality, TB and haemophilia. He chaired the Stuttgart Racial Hygiene Society. The Jewish geneticists Richard Goldschmidt and Hermann Poll were genetic advocates of eugenics. The Jewish eugenicists were progressives in drawing attention to the new prevalence of chronic degenerative diseases. Political and racial tension over Jews and socialists resulted in the split of the welfare-orientated League for Regeneration from the Racial Hygiene Society in 1925. There was also a society for Jewish family research, developed by Czellitzer.

Nationalist fervour linked eugenics to the *völkisch* movement – the publisher Lehmann racialised eugenics by sponsoring Günther to write the *Rassenkunde des deutschen Volkes*. Hitler's library contained several of Günther's works. Lehmann published the journal *Volk und Rasse* (People and Race) from the mid-1920s, gaining support from the SS. Non-racist forms of eugenics permeated the Weimar welfare state, with measures to curb the propagation of the asocial and feebleminded, and to curb the spread of so-called racial poisons. Lehmann secured control of the loss-making *Archiv für Rassen- und Gesellschaftsbiologie* in 1922. He added to this the *Zeitschrift für Rassenphysiologie* (Journal for Racial Physiology), which was focused on race and blood groups.²⁰

After the First World War, German eugenicists feared that the German race, or *Volk*, was being exterminated by hunger and territorial loss. Hunger was linked to poor economic growth and disease. The welfare state in the Weimar Republic instituted a number of positive eugenic measures, such as marriage advisory clinics and family allowances. 'Red' Vienna under Julius Tandler, an anatomist and advocate of body type theories, launched major initiatives in housing, as well as the first birth control clinic. In 1927, a national eugenics institute was founded, the Kaiser Wilhelm Institute for Anthropology, which received funding from the state as well as private sources. Otmar von Verschuer carried out research on twins to see which traits were inherited and which acquired.²¹

In Britain, the Eugenics Society gained influential supporters such as biologist Julian Huxley and cell biologist John R. Baker, who researched chemical contraception. Known as 'Volpar', this was sponsored by the Society, although Marie Stopes was upset by competition to her 'Pro-Race' rubber cap.²² There was sporadic sympathy at the level of Medical Officers of Health. A select few sought to implement a radical eugenics agenda of sterilisation. This can be seen in the unique and arguably exceptional case of Leicester, where the Medical Officer of Health, Killick Millard, arranged six sterilisation operations on children who were blind and presumed to be mentally subnormal. C.P. Blacker (Secretary of the Eugenics Society 1931–1961) reported that: "sterilisation on eugenic grounds has occasionally been performed in this country and without mishap".²³ At the same time, the Eugenics Society ran a campaign for voluntary sterilisation legislation, which, however, failed. In general, the labour movement was critical of sterilisation.²⁴

During the Depression of 1929, there were demands for sterilisation as a means of 'curing' Germany of its social problem groups such as juvenile delinquents, habitual criminals, and the feeble-minded. In 1928, the Swiss canton of Vaud legislated for sterilisation, and in certain German-speaking Swiss cantons, sterilisations were routine. Danish legislative models were influential for the Swiss, as well as precedents from US states, notably California, where coercive sterilisation was applied.

While eugenics pervaded state welfare in 1920s' Germany and Austria, it also shaped community-based initiatives beyond the state. This can be seen in colonial contexts and among the expatriate German communities. Austrian psychiatrists joined the Nazi Party illegally, and some left to work with the demographer and psychiatrist Ernst Rüdin. After the 1933 Nazi takeover, state-imposed eugenic monitoring of the population was implemented. Eugenicists launched national hereditary biological surveys and hereditary databanks, and advocated segregating 'racial deviants'.

The Nazi era

Hitler took up various eugenic themes, such as sterilisation and the damage to the nation's hereditary stock through sexually transmitted disease. He warned how German blood could be corrupted by mixing with Jews. The expectation that Hitler would pursue eugenic policies was initially confirmed in July 1933, when the Nazis passed a sterilisation law. Rüdin served as an advisor in drafting the law. He was influenced not only by US states with coercive sterilisation, but also by the Danish sterilisation law of 1929, as well as Swiss practices. The German law was targeted at a range of clinical conditions, most notably schizophrenia, muscular dystrophy, Huntington's chorea, epilepsy, severe mental defect, inherited deafness and chronic alcoholism. Sexual and mental abnormalities attracted especial interest. Geneticist, doctor and right-wing activist Otmar von Verschuer, based at the Frankfurt public health clinic, led the way in studies on twins.

In 1933, race and welfare were fused along with the rapid Nazification of the German welfare state. Public health was centralised so as to issue orders for sterilisation. Sterilisation was authorised by tribunals of two doctors and a lawyer. At least 375,000 individuals were sterilised by German authorities (including in annexed Austria and the Sudeten German-occupied territory), and there were an estimated 5,000 deaths from complications; 385 'mixed-race' children, aged 13–16, were sterilised in 1937. They were also subjected to psychological, anthropological and genetic evaluations.

In September 1935, the Reich Citizenship Law limited citizenship to those of 'German and related blood'. The Blood Protection Law forbade marriages and sexual relations between Germans, Jews and non-whites alike. These were the so-called Nuremberg Laws. They were based on the idea that blood could be infected by sexual relations with someone of another race.

The Marriage Law of 1935 required hereditary health examinations prior to marriage. Nazi health propaganda encouraged people deemed as good eugenic breeding stock to have at least three children. Health offices registered the birth of the unfit, and from mid-1939, this could have fatal consequences. Marriage certificates involved tests to make sure that no one with a sexually transmitted disease or carrying a genetic disease got married. Nazi racial experts set out to identify and research male homosexuals, many of whom were held in concentration camps, along with other racially stigmatised categories – notably Jews, Sinti and Roma, hereditary criminals, and the 'work-shy'.

In June 1936, a Central Office to 'Combat the Gypsy Nuisance' opened in Munich. This office became the headquarters of a national databank on so-called Gypsies. Robert Ritter, a medical anthropologist at the Reich Health Office, concluded that 90 per cent of the Gypsies were 'of mixed blood'. He described them as "the products of mating with the German criminal asocial sub-proletariat" and as "primitive" people "incapable of real social adaptation".²⁵

The Kaiser Wilhelm Institute for Anthropology trained SS doctors in genetics. From 1935, a medical lobby around Hitler pressed for the introduction of killing the malformed and incurable, although the practice was not introduced until October 1939. Hitler saw the sick as an economic burden on the healthy, and wished to rid the German race of their "polluting" effects on the nation's 'genetic treasury'.

The numbers of mentally ill and disabled killed with carbon monoxide in the initial phase – code-named 'T4' (after the administrative office at Tiergartenstrasse 4, Berlin) – amounted to 70,273 persons. The killings were based on medical records sent to the clandestine panel of psychiatrists in Berlin. In 1941, the Roman Catholic bishop of Münster, Clemens Galen, expressed his condemnation, and some opposition from distressed relatives was voiced as well. This resulted in a fake halt. 'Euthanasia' personnel, including physicians and technicians, were transferred to the *k*, which ran the extermination camps of Bełżec, Sobibor and Treblinka, to kill with carbon monoxide gas. Euthanasia continued in concentration camps where prisoners were selected for killing, so-called special children's wards, and in other clinical locations. Physicians, who were assisted by nurses, killed their victims by starvation, injection and by administering deadly drugs. Those killed included newborn babies, children, the mentally disturbed and the infirm. Sometimes victims were killed for merely challenging the staff in institutions, even though they were in good health, and others did not qualify as so-called incurables in accordance with the Nazi theory. Some physicians killed because of the scientific interest of the 'cases'. Austria had relatively high numbers of euthanasia killings, although numbers of sterilisation victims were lower. The rationales were to save costs of institutional care, to use institutions for other forms of medical care, and to purge genes deemed pathogenic from the racial 'genetic treasury'.

Carl Schneider, professor of psychiatry at Heidelberg University, was an adjudicator for euthanasia, and saw this as an opportunity for histo-pathological research. He wanted to determine the difference between inherited and acquired idiocy (a medical term for a severe form of mental disability): therefore, 52 children were examined, each for six weeks in the clinic. In the event, 21 of the children were killed so as to compare the diagnosis, made when they were alive, with the post-mortem pathological evidence.²⁶

Robert Ritter directed measures of registration and psychological evaluation of Roma and Sinti. He was supported by psychologists and racial anthropologists. Their observations were followed by incarcerations of Roma and Sinti in concentration camps, notably Auschwitz, where the women and children were killed in July 1944.

The pressure increased to use imprisoned humans for experiments. Eugenic experiments included research on several hundred Jewish women held in Auschwitz for chemical sterilisation experiments, and the X-ray sterilisation experiments on Greek and Polish Jewish men in November 1942. The SS anthropologists Bruno Beger and Hans Fleischhacker selected 115 Jewish men and women to be killed for an anatomical skeleton collection (in the event, 86 were transported to Alsace and gassed; the largest group were Sephardic Greek Jews). The year 1944 marked a high point in unethical research in the basic medical sciences. Many younger researchers (like Josef Mengele) hoped for academic appointments on the basis of unique research findings.

Racial experts from various disciplines from anthropology to agriculture planned extermination of Jews and Slavs to make way for German farmsteads. The Kaiser Wilhelm Institute anthropologist Wolfgang Abel surveyed Nordic qualities of Russians, and Fritz Lenz reviewed the suitability of Ukraine for Nordic settlement.

Nazi demographers were assisted by census techniques and collected medical, health and welfare data. Data on diseases and crime were analysed, and states organised central registries. Hamburg Welfare was established in order to centralise and analyse the statistics. They used the new technology of Hollerith punch cards, using an IBM patent. These techniques assisted in calculations of the numbers of Jews, how many had emigrated and the location of those remaining. They calculated how many full, half and quarter Jews still lived in the Reich. SS demographer Richard Korherr's calculations on the numbers of Jews in the occupied territories assisted Adolf Eichmann with the implementation of the Final Solution. In 1943, Korherr calculated for Himmler and Hitler how many Jews had been killed, country by country. Similar techniques were applied to identify social deviants and for the genocidal measures against the Roma. In the occupied territories, notably the Netherlands, census techniques were used in the deportation of Jews to the concentration and death camps of the east.

Josef Mengele worked as an assistant to Otmar von Verschuer, the expert on the genetics of twins. Mengele joined the Nazi Party and the SS in 1938, and from November 1940 worked with the SS Race and Settlement Office on ethnic German returnees from such locations as the Baltics. In June 1941, Mengele joined a combat unit, and in May 1943 he was sent to Auschwitz as a camp doctor. Scientific research was an informal, spare-time activity. As Mengele selected new arrivals at Auschwitz for poison gassing, he could exploit his position in the selection of twins and other subjects of genetic interest (notably, persons with growth anomalies). The implications for public health were never clearly indicated by Mengele or Verschuer to the German Research Fund: however, it would be reasonable to assume that an intention was the elimination of hereditary defects and growth anomalies from the hereditary stock of the German 'race'. Such medical experiments underpinned a system of differential health care, primarily for those deemed to belong to the racial elite, enhancing fertility (as can be seen in Clauberg's scheme for a City of Mothers) and exclusion (by elimination) of presumed racial undesirables, whether on grounds of ethnicity or of substandard genetic constitution.

Legacies

Post-war Britain set about instituting the National Health Service in 1948. Financed through state tax revenues, the ethos was inclusion and universality rather than selectivity. While the NHS represented an end to eugenic ideals of selection and exclusion, whether the physically and mentally disabled have always received their entitlements is an open question.

Post-war Germany often turned a blind eye to racial criminals. The German state ignored the financial support Mengele received from his family business in agricultural machinery; and other racial criminals, such as Horst Schumann (responsible for X-ray experiments in Auschwitz), also evaded prosecution. In 1946, Verschuer claimed that he had not known about the true nature of Auschwitz, or about the illegitimacy of the body parts he used, i.e., that he prompted the killing of people for extraneous reasons. Neuroscientist Julius Hallervorden, who possibly collected the brains of over 1,500 euthanasia victims for research, similarly defended his actions. In Vienna, there were also large collections of victims' brains, the last buried only in 2014. The legacy of Nazism was

immense, and it tainted medical and scientific elites in the Federal Republic of Germany. Few were informed about the chance of reversing the sterilisation operation with refertilisation. The victims' stigma held fast, and eugenicists still argued that the victims had been justifiably sterilised. Eugenics was a prominent topic at the Nuremberg trials, as well as at the trials of Nazi physicians and of the SS Race and Settlement Office. Physician Hermann Poppendieck had trained at the Kaiser Wilhelm Institute for Anthropology, and was involved in SS-administered racial policy.²⁷ Although Rüdin was deprived of his Swiss nationality for his deeds, this did not bring sterilisation on the grounds of schizophrenia or 'moral idiocy' to an end in Zurich; indeed, it continued until 1970. Despite limited compensation for German victims, full acknowledgement of the injustices of sterilisation and racial research victims has not been made.

Racial hygiene and eugenics were rebranded as human genetics. This allowed for continuity of former racial experts in the Federal Republic. Many eugenicists like Lenz, Nachtsheim, Harmsen (of the Pro Familia birth control organisation) and Verschuer had influential careers in birth control provision, radiation monitoring and forensic psychiatry. That many former eugenics experts retained their positions in such fields is indicative of continuities from the Third Reich to the Federal Republic and post-Second World War Austria. The Viennese brain pathologist Hans Gross continued research on the brains of euthanasia victims. The student protests of 1968 initiated a break with the old elites, leading to critical publications by such figures as the geneticist Benno Müller-Hill. A new phase of concern began with birth control and the liberalising of restrictions on abortion, and latterly over whether human genome research and pre-embryonic implantation constituted new forms of eugenics. The German case cautions against any monolithic interpretation of eugenics, as eugenics sustained itself under both democratic and authoritarian regimes.

A new historical pitfall arose – that all state welfare could be seen in the light of abusive powers and Nazi atrocities. Problematic new interpretations of eugenics that made too much of contrasting stereotypes arose as well.²⁸ Here, loosely conceptualised interpretations of Nordic and Latin eugenics require critical reappraisal. 'Nordic eugenics' is taken as representing selection and sterilisation, whereas 'Latin eugenics' is seen in such contrasting terms as pronatalist and promoting reproductive health. In the middle sits Nazi eugenics, seen as driven by exterminatory impulses against Jews, the Roma and the mentally ill – both extremes lacking in the Nordic and Latin variants with intersections with German eugenics and racial hygiene.

Switzerland is an indicative case study. In analysing Swiss eugenics as putatively 'Latin', there is a need to acknowledge a structural point – Swiss policies were cantonal. The result is more of a patchwork and clusters rather than a country heading towards the Latin camp. In fact, the francophone canton of Vaud introduced sterilisation legislation in 1928. Swiss psychiatrists had taken a lead in advancing sterilisation. Rüdin, as a Swiss national, retained influence in the German-speaking cantons. Turda and Gillette cite the Swiss anthropologist Georges Montandon, as a prominent advocate of Latin eugenics. Montandon had a key role in shifting French anthropology, politically left-wing and anti-racist (as represented by the grouping *Races et Racisme*), towards the fascist and racially genocidal right. Montandon moved to German-occupied France and drove forward the roundups and deportations of French Jews. Extolling Latin virtues should not obscure activism in the unleashing of negative policies. If Montandon is an archetypal Latin eugenicist, we see the Latins in ultra-racist exterminatory mode.

Nordic eugenics presents a similarly problematic situation. Here, the issue has been that Nordic eugenics should be seen in the context of a welfare state concerned with 'unfit' mothers.²⁹ The Scandinavian accounts underestimate policies against the nomadic Sami (sometimes referred to as Laps). The other dimension is that of the wider international framework. In this framework the deep

gulf between Nazi racial sympathisers like Norwegian Jon Alfred Mjøen (albeit limited to before he died in 1939) and pro-Allied groupings, argues Gunnar Dahlberg at Uppsala University, should be read as a swing towards anti-racist politics.³⁰ In Finland, General Mannerheim vacillated over what to do about foreign and Finnish Jews. While the number of deportations from the precariously independent Finland was, in the end, relatively low, for a period Finland was also firmly in the German cultural sphere. The Nordic stereotype obscures deep divisions.

What needs to be taken into account is that Nazi race theory was itself contested and polarised. Far from being monolithically uniform, publications on racial hygiene show a pluralist approach, be it on heredity, cultural or psychological issues. Even among the SS there were deep divisions between geopolitical factions of SS hygienists and those who were genetically and genealogically oriented. Multiple types of eugenic racial theory were operationalised as genocide. Such pluralism also operated in the 'Latin' and 'Nordic' contexts.

Sociobiological approaches continued to be developed. Biotypology is questionably hailed as a wholly 'Latin eugenic' characteristic. Certainly, France was a major centre of bio-typological research. But root ideas drew heavily on the German eugenicist Ernst Kretschmer's *biotypes* oriented to body and character (as outlined in *Körperbau und Charakter/Physique and character of 1921*). Another centre was Czechoslovakia. The Bata shoe factory at Zlin in southern Moravia was a modernist vortex of bio-typological research and practice in industry and administration. The Czechoslovak Eugenic Society was affiliated to the French in 1937. What this signifies was that bio-typology was not 'Latin' but internationalist, modernist and progressive, and eschewed racial concepts. Clearly bio-typological clusters arose in contexts from Mexico to Zlin, but the contexts were not uniformly 'Latin'. Seen in the above perspectives, reviewing the different components of Nordic eugenics and welfare is therefore timely.

Conclusions

Eugenics has been a powerful influence in shaping diverse aspects of health care. Historiographically, eugenics has shifted from the marginal ultra-right to entering the mainstream of welfare policies and practices. On the one hand, we find practitioners; but the victims are sadly lacking a voice and identity. On the other hand, the extent of eugenics needs to be circumscribed and specified. From the start there were opponents as well as diverse opinions. Eugenics – as argued here – has its innovative side, in terms of the problems identified in epidemiological and demographic shifts. In terms of ideology and social forms, these were normally driven by expert elites. Eugenics organisations allowed for multiple disciplines to address problems regarding mental health, chronic disease and disability. The diversity of eugenic opinions allowed for the survival of programmatic ideas in times of transition. The past certainly casts a darker shadow over Germany than Britain, which has shaped medical and biologicistic discourses. Looking forward, Germany has seen a problematic transition to human genetics, molecular medicine and in vitro fertilisation (IVF). Whereas in the UK, preembryonic selection prior to in vitro fertilisation is accepted, in Germany there are deep reservations. The dreams of the early eugenicists are now – in part – realisable. This adds to the importance of critically reappraising the different strands of eugenic histories.

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