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1912:

Questions of Breeding

The man who is thoroughly healthy in every respect simply cannot act badly or wickedly; his actions are necessarily good, that is to say, properly adapted to the evolution of the human race.

– Hugo Ribbert

Seven hundred men and women from across the civilized world crowded together in the corridors and lecture halls of London's University College to hear speeches and to participate in seminars and discussions led by some of the most distinguished experts in the world. They were doctors and university professors, politicians and biologists, theologians and feminists, social reformers, philosophers, statisticians, anthropologists and eminent natural scientists, and they had all come to debate the one idea that most of them considered the chief foundation of a better future: the genetic improvement of the human race.

The 1912 First International Congress of Eugenics was held from 24 to 30 July and it received blessings from high places. Its president was Major Leonard Darwin, chairman of the British Eugenics Society and son of the founder of the theory of evolution. Among the honorary vice presidents were the first lord of the Admiralty, Mr Winston Churchill; Sir Thomas Barlow, president of the Royal College of Physicians; Lord Alverstone, the lord chief justice; Charles Gore, the lord bishop of Oxford; the eminent German biologist Friedrich Weismann; the famous Swiss pathologist Auguste Forel; Alexander Graham Bell, inventor of the telephone; the Munich professor Max von Gruber and the German eugenicist and prophet of Nordic racial superiority Dr Alfred Ploetz, president of the International Society for Race Hygiene; David Starr Jordan, the chancellor of Stanford University; and Charles W. Eliot, president emeritus of Harvard.

Formerly the reserve of cranks and eccentrics, eugenics had risen to the highest scientific honours. It was discussed at universities and in learned journals, in bestselling books and parliamentary debates. Laws enacting eugenic measures such as forced sterilization were passed, political leaders across the ideological spectrum espoused its goals, and scientists everywhere thought of it as the salvation of the human race, while philosophers and writers sang its praises. None of this would have been possible without two scientific discoveries that would prove seminal to all biological thinking and research in the twentieth century and beyond.

The first of these breakthroughs had occurred decades earlier without attracting any notice. It was the fruit of the experiments of a reclusive Austrian monk, Gregor Mendel (1822–84), who had followed the distribution of inherited traits throughout several generations of common peas. A particularity like the yellow husk of one of the parent plants would reappear only two generations down the line, and then only in 25 per cent of the cases. Mendel concluded that the inherited information must be passed on in two strands of information, a dominant and a recessive one, so that recessive characteristics would be expressed only if two recessive strands came together, while otherwise the dominant strand would be expressed.

In 1866 Mendel had published his findings in a scientific journal and sent his article to prominent scientists, among them Charles Darwin, but his findings had been ignored – an intellectual tragedy, not only for the monk but also for Darwin himself. His theory of natural selection demonstrated that organisms could adapt to their surroundings, but the mechanism was a mystery even to Darwin. Here, Mendel held the secret, and the British scholar had the solution right under his nose: a copy of Mendel's article lay, unopened, on his desk for years. The findings of the Austrian monk received wider attention only after their rediscovery by the Cambridge biologist William Bateson (1861–1926), who finally understood their implications. Bateson published his findings in *Mendel's Principles of Heredity* (1909). A later book by him, published in 1913, bears a word that he coined to describe the nature of Mendel's discovery: *Problems of Genetics*.

Another crucial discovery had been made by one of the vice presidents of the First Eugenics Congress, the Freiburg zoologist Friedrich Leopold August Weismann (1834–1914). The son of a provincial high-school teacher in Germany, Weismann had worked hard and had become not only a professor at the prestigious university of Freiburg but also a central figure in the debate about how organisms could adapt to their environment. Until now, many scientists had followed the theory put forward by the French

zoologist Jean-Baptiste Lamarck (1744–1829), who had claimed that characteristics were learned or imposed by an environment, and would then be transmitted to following generations. Thus the giraffe had a long neck because every generation tried to reach ever higher branches in the savanna and thus, by implication, generations of human refinement and intellectual endeavour would create people specifically adapted to ruling over other, more brutish ones.

Weismann had little time for Lamarck's theory and proposed a very different scenario. He had identified the 'germ plasm' of individual cells (roughly what we today would understand by DNA) and postulated that this innermost core of every individual was passed on to the next generation without being affected by the parent's experiences or acquired characteristics. Weismann argued that only this could explain otherwise inexplicable facts like the existence of infertile animals such as worker or soldier ants, whose parents could not have passed on their specialization to them. This idea elegantly and easily solved many discrepancies between theory and observation in nature, but it created a new problem, namely how to answer Lamarck: if acquired characteristics cannot be inherited, then how do organisms adapt to their environment and how does evolution bring forth new and better-adapted species?

The grand theory of evolution has been carried by humble vehicles. Mendel made his discoveries with peas, Weismann loved to work with sea urchins, and the missing piece of the evolutionary adaptation puzzle (the greatest discovery in genetics until the unveiling of the double helix in 1953) was contributed by a single white-eyed fly, or rather by an American researcher who himself had eyes sharp enough to spot the tiny creature. The Columbia University biologist Thomas Hunt Morgan (1866–1945) advanced science by a giant leap by looking at fruit flies, *Drosophila melanogaster*, beloved or hated by biology students to this day. *Drosophila's* life cycle (egg to adult) of little over a week made it an ideal candidate for research spanning many generations. The significance of the white-eyed fruit fly which Morgan discovered in 1910 was that it came from two pure lines of red-eyed ancestors. And therefore could not have inherited the trait. The animal's genetic code must therefore have changed spontaneously; it had mutated. If mutation was not only possible, as had been advanced by several scientists, but could actually be observed, it held the explanation for adaptation without a transmission of acquired traits from one generation to the other. In an infinite number of random changes, some would provide evolutionary advantages while others would condemn their carriers. Evolution was occurring as scientists looked on.

Published under the title *The Mechanism of Mendelian Inheritance* in 1915, Morgan's observation and its theoretical framework provided the basis of a modern understanding of evolution – as well as a comprehensive refutation of eugenics, a theory built on the belief of the possibility of inherited traits and an otherwise unchanging inheritance. If some populations actually had been improved and others enfeebled or ruined throughout history, it might indeed have been sensible to accept the eugenics theory, but if random mutations intervened in both populations, and if genetic change was exclusively due to random change and not to acquired characteristics, then the whole edifice of eugenics was nonsense. Mutation is at once the great creator and the great leveller of the organic world.

Scientific debates only ever seem clear in retrospect. For those who sought the truth about heredity and evolution, the issue was clouded in a thick fog of competing ideas and flawed theories and experiments. Science has the charm of operating with models, and it is always possible to find a defect in a theoretical construct, or to reject either its premises or the interpretation of its outcome. Indeed, when following the debates about eugenics around 1910 it is important to remember that the mechanism of mutation and the recombination of individual genes had not yet been understood, that the structure of genetic material – Watson and Crick's double helix – was not yet known. It was therefore both rational and scientific to keep an open mind about questions such as the possibility of inheriting acquired characteristics. Its role in such features as intelligence or alcoholism had still not been settled, and it was quite possible to argue that the genetic material of entire populations did indeed degrade or improve over the generations. This was still regarded as good science, and, with the best of intentions, those who subscribed to it proposed solutions based on this idea.

While all elements of a fully fledged theory of genetic inheritance and mutation were in place around 1910 there was a lively and often acrimonious debate among scientists as to which theory was the most valid. Before the discovery of a genetic code, the mechanism of inheritance remained obscure. Were traits developed by an individual, such as intelligence or brutality, manual dexterity, moral refinement, alcoholism or tuberculosis, inheritable by a next generation? Here, science had made few advances since the followers of Carl von Linné and the comte de Buffon had clashed during the eighteenth century. Traits could be observed, but it was almost impossible to distinguish nature from nurture, physical inheritance from environmental effects.

Superior Stock

The most august of all researchers into hereditary traits was Francis Galton (1822–1911), one of the great polymaths of Victorian science in Britain. Galton was the author of more than 300 scientific papers and the discoverer of, among other things, fingerprinting, meteorological high-pressure areas and their effect on weather, and statistical psychology (as well as the scientific principles of brewing a perfect cup of tea, a publication in which the question of whether milk should be added before or after the tea is poured into the cup was settled once and for all – in favour of the latter).

Using the *Dictionary of Men of the Time*, Galton had done some of his early research on the prevalence of men of ability – scientists, artists, high civil servants, politicians, military men and princes of the Church – among Britain’s prominent families. As most of them were related to one another (fittingly, Galton himself was a nephew of Charles Darwin), he concluded that their inherent qualities must be better than those of the rest of the population. But if the first families of the land produced more eminent men because they were of superior stock, then it was important to protect and foster this potential and not allow it to be swamped by the lesser genetic qualities of the lower classes, whose higher birth rates threatened the power of their betters.

This classic case of *post hoc, ergo propter hoc* reasoning seems comical today, but it became the foundation of Galton’s career. From the ancient Greek for ‘well-born’ he formed the word ‘eugenic’ and he publicized his findings with energy only a Victorian could muster (as Virginia Woolf recognized when comparing Lord Macaulay and Lytton Strachey). In innumerable lectures and publications, Galton propagated the idea that humanity could attain a higher level of civilization only if valuable individuals were given precedence over weak, degenerate or diseased ones. Eugenicism was born.

Galton published his research in a book with the simple title *Hereditary Genius* (1869, republished 1892), in which he proposed a method for creating a race of supermen:

it is easy ... to obtain by careful selection a permanent breed of dogs or horses gifted with peculiar powers of running, or of doing anything else, so it would be quite practicable to produce a highly-gifted race of men by judicious marriages during several consecutive generations. I shall show that social agencies of an ordinary character, whose influences are little suspected, are at this moment working towards the degradation of

human nature, and that others are working towards its improvement. I conclude that each generation has enormous power over the natural gifts of those that follow, and maintain that it is a duty we owe to humanity to investigate the range of that power, and to exercise it in a way that, without being unwise towards ourselves, shall be most advantageous to future inhabitants of the earth.

In choosing the English upper class as the focus of his work, Galton had only acted pragmatically, he claimed: 'I should have especially liked to investigate the biographies of Italians and Jews, both of whom appear to be rich in families of high intellectual breeds. Germany and America are also full of interest. It is a little less so with respect to France, where the Revolution and the guillotine made sad havoc among the progeny of her abler races.' In writing this, Galton demonstrated one of the central political implications of eugenics: it led to the creation of a new and stronger kind of aristocracy. Not all eugenicists believed that the European noble houses did hold a superior genetic reservoir – many prominent eugenicists were socialists – but the idea of a ruling class of any description naturally entailed political fault lines, along which the debates of the following years would be fought.

Supported by painstaking statistical research and endless tables and graphs illustrating Britain's genetic decline, Galton's vision was luminous, and attracted more and more followers. 'If a twentieth part of the cost and pains were spent in measures for the improvement of the human race that is spent on the improvement of the breed of horses and cattle, what a galaxy of genius might we not create!' he wrote in *Macmillan's Magazine* in 1865. 'We might introduce prophets and high priests of civilization into the world, as surely as we can propagate idiots by mating cretins. Men and women of the present day are, to those we might hope to bring into existence, what the pariah dogs of the streets of an Eastern town are to our own highly-bred varieties.'

These thoroughbred supermen would assume the world leadership as of right:

The feeble nations of the world are necessarily giving way before the nobler varieties of mankind; and even the best of these, so far as we know them, seem unequal to their work... We want abler commanders, statesmen, thinkers, inventors, and artists. The natural qualifications of our race are no greater than they used to be in semi-barbarous times, though the conditions amid which we are born are vastly more complex than of old. The foremost minds of the present day seem to stagger and halt under an intellectual load too heavy for their powers.

The fear was that Britain herself was turning into a feeble nation, a spectre that seemed especially threatening after the Boer War, during which the world's greatest army did not only appear to have found its match in a handful of farmers with rifles, but which had also shown that in industrial centres like Manchester, 403 out of every 1,000 recruits were unfit for medical service on account of their bad health. The national anxiety had been amplified by researchers who had ventured into the slums of London and had come back to paint a disturbing picture. One of these intrepid explorers was the American novelist and journalist Jack London, who had published an account of his own experiences in 1902 after having disguised himself as a homeless man and visited the East End (he had first approached Thomas Cook, who had refused to organize a tour there, claiming never to have heard of the place). In London's ringing prose, the condition of the poorest of the poor seemed worse than even Victorian missionaries would admit:

The unfit and the unneeded! the miserable and despised and forgotten dying in the social shambles. The progeny of prostitution – of the prostitution of men and women and children, of flesh and blood, and sparkle and spirit, in brief, the prostitution of labour. If this is the best that civilization can do for the human, then give us howling and naked savagery. Far better to be a people of the wilderness and the desert, of the cave and the squatting place, than to be a people of the machine and the abyss.

London's picture was corroborated by the philanthropist Charles Booth, who, after a tour of the slums, had written about their inhabitants: 'Their life is the life of savages ... From them come the battered figures who slouch through the streets and play the beggar or bully. They render no useful service, they create no wealth; more often they destroy it.'

What, then, could be more natural than to end this misery by limiting its reproduction? Eugenics, Galton told an adoring audience during one of his many lectures, would be 'introduced into the national consciences like a new religion', ensuring that 'humanity shall be represented by the fittest races. What nature does blindly, slowly, and ruthlessly, man may do providently, quickly, and kindly.' To arrange for this providential hand to create a better society, Galton unleashed a plethora of activities, writing scholarly publications and even a novel to promote his ideas (it was rejected by his publisher and later burned by his niece, who was shocked at the 'indecent' nature of the work). He was the *éminence grise* behind the Eugenics Education Society (founded in 1907), which counted among its ranks men as brilliant as the economist John Maynard Keynes, whose friend, the

young Virginia Woolf, would herself note in her diary on 9 January 1915: ‘On the towpath we met & had to pass a long line of imbeciles. The first was a very tall young man, just queer enough to look at twice, but no more; the second shuffled, & looked aside; & then one realised that every one in that long line was a miserable ineffective shuffling idiotic creature, with no forehead, or no chin, & an imbecile grin, or a wild suspicious stare. It was perfectly horrible. They should certainly be killed.’ Another admirer of Galton’s teachings was the dramatist George Bernard Shaw, who wrote: ‘There is now no reasonable excuse for refusing to face the fact that nothing but a eugenic religion can save our civilization from the fate that has overtaken all previous civilizations.’

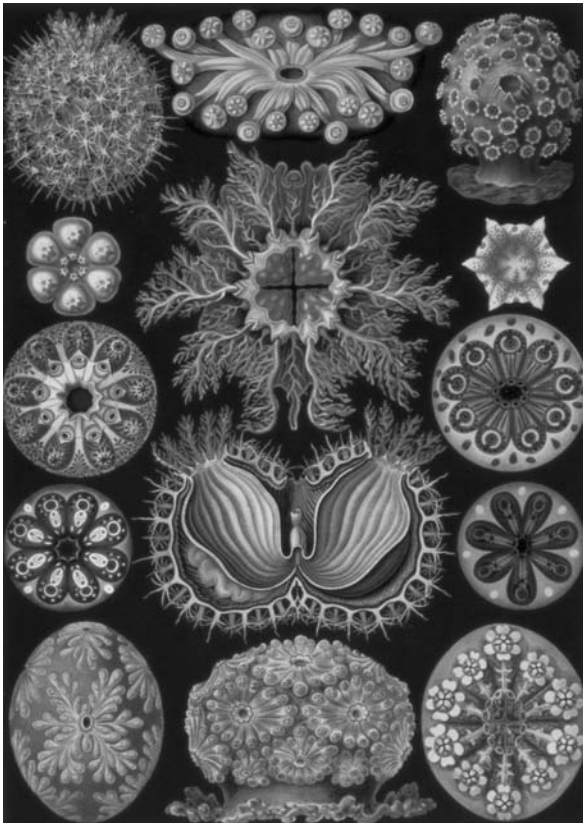
Not only intellectuals were convinced of the movement’s merits. Karl Pearson, Galton’s assistant and general amanuensis, cheerfully wrote in a letter to the master that his ideas were beginning to be regarded as common sense: ‘I hear most respectable middle class matrons saying, if their children are weakly, “Ah, it was not a eugenic marriage!”’ On his appointment as home secretary in 1910, Winston Churchill secretly proposed the sterilization of 100,000 of Her Majesty’s loyal but less fortunate subjects. The eugenics movement was now a real social and intellectual force, and Galton could congratulate himself on being the father of a rapidly growing movement, dedicated to good breeding. With the air of a benevolent visionary, his profile gleamed on every participant’s badge of the First International Eugenics Convention.

The most significant and portentous developments of the apparently rational utopias of this period took place at the very intersection of science and philosophy. The second prophet of this new world-view was the German anatomist and writer Ernst Haeckel (1834–1919), a jellyfish specialist whose popular works on evolution and biology were among the greatest bestsellers in Wilhelminian Germany. His most successful book, *Welträthsel* (Riddles of the Universe, 1899), sold 400,000 copies before 1914.

Haeckel came to prominence as a science writer around 1900, but his career was a product of the prodigiously energetic and optimistic nineteenth century. Like several scientists of his time, he immersed himself totally in his work – much to the chagrin of the second Mrs Haeckel, who felt sorely neglected by the intellectual giant. Having read *The Origin of Species* around the time of its publication in 1859, Haeckel, then a student without any firm professional plans, had immediately recognized the book as the most important of his life and he had dedicated his entire career to spreading its message and bolstering its scientific claims. On several extended research journeys he

collected specimens and worked on those that colleagues brought back from their own expeditions. He named and described literally thousands of new species, 3,500 alone after the Challenger expedition to the Polar Circle. A gifted draughtsman, Haeckel also made beautiful illustrations of his specimens.

Haeckel was cut from a very different cloth from Galton or his idol, Darwin. His intellectual patron saints were Goethe, a poet and a scientist, and another German, that great universal genius Alexander von Humboldt, who during the first half of the nineteenth century had put all his energies into creating a unified vision of the world, a grand synthesis reaching from cosmology to geology, botany, zoology and human history and thought. Standing in this German Romantic intellectual tradition, Haeckel was a scrupulous researcher, but the results of his studies were to be material for a deeper understanding of the world, a new ethics, based on the thought that all matter was invested with the same universal spirit.



The art of nature: Ernst Haeckel's successful work showed an aestheticized nature.

One of Haeckel's most successful books, found on every good middle-class bookshelf in Wilhelminian Germany, was *Kunstformen der Natur* (Artistic Forms in Nature, 1904), in which he described the aesthetic beauty of different creatures and natural phenomena in 200 sumptuously drawn illustrations. It is a fascinating book. Not only are the plates expensively produced and lovely to look at, but they are also subtly stylized, more like *Jugendstil* fantasies than scientific work. These are not real plants and animals in a random world, but animated moments of grace, indicators of a higher order, a cosmic mind which Haeckel believed to have recognized in evolution itself.

The real task of humankind, Haeckel felt, was learning to live in accordance with the rules of nature, which at the moment were being flouted everywhere by the philistines in power:

The higher culture, which we are only beginning to construct, will always have to keep in mind the task of creating a happy, i.e. contented existence ... Many barbarous customs and old habits which are thought indispensable will vanish: war, duels, forced adhesion to churches... The main interest of the state will no longer be the creation of the strongest possible military force, but the most perfect education of its youth based on the most extensive care of the arts and sciences. The perfection of technology with its inventions in physics and chemistry will satisfy the needs of all; artificial synthesis will deliver foods rich in proteins. A rational reform of marriage will create happy families.

It is possible that Haeckel had his own, copiously unhappy family life in mind when he wrote these last lines, but to his scientifically trained eye the future was bright because the solution was so clear: Politics, he wrote, was nothing more than applied biology.

Haeckel was often critical of his contemporary Nietzsche, whom he reproached for underestimating the power of sympathy and pity, but his own understanding of these qualities was idiosyncratic. He was a pacifist and an admirer of Bertha von Suttner, but at the same time his notions of pity took on a decidedly active tone. 'Rationally speaking,' he wrote in 1904, 'the killing of a crippled newborn child ... cannot be subsumed under the notion of murder, as our modern law books would have it. Instead, we must see and approve of it as a sensible measure, both for those concerned, and for all society.'

It was this mixture of natural, almost pantheist piety, strict scientific thinking and social engineering that attracted a host of followers, many of

whom seized particularly on the eugenic aspect of Haeckel's works, on the chance of building a new, purer, better society out of the shambles that was reality. These men, a new generation, hardened the eugenic ideas and pushed them into a particular direction. Science was becoming politics, and one of Haeckel's protégés, Wilhelm Schallmayer (1857–1919), propagated this political slant: 'The principle of natural selection is what made evolutionary theory important,' he wrote in 1910. 'Only as a result of the union of the descent theory and the theory of selection did evolution become a force which, despite strong opposition, old prejudices and powerful interests, continues to pave new roads...' If evolution reigned supreme, then an individual's value lay only in its usefulness to the species:

It appears as if the individual exists only to perform a function for the species and is not an end in itself; individuals no longer of worth to the maintenance of the species are blessed with an early death. As Weismann had demonstrated, the duration of life of every species is regulated to fit its needs... Death itself is, according to Weismann, a service to the species at the expense of the individuals. This law of nature, the total subservience of the interest of the individual to that of the species, must also hold true for human development.

Schallmayer was in no doubt that civilization was working against natural selection and was creating a 'crushing and ever-growing burden of useless individuals' with the inescapable result of 'a decline in the average hereditary qualities of a people such that its overall fitness with respect to the demands necessitated by the struggle for survival is diminished'. Convinced of the urgency of his task, the writer had very little patience with those too decadent and short-sighted to perceive the inexorability of the impending catastrophe:

If the flabby views and comfortable habits for which Neo-Malthusians [who believe populations are too large already] and feminists make propaganda become dominant among the white civilized nations, the white race will not only not expand over the earth, but will doubtlessly... sooner or later either be militarily defeated by the tough and rapidly growing portion of the yellow race and then be gradually replaced by its reproductively superior competition until it [the white race] disappears, or, if hostilities are avoided by all sides, the peaceful immigration of the fecund Asiatics... will lead to exactly the same result.

Measures would have to be taken, measures outlined by another of Haeckel's pupils and one of the vice presidents of the International

Eugenics Convention in London, Alfred Ploetz (1860–1940). With supreme Prussian application, he wrote in his 1895 work *Die Tüchtigkeit unserer Rasse und der Schutz der Schwachen* (The Excellence of Our Race and the Protection of the Weak) that procreation must not be left to ‘some accident, an hour of inebriation, but regulated according to fundamental principles established by science’. If such dutiful copulation resulted in a malformed child, ‘the college of doctors... will give it a kind death with a small dose of morphine’.

The founder and tireless propagator of the German Society for Race Hygiene, Ploetz was by no means more extreme than other writers, all of whom published successful books and articles. ‘We do not approve of any *false humanity*,’ wrote the avowedly racist eugenicist Theodor Fritsch. ‘Whoever seeks to preserve the degenerate and depraved, limits space for the healthy and strong, suppresses the life of the whole community, multiplies the sorrows and burdens of existence and helps rob happiness and sunshine from life. Where human power cannot triumph over sorrow, there we honour death as a friend and redeemer.’ Fostering the strong would get nowhere without killing the weak, it was believed, and here Nietzsche was used to give ammunition to those who wanted to kill to be kind: ‘Even the most careful selection of the best can accomplish nothing, if it is not linked with a merciless elimination of the worst people... Zarathustra preaches: Do not spare your neighbour!... Therefore this means becoming hard against those who are below average and in them to overcome one’s own sympathy.’

A New Manliness?

There is an obvious correlation between eugenic thinking and social issues which we have seen throughout the preceding chapters. Declining birth rates, especially among the middle classes, raised fears of being swamped by those further down the social scale, and called into question – illogically yet forcefully – the manliness of husbands who fathered fewer children. The relationship between men and women had been sufficiently questioned to raise the spectre of a decadent social disorder in which people no longer knew the place allotted to them by nature. Scandals like that surrounding Prince Eulenburg and the suicide of Friedrich Wilhelm Krupp, a convinced eugenicist, because of his rumoured homosexuality had created an impression of moral degeneracy among those in positions of power. In addition to this, the wave of nervous illnesses and neurasthenia, the rise of psychiatry and the free discussion of sexual pathologies had all contributed to a feeling of destabiliza-

tion, of an enfeeblement of human stock. The spectre of decadence, weakness and unmanliness rose everywhere, and behind it loomed a machine-powered dystopia, in which the masses of the weak and unfit were lulled into artificial sleep by mass entertainments and industrial levelling of all distinctions, all merit and all values. Eugenics appeared to offer a solution to these fears.

If eugenic thinking was strong in Germany and Britain, it was widely discussed in all industrialized nations. Historians have, for obvious reasons, given German eugenicism a great deal of attention, but recent research on other countries has shown that the debate there was every bit as intense, and the ideas no more moderate.

In France, the heritage of Lamarck and his doctrine of inheritable acquired traits was still dominant around 1900. In addition to this, the widespread fear about the collapse of the French population due to low birth rates tended to dissuade scientists from neo-Malthusian positions proposing a further limiting of births among those whom they believed to be of inferior stock. While the sense of needing to build a future (industrial, political and intellectual) was palpable, and eugenics became one aspect of this feast of utopian social engineering, French writers tended to be more sceptical about the future of their nation, and hence perhaps less inclined to imagine such a future.

Positive eugenics (in effect, selective breeding) was not high on the agenda, but when it came to weeding out the unfit, France was equal to other European nations. In a debate about the abolition of the death penalty (quickly rebutted by the higher ranks of justice and turned into a dispute between the relative merits of the guillotine and hanging), many experts published their views about punishment in general, and about social justice. The Italian criminal pathologist Cesare Lombroso worked on biometric measurements to define what he called the 'born criminal', a kind of person from whom nothing good could come, a class of degenerates that was best contained from birth or done away with immediately. In France, this view found enthusiastic support from the psychiatrist Emile Laurent, who argued simply and forcefully:

If your beloved dog catches rabies you kill him despite everything this cruel act might cost you. But you also kill him to protect him from injury and to spare him unnecessary suffering. And then, all around you, nature applies the death penalty on an immense scale in its hecatombs of the weak and the vanquished, with its storms, its famine, by the claw and tooth of those flesh-eaters that are its hangmen. Kill them! says nature to society. Kill them! says the past of humanity to the present through a hundred voices in history.

Another expert, a retired military doctor, praised the efficacy of execution because of a beneficial side-effect: 'it takes out of circulation the mad procreator [of future children] and is therefore a powerful factor in the amelioration of our race [...] through the avoidance of potential, vice-infected [*viciées*] conceptions.'

Not only the conservative legal establishment took an interest in eugenics. Socialists of all countries had long proposed eugenic measures for creating a healthier proletariat. This somewhat surprising face of eugenic thinking was represented in France in the educationalist and activist Paul Robin (1837–1912). Robin was a born revolutionary. Son of a conservative naval officer, he had moved to Belgium and chosen to become a teacher. Living off private lessons, he became involved with socialist education and ideas, and spent a decade between Geneva, London, Paris and Belgium, always involved in political activism, through which he met and collaborated with luminaries such as Prince Kropotkin in Geneva and Karl Marx in London. Eventually, however, Robin tired of the ceaseless factional infighting in the International and plunged instead into practical work as director of an orphanage, where he could put his very liberal educational ideas to the test. There was no corporal punishment, boys and girls were taught together and learned a variety of trades as well as academic subjects. Astonished visitors saw all the principles of education flouted and yet had to remark on the remarkable cleanliness of both orphanage and children, and on the pupils' cheerfulness and confidence. His reformist attitude, though, was too much for his superiors, who sacked him after fourteen years of service, in 1894.

Towards the turn of the century, Robin turned more and more towards eugenic teaching, or neo-Malthusianism as it was known in France. He founded the *Ligue de la régénération* and published a journal in which he argued for eugenic measures. During his years working in popular education and as a socialist activist, he had seen his share of misery and injustice. The conclusions he drew from his experiences, though, were surprising: 'public assistance is most often addressed to those inferior people who were born like this or became such through circumstances and will remain like this,' he wrote in 1902.

In the worst case they will haphazardly produce numerous children who will have no chance of triumphing over their difficulties and will tax all assistance beyond what is possible or imaginable. What is more, it allows the worst degenerates to live, particularly the weak of mind ... which the former state of nature or of public assistance would have allowed to perish. All these degenerates which are now allowed to live under great

sacrifice, but a life of which nobody would want even a week, and to which all of us would prefer death.

Societies, Robin believed, could not allow themselves to be burdened with such a load. 'The millions spent by all nations in order to help the inadequate, the scrofulous, the syphilitic and the alienated result in nothing but an amelioration hardly sufficient to make their miserable path in life,' he thundered, '[and] are an impoverishment of the race. It is the organization of public decline.'

Sweeping measures would have to be taken to prevent a slide back into barbarism, Robin wrote, particularly through a directive as to who should or should not produce children. Workers brought part of their own misery upon themselves by producing great numbers of children who would soon be their competitors in the workplace, and having fewer children was therefore in their interest, he believed, adding that for 'the worst incurable degenerates ... there is no other remedy than artificial sterilization'. Having never abandoned his secular principles, Robin also drew another consequence from this necessity of limiting births, for while procreation by the wrong people was a danger to society, the joys associated with it were unquestionably good and healthy, as he argued in 1902:

Let us establish the principle that the nervous vibrations corresponding to sexual enjoyment [*volupté sexuelle*] are just as positive as other vibrations, which nobody refuses to esteem. It is just as honourable for a person to give and to receive sexual pleasure as it is to create something beautiful, useful, good, or to look with admiration at a beautiful landscape, a beautiful monument, a beautiful statue ... to listen to beautiful music, enjoy the perfume of a rose, or a violet, or of jasmine, or to eat an apple.

National stereotypes are always annoying and sometimes dangerous, but they can also be very diverting. Where the German Dr Ploetz proudly proclaimed that the sexual act would no longer be a haphazard occurrence due to a drunken moment (poor Mrs Ploetz!), the Frenchman Robin convinced his compatriots that one of the positive aspects of his neo-Malthusian brand of eugenicism was the emancipation of sexual desire from necessary procreation. Despite the jolly reputation of the French capital as Europe's foremost place of pleasure, however, Robin's robustly sensual views on sex scandalized his contemporaries and repeatedly brought him into conflict with the authorities. Emancipating sexual enjoyment from procreation and openly calling for contraception, the socialist was questioning the funda-

mental values of good society. Paul Robin had become a feminist: 'A woman must be able to dispose freely of her own body and to decide for instance, when she is pregnant, whether or not to keep the child she carries. The freedom of woman is the *conditio sine qua non* of regeneration. Women's liberation, freedom before the law, in morals, before public opinion is in itself... will be the veritable regenerator of humankind.'

Robin remained a rationalist to the very end. When, in 1912, he felt that his threescore years and ten had been exhausted and he was now, aged seventy-five, himself becoming one of the infirm and the scrofulous, he swallowed a large dose of morphine. Even while dying, he attempted to make notes about the symptoms of poisoning until he was overtaken by unconsciousness.

At Home with the Kallikaks

While the French were gripped by national malaise and unsure of their future, the citizens of the Land of the Free had no such misgivings. In the world's greatest place of immigration, planning populations was an obvious concern shared by, among others, Andrew Carnegie and John D. Rockefeller, two of the richest and most powerful men in the land. Their financial support allowed Charles Davenport (1866–1944), a leading Harvard biologist, to create, in 1904, the Eugenics Records Office at Cold Springs Harbor, New York, as a laboratory for research into heredity and natural variation.

American eugenicists put heavy emphasis on scientific proof and evaluation scales, most importantly those developed by Henry Goddard (1866–1957), the director of an institution for mentally retarded children in Vineland, New Jersey. Goddard had standardized the measurement of intelligence by proposing a scale entitled Intelligence Quotient (IQ) and designed by a German colleague, mapping a progression from *idiot* to *imbecile* and *moron* and from there on to more favourable adjectives. Putting his work into practice, Goddard analysed the family tree of one of the young women in his charge, 'Debora Kallikak', whose feeble-mindedness he traced back to a male ancestor's dalliance with 'the nameless feeble-minded girl' who, according to the doctor, was the cause of generations of mental trouble within the family. *The Kallikak Family: A Study in the Heredity of Feeble Mindedness* (1910) was received as a sensation by fellow scientists, as was Goddard's revelation that according to research performed by him at the Ellis Island immigration station, 83 per cent of Jewish, 80 per cent of Hungarian, 79 per cent of Italian, and 87 per cent of Russian immigrants

were 'feeble-minded'. Severe cases, Goddard believed, admitted of only one rational course of action: sterilization. Only like this could a 'pure, American, superior' race be created.

Pressure from scientists and acquiescence from high-placed politicians such as Theodore Roosevelt (who was himself convinced that African Americans were 'as a race and in the mass ... altogether inferior to whites'), as well as lobbying by wealthy businessmen such as the health-food manufacturer and eugenics enthusiast John Harvey Kellogg, created a public climate for Goddard's ideas to find their way into legislation. There had been repeated attempts to introduce compulsory sterilization laws in several states (Michigan 1897; Pennsylvania 1905), but the first of thirty-three successful state laws was passed in Indiana in 1907 and applied to 'confirmed criminals, idiots, rapists and imbeciles' held in public institutions. Several sterilization laws remained on the statute books for many decades, resulting in an estimated 65,000 forced or surreptitious sterilizations (the latter often during the course of other surgical procedures) in the United States. The last forced sterilization was performed in Oregon, in 1983.

The intellectual climate and preoccupations in Russia were very different from those in Western Europe and the USA. While in Western Europe the bourgeoisie saw itself threatened by an ever-growing army of the working poor, the main problem of Russian bourgeois thinkers was that they were excluded from power by an autocratic regime whose legitimacy was built on the Orthodox Church. In this situation, a different strategy emerged: instead of arguing against the rise of the lower classes and for an increased measure of control over them and their procreation, the Tsar's subjects had more interest in proving that all creatures were evolved from the same original slime, that there was a rational explanation to creation, and that consequently no group of persons could claim to have a divine right to power, as the sociologist Nicolai Mikhailovskii argued:

The folk tradition of all peoples ascribes a more or less high origin to man. Darwin is perfectly correct in asserting that the folklore imputation of a divine or semidivine descent of man is only an illusion that does not flatter the human species; what flatters man immensely more is the idea that he has risen from lower spheres – from the depths of nature. In fact, this is the only viewpoint that allows for the advancement of man; all other views assume that man has fallen and disgraced his ancestors.

In pre-revolutionary Russia, Darwinism offered more argumentative scope than eugenicism. This would change only after 1917, when the demand from those in power was to create a new man. Russian intellectuals and

scientists had accepted Darwin with huge enthusiasm. Research scientists in laboratories throughout the empire set about supporting Darwin's hypothesis, producing not only a forest worth of scientific papers, but also what was perhaps Europe's largest Darwinist scientific community, whose research and methods were often ahead of those of their Western colleagues, notably in research laboratories. One such laboratory was led by Professor Ivan Pavlov (1859–1936), who was to attain international fame with his experiments on the behavioural conditioning of dogs.

If behaviourism was a central focus of research in Russia, social Darwinism was hotly contested. Darwin's most remarkable Russian critic was the anarchist philosopher Prince Petr Aleksandrovich Kropotkin (1841–1921), who was then living in exile in London, but was being avidly read and discussed in his homeland, and was certainly one of the great intellects of his generation. Kropotkin's eventful life had taken him from an elite cadet school and a post as *cadet de chambre* to Tsar Alexander II into the steppes of Siberia, where he had joined a Cossack regiment in order to escape the stifling life at court. It was there, during long days spent at leisure and on excursions into the surrounding wilderness, that the young man observed something which apparently contradicted Darwin's idea of the struggle for existence:

I recollect myself the impression produced upon me by the animal world of Siberia... We saw plenty of adaptations for struggling, very often in common, against the adverse circumstances of climate, or against various enemies...; we witnessed numbers of facts of mutual support, especially during migrations of birds and ruminants, but even in the Amur and Usuri regions, where animal life swarms in abundance, facts of real competition and the struggle between higher animals of the same species came very seldom under my notice, though I eagerly searched for them.

The idea of mutual support, of interested altruism in nature and in society, became a central tenet of Kropotkin's social philosophy, which he finally published under the title *Mutual Aid* in 1902. Far from teaching the relentless, Hobbesian battle of all against all, the princely anarchist concluded, nature teaches that animals are most successful if they organize themselves around common interests:

The animal species, in which individual struggle has been reduced to its narrowest limits, and the practice of mutual aid has attained the greatest development, are invariably the most numerous, the most prosperous, and the most open to further progress. The mutual protection which is

obtained in this case, the possibility of attaining old age and of accumulating experience, the higher intellectual development, and the further growth of sociable habits, secure the maintenance of the species, its extension, and its further progressive evolution. The unsociable species, on the contrary, are doomed to decay.

Kropotkin raised his voice at the First International Eugenics Congress in London. Who was more valuable to the species, he asked: proletarian women who bore and nursed children as best they could, or society ladies who went to great lengths not to produce children? His interventions were not appreciated by delegates who were still reeling from an unpleasant incident at the grand inaugural banquet of the congress, hosted by Her Grace, the Duchess of Marlborough, the lord mayor of London, and the American ambassador Whitelaw Read. The speaker at this occasion had been Arthur Balfour, one of the most eminent men in the kingdom, a former prime minister and according to Austen Chamberlain, 'the finest brain that has been applied to politics in our time'. As the 500 invited guests were mellowing over a glass of after-dinner port, the great man had given an address that made many of them sit up in astonishment. Having applied his brain for once not to politics but to science, he presented the eugenicists with some unexpected conclusions. 'We say that the fit survive. But all that means is that those who survive are fit,' Balfour had launched at his audience, and then: 'The idea that you can get a society of the most perfect kind merely by considering certain questions about the strain and ancestry and the health and the physical vigour of various components of that society – that I believe is a most shallow view of a most difficult question.'

There were other critics of eugenic thought. The British doctor and sexologist Havelock Ellis raised a troubling question of the future the eugenicists wanted to create: 'Animals are bred for specific purposes by a superior race of animals not by themselves... It is important to breed, let us say, good sociologists; that, indeed, goes without saying. But can we be sure that, when bred, they will rise up to bless us?' Max Nordau, who had made a career as a cultural sceptic looking forward to a brighter future peopled by superior men and women, also thought that eugenicists fell at the conceptual hurdle towards improvement:

It is clear that we cannot apply the principle of artificial breeding to man ... There is no recognized standard of physical, intellectual perfection. Do you want inches? In that case you would have to exclude Frederick the Great and Napoleon I who were undersized; [former French President Aldophe] Thiers, who was almost a dwarf; and the Japanese as a nation ...

Few of these objections cut much ice, needless to say, amid the excitement of founding an international movement courted by men of state and great aristocrats. The Eugenics Conference ran its course, closed with grand speeches and declarations, and brought forth, after a gestation of only a few months, a litter of eugenics societies throughout Europe. The time was ripe for action, it seemed, not for cautious argument.

New Men, New Women

Galton's approach was very Anglo-Saxon in its emphasis on utilitarianism and level-headed statistical analysis, and eugenicists like Davenport and Goddard worked at experiments and theoretical models. But many followers of the eugenic idea looked at Galton's ideas from a different horizon – a mountain range, to be precise: the dwelling place of Zarathustra. Here, intellectuals (including some British and American ones) huddled up, exposed to the cold winds of uncertainty, but glorying in their courage and their daring. They had found their teacher, they believed, and they had found eugenics.

Wherever we have turned until now, at some point we have encountered the legacy of Friedrich Nietzsche. It was the protagonist of Nietzsche's *Thus Spake Zarathustra*, 1883–85, of course, who received such grand ovations on his mountain top. 'For my generation he was the earthquake of the age,' wrote the German expressionist poet Gottfried Benn (1886–1956). Nietzsche's rebellious stance towards authority and Christian morality had already exerted a tremendous pull on the generation of the 1890s, and his dangerous appeal had lost nothing of its magnetism by 1910. This was in part due to the very obscurity that so annoyed some of his British readers like Bertrand Russell, who quipped: 'Nietzsche's superman is very like [Wagner's] Siegfried, except that he knows Greek.'

Others were attracted by the very mixture of the classical and the mythical which so disgusted the logician Russell. With almost prophetic sensitivity Nietzsche had sensed and given shape to many of the concerns his contemporaries and their children found particularly pressing in the pre-War years: the slave morality of the Church and of its capitalist heirs; the destabilizing changes in the relations between men and women; the will or need to overcome the spiritual smallness of consumer life in industrialized societies and to create something altogether more magnificent, based on self-knowledge and the renunciation of the inessential.

It was this sensitivity that gave Nietzsche's works such a ring of truth, and it was perhaps little more than desperate overcompensation that gave

them their bravado. At his best, though, Nietzsche put his finger right into the wounds of his time, a ringing voice, by turn angry, funny and apocalyptic, hurling curses into the faces of the plaster busts admired by the sages of official culture. His rhetorical gesture was more that of a poet than a philosopher. Nietzsche, in other words, could be seen to contradict himself, and imposing a system on his thought was no more possible than it would be to deduce a single and coherent vision of life from the plays of Shakespeare or the works of Shelley or Rabelais. To his followers, this was all part of his appeal. Not for them the sterile intellectual exercises of Kant and Hegel, Augustine and Aquinas.

The son of a Lutheran pastor, Nietzsche rejoiced in the idea of a future in the sign of Dionysus, the god of ecstasy and the irrepressible force of life and death, dance and destruction, a savage vivacity to sweep away all pietist oppressiveness and the cowering morality of the Protestant pulpit. True life and human value, Nietzsche claimed, expressed itself not in submission to a man-hating god of suffering, but in the will to power: 'Life is appropriation, injury, conquest of the strange and weak, suppression, severity, obtrusion of its own forms, incorporation, and at least, putting it mildest, exploitation.'

Nietzsche appeared an ideal prophet for eugenics and, later, for all forms of totalitarianism. He claimed that the coming century would be dominated by 'that new party of life, which will take into its hands the greatest of all tasks, breeding humanity to a higher level [*Höherzüchtung der Menschheit*], including the merciless destruction of everything that is degenerate and parasitical' – but in the passage in question he is actually writing about music after Wagner, about artistic renewal and a new Dionysian culture, not about politics and populations. Nowhere in his works does he show any admiration for eugenicists, and he generally treated the rationalist optimism of men like Galton with contempt. Only the bile he poured over antisemites and racists could turn his sentences even more bitterly sarcastic. Antisemites, he wrote, were 'moral masturbators', little 'men of resentment, physiologically unfortunate and worm-eaten,' whose outbursts sickened him. Describing himself as the 'anti-antisemite', he laconically ended one of his last letters 'I am just having all antisemites shot.'

The attainment of a 'highest level' brings us straight to the infamous *Übermensch* who was to be reinterpreted as a terrifying parody of himself, one of the master race. Nietzsche's concept has neither racial nor brutal traits. It simply takes an individual who has overcome the banal self-destructive narcissism of the 'herd people' of the plains and has discovered, on his spiritual mountain, that values are there to be revalued, that the pure

life force must be pursued beyond dogmatic thinking. Superman is not a ruler but a seeker, whose greatest challenge is to overcome himself.

Such niceties of interpretation paled before the idea of Nietzsche as the walrus-mustachioed prophet of a new and brutal kind of vitalism – dressed up, according to ideological requirements, in Nordic furs, Aryan robes, or the white coat of the scientist. The poet-philosopher was kidnapped a hundred times over, a victim of overly literal readings and of the very Will to Power he had enjoined his readers to discover.

Racists and Mystics

We have already seen how porous were the walls between biology and ideology in the scientific writings of this period. As soon as the argument moved out of the academy, however, these walls simply collapsed.

Prophets, philosophers and sages of all descriptions and nationalities despoiled science of isolated facts and theories and manipulated ideas like Nietzsche's to suit their various needs. While some of these utopians of race and heredity, such as Galton, Haeckel, Davenport, were part of the establishment and wrote from a scientific consensus, others sought more radical and darker truths which they claimed they could discern in the runes of ancient civilizations, in the stars, or in mystical documents. Most of the mystic authors, Madame Blavatsky and Rudolf Steiner among them, were racists who camouflaged their disdain for darker hues of skin under incense and initiation. Steiner particularly made it his sacred task to spread the gospel of race during his hundreds of lectures throughout Germany. According to his teaching of what is essentially a spiritual variant of evolutionism, Africans were at the very bottom of the scale while Europeans (Germans to be precise) stood at the pinnacle. The very comparison was absurd, he thought, between 'an uncompleted snail or amoeba to a perfect lion'. The 'negro race', in any case, 'does not belong to Europe', and Steiner declared himself shocked by the 'terrible cultural banality of implanting black people into Europe, a dreadful thing the French are doing to others [other Europeans]. It will have a worse effect on France herself. It has an incredibly strong influence on the blood, on the race. That will further French decadence. The French people as a race is thrown back [in evolution].'

Regarding the 'strong sexual drive' of 'negroes', the mystic explained that it was due to the sun, to light and warmth, which changed the metabolism of Africans, boiling them from the inside and heating up their affective lives, an effect that also explained their appearance. 'This is because

mercurial forces are boiling and simmering within the lymphatic system ... This [appearance] is caused by their boiling over [*auskochen*], which converts the general, similar human form [to that of a European] into the special one of the Ethiopian race, with black skin, woolly hair, and so on.' Seen in this context, the Jews could count themselves fortunate that the doctor claimed only that: 'Judaism as such has long outlived itself, has no justification in the community of peoples, and if it has survived nevertheless, it is a mistake of world history whose consequences followed by necessity. We are not speaking about the Jewish religion alone, but particularly about the mind of Jewry, about the Jewish way of thinking.'

Utopian visions often had a political and racial tinge in central Europe. Constantly buffeted by nationalist controversies between the German, Czech and Hungarian populations (to say nothing of the Jews and of smaller minorities), the self-anointed seers of the Habsburg empire were not content with free love and nut cutlets. A grander, more radical solution to the world's problems was needed, and amid the cacophony of voices and cultural traditions, racial purity seemed to provide an answer, and heredity the necessary instrument. Race had been a wide term, commonly used by people of all political persuasions and capable of denoting anything from breeding or class, to family background or biological predetermination and descent. It was about to acquire a narrower meaning that made it a weapon in the arsenal of the revolutionary right.

Foremost among these conservative racial mystics was the novelist Guido von List (1848–1919; the noble 'von' was awarded by himself), who discovered a world of hidden truths after a period of temporary blindness, during which he saw occult aspects of the world in a series of visions. Having recovered from his illness, he penned a memorandum about his findings and sent it to the Austrian Academy of Sciences, only to see it returned without comment. Embittered by establishment enmity towards his genius and higher perception, von List published his books himself and devoted the remainder of his life to extolling the virtues of Aryanism and the purification of the Nordic master race and the fight against 'herd peoples', dark races and Jews.

Like Steiner, List was influenced by the writings of Madame Blavatsky and, like Steiner, he believed that the German culture had a historical mission willed by ancient mythical forces. List believed he had found this truth through his studies of Germanic runes, whose interpretation, he held, unlocked the secrets of the universe, particularly the historical greatness of the Aryans as symbolized by the most powerful of runes, the swastika. Christianity had strangled the human spirit by alienating it from the

ecstatic, the sensual, from true spirituality, List taught, and the answer to the limitations of his time was to return to an earlier form of spirituality – in his case, what he believed to be a Germanic, Aryan religion. One can hear echoes of other critiques of modernity in his writings. Christianity, he thought, was about to destroy the ‘noble race of heroes’, the Germans,

and breed a people of slaves, which will descend to the level of Australian negroes in its dull shamanic rites... As the people of our contemporary age cannot deny the primeval natural laws despite being caught in a religious system which is negating the life force, a crooked morality has developed, spreading *hypercritical semblance of reality over hidden doings, showing all those sick phenomena of modern life which are beginning to disgust us in their hollowness and putrefication.*

Modernity, List argued, had not discovered but lost the principle of selective breeding. The goal of all right-thinking people in German lands had to be to reclaim the national, racial foundation of their culture as expressed in Germanic mythology, but this project had a powerful adversary: ‘Today’s Jews – the poor rascals, we know why! – are born internationals and therefore from the beginning “decided enemies” of any attempt to ground a culture in a national soil.’

In List’s grand vision, members of ‘inferior races’ would have no citizenship rights and would be prevented from owning land or businesses, or receiving a higher education. All this would help the Aryan to re-emerge from the shadows and assume the historic place he had so long been denied by a conspiracy of Jews, Freemasons and Catholic clergymen. Then, and only then, could Germans of purified blood and unsullied ancestry rise ‘toward the ancient heights of pure-blooded German heroism, toward the Holy Grail, toward Aryo-Germanism’. As the mystic seal of this quest, List used an old Germanic and Indian symbol, the swastika. It comes as little surprise to learn that the young Hitler was one of List’s most ardent readers.

While List liked to stylize himself in his photographs as prophet, with beard and velvet beret, one of his pupils, the defrocked priest and hysterical antisemite Baron Dr Johann Lancz de Liebenfels, preferred the pseudo-medieval cloak of a knight with a Maltese cross on his chest, an incongruous outfit, given his bald patch and wire-rimmed glasses. Liebenfels worked on the fault line between scientific heredity and Manichean mysticism. During the ancient Babylonian empire, he claimed, the superior Aryan race had committed bestiality with an extinct race of animals who were similar to pygmies and who carried evil in them, a sin that brought into the world

the non-blond, non-Nordic races. In his 1905 book, fancifully entitled *Theozoologie oder die Kunde von den Sodoms-Äfflingen und dem Götter-Elektron* (Theozoology, or On the Little Monkeys of Sodom and the Electrons of the Gods), Liebenfels argued that higher men were contaminated to various degrees by primeval animalism and wickedness, which still lived on as barely understood feelings in the different races:

Just as every Aryan feels overwhelming repulsion at the sight of a Mongol's distorted mug or a Negro's grotesque visage... so the eyes of any member of an inferior race flare up in age-old vicious hatred at the sight of a paleface. One feels his own superiority and recognizes his divine origins, and the other still has the feelings of the untamed, savage ape which at such moments awaken as the inheritance from the ancient past.

This gnostic world-view, the eternal struggle of good against evil, was further seasoned with 'proofs' from recent scientific discoveries such as radioactivity, X-rays and electrical phenomena.

Such brutalist racial thinking was not the domain of mystical cranks. The respected pathologist Hugo Ribbert, who held successive chairs at famous universities, claimed: 'The man who is thoroughly healthy in every respect simply cannot act badly or wickedly; his actions are necessarily good, that is to say, properly adapted to the evolution of the human race, in harmony with the cosmos.' The Vienna member of parliament and philosopher Bartholomaeus von Carneri, a personal friend of Ernst Haeckel's, claimed: 'Entire human tribes stand lower than the animals... the mental activity of the elephant, the horse, and the dog [is] significantly better developed than the lowest human species.' Such statements from within the scientific and literary establishment were numerous, while on the margins of academic respectability the likes of Otto Weininger and Houston Stewart Chamberlain attracted huge readerships with their racially motivated pseudo-scientific bestsellers.

At the intersection of Catholicism and ethnic strife, Austria-Hungary produced a particularly mystical form of the racist ideas which had become a fixed part of debate throughout the West. Maurice Barrès in France, Francis Galton in Britain and Russian Slavophile thinkers such as Vladimir Soloviev were every bit as racist as their German and Austro-Hungarian counterparts, but their racial thought articulated itself along different lines, following different national cultures of debate.

The intellectual corner-posts of eugenic and racial thinking nevertheless corresponded to certain general preoccupations of the period. Acceptance

of traditional religious models was in decline (witness the separation of Church and State in 1905), and science increasingly replaced religion as the dominant paradigm for understanding the world. At the same time, the banality and anonymity of life in an urban, consumer society created a need for new models, in response to change and to the annihilation of old certainties. Any theory pretending to offer a solution to the perceived degeneracy of modernity had to use the vocabulary of science: explaining life in terms of evolutionary mechanisms and even electricity. At the same time, it had to address what was perhaps the most deeply felt change on a personal level: the shift in the relationship between men and women, male and female social roles. Darwinist thinking and theories on heredity were ideal vehicles for this, as they put sexual roles and mechanisms at the very heart of human history.

Thanks to Darwin, the world, its ills and goals could be explained in terms of sex. The levelling impact of a democratized culture of education and entertainment, as well as the rise of socialism, found its match in the perceived menace of 'lower races' taking over a high culture that was cast as originally European. The claims for universal human rights and Bertha von Suttner's peace movement could be countered by arguing in terms of a struggle for survival that was not a mere cultural construct, but part of the Darwinian, natural, order of things. Changing moral norms could be demonized 'scientifically' in terms of a degeneration of racial purity; individualism rejected by putting the needs and future of the race before concerns about personal happiness. It was science, after all: objective fact, unassailable by sentiment or more trivial concerns. Waking up in a disenchanted world, eugenicists and racial theorists sought to rob those they despised of the last of all human rights, the right to live.

13. 1912: *Questions of Breeding*

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