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The Intersection of Ableism, Domestic Colonialism and Statistics in Britain from Bentham to Galton

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Statistics, ableism and domestic colonialism were inextricably intertwined in Britain over the long nineteenth century, based on both engineering people deemed to be "backward" and improving "waste" land, which together were used to justify farm colonies for the disabled, bookended by two key moments. The first is Sir John Sinclair's introduction of descriptive statistics into the English language in order to provide a foundation for domestic colonization which, as the founding president of the British Board of Agriculture and Internal Improvement, he promoted. He also enlisted Jeremy Bentham, who published his own domestic colonization plan (massive pauper panopticons on waste land) rooted in the statistics of his pauper population table. The second key moment occurs at the beginning of the twentieth century, when Sir Francis Galton develops key statistical arithmetic methods as the foundation for eugenics and his defense of compulsory segregation of the mentally disabled into domestic farm colonies.

Statistics, ableism and domestic colonialism were born together and inextricably intertwined in Britain from the 1890s to the 1913 Mental Deficiency Act. The goal of domestic colonies for the disabled/poor and the meaning of statistics evolved in relation to each other during this period—from "improvement" of the poor and disabled via agrarian labor in the nineteenth century, rooted in descriptive statistics and mass data, to stopping reproduction amongst the disabled altogether, rooted in and justified through mathematical statistical methods (standard deviation, probability, correlation) at the beginning of the twentieth century as eugenics took center stage. I advance my argument in three parts. In the first part, I provide a quick overview of domestic colonialism as an ideology before turning to examine the intertwined origins of domestic colonies, ableism and statistics. Building on previous research,[1] I argue that Sir John Sinclair, founding president of the Board of Agriculture and Internal Improvement, and Jeremy Bentham were the first thinkers to propose a national domestic colonization scheme in Britain to both cultivate (waste) land within Britain and improve the poor, unemployed and/or disabled

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[1] Barbara Arneil, "Origins: Colonies and Statistics," *Canadian Journal of Political Science* 53 (2020), 735–54.

by transforming them into industrious citizens. Bentham's colonial scheme is particularly important to the current analysis, because he is the first to target *disabled* people for mass institutionalization in his colonization plan. Sinclair simultaneously introduces "statistics" into the English language via his massive National Statistical Accounts of Scotland at the end of the eighteenth century,[2] which he saw as the necessary means to the "internal improvement" of people and land. Bentham followed suit and championed statistics in his own "pauper population table," which includes seven categories of disability. He also helped to establish what would eventually become the Royal Statistical Society for the explicit purpose of counting the number of poor. Mass descriptive statistics were thus the foundation upon which the "improvement" of "waste" land and "backward" idle and/or irrational people would be achieved via the Board of Agriculture and Internal Improvement.

In the second section, I analyse how domestic colonialism and mass descriptive statistics evolved but remained intertwined to the end of the nineteenth century, still rooted in the principle of "improving" the poor and/or disabled via segregation and agrarian labor. Statistical societies also developed further in Cambridge and London, focusing primarily on collecting mass data on the poor and diseased with the goal of social reform/improvement—making the "backward" and "idle" (poor and/or disabled) industrious and healthier.[3] I turn to examine two leading nineteenth-century social reformers, Charles Booth and William Booth, as they both advance mass statistics on the poor/disabled and domestic colonies as corollaries of each other. Charles Booth, a president of the Royal Statistical Society, used survey data to map London's households and proposed labor colonies for the largest class of poor. William Booth, founder of the Salvation Army, used statistics as the basis for his tripartite scheme of colonies for the poor and disabled.

In the third and final section I examine how eugenics changes the meaning of both statistics and domestic colonialism even as they continue to be intertwined with each other in the justification of colonies for the disabled. I will show how Francis Galton and his colleague and successor Karl Pearson argue that the "feeble-minded," "unfit" and/or "mentally deficient" at home, as well as the biologically "inferior" races overseas, must be eliminated or reduced in population in order to "improve" the human race. The focus on statistics and colonialism shifted from social reform (nurture) to biological engineering (nature), with domestic colonies permanently segregating the disabled to repress their reproduction, and settler colonialism decreasing the population of indigenous peoples, replaced by white settlers.

I begin with Galton's endorsement of the report of the British Royal Commission on the Care and Control of the Feeble-Minded (1905–8) in his essay "Segregation," including the key recommendation of farm colonies for the

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[2]Sir John Sinclair, ed., *The Statistical Accounts of Scotland Drawn Up from the Communications of the Ministers of Different Parishes*, 21 vols. (Edinburgh, 1791–9), at https://stataccscot.edina.ac.uk/static/statacc/dist/home.

[3]My focus is on the disabled (and poor), but other scholars have shown how statistics in nineteenth-century Britain were linked to foreign colonialism, illiteracy or communicable diseases—"problems" in need of reform that needed to be counted and located first. See Lawrence Goldman, *Victorians and Numbers: Statistics and Society in Nineteenth Century Britain* (Oxford, 2022); Jean-Guy Prevost and Jean-Pierre Beaud, *Public Debate and the State, 1800–1945: A Social, Political, and Intellectual History of Numbers* (London, 2016).

disabled. I then analyze Galton's and Pearson's defense of domestic and settler colonialism in lectures in which they simultaneously advance their own *mathematical* statistical methods (standard deviation, probability, frequency, correlation) as a necessary "foundation" for a "science" of positive and negative eugenics. I conclude with Home Secretary Winston Churchill's endorsement of colonies and the 1913 Mental Deficiency Act, which embraced mass institutionalization, including farm colonies.

The origins of statistics and domestic colonialism for the disabled in Britain

Colonialism, a modern ideology rooted in the Latin word *colonia* (agrarian settlement), was first articulated in a comprehensive form by John Locke in seventeenth-century America via his labor theory of property to justify settlers' right to land in indigenous territories based on their engaging in agrarian labor and enclosure. The key colonial principles of segregation, agrarian labor and improvement were turned inward a century later to justify domestic colonies for the backward in Europe (the poor/unemployed and mentally ill/disabled).[4] The defense of domestic colonies in Europe grew over the nineteenth century as the population of unwanted idle poor, unemployed, disabled, petty criminals and/or vagrant beggars and alcoholics living in cities grew.[5] The question of what to do with such populations loomed—should they be sent to labor on ships, or to foreign colonies as indentured servants? Would it be better to keep them in Britain but house them in asylums, workhouses, prisons and/or poorhouses? In the midst of this debate spanning the nineteenth and early twentieth centuries, domestic colonialists argued that the best solution both ethically and economically was to send them to domestic colonies.[6]

Northern Scotland was the site of the first domestic colonies, after the defeat of the Jacobite uprising in 1745, via the Board of Annexed Estates.

> One of the Board's key policies was to establish what it called "colonies" … on annexed estates which the Government had seized from traditional clan leaders … [unemployed, idle] soldiers were to be given small individual plots

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[4]For more detail see Barbara Arneil, *Domestic Colonies: An Inward Turn to Colony* (Oxford, 2017).

[5]Albert Schrauwers, "The 'Benevolent' Colonies of Johannes van den Bosch: Continuities in the Administration of Poverty in the Netherlands and Indonesia," *Comparatives Studies in Society and History* 43/2 (2001), 298–328; Stephen Toth, *Mettray: A History of France's Most Venerated Carceral Institution* (Ithaca, 2019); Claire Edington, "Beyond the Asylum: Colonial Psychiatry in French Indochina, 1880–1940" (doctoral dissertation, Columbia University, New York, 2013), esp. "Labor as Therapy: Agricultural Colonies and the Psychiatric Re-education of the Insane"; Edington, *Beyond the Asylum: Mental Illness in French Colonial Vietnam* (Ithaca, 2019).

[6]One theoretical question some scholars might ask (based on the large literature on treatment of the disabled in Britain) is why analyze the institutionalization of the disabled through a colonial lens rather than through Michel Foucault's disciplinary/productive power? A Foucauldian frame of productive power is very powerful for analyzing how institutional "care" impacted and shaped the "residue" of society. My colonial lens is complementary to his argument, but it also addresses some shortcomings in Foucault's theory. His focus is largely on prison panopticons and hospitals/asylums for the mentally ill and less on disability. Also, he does not explain colonies per se (as distinct from asylums, hospitals or prisons), nor the ideological or material links to settler colonies, both rooted in land. These oversights in Foucault's theories are surprising given that Bentham's panopticon and Mettray Colony are the quintessential examples Foucault uses for disciplinary and carceral power respectively, and both are championed *as colonies* by their creators. For a more detailed argument see Arneil, *Domestic Colonies*, Ch. 7.

of land from which they could maintain themselves … Although the work of the Board is generally considered to have been a failure … widespread attempts at "wasteland colonization" made by private landlords in Scotland later in the 18th century took inspiration from the Board's projects.[7]

The leading figure, as I have argued previously, was Sir John Sinclair, who established colonies on his own estate in Caithness and, as founding president of the British Board of Agriculture and Internal Improvement, promoted domestic colonization for Britain as a whole.[8] In this capacity, he asked Jeremy Bentham to write a paper on "improving" the poor, and the resulting essay, "Pauper Management Improved," proposed a domestic colonization plan of large panopticons to house all paupers.[9]

Most importantly with respect to the history of ableism in Britain, Bentham was the first to specifically include multiple categories of disabled paupers in his domestic-colony proposal and pauper population table. As such, he is amongst the first thinkers to defend the systematic and widespread segregation of the disabled from society into colonies, and then, within the colonies themselves, from nondisabled paupers: "for appropriate *care*, the insane [must be] in an establishment by themselves … the *deaf and dumb*, in a set of appropriate establishments," and "*raving lunatics*" should be housed next to the "deaf and dumb"; while "abodes of the *blind*" should be located beside "the melancholy … *silent* lunaticks [and] shockingly *deformed*."[10] Thus Bentham is the first British thinker to articulate what would become a long-standing ableist belief in segregating and institutionalizing the disabled (until the 1970s).

As such, he is at the forefront of a major historical shift in the "management" of disability away from community, church and family, and toward institutional "care." Lucas Pinheiro notes of this seismic change, "In contrast to the seventeenth and eighteenth centuries, the nineteenth century marks a well-documented 'institutional turn' in the history of intellectual disability, both in Europe and the United States."[11] In essence, the disabled are moved from what had been parental "care" (Locke argued that "lunaticks" and "ideots" should live under the *permanent* authority of their parents) to mass institutionalization.[12]

At the same time as Sinclair and Bentham were proposing domestic colonies, the former also introduced "statistics" into the English language.[13] For Sinclair,

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[7]Iain MacKinnon, "'Decommonising the Mind': Historical Impacts of British Imperialism on Indigenous Tenure Systems and Self-Understanding in the Highlands and Islands of Scotland," *International Journal of the Commons* 12/1 (2018), 278–300, at 285.

[8]Barbara Arneil, "Jeremy Bentham: Pauperism, Colonialism and Imperialism," *American Political Science Review* 115/4 (2021), 1147–58; Sir John Sinclair, *The Code of Agriculture, Including Observations on Gardens, Orchards, Woods, and Plantations* (London, 1817).

[9]Sinclair, *The Code of Agriculture*; Jeremy Bentham, "Pauper Management Improved," in *The Collected Works of Jeremy Bentham: Writings on the Poor Laws*, vol. 2, ed. Michael Quinn (London, 2010), 1–459.

[10]Jeremy Bentham, "Outline of a Work Entitled Pauper Management Improved," in Bentham, *Annals of Agriculture and Other Useful Arts*, vol. 30 (London, 1798), 109–10.

[11]Lucas Pinheiro, "Colonizing Cognitive Disability: Progress, Development, and Confinement in Nineteenth Century America," paper presented at the Brown University Graduate Student Conference, 1–36, at 8.

[12]John Locke, *Two Treatises on Government* (Cambridge, 1988), II, ¶60.

[13]Sinclair, *The Statistical Accounts of Scotland*, 20: xiii–xiv. For more detail see Arneil, "Origins."

statistics—defined as large-scale national surveys to count the number of poor in each parish—were necessary to identify the size, nature and location of the problem. Surveys were also needed to create a benchmark from which to measure improvement in the future. Put simply, statistics were the means to the end of domestic colonization: improvement of "idle" people and "waste" land. In an address to the clergy of the Church of England, he states that by "analyzing … with anatomical accuracy and minuteness the internal structure of society … the science of government can alone be brought to the … height of perfection" and secure for Britain "the means of its future improvement."[14]

Bentham, like Sinclair, sees statistics as foundational to his domestic colonization scheme but again specifically targets the disabled and seeks to categorize them in his data collection. Bentham's pauper population table was published in Arthur Young's *Annals of Agriculture* six months before his essay on paupers. Seven of a total of twenty-four categories in his table of paupers were either the physically or the mentally disabled (lunatics, morons, the feeble-minded, the deaf/dumb, the blind, the crippled in hand/arms, the crippled in feet/legs) amongst twenty-four categories. Bentham sought to collect this data by parish in England to properly design and finance his panopticons, including housing the disabled in separate buildings.

Bentham was central to the foundation of British statistics in a second way—as one of the founders of what eventually became the Royal Statistical Society. Eileen Magnello notes that it was Bentham "who suggested the need for a statistical society in London … [as he] discovered that the government did not know how many paupers received relief and … could not even account for the amount of money in circulation."[15] Lawrence Goldman likewise observes that Bentham "supported the organization of a statistical society," and it was actually started "by some of his followers."[16] One Benthamite, Albany Fonblanque, was the statistical secretary to the Board of Trade from 1847 to 1872, where he followed through on Bentham's argument for the need to collect data on "unenfranchised men in industrial towns … [and] numbers of paupers claiming 'outdoor relief.'" As Goldman argues, for Bentham and his followers, "statistics were the chosen weapon of the reformer in that they uncovered [the seemingly] outmoded, failed or plain wrong ways of organizing society" with respect to the poor and disabled.[17] Such descriptive statistics not only identified where the disabled poor currently lived and in what numbers/categories, but also provided a benchmark from which to measure future improvement both individually in the colony and collectively as a nation, through subsequent surveys.

The evolution of domestic colonialism and statistics in nineteenth-century Britain

Throughout the nineteenth century, British social reformers continued to champion domestic colonies as a tool of social reform for various populations of "backward"

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[14]Sir John Sinclair, "Address to the Clergy of the Church of England," in *Communications to the Board of Agriculture on Subjects Relative to the Husbandry, and Internal Improvement of the County*, vol. 1, Appendix F (London, 1797), xxxv.

[15]Eileen Magnello, "Eminent Victorians and Early Statistical Societies," *Significance* 6/2 (2009), 86–8, at 87.

[16]Goldman, *Victorians and Numbers*, 19.

[17]Ibid., 20.

people—invariably defended as both more humane/kindly/progressive and less costly than workhouses, prisons or asylums, and rooted in statistical analysis/mass data.[18] To analyze the continuing intertwined history of domestic colonialism and statistics, I turn to two key proponents: William and Charles Booth (no relation), leading reformers who recommended colonies for the poor (and, in the case of William Booth, the disabled) with statistics as their "scientific" foundation.

Charles Booth, a member of the Royal Statistical Society and its president from 1892 to 1893, presented papers at society meetings, including his famous comprehensive survey of London in 1887 to identify various categories of poor, based on street-level data of households.[19] As Brown notes, "Booth and his followers were empirical in their careful study of all the available evidence, especially statistical, on the causes of poverty."[20] In his book *Life and Labour*, Booth divided the poor of London into eight groups—from A to H based on class and neighborhood. While the lowest class of criminals, A, was small, the next class, B (the mass of unemployed poor), was very large. Ultimately, "Booth's solution to poverty was to remove class B from society through … labour colonies."[21]

His domestic colonization plan was embraced by many progressive thinkers, including socialists Sidney and Beatrice Webb. As Goldman notes, "Booth's ideas were widely welcomed at the time and not only by conservatives: in 1889 the Fabian socialist journal *Today* welcomed labor colonies as an example of the sort of social innovations desired by collectivists."[22] J. A. Hobson, a leading British anti-imperialist, also supported Booth's plan based on perceived ethical and economic benefits:

> the scheme is economically sound, that is to say, if such communities could be maintained … two great benefits [result:] human care and a decent standard of material comfort for the class which is unable to look after itself, and a distinct relief from the glut of low-skilled inefficient labour which would considerably strengthen … working classes which stand just above the class that was removed.[23]

Booth focused on the poor (as opposed to the disabled), so while statistics and colonialism were intertwined in his analysis, ableism was not as strong a factor. His analysis nevertheless directly impacted later domestic colonialists in Britain, including William Booth and Francis Galton.

William Booth, founder of the Salvation Army, published his book *Darkest England: The Way Out* in 1890. In it, as I argue in detail elsewhere, he proposes a tripartite colonial scheme to target the "bottom tenth" in England.[24] The first

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[18]Two other British champions of home colonies in the nineteenth century were Robert Owen (1841) William Allen (1832).

[19]Booth's survey and maps can be found in an interactive format at the LSE: https://booth.lse.ac.uk.

[20]John Brown, "Charles Booth and Labour Colonies, 1889–1905," *Economic History Review* 21/2 (1968), 349–60, at 360.

[21]Ibid., 351.

[22]Goldman, *Victorians and Numbers*, 270.

[23]John Hobson, *The Problem of the Unemployed* (London, 1896), 137.

[24]Arneil, *Domestic Colonies*.

kind of colony—"city colonies"—would provide temporary shelter for the poor in cities (the only part of Booth's colonial plan now left in place). From here they would be sent to the most important colony—the "farm colony," which was eventually built in Essex—and trained in agricultural skills. Booth included the "mentally infirm and physically incapacitated" in his scheme, arguing that the disabled could raise rabbits or poultry and keep bees, although he notes that such labor "will not repay the labour of able-bodied men."[25] Once properly trained, those living in the farm colony could be sent to labor on farms in England or as settlers in an "over the seas colony," thus drawing a direct line from domestic to settler colonization.

Statistics were as critical to William Booth as to previous colonialists. He claimed (much like Bentham did almost a century earlier) that a "census" of the poor in England was needed as it had "scarcely been studied at all scientifically."[26] Pointing to Charles Booth's survey of East London as a good place to begin, he developed his own categories, concluding that there are three million people or one-tenth of the population who constitute the bottom or "submerged tenth"—what he calls "darkest England" who need to be sent to colonies.[27] The importance of statistics to Booth's scheme is manifested visually in the frontispiece of his book. As Kelsey Wilson notes, it is a "compelling visual image of the book's reformative scheme," with the farm colony at its centre, the city colony at the bottom and the overseas colony at the top, and importantly, "framing the whole [image] is an arch … supported by pillars *entwined with banners inscribed with statistics* … number of urban poor in prisons, workhouses, or working in prostitution."[28] Charles Booth and William Booth, leading reformers of their day, thus view colonies as the solution for the poor/disabled, founded on surveys and the collection/analysis of mass data.

Eugenics, domestic colonialism, statistics and the disabled: Galton and Pearson

While domestic colonialism and statistics evolved in Britain in the nineteenth century from Bentham to the Booths, as described above, a fundamental break occurred at the turn of the twentieth century as eugenics moved to center stage. Sir Francis Galton (who coined the term "eugenics") and his colleague Karl Pearson redefined colonialism by changing the goal of improvement from the betterment/improvement of both the poor and disabled through short stays in colonies to engineering the whole human race by segregating the disabled permanently into colonies. Thus the colonial principle of segregation is emphasized (adding that it must be both compulsory and permanent) if the negative eugenicist end of preventing reproduction amongst the "unfit" is to be achieved. Galton also argued that the principle of agrarian labor within the colony was beneficial, but primarily because it served to offset the financial "burden" of the disabled, not because they would be improved and trained to return to society, as previous colonialists had claimed. As

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[25]William Booth, *In Darkest England and the Way Out* (London, 1890), 133.

[26]Ibid., 16.

[27]Ibid., 16–18.

[28]Kelsey Wilson, "Visualizing the Imperial Mission of the Salvation Army: The Frontispiece of 'In Darkest England and the Way Out'" (master's thesis, University of British Columbia, Vancouver, 2011), 2, emphasis added.

Galton and Pearson changed the purpose of colonies, they simultaneously rede-
fined statistics—firmly rejecting the mass descriptive data of previous colonialists
in order to develop and defend mathematical statistics rooted in the very methods
Galton and Pearson developed—such as standard deviation, correlation, frequency,
and probability. These methods remain at the very core of quantitative social
science to this day.[29] I analyze the changes to both colonialism and statistics in
more detail below, beginning with the driving force behind redefining both—
namely the ideology of eugenicism.

Eugenics is almost invariably described in the academic literature as a "pseudo-
science" or "quack science," but this description is misleading because eugenics is
better understood as a political *ideology*. As Mitchell and Snyder note, eugenics is
"one of the foremost ideological movements of Europe and North America from
1880 to 1945," with an overarching *political* goal to convince states to control
their citizens' reproduction (via positive and negative eugenics).[30] As we analyze
the relationship between ableism, colonialism and statistics in this period, it is
important to keep in mind this founding ideological motivation for mathematical
statistics. While much scholarship in political science, psychology, economics and
sociology depends on the very methods Galton and Pearson developed, the historical
ideological context that drove both men to develop them—eugenics—is rarely
mentioned in reference to statistical analysis.

Galton and Pearson argue that the state has two primary political goals: to
encourage reproduction amongst people deemed to be superior (positive eugenics)
and repress reproduction amongst or eliminate people(s) deemed to be degenerate,
inferior, defective or unfit (negative eugenics). British eugenicist colonialists col-
laborated very closely with their counterparts in America at the turn of the twentieth
century on the central domestic "problem" of mental disability—or what they called
"feeble-mindedness." As Mitchell and Snyder observe, "In the shared cultural space
of the Eugenic Atlantic … disability served … as a primary catalyst for international
collaboration."[31]

For British eugenicists, collaboration meant embracing American farm colonies
for the "feeble-minded," in particular Walter Fernald's colonies in Massachussets
(1903), which required "permanent custody" of the mentally disabled and their
engagement in agricultural labor.[32] In volume 7 of the final report of the British
Royal Commission on the Care and Control of the Feeble-Minded (1905–8), the

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[29]It is important to note that eugenics had significant racialized and classist dimensions beyond indigen-
ous peoples, which I will examine shortly, in the disproportionate numbers of African Americans and eth-
nic minorities classified as "backward" or feeble-minded relative to white Europeans. The classist
dimensions intersect with racist ones as the poor were more likely to be classified as feeble-minded and
also subject to eugenics policies.

[30]David Mitchell and Sharon Snyder, "The Eugenic Atlantic: Race, Disability, and the Making of an
International Eugenic Science, 1800–1945," *Disability & Society* 18/7 (2003), 843–64, at 845.

[31]Ibid.

[32]Walter Fernald, "The Burden of Feeble-Mindedness," *Journal of Psycho-Aesthetics*, March 1912,
87–111, at www.disabilitymuseum.org/dhm/lib/detail.html?id=1208&page=all. Fernald impacted not only
British policy on the disabled but also Canadian policy; see Walter Fernald, Appendix D, "The Growth
of Provision for the Feeble-Minded in the United States," *Report on the Care and Control of the
Mentally Defective and Feeble-Minded in Ontario* (Toronto, 1917), 164–6. For an example of the oppos-
ite—namely an anti-eugenicist domestic colonialist in America—see Charles Bernstein, "Advantages of

visit of commission members to America to study the colony system is described, leading to their recommendations in the final volume 8. "We recommend the introduction of the system of large farm colonies on lines suggested to us by the colonies for the feeble minded … established in the USA … which give scope for training the mentally defective in … farm work and in horticulture."[33] Galton championed the commission's recommendations in his article "Segregation," which accompanied the public abstract of the report. The editors of the journal *Nature* where the abstract was republished especially recommended "Segregation" to their readers.[34]

Galton begins his essay by claiming that segregation of the mentally disabled into colonies will repress population in a "more kindly" manner and at little extra cost due to agrarian labor:

> The Royal Commission on the Feeble Minded have attacked a Eugenic problem of the first order of magnitude with thoroughness and remarkable success … The annual output of mentally defective children admits of being largely diminished in future generations and that feeble minded persons may be more kindly treated than now at apparently an inconsiderable increase of total cost to the community. They propose to do this by means of the continuous control of the mentally defective and the segregation of a large number of them in labour colonies.[35]

Galton, like the commission, points to America as the model: "labour colonies … especially in America, where feeble minded persons are taken in … live happily and feel as if at home … [and] remain for many years."[36] Agrarian labor creates an economic justification for colonies as the "feeble-minded … wholly or nearly pay for their keep by their work and almost all of them can do something towards the expenses."[37] Segregation needs to be permanent, especially for girls. "All the evidence printed in the report points unmistakably to segregation *for life* as the only means of preventing feeble-minded girls from doing great harm to the community."[38]

Galton, however, goes further than American colonialists to argue that segregation must be not only permanent but *compulsory* for all disabled people: "Unfortunately [in America], as yet, no power exists for their compulsory detention."[39] He also argues that, to ensure that the disabled have the right kind of work in colonies, they must be categorized via intelligence tests and statistical

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Colony Care of Mental Defectives," *Psychiatric Quarterly* 1/4 (1917), 419–25; and Bernstein, "Colony and Extra-institutional Care for the Feeble-Minded," *Mental Hygiene* 4/1 (1920), 1–28.

[33]Royal Commission UK, *The Problem of the Feeble-Minded: An Abstract of the Report of the Royal Commission on the Care and Control of the Feeble-Minded* (London, 1908), 237.

[34]"Review of 'The Problem of the Feeble Minded: An Abstract of the Report of the Royal Commission on the Care and Control of the Feeble-Minded' with an Introduction by Sir Edward Fry," *Nature* 81/2075 (1909), 158.

[35]Francis Galton, "'Segregation,' an Essay Accompanying the Problem of the Feeble-Minded," in *An Abstract of the Report of the Royal Commission on the Care and Control of the Feeble-Minded* (London, 1909), 81–8, at 82.

[36]Ibid., 84.

[37]Ibid.

[38]Ibid., 83, added emphasis.

[39]Ibid., 84.

analysis into different "grades": "Feeble-mindedness is of many grades," and "feeble-mindedness" in "large institutions" must be "graded" so that they can be "more easily supervised … and occupied in work" in line with their mental capacities. Standard deviation, a method Galton himself creates, is the necessary tool to "scientifically" demarcate the disabled into groups of morons, idiots and imbeciles, based on how far they deviate from the norm. Galton concludes that "this Remarkable Report … will ultimately gain a Eugenic victory over the evils that have long lain unnoticed."[40]

Galton's "Segregation" is important for three reasons: first, while most scholarly analyses of eugenics view sterilization as the inevitable, even the only, outcome of negative eugenics, Galton is arguing for *segregation* in colonies—compulsory and permanent. Second, Galton's statistical methods provide a scientific justification for colonies and a way to determine grades of "feeble-mindedness." Galton thus rejects *descriptive* statistics in favor of *mathematical* statistical analysis, and the main goal of colonies is not to *nurture* the disabled ("improving" via education or labor) but to engineer *nature* itself (repressing reproduction via segregation). Lawrence Goldman notes how the meaning of statistics and its purpose shifts under eugenics:

> From the 1830s to the 1870s the Statistical Movement was broadly defined by … its commitment to social reform and its environmental approach to social problems … inductive in its procedures, collecting data from the world as it was and then generalizing from actual experience as discerned in the numbers … "ameliorating the human race by modifying their institutions". [By contrast], Galton associated the discipline [of statistics] with quite contrary values. From the 1880s, statistics were frequently used … to build a case that favoured "nature over nurture," a term coined and popularized by Galton himself … stressing the importance of inheritance [over] the environment.[41]

Further evidence of the shift in both is found in Galton's Aldous Huxley Lecture in 1901, as he takes direct aim at Charles Booth's descriptive statistics and labor colonies, claiming that the analysis of London's poor and unfit requires better statistical methods—in particular Galton's own "normal law of frequency," which can again distinguish *degrees* of "subnormality," and his "scheme of descent" of inherited characteristics, which provides numerical certainty as to the growth of unchecked reproduction amongst the "unfit." Galton notes, "The faculties of future generations will necessarily be distributed according to laws of heredity, where statistical effects are no longer vague [but] measured and expressed in formulae."[42]

In this earlier lecture (1901), Galton emphasized *positive* eugenics: "the possibility of improving the race of a nation depends on the power of increasing the productivity of the best stock … [which is] more important than … repressing the productivity of the worst."[43] Positive eugenics takes on racist dimensions as

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[40]Ibid., 85.
[41]Goldman, *Victorians and Numbers*, 258.
[42]Francis Galton, "The Possible Improvement of the Human Breed and the Existing Conditions of Law and Sentiment," Second Huxley Lecture of the Anthropological Institute, *Nature* 64/1670 (1901), 659–65, at 665.
[43]Ibid., 663.

Galton concludes with an observation about British reproduction in the context of global imperialism. "To no nation is a high human breed more necessary than to our own, for we plant our stock all over the world and lay the foundation for the dispositions and capacities of future millions of the human race."[44] Thus, for both Galton and Pearson, settler colonialism—increasing white populations and decreasing indigenous populations—provided another tool to engineer nature and racially "improve" the human race.

Mathematical statistics were the foundation for eugenics. In his 1907 Herbert Spencer Lecture at Oxford entitled "Probability, the Foundation of Eugenics," Galton advanced his case, with the frontispiece of his lecture (entirely constituting figures of variates, distributions, median averages, frequencies and correlations) providing a visual summary of his argument. He began the lecture by claiming that eugenics requires numerical specificity: "Eugenics seeks for quantitative results. It is not contented with such vague words as 'much' or 'little,' but endeavours to determine 'how much' or 'how little' in precise and trustworthy figures."[45] To achieve such exacting measurements, Galton begins with standard deviation as able to measure degrees of "defectiveness" in specific terms. Indeed, even the words "deviation" and "normal"/"abnormal" are, as Lennard Davis argues, deeply ableist, yet masked in a seemingly "neutral" science of numbers.[46] This lecture, published two years before his essay "Segregation" in the midst of the royal commission's inquiry into feeble-mindedness and six years after the 1901 Huxley Lecture, focuses on *negative* eugenics—preventing reproduction in the "unfit."

And in this context, Galton argued that another statistical method—*correlation*—is necessary to demonstrate the mathematical relationship between "degeneracy" and criminality or immorality. While previous colonialists had argued that such a link existed and hence the need to segregate the backward into colonies, correlation can express the relationship in a precise, scientific way. But to do so would require massive data collection and analysis on a national scale. This meant that Britain must create multiple new statistics/eugenics labs: "There can be no doubt that a thorough investigation of the kind described, even if confined to a single grade … of degeneracy, would be a serious undertaking. Masses of trustworthy material must be collected … and be afterwards treated with skill and labour by methods that few at present are competent to employ."[47] Such a "huge volume of work [is] sufficient to occupy Eugenics laboratories for an indefinite time."[48] Within four years (1911), Galton and Pearson established the first department of applied statistics in the world at University College London with the chair of eugenics at its center.[49]

Along with developing high-level expertise in multiple new labs, Galton also argued that the general population and politicians must be educated in statistical methods and inheritance; only then will they fully comprehend the "scientific necessity" of eugenics. It is the "popular ignorance" of "biometry … [that] obstructs

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[44]Ibid., 665.

[45]Francis Galton, *Probability, the Foundation of Eugenics*, the Herbert Spencer Lecture (Oxford, 1907), 13.

[46]Lennard Davis, "Constructing Normalcy: The Bell Curve, the Novel, and the Invention of the Disabled Body in the Nineteenth Century," in Davis, ed., *The Disability Studies Reader* (New York, 1997), 9–28.

[47]Galton, *Probability, the Foundation of Eugenics*, 14.

[48]Ibid.

[49]For more on Galton and Pearson's UCL lab see www.ucl.ac.uk/statistics/our-early-history-1.

the path of Eugenics … [and] when the curve of frequency, standard deviation, mean, binomial series [and] correlation" are fully understood, eugenics would be *the* national priority.[50] Half of Galton's lecture was thus spent outlining a statistics curriculum for the general public, before he ended it with an exhortation to the nation:

> Considering that public opinion is guided by the sense of what best serves the interests of society as a whole, it is reasonable to expect that it will be strongly exerted in favour of Eugenics when a sufficiency of evidence shall have been collected to make the truths on which it rests plain to all. That moment has not yet arrived. Enough is already known to those who have studied the question [i.e. statisticians like himself] to leave no doubt about the general results, but not enough is *quantitatively* known to justify legislation … When the desired fullness of information shall have been acquired, then, and not till then, will be the fit moment to proclaim a "Jehad" or Holy War against customs and prejudices that impair the physical and moral qualities of our race.[51]

It is extraordinary that Galton concludes with an appeal to "Jehad" or Holy War—given that eugenics was supposed to be rooted in *science*. As discussed earlier, such an exhortation demonstrates that eugenics was a political ideology and one towards which Galton felt a religious fervor.

Karl Pearson advances the same argument at the Boyle Lecture at Oxford on "The Scope and Importance to the State of the Science of National Eugenics" (1907) given around the same time as Galton's Spencer Lecture.[52] Pearson, like Galton, is responsible for foundational methods in statistical analysis, particularly correlation coefficients beyond "simple linear correlations" to "multiple and partial correlation … curvilinear correlation [and] x^2 function for summarizing multinominal data."[53] He explicitly developed his methods to further eugenicist ends; correlation would predict the hereditary outcomes of future generations:

> Pearson's massive developments in the statistical theory of correlation, the branch of his work that he invests with the highest significance, originated in … heredity. He wished to make probabilistic predictions about the outcome of a line of ancestry without the necessity of discussing underlying mechanisms … This was quite out of step with contemporary biological practice … more interested in getting to grips with the underlying physiology of heredity than in the sheer business of prediction.[54]

For Pearson, if the state was to be convinced to reshape future generations by proactively implementing negative and positive eugenics, two things would be

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[50]Galton, *Probability, the Foundation of Eugenics*, 14–15.

[51]Ibid., 29–30, added emphasis.

[52]Karl Pearson, *The Scope and Importance to the State of the Science of National Eugenics*, Boyle Lecture at the Oxford University Junior Science Club (Oxford, 1907).

[53]Samuel Stoffer, "Karl Pearson: An Appreciation on the 100th Anniversary of His Birth," *Journal of American Statistical Association* 53 (1958), 23–7, at 23.

[54]Bernard Norton, "Karl Pearson and Statistics: The Social Origins of Scientific Innovation," *Social Studies of Science* 8 (1978), 3–34, at 15.

required: the advanced forms of correlation that experts like himself had developed to mathematically "prove" the exponential growth in "degenerates" and a socialist government to facilitate the central planning necessary to bring about full control over reproduction. Thus he states in the lecture, the "best way to achieve [eugenics is] a move to a form of state socialism, run by talented experts," because the free-market "laissez-faire [approach] … has led … to the proliferation of the unfit."[55] In order to repress reproduction, segregation of "degenerates" into colonies and by sex is needed: "Every remedy which tends to separate [degenerates] from the community, every segregation which reduces their chances of parentage, is worthy of consideration. Strange as it may seem, we are not beyond the cure suggested by Plato—what is euphemistically termed a colony, for the degenerates of each sex."[56]

In the same way as eugenics and statistics served ableist ends in Britain via domestic colonialism, Galton and Pearson also deployed them towards *racist* ends via settler colonialism overseas. In *Hereditary Genius*, Galton claimed that "racial" differences in intellect were the catalyst for his investigating mental inheritance in the first place. "The idea of investigating the subject of hereditary genius occurred to me during the course of a purely ethnological inquiry, into the mental peculiarities of different races."[57] In *Inquiries into the Human Faculty and Its Development*, he further argued that positive eugenics "give to the more suitable races … a better chance of prevailing speedily over the less suitable."[58]

Pearson argued in *National Life from the Standpoint of Science* that natural selection meant that indigenous peoples' suffering was necessary to "improve" the human race; then, echoing Locke's arguments that indigenous peoples fail to "work" the land, he claimed that they can be justifiably removed from it. But Pearson went even further, to argue for wholesale replacement:

> I want to justify natural selection to you. I want you to see selection as something which renders the inexorable law of heredity a source of progress which produces the good through suffering … The white man [in] lands of which the agricultural and mineral resources are not worked … should go and completely drive out the inferior race. That is practically what the white man has done in North America … The struggle for existence between white and red man, painful and even terrible as it was … has given us a good far outbalancing its immediate evil. In place of the red man, contributing practically nothing to the work and thought of the world, we have a great nation, mistress of many arts, and able … to contribute much to the common stock of civilized man.[59]

Finally, in the *Grammar of Science*, Pearson again referred to indigenous people failing to cultivate land and championed genocidal colonialism, with white settlers replacing "dark-skinned tribe[s]":

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[55]Pearson, "The Scope and Importance to the State of the Science of National Eugenics," 19–20.
[56]Ibid., 40.
[57]Francis Galton, *Hereditary Genius: An Inquiry into Its Laws and Consequences* (London, 1892), v.
[58]Francis Galton, *Inquiries into the Human Faculty and Its Development* (London, 1883), 17.
[59]Karl Pearson, *National Life from the Standpoint of Science* (London, 1905), 23–5.

It cannot be indifferent to mankind as a whole whether the occupants of a country have its fields untilled and its natural resources undeveloped. It is a false view of human solidarity … which regrets that a capable and stalwart race of white men should replace a dark-skinned tribe which can neither utilize its land … nor contribute its quota to the common stock of human knowledge.[60]

In essence, he defends settler colonialism rooted in the Lockean idea of "waste" land overseas and domestic colonialism rooted in the idea of segregation at home with the explicit goal of decreasing or eliminating indigenous peoples and disabled people from the human race.

In February 1911, Winston Churchill, the Home Secretary responsible for the Royal Commission on the Care and Control of the Feeble-Minded, rose in the House of Commons to announce the government's endorsement of the commission's (and Galton's) recommendations to establish colonies for the mentally disabled in Britain.[61] One year later, in June 1912, the government introduced the Mental Deficiency Bill into the House of Commons. Anchored in statistical categories, it included a categorization of the disabled. Thus in the first section—"definition of defectives"—Galton's standard deviation underpinned grades of mental deficiency in four categories: "idiots, imbeciles, feeble minded, and moral imbeciles." The Act, passed in 1913, ultimately rejected sterilization due to opposition in the House but embraced segregation and institutionalization of the mentally disabled.

In his book on the history of disability in Britain, Matthew Thomson notes in his chapter on "The Colony Solution" that farm colonies were viewed as progressive but invariably became overcrowded, cruel and abusive in practise. The Act represents both the apex of segregation, colonialism and institutionalization in Britain and the beginning of its end.

The colony was crucial in the construction of this progressive image, since it associated the Act with a fashionable tool of social engineering, and obscured its reliance on the type of warehouse-like institutions which catered for the mentally ill and were broadly condemned as ineffective and inhumane. The census of 1911 saw the highest ever proportion of the British population in institutions. The Mental Deficiency Act was the last major attempt to solve a social problem by locking it away from society. It can be seen as a turning point—the culmination and most mature expression of the institutional era, but one which also contained the seeds of decline.[62]

Colonies for the "mentally deficient" were implemented at multiple sites in Britain: Monyhull, Langdon, Bexley, Stoke Park, Chalfont, Ewell, Lingfield, Stramthwaite, London and Edinburgh. Over the twentieth century, the disability rights movement

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[60]Karl Pearson, *The Grammar of Science* (London, 1901), 369.

[61]Hansard, Parliamentary Debates, 10 Feb. 1911. Churchill also supported sterilization even though he knew there was opposition in Parliament (and ultimately it was rejected), but he believed that once sterilized the feeble-minded could live freely rather than in colonies.

[62]Mathew Thomson, *The Problem of Mental Deficiency: Eugenics, Democracy, and Social Policy in Britain c.1870–1959* (Oxford, 1998), 113–14.

challenged eugenics, institutionalization, statistical science and a medical definition of disability as "defect" which had together conspired to segregate and institutionalize the disabled. Deinstitutionalization movements challenged ableist assumptions and segregation, including domestic colonies, along with the statistics used not only to justify colonies but also to stifle any debate over them based on the claims they had provided an unassailable "scientific" proof for such eugenicist policies.

Conclusion

The British domestic farm colony for the disabled was a manifestation of the intersecting forces of statistics, domestic colonialism and ableism, linked together even as they evolved over the long nineteenth century. From Bentham to the Booths, statistics were the basis for social reform via colonies. While "improvement" remained the goal of domestic colonialist statisticians from beginning to end, its definition evolved from earlier colonialists seeking to reform and ameliorate the disabled by engaging and training them in agrarian labor in order for them to return to society and be productive, to later colonialists who sought to "improve" the human race via an ableist commitment to the compulsory and permanent segregation of all disabled people and the racist commitment to decreasing the population of racialized indigenous peoples and replacing them with increasing numbers of white settlers. In both cases, colonialism targets the "backward" and/or "unfit" whether at home or overseas in order to eliminate them.

Ableism manifests itself in the statistical language of deviation and degeneracy, as well as the labels deployed by colonialist statisticians to create different "grades" of disabled people—imbeciles, lunatics, idiots—invariably ostensibly scientific terms but with profoundly negative connotations, even as they turned into legal definitions and categories in the first section of the 1913 Act. Ableism also manifests itself in the central commitment to systematically segregating the disabled from society into purpose-built panopticons/colonies. Bentham's domestic colonization proposal was the first national scheme to seek to institutionally segregate all disabled paupers from society, as well as from nondisabled paupers within the colony. By the twentieth century, eugenicist colonialists went further to argue for the *permanent and compulsory* segregation of all "mentally deficient" people to prevent reproduction. While other institutions segregated the disabled (asylums), colonies were defended as more "progressive" and "kindly," which led a broader group of people to embrace them (including socialists and progressives). Colonies—as opposed to sterilization—ultimately became the basis of British policies toward the disabled as entrenched in the 1913 Act. And even though the colony was claimed to be progressive, vulnerable populations subject to colonial principles of segregation (living a long distance from the oversight of society) and internal improvement (changed from within) led inexorably to abuse, as staff who engaged in abuse knew they could do so with impunity.

Thus I hope to have shown how domestic colonialism and statistics in Britain developed together and required each other to address the "problem" of disability—from their common birth at the end of the eighteenth century, through Sinclair and Bentham, to the labor colonies at the end of the nineteenth century championed by social reformers William Booth and Charles Booth, to the permanent and compulsory

forms of segregated colonies by eugenicists Galton and Pearson at the start of the twentieth century. With respect to statistics, earlier domestic colonies needed mass surveys to identify the number, kind and location of poor/disabled and measure individual improvement, but later domestic colonialists needed mathematical statistical methods to categorize the disabled into categories (imbecile, moron and idiot), correlate disability with criminal and/or immoral behaviour and predict the growth of the "unfit" if reproduction was left unchecked. Ultimately, due to the mathematical nature of their methods, Galton and Pearson believed that they had created an unassailable "scientific" case for negative eugenics via the compulsory and permanent segregation of all feeble-minded citizens. Ableism, colonialism and statistics were thus intertwined even as they evolved, for over a century in Britain, manifested in the proposals for and implementation of farm colonies for the poor and disabled.