

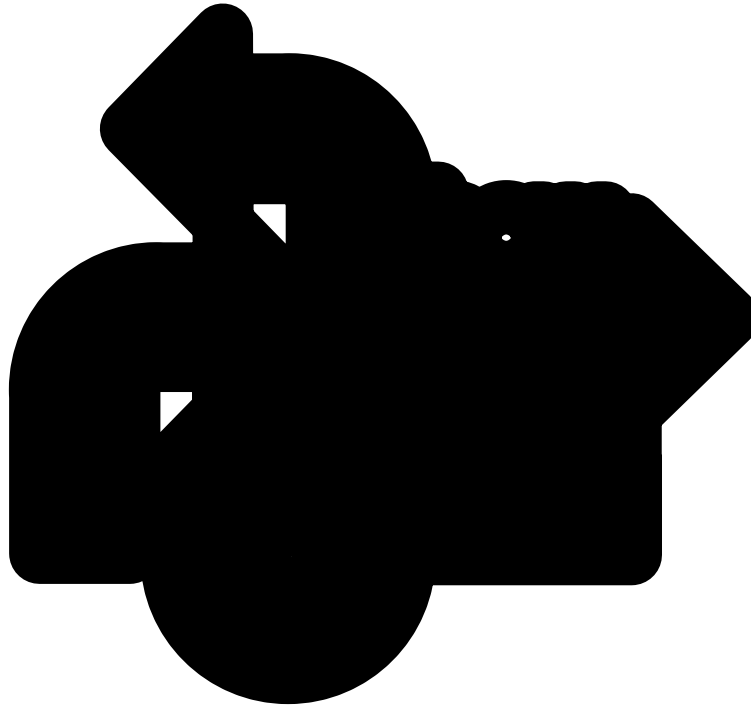
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**Confronting the Stigma of Perfection:
Genetic Demography, Diversity and the
Quest for a Democratic Eugenics in the
Post-war United States**

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**Confronting the Stigma of Perfection: Genetic Demography,
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war United States¹**

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Introduction

The British geneticist Lionel Penrose complained in 1961 that the work of human genetics was handicapped when tainted with the “stigma of eugenics” (Kevles 1985: 252). Penrose was referring to his own title at University College London, that of Galton Professor of Eugenics.² Historians, such as Daniel Kevles, have used such statements as evidence of “eugenics” becoming “virtually a dirty word” following the revelations of the Holocaust (1985: 251). While unpopular in Britain, it had a particularly poor reputation in the United States, where, Kevles argues, it was associated with racism. In recent decades, eugenics has been continuously criticised by scientists and commentators for having stigmatised, with devastating consequences, certain populations as inferior, inadequate, and dangerous to the very fabric of social and biological evolution.

As is immediately apparent, the processes of “stigma” are pervasive, multifarious, and ongoing. The interpretation of eugenics as a science or social movement that stigmatised certain individuals and groups is itself allied to a belief that, following the atrocities of the Holocaust, eugenics itself became unworthy. It was a “folk science” as described by Ravetz (1971), posing a threat both to scientific credibility and to civilised society. The politics of stigma are the focus of this paper. I have taken, and adapted, the concept from the sociologist, Erving Goffman:

The Greeks, who were apparently strong on visual aids, originated the term *stigma* to refer to bodily signs designed to expose something unusual and bad about the moral status of the signifier. The signs were cut or burnt into the body and advertised that the bearer was a slave, a criminal, or a traitor - a blemished person, ritually polluted, to be avoided, especially in public places... Today

² Penrose was requesting, in a letter to the University provost, that his chair be renamed the Galton Professorship in Human Genetics, having already changed the name of the laboratory’s publication from the *Annals of Eugenics* to the *Annals of Human Genetics* (Kevles 1985: 252). The author is presently completing work on Penrose’s struggle with the eugenic problem.

By the late 1930s, however, stigma was reflected back upon eugenics itself, and with it, upon the sciences with which it had been closely intertwined. In response, “population thinking” was now interpreted as having provided a fundamental critique of the eugenic position, characterised, according to the biologist Ernst Mayr (1982), by “typological

genetics also allows us to see how different scientific communities interacted over time, and how proximity to the stigmatised approach affected what they were willing to recognise as scientific facts. The study of population is one that affords immense opportunity for interdisciplinary research across and between the social and biological sciences, and, as a consequence, for conflict and boundary work. In this respect, the analysis of eugenics in relation to the population sciences, contributes to a growing scholarship focused upon the processes of boundary-crossing (Frickel 2004; Fujimura 1992; Lamont and Molnár 2002).

In this paper, we will see how eugenics has both united and divided population scientists in different historical periods, its very definition shifting in debates over science and policy. In the 1920s, eugenics helped bring social and biological scientists of population together, culminating in the foundation, in 1928, of the International Union for the Scientific Investigation of Population Problems. By the 1940s, however, as social and biological scientists differentiated between population thinking and eugenic typology, they did so in ways that divided them. While geneticists became more circumspect in their discussions of the genetic causes and consequences of human fertility dynamics, demographers claimed the field of study for themselves, attributing eugenic excesses to biologists' earlier involvement. In the United States, demographers defined their discipline as a social, rather than a biosocial, science. In 1965, those interested in realising the interdisciplinary potential of population study lamented that "demographers and geneticists were, by and large, *abysmally ignorant of each other's fields*. This ignorance was so profound it was shocking to the most cynical observer."⁷ The stigma attributed to eugenics will be shown to have impeded and restricted the transfer and sharing of facts between these disciplines

⁷ Philip Hauser, Nathan Keyfitz, and Richard Lewontin, "Training Program in Population Genetics and Demography", 2nd Princeton Conference, 1965, AES Papers, American Philosophical Society (APS).

attractive but subtly divisive, discordant, and, for some, even dangerous, concept.¹⁰ In contrast, reform eugenics would attempt to improve the population in accordance with the ideals of democracy and diversity. It would do so through the dynamic processes of assortative mating and differential fertility, the study of which demanded collaborative research between demography and genetics. Thus, the paper will argue, it was the attempts of population geneticists and demographers to cope with the stigma of the optimum, of human perfectibility, which led them into closer relations with each other and with a reform eugenics movement in the post-war United States.¹¹

Finally, this paper will explore how, with the growing controversy over nature and nurture that occurred in the 1970s, we again see eugenics cast as the epitome of bad science in the service of discriminatory ideology, a means of patrolling the boundaries between the social and the biological, rather than encouraging collaboration between them. Indeed, the processes of stigma have come full circle, the description of science or policy as “eugenics” continues to serve as a most useful strategy of demarcation. As Diane Paul observes, “the word *eugenics* carries ominous connotations”, and is thus a most effective “weapon in a war over social policy” (1995: 4, 134).

The stigma of eugenics

Historians have shown how concerns over degeneration were important to the development of human sciences such as anthropology,

¹⁰ Sauvy was not himself opposed to the idea of the “optimum”, but believed that it required careful clarification and calculation, as well as recognition of it as a dynamic rather than static concept.

¹¹ I have dealt with this subject in closer historical detail in a forthcoming paper in *Studies in History and Philosophy of Science Part C: Biological and Biomedical Sciences*. While the present paper deals primarily with the problem of stigma attribution and management, and the use of “eugenics” as an heuristic device, this forthcoming paper focuses more fully on the theoretical, methodological and institutional developments in genetic demography, and their relations to eugenics from the inter-war era through to the 1960s.

psychiatry, psychology, criminology, genetics, and demography. By the 1930s, however, American eugenics was entering a period of crisis. For a growing number of scientists, the research, theory and policy emanating from once-respected individuals, such as Charles B. Davenport, and organisations, such as the Eugenics Record Office, threatened their professional interests and tested their political sensibilities. J. B. S. Haldane warned that “a premature application of our scanty knowledge... will merely serve to discredit the branch of science in which I am working” (1938: 10). Most problematic were the eugenic justifications for class and race hierarchy. The Johns Hopkins biologist Raymond Pearl famously described eugenics as “a mingled mess of ill-grounded and uncritical sociology, economics, anthropology, and politics, full of emotional appeals to class and race prejudices, solemnly put forth as science, and unfortunately accepted as such by the general public” (Pearl 1927: 260). Simplistic Mendelian genealogies of degeneracy, such as studies of the *Kallikaks* or *Jukes*, had little scientific merit, instead serving as a means of attributing the failings of society to specific, “undesirable” populations. As a result, for Lancelot Hogben, “The term ‘eugenics’ has become identified with ancestor worship, anti-semitism, colour prejudice, anti-feminism, snobbery, and obstruction to educational progress” (1931: 209).

For these scientists, whatever their differences, eugenicists had transgressed the boundaries of legitimate science. Pearl sought to recover its scientific basis through the combined efforts of social and biological students of population, founding, in 1928, the International Union for the Scientific Investigation of Population Problems (IUSIPP) (Ramsden 2002). Through survey and statistical methods, this organisation and its affiliated bodies assessed the opportunities for population improvement through the technologies of birth control. It was only, Pearl argued, through “substituting rational action, scientifically grounded, for the policies of the demagogue and the mob”, that the Union could establish the “scientific

dignity” of the population field.¹² Only then would science be called upon to solve the problems of dysgenic population trends.

Yet, with the growing awareness of the atrocities committed through Nazi racial hygiene, the controversy surrounding population science and policy only intensified. As Goffman argues, a stigmatised person is often perceived as “not quite human” (1963: 15) and by the 1940s, programmes of negative eugenics were seen to have stigmatised, sterilised, even murdered, arbitrary categories of populations deemed unfit. The concerns of both scientists and the public were turning away from the fertile and atavistic monsters threatening modern civilisation with their degenerate germ plasm. It was eugenicists, as promulgators of a monstrous, pathological and polluted science, who were a more significant threat to modern science, humanity and civilisation. The boundaries had shifted, consistent with Goffman’s conception of stigma:

The stigmatized and the normal are part of each other; if one

scientific status of their emerging discipline in the 1940s and 50s, they were forced to address its historical relations with eugenics, now derided as a value-laden concern with “quality” that had tarnished the more fundamental study of population “quantity”. Kingsley Davis advised his readers to be aware that in his influential *World Population in Transition*, “there is nothing on population ‘quality’... due both to lack of space and to lack of relevance. In the past ‘quality’ has been taken to mean biological goodness or badness, a subject on which little scientific information is available aside from pathological cases” (1945: viii). Demographers correlated the shift from the biological to the social with a shift from the ideological, anti-democratic to the objective, and progressive. This division helped maintain credibility, as demographers “fought shy of the grander theory... denying the element of eugenics in their past, and demanding ideas that promised the possibility of quantitative justification” (Caldwell 1996: 329). Attention now turned to the problems of the “population explosion” at the global level.

At the same moment, geneticists were more guarded in their discussions of the genetic causes and consequences of differential fertility between race and class. The renowned population geneticist at Columbia University, Theodosius Dobzhansky wrote to his colleague L. C. Dunn, that there was now,

nothing left... but to pull oneself up in a good ivory tower and venture out of it only with greatest of circumspection and only after making sure that the venture is called for.... Fortunately, science furnishes excellent towers, out of the purest and hardest ivory, and they can be furnished very comfortably and with enough good taste, as well as a system of effective drawbridges to permit occasional sallies in the open.¹⁴

Such sallies increasingly consisted of strikes against scientific racism and the overstatements of hereditarian prop

Dunn described them.

What kind of eugenics is it which is on the decline? Isn't it the eugenics which believed, and even preached, the genetic superiority of certain social classes? If so, I welcome the decline. Eugenics suffered from those who assumed group superiorities and preached them in the name of eugenics (Osborn 1943: 64).

He went on to claim: "Nazi excesses should no more be called 'Eugenics' than the Russian political system 'Democracy' though they give it that

inferiority, or indeed, without raising the “eugenic question” itself (Osborn 1956). They did so through revealing a demand for contraception among the less successful in society. As eugenicists continued to assume that social status reflected genetic quality, the promotion of birth control as part of a more general programme of social welfare and health, would improve biological as well as social heritage. As a trustee to the Milbank Memorial Fund, Rockefeller and Carnegie Corporations, Osborn had played a critical role in the development of demography as a social science (Notestein 1971; Ryder 1984).

The more explicit aim to improve genetic “quality” could be maintained, Osborn argued, if eugenicists acquiesced with demographers’ priorities for research and action. Global population growth was now privileged as man’s most important problem, diffusing the controversy that surrounded measures of genetic improvement. Problems of medical genetics, reduced as they were, were only relevant to those nations that had reached the final stages of demographic transition, having low and stable rates of birth and death. In complying with this new hierarchy in the population field, Osborn succeeded in securing limited funds for a programme of medical genetics, supporting a series of fellowships, conferences, and training programmes. He did so as vice-president (1952-1957) and then president (1957-1959) of the Population Council, the leading American organisation for population study in the post war era. Members considered these projects acceptable as they considered medical genetics a useful corollary to broader programmes of fertility control to ensure socio-economic development.²² Nevertheless, while some eugenic concerns were realised through genetic screening and counselling, the leading organisations in the population field privileged the problems of quantity over those of quality, and the social over the

²² Indeed, Kingsley Davis went on to state in his volume, that once restricted to “medical and social characteristics”, there was “considerable material” on “population quality” (1945: viii).

biological.²³ Indeed, when re-established in 1947 as the International Union for the Scientific Study of Population, the domination of the union by social scientists was complete.

Genetic mutation and the population bomb: balance versus control

Through his effective management of eugenic stigma in the 1940s and 50s, Osborn had established a delicate balance – restricted programmes of quality control existed to complement the more significant attempt to restrict global population growth, which, in turn, would have some eugenic effect through reducing fertility differentials. For some, however, the population explosion demanded that scientists and politicians address the question of genetic quality in direct, often radical, ways. In the interwar era, the Nobel Prize winning geneticist, Hermann J. Muller, had been a noted advocate of a reformed eugenics consistent with socialist ideals.²⁴ His one-time student A. E. Carlson described how, with the controversy surrounding eugenics, his views became “submerged” in the immediate post-war era. Yet, as a student of mutation, “the atomic bomb... jolted him, perhaps more than most of the physicists who worked on it, because he realized the real meaning of the radiation damage it had

²³ While Paul has quite rightly identified organizations such as the American Society of Human Genetics (ASHG), founded in 1948, as being seen by many as a respectable platform for eugenics, for most, the emphasis was on research before action, and on programs of genetic counselling restricted to specific genetic diseases. Indeed, James Neel, arguably the leading human geneticist in the United States in the post-war era, declined Osborn’s offer to join the AES on the basis that while he did “not question the objectives of the Society, I entertain serious reservations as to whether the time is at hand for their implementation... I cannot help but feel that the term “eugenics” by common usage has connotations with which I am not in agreement. Accordingly, I think that for the present I shall continue my own efforts to advance our knowledge of heredity in man outside the framework of the Amer

Nevertheless, the prospect of population control also provided an opportunity for eugenic measures. Muller argued that as people accepted “the principle that births should be planned and controlled in order to limit population *quantity*, they will find it but a short and logical step, in this planning, to take the *quality* of the children’s genetic heritage into account” (1957: 18).²⁵ Such an approach benefited from the rapid institutional expansion of ecology, many of whose members called for aggressive programmes to control population growth. As Garrett Hardin had put it: “The freedom to breed is intolerable.” In Hardin’s view, the necessity of a system of “symbolic coercion” allowed for the “legal possession” of the right to bear children to be “perfectly correlated with biological inheritance... those who are biologically more fit to be the custodians of property and power should legally inherit more” (1968: 1247).

Thus, for many biologists, humanity faced degeneration due to the geometrical increase in mutation and/or population numbers. The idea that there was a harmonious “genetic equilibrium” or “balance of nature” was misconceived (Ehrlich and Birch 1967).²⁶ Medical and technological panacea had both increased man’s ability to carry mutations and to increase his numbers, but at a severe cost, leading in time to starvation or “genetic death”. Crow argued that the collapse of the delicate and elaborate existence that man had created would lead to an “immediate full impact of all the mutants that have accumulated during the period of

suffering” (1966: 866). It was necessary to face up to these problems at their core, through radical measures to control reproduction.

The response of other population geneticists to such ideals led Carlson to describe the attacks on Muller as stemming from geneticists “who feared eugenics in any form” (1981: 403). At the forefront of these attacks was Dobzhansky, who not only used the stigma of eugenics to taint Muller’s position concerning biomedical policy, but also evolutionary theory. Both were involved in a bitter struggle over the significance of

selection that purified the population through favouring a superior genotype (Dobzhansky 1968a: 549). Dobzhansky, and his students Lewontin and Wallace, focused their attention on *Drosophila* genetics, seeking to identify both the immense genetic diversity in fruit fly populations, and the important role of the heterotic mutant to survival value or fitness. It was however, as Dobzhansky never tired of reiterating, the discovery of the heterotic mutant in cases such as sickle cell anaemia (Allison 1956), that had not only revealed Muller's utopian vision of the "optimal genotype" to be a "typological fiction", but was a danger to man's biological survival (1968a: 544). In making a "Platonic archetype of Man the eugenic ideal", Muller's theories demanded that all deviations from the optimal genotype be eliminated (Dobzhansky 1963: 1133). The realisation of such a vision of genetic purity would destroy man's inherent adaptability, essential to his survival. Therefore, the consequences of a misconceived eugenic programme "could, in themselves, be as dangerous to our genetic endowment as radiation" (Wallace and Dobzhansky 1963: 116).

For Dobzhansky, Muller's arguments embodied the most insidious servant of political bias in science - typological thinking. It was the typological ideal that had prostituted genetics to the racism of earlier eugenicists, and had once led Muller to embrace communism. Thus, not only human evolution was in danger. Dobzhansky was clearly perturbed that Muller's obsession with the pollution of the gene pool was in danger of further polluting the field of genetics. Genetics was more than a science of abnormality, deleterious mutation and deviance:

it is quite misleading to think about genetic problems only in terms of dreadful diseases, monsters, and extinction. To be sure, such diseases and monsters do exist. Unfortunately, geneticists have used such monsters to the virtual exclusion of all else in illustrating public lectures and popular articles. The result has been that the general public identifies the material of genetics with wingless and eyeless flies, shortlegged sheep, and congenital idiots. (Wallace and Dobzhansky 1963: 98)

Muller's views became ever more relevant and prominent in academic and public discussion because of the mete

and rich”, it had been “contaminated” by “non-demographic newcomers”, policy-activists, and “to bio-ecologists suddenly expressing grand rights of eminent domain” (Berelson 1971, in Ho

would only alienate policy-makers and the public, opening them up to accusations of eugenic racism. Frank Notestein, Osborn's successor as president of the Population Council, had long argued; "I think the negative value, 'not having children,' can never be introduced directly. For years I have urged that we should seek the means by which we could use the positive value of 'healthy mothers and healthy children' as the carrier for the negative idea."³¹

Reducing "unwanted" fertility and promoting of the ideal of the rational and responsible birth control consumer, would be the new aim of population science and power. The emphasis was positive: through their own choices, individuals would be liberated from cycles of poverty and dependency. "Freedom to breed" was not "intolerable", as Hardin had suggested, but was the basis through which "planned parenthood" would be achieved. Drawing from the evidence of the National Fertility Study of 1965, the CPGAF report of 1972 argued that by tackling the problem of the large proportion of unwanted births – one-fifth in the white population and one-third in the black – population problems would simply disappear. Westoff and Ryder later admitted that the programme to reduce unwanted births offered "a nonradical, comparatively inexpensive and, for the most part, politically palatable 'solution' – played a genuinely important role in the deliberations and ideological tone of the final report" (1977: 336).

Demographers in the Population Council severely criticised any ground given to the ecological "cult."³² In this regard, they were critical of fellow demographers Judith Blake and Kingsley Davis for describing the family planning approach as providing "an escape from consideration of the painful social and economic changes necessary to achieve fertility control" (Davis 1968: 828-9). Blake and Davis argued that the problem could not be solved by a simple prescription of contraceptive technology to

³¹ Notestein to Carl E. Taylor, Harvard University School of Public Health, 4 December 1951, Notestein Papers, SM.

³² Notestein, Notes for "Population as a Factor of National Power", 1970, Notestein Papers, SM.

those suffering from excess fertility, as people *wanted* too many children. Society itself required treatment. For Davis (1967), it was necessary to consider such policies as increasi

Milbank Memorial Fund demographer, Clyde V. Kiser. Dobzhansky served as a director of the AES from 1964-73, and chairman of the board from 1969-75; a fact often ignored in favour of his role as a heroic anti-racist, and thus anti-eugenicist.

interest. It will become an applied science.”³⁶ Through a programme in genetic demography, the Society would connect to the “mainstream of scientific investigation.”³⁷ Indeed, considering the limited effects of any programme of medical genetics, Osborn had been at pains to emphasise, “we are not a society of genetic counselors.”³⁸

The AES recruited much of its new leadership through organising series of five conferences in population genetics and demography held at the Princeton Inn from 1964 until 1969, supported by the Population Council.³⁹ The primary reason for the symposia was, as Lewontin argued, that it was “about time human geneticists learned a little demography.”⁴⁰ Much of the discussion at the conferences focused upon the need to establish the parameters that determined the expression of genetic variability, such as consanguineous and assortative mating patterns that existed beyond the mathematical ideal of random mating.⁴¹ Man was no longer an unfavourable subject for population research thanks to data provided through medicine, physiology, psychology, demography and “even sociology” (Dobzhansky 1963: 1131).

In genetics as a whole *Drosophila* is no longer the queen of genetics - it seems to be relegated to the honorific obscurity of a queen mother... Even in population genetics, where *Drosophila* still wears

³⁶ AES: Director's Correspondence in re. 1961 statement, APS.

³⁷ Osborn to Robertson of the MMF, 21 April 1965, AES Papers, APS.

³⁸ Osborn, Memorandum to Committee, 31 May 1961. AES: Director's Correspondence re 1961 statement, #1, APS.

³⁹ Demographers included Ansley Coale, Paul Demeny, Charles Westoff, John Hanjal, Dudley Kirk, Clyde Kiser, Osborn, and Norman Ryder. Among the geneticists there were Dobzhansky, Gordon Allen, Cavalli-Sforza, Bentley Glass, R. C. Lewontin, Robert MacArthur, Richard Osborne, S. C. Reed, J. P. Scott, and J. N. Spuhler. Muller was not invited to any of the conferences, and died in 1967. Crow was involved in the fourth conference of 1967 at the urging of Kirk and did receive some support for his argument regarding the possibility of reduced selection (Lewontin, Kirk, and Crow 1968).

⁴⁰ AES: Princeton Conferences, 3rd, #11: p.285, APS.

⁴¹

its crown proudly, it is being challenged by an upstart – man (Dobzhansky, 1963: 1131).

For Dobzhansky and his allies, it was through genetic demography that further evidence of balanced polymorphism and the maintenance of variability through selection would be uncovered. Through his studies into the genetic demography of indigenous South American tribes, Neel argued that there existed a tremendous amount of variation and mutation among “primitive” populations as yet untouched by the ravages of civilisation (Neel 1970, Neel and Schull 1968). Neel had become a leading critic of Morton, Crow and Muller’s (1956) concept of genetic load, in which, he argued, imperfection existed as an additive consequence of an accumulation of undesirable genes, separating man from “hypothetical perfection.”⁴²

As the conferences progressed, they focused upon interdisciplinary studies in genetic demography, funded by the Population Council through the AES’s newly established Population Genetics Research Committee.⁴³ These included studies of both “primitive” populations in Mexico, and of modern populations such as in the University Population Study Pilot Project under Richard H. Osborne at the Wisconsin Department of Medical Genetics. However, it was not simply their focus on combining the techniques of demography and genetics that was so notable about the projects presented, but their focus upon characteristics of intelligence and personality. Osborne’s project was a mix of measurements of intelligence, mating patterns and fertility of “society’s most valuable resource.”⁴⁴ Carl Bajema, the first recipient of the Senior Population Council Fellowship in Demography and Population Genetics at the University of Chicago, explored the relations between intelligence and fertility through samples of schoolchildren (Bajema 1966, 1968).

⁴² Neel to Clarke Fraser, 27 February 1973, Neel papers, APS. See also Schull (2002).

⁴³ The Population Genetics Research Committee comprised of Gordon Allen, Carl Bajema, Dudley Kirk (replaced with W. Parker Maudlin), Richard Lewontin, Frank Lorimer (replaced by O. D. Duncan), Osborn, Richard Osborne and Irving Gottesman.

⁴⁴ R. H., Osborne, “University of Wisconsin Study” AES Papers, APS.

Such studies would provide the basis of a broader, “population” eugenics, described by Post as “second function” of the conferences (1965: 42). The leadership of the AES outlined this programme in a statement in 1961, the springboard for the Society’s entry into the field of genetic demography. Gordon Allen, Harry Shapiro, Osborn, Dudley Kirk, J. P. Scott, and Bruce Wallace composed the statement, which they premised on Dobzhansky’s evolutionary philosophy. Newton Morton, one of Muller’s most steadfast supporters, resigned from the Society upon its release.⁴⁵ The policies of the AES were being carefully differentiated from Muller’s ideas, members deciding against a meeting proposed in 1966 on “recent and most controversial eugenic proposals” such as sperm banks, donor insemination, gene-substitution, and compulsory fertility control, proposals from which, according to Allen, the “society has wisely disassociated itself.”⁴⁶ Osborn criticised with great vitriol, “the far-fetched ideas of science writers like Aldous Huxley in the Brave New World.”⁴⁷ If man could control the distribution of births, “there will be no reasons to

⁴⁵ AES: Director’s Correspondence in re 1961 statement, #4, AES Papers, RAC. Osborn admitted at the first Princeton conference, that the statement was “one that Dobzhansky and Gordon Allen and, I guess, I have worked on and Gordon put in best shape.” AES: Princeton Conference, 1st, Transcript #13, p. 73. Dobzhansky described the document to Osborn as “excellent. I agree with you on every point.” Dobzhansky to Osborn, 4/11/61, AES: Director’s Correspondence re 1961 statement, #6, AES Papers, APS

⁴⁶ Allen to Osborn, 2 May 1966, SSRC Collection, Accession 2, Series 1, RAC. Osborn wrote to Dobzhansky soon after the proposal was made, stating that he, personally was against any proposal which “would only result in publicity for Muller’s idea,” but would do nothing until he heard from Dobzhansky, whose response was, unsurprisingly, negative. Osborn to Dobzhansky, 10 May 1966, AES papers. However, it is interesting that in private, Osborn expressed support for Muller’s program of artificial insemination. Osborn wrote to Curt Stern of how he, Shapiro, Kirk and Allen had been involved in meetings with Muller and the businessman Robert Graham who would, in time, set up an artificial insemination program: “The idea is that sperm would be obtained from men from sound family stocks, as free as possible of any indications of defect or abnormalities. There would be no mention of ‘superiority’, though they would try to get the donors from successful families, or competent families, so in a sense they would be superior. They would also for research purposes try to get families of different special qualities, such as Musical ability, Athletic ability, etc.” Osborn to Stern, 11 August 1968, Stern Papers, APS.

⁴⁷ Osborn to Evelyn Scott, 6 February 1967, AES Papers, APS.

adopt the kind of extraordinary, and perhaps dangerous, measures suggests in some of those dramatic proposals.”⁴⁸

Society members were presenting their aims as consistent with, even dependent upon, the end of poverty and discrimination and realisation of the Great Society. The 1961 statement argued that the equalization of educational opportunities and greater social and occupational mobility eliminated “fixed hereditary classes” allowing for the individual to fulfil “his genetic potential” (Allen *et al.* 1961: 183). Consequently, genetics would become more, not less, central to social mobility. Socialists perceived the possibility of similar genetic ability, altering the distribution of genotypes in the population (Allen *et al*

eugenic assumptions that social classes contained different sets of abilities. He divided the populations into a small group named “Aristo”, and a larger companion population that he named “plebs.” He then transferred a percentage of divergent individuals from each group at each generation – the “best” moving “up” and the “worst” moving “down” – in accordance with demographic measures of social mobility. Yet he not only concluded that that the “plebeian” population retained a large proportion of “able” individuals, but that in time, “free social mobility” and positive assortative mating would result in the accumulation of the genes “in some individuals, raising their ability in their special field” (Dobzhansky 1968a: 142).

Dobzhansky’s vision of a genetic meritocracy as a eugenic process was, therefore, consistent with that of Osborn, whom he now described as the leader who would make the “substance of eugenics scientific and its name respectable again” (1968b: vi). While Dobzhansky remained critical of eugenicist’s obsession with IQ as *the* trait to be maximised, he replaced Muller’s “optimal genotype” with a variety of ideal forms at a number of adaptive peaks.⁵¹ There would emerge, as Osborn described, a “new sort of caste system... based on a genetic diversity of talents... Each group would be improving in its general background. You wouldn’t have a caste system in which one caste was inferior to another. You would have a caste

just the contrary, the *Drosophila* work interests me less and less as such, and more and more insofar as it contributes to human problems.” 14 August 1954, L. C. Dunn Papers, APS.

⁵¹ Dobzhansky wrote to the sociologist and eugenicist Bruce Eckland that while he was supportive of his work into the genetic demography of IQ he disagreed with him as to the degree to which it was genetically determined: “Perhaps you are over-reacting to extreme environmentalism of your sociological colleagues. I still refuse to swallow Jensen and Herrnstein whole; I “swallow” them something like 75 percent, approximately. But my principal difficulty is that you adhere to the “usual” method of a single stratification following the IQ. Does not human variation follow numerous parameters instead of a single one? Do the outstanding sport figures, musicians, painters, etc. have IQ’s in the genius class?” Letter, 24 April 1972, Dobzhansky Papers, APS. It is interesting that Muller, like Dobzhansky, criticized the eugenic obsession with IQ, refusing to add his name to the development of a sperm bank due to this emphasis (Carlson 1981; Hirsch 1980).

system in which musicians were musicians and mathematicians were mathematicians.”⁵²

Osborn promoted Dobzhansky’s work among demographers, emphasising his keen awareness of the social scientist’s role in unravelling the complex determinants of human behaviour and of social reform as a prerequisite to hereditary improvement. Such liberal credentials, coupled with the increased prestige of genetics more generally, no doubt made them more aware of the other half of demography’s “two main foci” (Notestein 1982: 651). Yet it was the genetic conception of individual quality that was becoming an attractive proposition to many in the social sciences in the 1960s. It provided the means of defending the ideals of diversity and variance as essential to social and biological heritage, proving useful foil to controversial programmes to realise the optimum population. Indeed, Notestein resigned from the propagandist agency for family planning, the Population Reference Bureau (PRB), when Robert E. Miles Jr. became its leader in 1969. Miles had begun to reorient the organisation towards promoting an environmentalist agenda and the ideal of the two-child family for all.⁵³ For Notestein, the “false ideal” of the two-child family would result in “uniformity” detrimental to the transmission of “biological or... social heritage... Surely we should maximise our potential by seeking diversity and a society that, through diversity, could be self-selective for the traits that are biologically and socially valued.” In a society of planned families, “the couple that decides to have five children will probably be excellent parents on the average,” while environmentalist propaganda for zero population growth would be more influential among

⁵² AES: Princeton Conference, 1st, Transcript #13, p. 61, AES Papers, APS.

⁵³ Demographers did have problems with some of the outspoken comments of the Bureau’s previous director, the geneticist and eugenicist, Robert Cook, such as those expressed in his 1951 text, *Human Fertility*. Nevertheless, they felt more comfortable with his emphasis on family planning and genetic diversity.

the responsible and educated and thus “almost certainly stimulate the *wrong* people.”

a tool to derogate, many scientists were beginning to argue that there had been an overreaction to the naïveté and politics of early eugenicists. As a result, scientists had avoided potential applications of knowledge and technology of critical importance to the future of man, for equally emotional, moral and political motivations. While the zeal of early eugenicists may have led them into the realms of pseudoscience, they requested that scientists not forget that knowledge production was a cumulative process.⁵⁷ Indeed, it was the very focus on the problems of quality

Therefore, we can see how communities of scientists continued to accuse one another of having inherited the eugenics movement's tradition of political interest, discrimination, and elitism. While there had been great strides made in restoring credibility to the term "eugenics", its stigmatising potential remained. As the social context of debates over fertility control continued to shift, this potential was increasingly realised. In 1966, the Nobel Prize winning physicist, William Shockley, had made an infamous presentation to the National Academy of Sciences (NAS) which synthesised under the title of "eugenics" the compulsive element of population control with the targeting of the dysgenic fertility of the black population.⁵⁸ Osborn responded quickly, warning Shockley that his statements would

... impede the progress of scientific work which is now going on by wrapping it in an emotional atmosphere and by encouraging prejudiced attacks on the men doing the work. You are setting back the course of studies which bear on eugenic problems... All of this is very painful to us who through long years have been dedicated to trying to understand more about this complex field.⁵⁹

Osborn (1968) had also expressed concern that while fertility differentials had declined within the white population they had only increased within a more rapidly growing black population (Kiser 1970).⁶⁰ However, for Osborn, it was necessary to approach this problem through a focus on

⁵⁸ Shockley was a Stanford physicist who turned his attention to race soon after receiving the Nobel Prize. Again, following Goffman (1963: 167), it seems "that a confirmed high posit ain0.0004 Tw 1c 16bncossocisowtargeta lks n0.0ies0.0obnco3 Tc -0.0060.02 0 0 tio

unwanted fertility and voluntary parenthood.⁶¹ He urged Shockley to consider the important work in genetic demography as a basis for a voluntary and democratic eugenics. In failing to adopt this approach, Shockley was transgressing the boundaries of “normal” and “acceptable” science, and consequently, was undermining the credibility that Osborn had spent so long restoring to eugenics.

Osborn was joined by Dobzhansky, who employed a similar approach when responding

Kallikaks and *Jukes*, programmes of sterilisation for criminals and the mentally defective, and concepts such as the genetic load of mutations, “degeneracy” and “population pollution”.⁶² For Shockley, the “bad heredity”

between psychologists such as Sir Cyril Burt and the eugenics movement as evidence of an elitist and discriminatory agenda. With growing evidence of Burt's fraudulent construction of statistical data, any reference to his evidence of the innate character of intellectual characteristics, now "marked" an individual with the stigma of flawed science in the service of eugenic ideology (Gieryn and Figert 1986).⁶⁵ Kamin was soon joined by Lewontin who, in shifting further to the left, now criticised Dobzhansky for his naïveté in failing to recognise the political dimension of biological theories of inequality.⁶⁶

With such growing controversy, others involved in the field of genetic demography preferred to abandon, or at least severely restrict, the territory of population "quality". James Neel argued that "anything other than a simple quantitative policy, of the same number of children for every couple, is unworkable" (Neel 1973: 361). Broad "qualitative judgments" were both "emotionally unacceptable to society" and beyond the bounds of present "wisdom or knowledge" (Neel 1973: 361). Within such a policy, a restricted programme of medical genetics focused on specific genetic disease could continue to exist.⁶⁷ He even expressed sympathy for Graham (1971), encouraging the American Society of Human Genetics to "come out strongly with a statement – two children to each couple, on the average – then this might do much to defuse the issue of the geneticist trying to

⁶⁵ Many so-called "hereditarian" psychologists had relied on Burt's calculations in their own work, leaving themselves open to criticism. While, certainly, those such as Jensen and Shockley used arguments of persecution from the left most effectively, Jonathan Harwood (1982) points out that this does not mean that they were not restricted in publication and lecturing. When suggesting that social scientists may have been over-zealous in their criticism of genetic interpretations, even Harwood found difficulties in publication. One editor of a left-wing journal complained that "far from wishing 'to save the hereditarian baby while discarding the reactionary bath water', those of us who have been involved in the black struggle would have preferred to see the hereditarian baby strangled at birth". Letter to Harwood, 1 June 1981, from private correspondence of Jonathan Harwood.

⁶⁶ Lewontin to Dobzhansky, 2 May 1973, Dobzhansky papers, Lewontin, R. C., APS.

⁶⁷ Neel wrote to Curt Stern, "I personally am ready to go on record with the thought that for present, it would be better to apply a 'quota' to everyone rather than with our knowledge as limited as it is, applying a sliding scale for reproduction on the basis of value judgment." 25 July 1967, Neel papers, Series IV, 8, APS.

decide, as we go into the population crunch, who should reproduce and who shouldn't."⁶⁸

AES members were now witnessing the promotion of the two-child quota system to realise zero population growth and as means of sidestepping eugenics. Some expressed their support, Erlenmeyer-Kimling and Gottesman, the future president and vice-president of the Society respectively, professing that Osborn's "new eugenics may never be able to free itself from the stigma of its past" (1971: 1). Indeed, while the recommendation of CPGAF that the answers to population problems be sought in "qualitative not quantitative terms" was no doubt much to Osborn's liking, in the only section of the report dealing with genetic issues, Michael Teitelbaum restricted his study to medical genetics and the influence of age and child spacing on the incidence of genetic defect. When discussing the subject of "eugenics", Teitelbaum's definition was negative. He described the issue of genetic quality as having been "plagued by incorrect scientific propositions motivated primarily by political ideologies." This was in spite of Osborn's urging that he include an overview of the eugenic improvement made through more general population policies and the increase in social mobility and assortative mating.⁶⁹

The same year that the CPGAF report was published, it was decided that the damage to the term "eugenics" was irreversible. The AES was renamed, the Society for the Study of Social Biology, following the confessed failure to "restore the name to public and scientific esteem."⁷⁰

The Society's then president, Dudley Kirk, reported; "Many members have felt that the existing name has hindered the purposes of the Society because of the general misunderstandings that we do not have the power to dispel."⁷¹ Eugenics now functioned as a "stigma symbol", and the strategy was, once again, to "conceal" or "obliterate" through "name changing" (Goffman 1963: 114). The Society incorporated the name, "American Eugenics Society", thereby protecting it in accordance with New

Conclusion

While the fortunes of a “genetic demography” were not wholly dependent upon the fortunes of the eugenic enterprise, we have seen how important its role was in defining the relations between social and biological scientists of population. Having served as a site of trans-disciplinary communication and boundary-crossing in the interwar era, “eugenics” began to develop an important heuristic function as a “stigma symbol” - a means of circumscribing the boundaries of scientific disciplines such as genetics and demography. Its uses have proved divisive. In the 1940s and 50s, as demographers focused their attention on the socio-economic causes and consequences of global population growth, they eschewed the study of differential fertility as the concern of the eugenically minded biologist.

However, in the post-war era, eugenics was not so much “discredited”, as it was, in Goffman’s terms, “discreditable” - its stigma was “managed” through boundary-work. Leaders in the movement, such as

celebrate his or her own, unique genetic potential as essential to a dynamic, complex, and diverse industrial society. This conception countered extremist approaches to population contro

which he used to such great effect in the broader “classical-balance” debate.

Throughout this paper, we have seen how communities of scientists have continuously accused one another of having inherited the eugenics movement’s class and race biases, while presenting their own approaches as heirs to Galton’s admirable, if at times naïve and misapplied, vision of science in the service of human betterment. Through the study of stigma politics, we can see how “eugenics” as a label has multiple uses. As an exclusion device, it can be a means of tainting particular facts,

policy being “eugenic” have abounded.⁷⁵ While there has been some renewed interest in convergent issues in genetics and demography, the field remains controversial and scientists have continued to observe that the “scope for convergence between the two disciplines should be great, but in practice genetics has made only a very limited impact on mainstream demography” (Pressat 1985: 176).

⁷⁵ For example, the genetic demography of James V. Neel has been the subject of much controversy in recent years. Patrick Tierney (2000) uses Neel’s connections, albeit fractious, with eugenics. He elevates these to become the defining feature of his personality, and thus, his scientific endeavour. This has sparked a significant controversy in anthropology. In their measured contribution, Diane Paul and John Beatty (2000) identify a number of individuals who, according to Tierney’s criteria, fall into the category of ‘eugenicist’, such as Franz Boas and Dobzhansky. They also identify the diversity of positions with regard to the question of abnormality, focusing upon Neel’s challenges to Muller’s conception of the genetic load.

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