

DIFFERENTIAL MINDS: MASS INTELLIGENCE TESTING AND RACE
SCIENCE IN THE TWENTIETH CENTURY

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ABSTRACT

Historians have argued that race science and eugenics retreated following their discrediting in the wake of the Second World War. Yet if race science and eugenics disappeared, how does one explain their sudden and unexpected reemergence in the form of the neohereditarian work of Arthur Jensen, Richard Herrnstein, and Charles Murray? This dissertation argues that race science and eugenics did not retreat following their discrediting. Rather, race science and eugenics adapted to changing political and social climates, at times entering into states of latency, throughout the twentieth century. The transnational history of mass intelligence testing in the twentieth century demonstrates the longevity of race science and eugenics long after their discrediting. Indeed, the tropes of race science and eugenics persist today in the modern I.Q. controversy, as the dissertation shows. By examining the history of mass intelligence testing in multiple nations, this dissertation presents narrative of the continuity of race science and eugenics throughout the twentieth century.

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INTRODUCTION

On March 2, 2017, protesters at Middlebury College in Vermont carrying signs that read “No Eugenics” interrupted an on-campus lecture given by Charles Murray, co-author of *The Bell Curve*. The protesters hurled accusations that Murray was a white nationalist, chanting, “racist, sexist, anti-gay, Charles Murray go away!” The protest forced the cancellation of the lecture, eliciting strong reactions from right-wing groups. Objectors to the protests decried the death of freedom of speech and the “intolerance” of the left. In an open letter, students protested that the matter was not one of free speech, but of scholarly integrity. The letter, which read, “in this case, there’s not really any ‘other side,’ only deceptive statistics masking unfounded bigotry,” argued that Murray’s research was pseudoscientific and therefore had no place on a university campus. Murray was forced to flee the campus and at least one individual sustained injuries as the protest turned riotous.¹ The I.Q. controversy consists of the heated debates surrounding several key issues in intelligence testing in the twentieth and twenty-first centuries: the definition and measurement of intelligence, the factors that determine intelligence, intellectual differences between groups, and the relation of intelligence to differential fertility. This recent incident underscores the urgency and relevance of the I.Q. controversy in modern times. More than twenty years after its initial publication, *The Bell Curve* continues to stand as representative of the enduring influence of race science and eugenics within this broader controversy. The Middlebury protests reveal critical and enduring themes of the I.Q. controversy, including condemnations of racist science, often from the left; accusations of the oppressive consensus and intellectual fraudulence of the academic

¹ Katharine Q. Seelye, “Protesters Disrupt Speech by ‘Bell Curve’ Author at Vermont College,” *New York Times*, March 2, 2017.

establishment, generally from the right; and the persistence of race science despite its discrediting by mainstream science.

The Bell Curve, published in 1994 and authored by Charles Murray and Richard Herrnstein, revived the I.Q. controversy of the 1970s when it reintroduced the polemical claim that differences in black and white students' I.Q. test scores had a genetic basis. Reflecting on *The Bell Curve* twenty years after its first publication, Murray claimed in a 2014 interview conducted by the conservative think tank, the American Enterprise Institute, "the reaction to 'The Bell Curve' exposed a profound corruption of the social sciences that has prevailed since the 1960s. 'The Bell Curve' is a relentlessly moderate book – both in its use of evidence and in its tone – and yet it was excoriated in remarkably personal and vicious ways, sometimes by eminent academicians who knew very well they were lying." He argued, "the social sciences have been in the grip of a political orthodoxy that has had only the most tenuous connection with empirical reality, and too many social scientists think that threats to the orthodoxy should be suppressed by any means necessary. Corruption is the only word for it." In Murray's view, corruption, however, was not solely responsible for the mainstream scientific community's outspoken defamation of *The Bell Curve*. Murray continued, "now that I've said that, I'm also thinking of all the other social scientists who have come up to me over the years and told me what a wonderful book 'The Bell Curve' is. But they never said it publicly. So corruption is one thing that ails the social sciences. Cowardice is another."²

Murray denied that *The Bell Curve* was ever about race or the genetic basis of I.Q.: their work had been misconstrued and misrepresented by its critics who exaggerated

² Natalie Goodnow, "'The Bell Curve' 20 years later: A Q&A with Charles Murray," *AEIdeas*, October 16, 2014, <http://www.aei.org/publication/bell-curve-20-years-later-qa-charles-murray/>.

the book's emphasis on race and twisted their words on the influence of genetics in the development of group and individual intelligence.³ He attributed this libel to the corruption and cowardice of the establishment, stating that "fifty years from now, I bet those claims about 'The Bell Curve' will be used as a textbook case of the hysteria that has surrounded the possibility that black-white differences in IQ are genetic."

Recounting the passage from the book that concluded, "*it seems highly likely to us that both genes and the environment have something to do with racial differences,*" he stated, "that's it. The whole thing. The entire hateful Herrnstein-Murray pseudoscientific racist diatribe about the role of genes in creating the black-white IQ difference." Murray thus portrayed himself and Herrnstein as the victims of the oppressive political orthodoxy of the scientific establishment, explaining, "if you say it is likely that there is any genetic component to the black-white difference in test scores, the roof crashes in on you." Yet, Murray countered, "on this score, the roof is about to crash in on those who insist on a purely environmental explanation of all sorts of ethnic differences, not just intelligence. Since the decoding of the genome, it has been securely established that race is not a social construct, evolution continued long after humans left Africa along different paths in different parts of the world, and recent evolution involves cognitive as well as physiological functioning."⁴ This revealing claim casts doubt on Murray's assertion that *The Bell Curve* was never about race or the genetic basis of intellectual differences between groups.

In a subsequent interview with the American Enterprise Institute, Murray asserted, "the dirty little secret about 'The Bell Curve' is that it did not push the scientific envelope

³ Ibid.

⁴ Ibid.

at all. We were in the scientific mainstream. Every single significant statement we made – scientific statement we made – has not only not been refuted; they have been confirmed by subsequent research.”⁵ Murray’s representation of mainstream science on I.Q. recalls the claims of neohereditarians of the 1970s, including Richard Herrnstein, William Shockley, and Arthur Jensen, who accused the liberal establishment of covering up unpleasant scientific truths about race and class differences in intelligence, and of placing a gag on dissenters by defaming them publicly. The corruption Murray describes similarly resonates with the claims of hereditarian experts of the 1990s who accused the liberal political orthodoxy of silencing researchers for voicing politically incorrect scientific truths. Such accusations of Lyseknoism, so-named after the Soviet program in genetics run by Trofim Lysenko that actively promoted disproven scientific theories about heredity for political ends, had abounded in the United States since the 1950s and served as powerful tools in the hands of hereditarians eager to demonstrate the scientific invalidity of their opposition.

Murray elaborated further that I.Q. had significant policy implications that were willfully overlooked by the establishment to the detriment of all of society, again echoing the statements of the neohereditarians of the 1970s. He maintained: “[I.Q.] is an all-purpose resource that has, because of our economy and the improvements in our educational system, allowed people of high-ability who disproportionately earn a lot of money, to create a new class in the United States, a class that did not exist 60 years ago. A cognitive elite.” This had significant implications for both society and government policy. For, “unless you take into account all of the effects of that class at the top and a

⁵ Charles Murray and James Pethokoukis, “Is this the ‘Coming Apart’ election? A Q&A with Charles Murray,” *AEIdeas*, July 1, 2016, <https://www.aei.org/publication/coming-apart-election-qa-with-charles-murray/>.

class at the bottom that has gotten the short end of the stick in this very valuable general resource called intelligence, unless you understand the dynamics of that, you are going to pursue solutions in social policy that don't have a snowball's chance in hell of working.”⁶ Murray's invocation of the language of resources and capital resonates with that of experts from the 1950s, 1960s, and 1970s who argued that the genetic basis of I.Q. and its relationship to the differential fertility of various racial, ethnic, and social groups, was largely responsible for declines and stagnation in national levels of intelligence. It may be tempting to disregard Murray and others' claims about the genetic basis of differences in I.Q. test performance as aberrant instances of the manipulation of scientific evidence to achieve political ends. However, to dismiss these voices as aberrations is to overlook the longer history and origins of the modern I.Q. controversy.

Beginning with the first modern intelligence test designed in 1905 by French psychologist Alfred Binet to identify children in need of remedial education, concern over the factors that determined individual intelligence, as well as the factors that determined intellectual differences between groups, have abounded in widespread temporal and spacial contexts. Anxieties over levels of national intelligence, and their relationship to differential fertility, were often animated by eugenics or race science. Before the Second World War this was frequently transparent and explicit. Yet there was a period during the postwar moment when race science and eugenics ostensibly disappeared. This was largely due to the revelation of the horrors of *rassenhygiene* in Nazi Germany, which led to the discrediting of race science and eugenics among mainstream scientific communities. The drafting of the UNESCO statements on race, the

⁶ Ibid.

environmental turn in the field of genetics that pushed back against the hardline hereditarian claims of eugenicists, the achievements of the Civil Rights Movement, and the institution of government programs designed to create equal opportunities for all document steady advances against hereditarian theories of the genetic inferiority of certain socioeconomic classes and racial and ethnic groups over the course of the second half of the twentieth century. Indeed, the discrediting of race science led numerous historians to argue that race science retreated. Similarly, many historians have argued that following the Second World War eugenics was dismissed by mainstream science as the pseudoscience of a bygone era.⁷ Yet if race science and eugenics truly disappeared after the Second World War, how do we explain their seemingly sudden and strange reemergence in the late 1960s and 1970s in the form of the work of Arthur Jensen, William Shockley, and Richard Herrnstein? How do we explain the 1990s publication of *The Bell Curve*?

The long history of the I.Q. controversy reveals the tenacity and adaptability of race science and eugenics. Race science and eugenics never truly retreated, but underwent numerous transformations over the course of the twentieth century, at times entering into a latent state. To perceive the published works of Jensen, Shockley, Herrnstein, and Murray as aberrations is to lose sight of a broader and longer narrative of the continuity of race science and eugenics throughout the twentieth century and into the twenty-first. The resiliency of race science and eugenics was principally achieved by the

⁷ Elazar Barkan, *The Retreat of Scientific Racism: Changing Concepts of Race in Britain and the United States between the World Wars* (New York: Cambridge University Press, 1992); Nancy Stepan, *The Idea of Race in Science: Great Britain, 1800-1962* (Hamden, CT: Archon, 1982); George W. Stocking Jr., *Race, Culture, and Evolution: Essays in the History of Anthropology* (Chicago: University of Chicago Press, 1968); Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity*, 2nd ed. (Cambridge: Harvard University Press, 1995).

ability of race scientists and eugenicists to alter their messages to speak to the particular anxieties of diverse geopolitical and temporal contexts, and to speak especially to anxieties related to rising and falling levels of national intelligence. Over the decades, experts drew on mass intelligence testing data to argue that national levels of intelligence were at times declining or stagnating as a consequence of the differential fertility of specific groups. The wars of the twentieth century were driving forces behind the repurposing of individual I.Q. tests as tools of mass testing. In time of conflict, nations began to apply intelligence tests en masse in order to quickly process recruits. Beginning with the United States Army's first mass application of intelligence tests to new recruits in the First World War, intelligence tests were used by experts to quantify national levels of intelligence for the first time in history. This precedent led to the institutionalization of mass intelligence testing as a means of determining national levels of intelligence. During the interwar period, a series of national surveys followed, generating a wealth of data on national levels of intelligence. Experts drew on these data to make claims that national levels of intelligence were declining. The underlying assumption behind these alarmist claims was a genetic basis for individual intelligence. Intelligence was declining, experts argued, due to the greater fertility of innately inferior groups within national populations. These experts hypothesized a negative correlation between fertility and intelligence; larger families tended to have lower I.Q.s, while the most intelligent among society had the fewest number of children, leading to the degeneration of the nation. This argument effectively targeted lower income and immigrant families who on average had larger families during these years, which in turn reinforced the notion that the poor and minorities were the least intelligent members of society. In the United

States, this played out primarily in racial terms, while European experts focused on the working classes within their nations. Experts warning of imminent national degeneration urged their governments to undertake measures to prevent it.

By the 1950s this narrative shifted as experts redirected their energies toward the maximization of intelligence. The groundbreaking longitudinal studies of the intelligence of schoolchildren in Scotland in the 1930s and 1940s, major psychological and demographic studies conducted in the United States, and mass intelligence surveys in France all indicated that intelligence was not in fact declining as experts had so long feared, but possibly even rising, troubling the old narrative of decline. These surveys, and their revelation that intelligence might not be in decline after all, generated a series of theoretical explanations for rising levels of intelligence. Some experts suggested assortative mating, or the marriage of like with like, was the root cause of the apparent increase. Others proposed that “test sophistication,” or increasing familiarity with the tests, had produced a false elevation in intelligence test scores, and thus false hope as well. Others suggested that populations naturally achieved intellectual stasis, and that while differential fertility was not causing a decline, it might be preventing a rise in national intelligence. In light of these surveys, experts advised their nations to invest in the intelligence of their citizens. As nations became increasingly invested in the maximization of national intelligence, experts began to resort to the language of human capital and resources to justify and support these investments. I.Q. as human capital, experts argued, was necessary for both national and international success, particularly during time of war. This rhetorical shift coincided with the environmental turn in the human sciences. Following the discrediting of eugenics and race science during the

Second World War, the human sciences embraced more complex models of intellectual development that acknowledged the importance of both environment and genetics, leading to the creation of numerous initiatives and programs designed to decrease inequality between groups and to maximize individual intellectual potential through environmental and educational interventions.

The post-Second World War environmental turn came under attack in the late 1960s following the apparent failure of the programs designed to bridge inequalities between groups, which often neglected to address systemic and institutionalized discrimination. Dissatisfaction with government spending on these initiatives, along with the challenges to the social and political status quo presented by the political and legal advances achieved by minority rights activists in the 1960s, helped to create an environment permissive to the return of hereditarian arguments about the differential intelligence of groups. Following the publication of Jensen's 1969 article in the *Harvard Educational Review*, which alleged that black students' were inherently less intelligent than their white peers, narratives began to shift once more. Neohereditarian experts argued that educational and environmental interventions were incapable of improving the intelligence of certain groups of the population. These "Jensenists" rejected liberal policy interventions in favor of a distinctly neoliberal approach.

Neohereditarianism emerged at a moment of liberal pessimism about the ability of government interventions to effect change. Rather than urging government intervention to exert population control, or attempt to level the playing field through educational policy, as their predecessors had at various times done, these individuals argued that valuable national resources were being wasted in a futile effort to achieve equality.

Highly critical of Great Society programs intended to eliminate the intelligence test performance gaps between racial and socioeconomic groups, neohereditarians argued that the apparent failure of these liberal programs provided clear evidence of innateness of I.Q. In Jensen's own words, "as environmental inequalities are ameliorated, human differences in ability and performance will be increasingly due to genetic factors, and the greater will be the force of the argument: a meritocratic society will become increasingly stratified by biological factors."⁸ Neohereditarians worked fervently to demonstrate that socioeconomic and racial disparities in intelligence test performance derived not from environmental inequalities, but from unequal genetic endowment. Although neohereditarians represented a minority opinion among experts, they proved a powerfully influential force in the culture wars of the 1980s and 1990s, tapping into broader neoliberal discontent with government interventions. Neohereditarians asserted that their counterparts were responsible for hiding or misrepresenting scientific data in order to fulfill a flawed political agenda. They portrayed themselves as the victims of political obstructionism and argued that many of their opponents held views similar to their own in secret, and remained silent only out of fear of the corrupt establishment. These accusations had reverberating effects, provoking some professional scientific organizations to exercise reticence in their responses to neohereditarianism in an effort to not overstate available scientific knowledge on the issues at hand, lest they lend any credibility to neohereditarian claims.

The I.Q. controversy was revived once more in the 1990s with the publication of *The Bell Curve*. Although the narratives on I.Q. and national intelligence shifted over the

⁸ Arthur R. Jensen, "Expanding the Thesis: The I.Q. Controversy," *Chicago Tribune*, June 24, 1973, F4.

decades, race science and eugenics have been continuously implicated in the I.Q. controversies of the twentieth century. Race science and eugenics proved highly adaptable to diverse political, social, and national milieus. The broader history of the I.Q. controversy demonstrates the profound plasticity of eugenicists and race scientists in their invocation of the rhetoric of human capital, resources, and ability, and their narratives predicting the future of national levels of intelligence. This history bears relevance for today as advances are made in the field of genetics, and the possibility of selecting genes for high intelligence draw nearer within reach.⁹ To treat instances of the sudden appearances of race science and eugenics as anomalies is to underestimate their intransigence and malleability. The long history of the I.Q. controversy demonstrates the persistence of race science and eugenics in many guises, even and especially during the moments when they seem to have disappeared.

For the purpose of this research I define race science as science undergirded by racial essentialism and biological determinism, and eugenics as science motivated by desires to either improve or prevent the decline of the race. The aims of race science often overlapped with those of eugenics, though at times they were distinct. In tracing the historic roles of both race science and eugenics in the I.Q. controversy, I treat each as separate phenomena with often related trajectories. There are, however, notable differences between the two. First, race takes on multiple and different meanings. In the case of race science, “race” refers to constructed categories that differentiate between groups within a population according to ethnicity, skin color, or heritage. In the case of

⁹ John Bohannon, “Why Are Some People So Smart? The Answer Could Span A Generation of Superbabies,” *Wired Magazine*, July 17, 2013, <https://www.wired.com/2013/07/genetics-of-iq/>.

eugenics, race variably refers to the human race or national populations, as well as constructed racial categories. Thus, not all eugenicists were invested in the same questions and concerns as race scientists. Indeed, many European experts were more concerned with class differences than racial ones, which minimized the influence of race science in European I.Q. controversies relative to their American counterparts. In the United States, both race scientists and eugenicists were most frequently preoccupied with constructed racial categories, even when at times the language of socioeconomic difference supplanted that of race. For these reasons, race science proved much more intransigent in the United States than in Europe, although this began to change by the end of the century as European countries became more concerned with influxes of immigrants. Second, while a number of historical actors self-identified as eugenicists, none self-identified as “race scientists.” For this reason, I reserve identifying individuals as eugenicists for those who self-identified as such. The label of “race scientist” is one which I invoke and apply to describe experts whose scientific practices either embodied essentialist and biologically deterministic thinking about race, or who were identified as race scientists by contemporaries.

Viewed through a transnational lens, the history of intelligence testing emphasizes the universality of the continuity of race science and eugenics. The intelligence testing movement, which crossed national borders and transpired in international spaces, sought both answers to international dilemmas and solutions tailored to national contexts. A transnational approach traces the growth of a movement that developed beyond the

confines of national borders.¹⁰ Extant scholarship on the history of intelligence testing emphasizes the differences and distinctions between national histories of intelligence testing. By contrast, this dissertation highlights the shared history of intelligence testing between different nations and reveals a constant tension between national and international concerns. The leaders of this movement conceived of it as an international endeavor with profound international implications, even as they advanced applications and solutions primarily adapted to national problems. This tension between the national and the international characterized the intelligence testing movement from its origins in the early twentieth century, up through recent history. National contexts proved formative in the precise unfolding of mass intelligence testing, yet each of these discrete national contexts shared a set of historical commonalities. These commonalities included anxieties over national levels of national intelligence, the relationship of differential fertility to intelligence, and the effects of demographic conditions on intellectual development. The most significant commonality shared among nations, however was the persistence of race science and eugenics throughout the I.Q. controversies of the century and their ability to adapt to unique political environments, including even those of nations with conflicting experiences with eugenics and race science.

In approaching mass intelligence testing from a transnational perspective, the dissertation builds on comparative histories of intelligence testing, such as that of John Carson, and national histories of intelligence testing, including those of Leila Zenderland and William Schneider, to demonstrate how mass intelligence testing helped to perpetuate

¹⁰ In so doing, the dissertation adopts a framework similar to that of Matthew Connelly's global history approach in *Fatal Misconception: The Struggle to Control World Population* (Cambridge: The Belknap Press of Harvard University, 2008).

race science and eugenics long after their discrediting.¹¹ In so doing, the dissertation emphasizes a tension between the national and international in the history of intelligence testing. For instance, intelligence testing experts became preoccupied with “internationalizing” tests early in the twentieth century, even while they resorted to intelligence testing as a means of resolving national issues. National histories of intelligence have centered on the themes of meritocracy and discrimination, and have endeavored to explain how intelligence testing was legitimated as an instrument of meritocracy and applied as a tool of discrimination. In looking beyond the scope of the nation, concerns over alleged links between fertility and intelligence emerge as an equally vital theme. Allegations of a relationship between differential fertility and intelligence generated anxieties about national levels of intelligence and fueled many of the mass intelligence surveys of this century. Moreover, a transnational perspective highlights the considerable similarities in intelligence testing between nations that historians have often represented as having drastically different responses to intelligence testing. This is particularly true in the case of France. In spite of its lukewarm reception of intelligence tests in the early twentieth-century, French attitudes began to change during the interwar period, and by the Second World War, France boasted the distinction of carrying out the largest intellectual survey of schoolchildren in the world. Although national context did produce unique histories of intelligence testing, a transnational approach reveals mass intelligence testing as a truly transnational movement that was times in tension with national prerogatives.

11 John Carson, *The Measure of Merit: Talents, Intelligence, and Inequality in the French and American Republics, 1750-1940* (Princeton: Princeton University Press, 2007); Elaine E. Castles, *Inventing Intelligence: How America Came to Worship I.Q.* (Santa Barbara: Praeger, 2012); Leila Zenderland, *Measuring Minds: Henry Herbert Goddard and the Origins of American Intelligence Testing* (New York: Cambridge University Press, 1998); William H. Schneider, “After Binet: French Intelligence Testing, 1900-1950,” *Journal of the History of the Behavioral Sciences* 28 (April 1992): 111-132.

The dissertation also seeks to build on the work of scholars of intelligence testing by expanding the chronology of this history. An examination of the long history of the I.Q. controversy over the twentieth century reveals a symbiotic relationship between population studies, genetics, eugenics, and psychology. An intelligence testing network made up of these professions variably collaborated and competed for control over intelligence testing. The issuance of jurisdictional claims on intelligence served these professions in their efforts to assert their authority to address issues of national welfare and security related to national intelligence. At times this contest for control led to inter-professional conflict. For instance, the exclusion of physical anthropologists from the drafting of the initial UNESCO statement on race, or Arthur Jensen's lack of background in genetics, led to clashes between various human science professions. At other times, collaboration allowed each profession to carve a niche for itself within the I.Q. controversy, thereby linking the controversy to fields as diverse as demography, genetics, and psychology. The involvement of each of these professions in major mass intelligence surveys and the production of statements on intelligence cemented each profession's claim within the I.Q. controversy. Multiple professions identified themselves as authorities on the use and interpretation of intelligence testing data. In spite of the perpetual inability of experts to settle on a single workable definition of intelligence, or even what intelligence tests measured, the professions each sought to establish their jurisdiction, rendering this history interdisciplinary.¹²

12 Andrew Abbott, *The System of Professions: An Essay on the Division of Expert Labor* (Chicago: University of Chicago Press, 1998.)

An expanded chronology of the I.Q. controversy furthermore helps to reveal the ways in which war and international conflict served as primary catalysts in the history of mass intelligence testing. For example, the experimental United States Army group intelligence tests of the First World War propelled intelligence testing out of its institutional origins. Originally utilized in institutional settings for individual diagnostic purposes, the mass application of intelligence tests on United States Army recruits initiated a century of mass applications of intelligence tests with the goal of measuring group, rather than individual, intelligence. Intelligence tests thus became a tool of national assessment that was utilized repeatedly over the course of the twentieth century. As technological instruments, intelligence tests generated data on the intelligence of populations with which experts constructed notions of intellectual averages in a fashion similar to other social science survey technologies studied by Sarah Igo.¹³ The establishment of intellectual averages, norms, and national levels of intelligence enabled the comparison of intelligence between both national populations and populations within nations. Specifically, mass intelligence testing lent itself to comparisons of intellectual averages of socioeconomic and racial groups.

World war created opportunities for the first mass applications of intelligence tests to assess the intelligence of populations. In turn, world war nurtured fears about national degeneration and the decline of critical human resources, as the data from the first mass intelligence surveys revealed startling evidence that the unintelligent were reproducing at a greater rate than the most intelligent of society. Beginning in the interwar period, psychometricians and population experts started to suggest that decadence of national

¹³ Sarah E. Igo, *The Averaged American: Surveys, Citizens, and the Making of a Mass Public* (Cambridge: Harvard University Press, 2008).

levels of intelligence put nations at risk of world war. During the Cold War, as anxieties shifted away from degeneration, experts redirected their energies toward the maximization of national intelligence, arguing that the nation's intelligence was vital to winning the war. Through an expanded chronology, the dissertation highlights this tension between intelligence testing and war. War inspired and provided considerable opportunities for mass applications of intelligence tests. Conversely, experts believed elevated levels of national intelligence would function as a bulwark against war. Mass intelligence testing was thus a product of war, even as its promoters viewed intelligence as a safeguard against war. In underscoring this tension, the dissertation seeks to add an additional facet to observations made in prior scholarship on the symbiotic relationship between war and the professionalization of psychology in the twentieth century. Not only did war present critical opportunities for the expansion of professional jurisdiction, it simultaneously had the effect of militarizing notions of intelligence, which became evident in discussions of human capital and resources in the postwar era. The dissertation thus endeavors to contribute to the work of historians of the human sciences, in an effort to speak to broader discussions of the relationship between war and the professionalization of the human sciences in the last century.¹⁴

14 James H. Capshew, *Psychologists on the March: Science, Practice, and Professional Identity in America, 1929-1969* (New York: Cambridge University Press, 1999); Daniel J. Kevles, "Testing the Army's Intelligence: Psychologists and the Military in World War I," *The Journal of American History* 55(3)565-581; Joy Rohde, *Armed with Expertise: The Militarization of American Social Science Research during the Cold War* (Ithaca: Cornell University Press, 2013); David C. Engerman, *Know Your Enemy: The Rise and Fall of America's Soviet Experts* (New York: Oxford University Press, 2009); Joel Isaac, "The Human Sciences in Cold War America," *The Historical Journal* 50:3 (September 2007), 725-746; Audra J. Wolfe, "Defending Cold War Science," *Berfrois* (2013); Ellen Herman, *The Romance of American Psychology: Political Culture in the Age of Experts* (Berkeley and Los Angeles: University of California Press, 1995).

The history of mass intelligence testing highlights above all else the adaptability and longevity of race science and eugenics throughout the twentieth century. The dissertation argues against the claims of extant scholarship that race science retreated after the Second World War.¹⁵ In so doing it builds on the progress made by historians of science, such as Alexandra Minna Stern and Nathaniel Comfort, who have demonstrated the longevity of eugenics into the late twentieth century.¹⁶ It contributes as well as the work of scholars Perrin Selcer, Tracy Teslow, and Jenny Reardon, who have demonstrated the perpetuation of race science long after its discrediting by mainstream science.¹⁷ Far from retreating, race science underwent numerous transformations over the twentieth century in accord with the political and social climate of the times. For instance, at the beginning of the century and leading up to the Second World War, experts warned of the degenerative effects of differential fertility on national levels of intelligence; drawing on the language of resources, these experts predicted a future embroiled in international conflict and national decadence. Yet by the end of the Second World War, as longitudinal intelligence testing studies provided evidence that national levels of intelligence were not in fact in decline, experts turned to the language of human capital to advocate for policies that would maximize national levels of intelligence. In the 1970s, following the publication of the work of Jensen, Shockley, and Herrnstein,

15 Elazar Barkan, *The Retreat of Scientific Racism: Changing Concepts of Race in Britain and the United States between the World Wars* (New York: Cambridge University Press, 1992); Nancy Stepan, *The Idea of Race in Science: Great Britain, 1800-1962* (Hamden, CT: Archon, 1982); George W. Stocking Jr., *Race, Culture, and Evolution: Essays in the History of Anthropology* (Chicago: University of Chicago Press, 1968).

16 Alexandra Minna Stern, *Telling Genes: The Story of Genetic Counseling in America* (Baltimore: Johns Hopkins University Press); Nathaniel Comfort, *The Science of Human Perfection: How Genes Became the Heart of American Medicine* (New Haven: Yale University Press, 2014).

17 Tracy Teslow, *Constructing Race: The Science of Bodies and Cultures in American Anthropology* (New York: Cambridge University Press, 2014), 228, 305, 312, 350; Perrin Selcer, "Beyond the Cephalic Index: Negotiating Politics to Produce UNESCO's Scientific Statements on Race," *Current Anthropology* (April 2012): S173-S175; Jenny Reardon, *Race to the Finish: Identity and Governance in an Age of Genomics* (Princeton: Princeton University Press, 2005).

experts claimed that interventions designed to maximize the intelligence of certain racial and socioeconomic groups were doomed to fail, reflecting neoliberal disenchantment with the failure of liberal policies directed at the maximization of intelligence. Thus were eugenicists and race scientists able to alter and adapt their message over time.

The connection that early intelligence testing experts forged between differential fertility and intelligence proved a crucial and enduring trope in the hands of eugenicists and race scientists. Concerns about differential fertility helped to fuel anxieties about national levels of intelligence throughout the twentieth century. Experts variably identified socioeconomic status and race as the source of harmful fertility differentials. Studies on the influence of family size on I.Q. seemed to demonstrate that as families increased in size, individual intelligence decreased. This alleged correlation between family size and I.Q. motivated experts' appeals for government population planning or reproductive control over the most prolific, and least intelligent, members of society. Political and social context determined whether these members were identified by race or socioeconomic status. European experts focused predominantly on socioeconomic differences, while American experts focused predominantly on race. However, in the wake of changing attitudes toward racial discrimination in the United States after the Second World War, socioeconomic differences became more frequently invoked than racial difference. This changed in the 1970s, when experts in the United States returned to race as a mode of differentiation upon the seeming reappearance of race science in the form of Jensen, Shockley, and Murray.

In addition to rhetorical adaptiveness, race scientists attempted to recreate historical memory through narrative. Eugenics similarly reinvented itself in the postwar

years. Following the Second World War, the American Eugenics Society attempted to restyle itself by utilizing the history of eugenics as a foil for the new eugenics, which they professed would redress all of the errors of past eugenicists. These new eugenicists fashioned themselves as applying eugenics in a time in which the science was finally sufficiently advanced to implement eugenic policies. The society even changed its name to the American Society of Social Biology, further distancing itself from an unsavory past. At times, experts adopted the language of their opposition to project an outward image that belied eugenic or racist tendencies. This study thus builds on the work of Edmund Ramsden and others to show how race scientists and eugenicists utilized history and memory to reconstruct exonerating or exculpating narratives, by demonstrating the importance of rhetoric and the language of human capital and resources in the perpetuation of race science.¹⁸

In tracing the prolongation of eugenics past its discrediting, the dissertation also underscores the universality of this phenomenon, in spite of the uniqueness of national histories of eugenics. Historians have often emphasized the different trajectories of eugenics within distinct national contexts. Eugenics in the Great Britain often concentrated on class differences. In France, as in much of Latin America, eugenicists focused on child and maternal hygiene in the form of the practices of *puériculture* and *homicultura*. In Sweden, Denmark, Finland, and Norway, eugenics helped to fuel the establishment of a welfare state. In the United States, early twentieth-century eugenicists focused on the twin threats of feeble-mindedness and racial degeneration. Some nations pursued “positive” eugenics, which included pro-natalist, educational, or welfare

18 Edmund Ramsden, “Confronting the Stigma of Eugenics: Genetics, Demography and the Problems of Population,” *Social Studies of Science* 39(6) (December 2009): 853-884.

measures. Others pursued “negative” eugenics through institutionalization, immigration restriction, sterilization and marriage restriction laws. In addition to these national distinctions, important regional differences existed within nations as well.¹⁹ In spite of these significant national differences, the I.Q. controversy reveals equally important similarities. Nations that participated in the transnational intelligence testing movement did not abandon national concerns, yet countries with as diverse histories of eugenics as the United States, Great Britain, France, and Sweden found common ground and concern on the subject of national levels of intelligence, demonstrating the great reach and staying power of the eugenic and racist tropes of I.Q. controversy.

The dissertation finally introduces the language of human capital into historiographical conversations about meritocracy in the I.Q. controversies of the twentieth century to further develop historical understanding of the ability of race science to adapt to changing political contexts, including that of the rise of neoliberalism from the 1970s. Building on recent work of scholars, including Daniel Rodgers and Thomas Borstelmann, the dissertation explores how the language of human capital, resources, and abilities was invoked by race scientists and eugenicists to leverage arguments against

19 Garland E. Allen, "The Eugenics Record Office at Cold Spring Harbor, 1910-1940." *Osiris* 2 (1986): 225-64; Alison Bashford and Philippa Levine, *The Oxford Handbook of the History of Eugenics* (Oxford; New York: Oxford University Press, 2010); Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity*, 2nd ed. (Cambridge: Harvard University Press, 1995); Edward J. Larson, *Sex, Race, and Science: Eugenics in the Deep South* (Baltimore: Johns Hopkins University Press, 1995); Paul A. Lombardo, *Three Generations, No Imbeciles: Eugenics, the Supreme Court, and Buck v. Bell* (Baltimore: Johns Hopkins University Press, 2008); Pauline M. H. Mazumdar, *Eugenics, Human Genetics, and Human Failings: The Eugenics Society, Its Sources and Its Critics in Britain* (New York: Routledge, 1992); Alexandra Minna Stern, *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America* (Berkeley: University of California Press, 2005); Mark B. Adams, *The Wellborn Science: Eugenics in Germany, France, Brazil, and Russia, Monographs on the History and Philosophy of Biology* (New York: Oxford University Press, 1990); Angus McLaren, *Our Own Master Race: Eugenics in Canada, 1885-1945* (Toronto: Oxford University Press, 1997); Nils Roll-Hansen and Gunnar Broberg, *Eugenics and the Welfare State: Sterilization Policy in Denmark, Sweden, Norway, and Finland* (East Lansing: Michigan State University Press, 1996); Nancy Leys Stepan, *'The Hour of Eugenics: Race, Gender, and Nation in Latin America* (Ithaca: Cornell University Press, 1991).

Great Society liberalism.²⁰ It furthermore adds an exploration of the role of race scientists and eugenicists in neoliberal attacks on Great Society policy efforts to reduce inequalities. It thus builds on the work of scholars including Alice O'Connor and Daniel Geary to show an additional dimension by which Great Society programs were subject to neoliberal criticism by race scientists and eugenicists invested in demonstrating these programs' futility from the perspective of scientific research on I.Q.²¹

In investigating the struggles between the human science professions for authority, the dissertation offers new insights into the relationship between politics and the human sciences in the twentieth century and examines the complex role of objectivity in the human sciences. It builds on the recent work on politics and knowledge-production in the professions to highlight the role of ideology in the human sciences over the course of the century and its role in enabling the perpetuation of race science and eugenics.²² Although mainstream science had largely distanced itself from race science and eugenic theories by the close of the Second World War, efforts to debunk race science in the postwar era were continuously encumbered by tactical efforts to avoid accusations of misrepresenting of scientific knowledge to avoid unpleasant truths about social and racial inequality. Many postwar scientists and organizations therefore habitually erred on the side of reservation and caution, for fear of either being branded as Lysenkoists or

20 Daniel T. Rodgers, *Age of Fracture* (Cambridge: Harvard University Press, 2011); Thomas Borstelmann, *The 1970s: A New Global History from Civil Rights to Economic Inequality* (Princeton: Princeton University Press, 2013).

21 Alice O'Connor, *Poverty Knowledge: Social Science, Social Policy, and the Poor in Twentieth-Century U.S. History* (Princeton: Princeton University Press, 2002); Daniel Geary, *Beyond Civil Rights: The Moynihan Report and its Legacy* (Philadelphia: University of Pennsylvania Press, 2015).

22 Joel Isaac, *Working Knowledge: Making the Human Sciences from Parsons to Kuhn* (Cambridge: Harvard University Press, 2012); Andrew Jewett, *Science, Democracy, and the American University: From the Civil War to the Cold War* (New York: Cambridge University Press, 2012).

ideologues. Race scientists exploited this cautiousness to rhetorical and strategic advantage. Expert efforts to place science above the influence of politics therefore often inadvertently helped to perpetuate I.Q. controversies. Likewise, ideological attacks on race science, in their attempts to reveal the errors and falsehoods of race science, at times themselves contained errors, as was the case with *The Mismeasure of Man*, Stephen Jay Gould's rebuke of Jensen, Murray, and Shockley. Both shoddily constructed scientific attacks and ideological recusals on the part of mainstream science created a climate of permissiveness that enabled race science proponents to persist and even usurp the language of mainstream science originally deployed to combat race science. This research thus contributes to the literature on objectivity and advocacy in the human sciences in the United States, extending this debate beyond domestic borders by incorporating the transnational dimensions of tensions between objectivity and advocacy in the human sciences.²³

A transnational history of mass intelligence testing demonstrates the resiliency of race science and eugenics across space, borders, and time. Although explicitly eugenic or racist science is increasingly rare, the racist and classist assumptions embedded in the construct of I.Q. remain. Throughout many shifts in language, rhetoric, and narrative, the history of intelligence testing has been fraught with these discriminatory assumptions that have proved so intransigent as to be inseparable from the notion of I.Q. itself.

23 Dorothy Ross, *The Origins of American Social Science* (New York: Cambridge University Press, 1992); Mary O. Furner, *Advocacy & Objectivity: A Crisis in the Professionalization of American Social Science, 1865-1905* (Lexington: University of Kentucky, 1975); Thomas Haskell, *The Emergence of Professional Social Science: The American Social Science Association and the Nineteenth Century Crisis of Authority* (Baltimore: Johns Hopkins University Press, 2000); Isaac, *Working Knowledge*; Jewett, *Science, Democracy, and the American University*.

Deconstructing I.Q. historically reveals that it is all but impossible to separate I.Q. and intelligence testing from the histories of race science and eugenics. This history is increasingly relevant in light of the future possibilities presented by genetics.

1918, the year the first Army group tests were administered to United States recruits during the First World War, marks the beginning of the I.Q. controversy. The Army experiment in testing thrust intelligence testing and I.Q. far beyond their intended scope into the realm of mass intelligence testing. This experiment bore tremendous consequences for debates on the definition and measurement of intelligence, the factors contributing to intelligence, and group differences in intelligence and their relationship to differential fertility. This single event marks the beginning of narrative of the prolongation of race science and eugenics on the tails of the expansion of group testing throughout the Western world. It is to this fundamental experiment that the dissertation first turns.

CHAPTER ONE

Declining Levels of National Intelligence and the Specter of Differential Fertility

In 1918, the *Los Angeles Times* informed its readers that all Army recruits mustered for service at the nearby Camp Kearny were to undergo group intelligence testing. The Army intelligence tests promised to revolutionize the preparation and placement of new recruits by dividing and ranking them according to their innate intellectual abilities. The article explained, “intelligence can be measured, like wool or cotton goods. The government is now testing the mental efficiency of all men in the army with the idea of putting them in five classes, as to intelligence. The purpose is to pick out the mentally superior, not necessarily educated, to aid in appointments to responsible positions.” This marked a considerable development in intelligence testing, for “while gauging mentalities was formerly done individually, the new scheme permits several hundred to be examined and rated at one time, thus effecting a saving to the government estimated at several million dollars.”²⁴ During the First World War, the invention of methods in group testing propelled I.Q. tests out of their individual, diagnostic, and institutional origins, initiating a trend in mass intelligence testing in the twentieth century. The United States Army experiment in group intelligence tests marked the opening of a new frontier in intelligence testing and a novel way of applying intelligence tests to assess the intelligence of whole populations. These first mass applications of intelligence tests ultimately led experts to attempt to assess national levels of intelligence, and to conclude that national intelligence was declining as a result of the differential fertility of the least intelligent members of the nation. A transnational

²⁴ “Kearny Soldiers Given Test for Intelligence: Efficient Method of Classing Fighting Men Placed in Operation,” *Los Angeles Times*, May 20, 1918, II1.

approach to this history brings to light the universality of the perceived connection between intelligence and differential fertility among nations with otherwise distinct histories of intelligence testing, and underscores the role of war as a catalyst within this shared history. This early twentieth-century assumption of the relationship between differential fertility and intelligence would prove instrumental in perpetuating race science and eugenics late into the twenty-first century.

Fueled in part by the momentum achieved during the war, applications of intelligence testing expanded greatly during the interwar years. Group intelligence testing studies investigated alleged correlations between intelligence and family size that corroborated eugenic concerns that the least intelligent were reproducing at rates that were lowering national levels of intelligence. Hitherto undefinable and unmeasurable, national levels of intelligence suddenly emerged as a subject of great interest to psychologists, population experts, and nations alike following the unprecedented availability of data on the intelligence of populations. Race and class permeated the developing anxieties about the relationship between differential fertility and intelligence. Intelligence testing experts, many of whom openly embraced eugenics or race science, argued that intelligence was highly heritable. According to this logic, if the least intelligent of the population were the most fecund, national intellectual degeneration would result. As group intelligence testing expanded, experts increasingly discussed and understood national intelligence as a matter of national security. The threat of declining national intelligence posed a liability in a world ravaged by war. New applications of intelligence testing, as well as new fears about the intellectual quality of the population at large, thus helped to introduce new and often militaristic and nationalistic modes of

thinking about intelligence that would shape the social and political implications of I.Q. throughout the twentieth century.

A transnational approach to the history of group intelligence testing beginning with the United States Army intelligence tests builds on the histories of intelligence testing, race science, and eugenics presented by Leila Zenderland, John Carson, Daniel Kevles and others by complicating claims of national exceptionalism within these narratives. Zenderland's research has emphasized the role of intelligence testing in perpetuating anxieties about national intellectual degeneration.²⁵ Carson and Kevles have likewise affirmed the significance of the United States Army tests in legitimating intelligence testing in the United States.²⁶ Carson's work has further demonstrated that national context contributed to the widely distinct paths of intelligence testing in France and the United States, which failed to achieve great popularity in the former and assumed a significant supporting role in sustaining racism and the myth of meritocracy in the latter.²⁷ These national and comparative studies of intelligence testing emphasize the uniqueness of intelligence testing in the United States and other national contexts. A transnational approach to the history of intelligence testing during the interwar period, however, challenges narratives of national exceptionalism and highlights a series of dynamic tensions otherwise masked by national context. The first of these is a tension between the national and the international. Early intelligence testers were primarily preoccupied with concern over national levels of intelligence. Yet, moving into the

25 Leila Zenderland, *Measuring Minds: Henry Herbert Goddard and the Origins of American Intelligence Testing* (New York: Cambridge University Press, 1998), chapter 8.

26 John Carson, *The Measure of Merit: Talents, Intelligence, and Inequality in the French and American Republics, 1750-1940* (Princeton: Princeton University Press, 2006), chapter 6; Daniel J. Kevles, "Testing the Army's Intelligence: Psychologists and the Military in World War I," *The Journal of American History* 55(3) (1968): 565-581.

27 Carson, *The Measure of Merit*.

interwar years, these same experts sought to “internationalize” tests so that they could be applied among diverse populations across the world. A transnational perspective underscores the shared history of intelligence testing across national borders, even while national distinctions persisted. It furthermore recognizes the role played by private foundations, such as the Rockefeller Foundation and Carnegie Corporation, in the transnational funding and direction of state research on group intelligence. There exists as well a tension between intelligence testing as a product of and bulwark against war. As demographic experts identified population problems as the root cause of war, they forged a connection between declining levels of intelligence and a nation’s vulnerability to war. The antidote to war, in this case, was the elevation of national levels of intelligence as a method of both preventing war and ensuring a strong national defense should war prove unavoidable. Finally, a transnational approach to the history of mass intelligence testing highlights the centrality of concerns about differential fertility, bridging the history of intelligence testing with the histories of population studies, race science, and eugenics.

This chapter examines the history of the application of psychometric tests as tools of population assessment during the First World War and traces the resounding impact of the war on national applications of intelligence tests during the interwar period. Group intelligence testing data endorsed experts’ predictions of national decadence, stoking anxieties about the relationship of differential fertility to intelligence. This data supported extant eugenic arguments that the feebleminded, criminals, immigrants, and races of lesser stock threatened nations with intellectual degeneration. Eugenicists seized upon group intelligence testing data to support arguments for population control in an

effort to revive eugenics' diminishing relevance and popularity during the interwar years. This alleged relationship between differential fertility and intelligence, which helped to extend the existence of race science and eugenics, would largely define the history of intelligence testing in the twentieth century from the First World War.

When the United States entered into the First World War on April 6, 1917, American psychologists were quick to establish a role for psychometrics in the war effort.²⁸ Mobilization on a hitherto unprecedented scale flooded the Army with more recruits than it could efficiently process, with the Army expanding from 200,000 to 3.5 million in fewer than two years.²⁹ Under the direction of the president of the American Psychological Society Robert Mearns Yerkes, psychologists mustered to measure the intelligence of the United States Army. The Army Alpha and Beta Tests were the first mass applications of modern I.Q. tests. The first intelligence test, authored by French psychologist Alfred Binet in 1904, had been intended as a diagnostic tool of individual assessment to be used in educational settings.³⁰ The Army testing experiment propelled intelligence tests far beyond their intended application. The wartime experiment introduced the first group tests, which proved central to the expansion of mass intelligence testing. Group tests, unlike individual tests that required expert administration and scoring, could be administered to large numbers of people at once and could be scored rapidly. The Army tests were the first significant trial of the developing

28 For a complete history of the U.S. Army intelligence testing experiment, see: Carson, *The Measure of Merit*; Zenderland, *Measuring Minds*; Kevles, "Testing the Army's Intelligence: Psychologists and the Military in World War I."

29 Carson, *The Measure of Merit*, 200-201; Zenderland, *Measuring Minds*, 281.

30 Zenderland, *Measuring Minds*, 2.

field of intelligence testing, and the first amassing of data on the intelligence of a large population. At its peak, the Army tested 10,000 recruits per day.³¹ By the war's end, the Army had tested over 1.75 million recruits.³² The First World War presented an unique opportunity to apply intelligence tests to a large population with the express intent of ranking and categorizing individuals according to I.Q. The wartime testing experiment propelled the nascent testing movement forward out of its institutional settings and relative obscurity toward assessing the intelligence of whole populations.

It took two years for experts to process the wartime testing data. The National Academy of Sciences published the findings, which indicated a stunningly low level of the intelligence of recruits.³³ The average mental age of the Army recruits was a mere thirteen years, which skirted the dividing line between normal and subnormal intelligence.³⁴ Eugenicists were quick to draw on the Army testing data to support theories of racial degeneration and the decline of national intelligence. An article in the *New York Times* mourned the results, reporting, “now for the first time we have positive data as to the mental equipment and to a less degree as to the moral equipment of the American public – the public to which we have turned over the destiny of the nation under a virtually universal suffrage.”³⁵ Not all Americans were of inferior intelligence, yet those of superior intelligence were far outnumbered. According to eugenic experts, the high intellect of the educated class was significantly outweighed by the lesser intelligence of the masses. Indeed, the *New York Times* reported, “Professor Terman

31 Carson, *The Measure of Merit*, 197.

32 Carson, *The Measure of Merit*, 199; Zenderland, *Measuring Minds*, 288.

33 Robert M. Yerkes, “Psychological Examining in the United States Army,” *National Academy of Sciences Memoir XV* (Washington, DC: Government Printing Office, 1921).

34 Zenderland, *Measuring Minds*, 288-289.

35 John Corbin, “American Civilization on the Brink,” *New York Times*, June 12, 1921, 40.

thinks that the average intelligence of the population is decreasing and that the number of geniuses in the future is destined to be comparatively few. He accounts for this fact by quoting statistics showing the intellectually superior to be slower in reproduction even than the socially incompetent.”³⁶ Such demographic projections tapped into growing fears that if intelligence tests truly measured something innate, national trends in intelligence might prove damning and irreversible. Critically, these projections identified a relationship between intelligence and differential fertility in the configuration of national levels of intelligence.

The Army testing results were seen as a confirmation of widely-shared assumptions about intelligence: the socioeconomically advantaged scored the highest, while blacks and immigrants scored the lowest.³⁷ Regardless of the often unequal and unideal conditions under which recruits were examined, the Army testing experiment led experts and much of the American state and people to believe that their fear that national intelligence was declining had been validated. Photos taken of the testing of recruits, which allude to the inequitable circumstances of examination, reveal that black and immigrant recruits were regularly tested in cramped quarters, forced to sit on the floor, while examiners paced between them (see images 1 and 2). Yet, in spite of these unequal conditions under which the tests were administered, in the words of one expert, “the Army mental tests give us an opportunity for a national inventory of our own mental capacity.”³⁸ The United States Army testing experiment helped to establish a relationship between national levels of intelligence and the impact of specific groups within the population on overall intelligence. The Army tests thus paved the way for

36 “Thinks Intelligence of Race is Decreasing,” *New York Times*, December 25, 1922, 2.

37 Zenderland, *Measuring Minds*, 289.

38 Carl C. Brigham, *A Study of American Intelligence* (Princeton: Princeton University Press, 1923), xx.



Image 1: Group Examinations in a Hospital Ward, Camp Lee, October 1917

Robert Mearns Yerkes, ed., Memoirs of the National Academy of Sciences XV: Psychological Examining in the United States Army (Washington, DC: Government Printing Office, 1921), p. 90.



Image 2: Group Examination Alpha being taken by Black Recruits

Robert Mearns Yerkes, ed., Memoirs of the National Academy of Sciences XV: Psychological Examining in the United States Army (Washington, DC: Government Printing Office, 1921), p. 91.

experts to identify a link between differential fertility and intelligence that would underpin the I.Q. controversies of the century.

The National Research Council continued the work of assessing the intelligence of the nation as a whole and of subsets of the population within it. The wartime testing department found its new home within the National Research Council where many experts involved in the development and application of the Army intelligence tests pursued new testing projects designed to assess the intelligence of the American people – and international peoples – at large. The new focus on population drove the council’s research on intelligence testing, as did the new desire to produce intellectual inventories of groups within the population. The National Research Council, with considerable financial assistance from private foundations, spearheaded the major intelligence testing studies in the United States in the years following the Second World War, creating a Committee on National Intelligence Tests to oversee national intelligence testing and to serve as an informational clearinghouse on existing intelligence tests.³⁹

Formed in 1919 as the School Scale Board, the Committee on National Intelligence Tests, included wartime testing veterans Melvin Haggerty, Lewis M. Terman, Edward L. Thorndike, and Guy Whipple, with Yerkes serving as chair.⁴⁰ Yerkes, the committee’s driving force, ultimately left in 1921 for professional reasons, leaving it in the hands of Whipple.⁴¹ In 1923, the committee disbanded for a short period, retaining

39 “Committee on National Intelligence Tests Evolution,” Folder: Committee on National Intelligence Tests: Activities Summary, 1921-1932, Series: Division of Anthropology and Psychology, 1919-1939, National Academy of Sciences (NAS).

40 “Committee on National Intelligence Tests Evolution,” Folder: Committee on National Intelligence Tests: Activities Summary, 1921-1932, Series: Division of Anthropology and Psychology, 1919-1939, NAS.

41 Robert M. Yerkes to Abraham Flexner, April 23, 1921, Folder: 7206, Box: 700, Series 1.3, FA058, General Education Board (GEB), Rockefeller Archives Center (RAC).

Whipple as director, before its reappointment in 1927 to “give prestige (by use of their names) to the tests” and to undertake necessary revisions before finally dissolving in 1932.⁴² Entering into a contract with the World Book Company, the committee began the work of devising a national intelligence test for use beyond the military.⁴³ Moving beyond the identification of the intellectually subnormal, the committee was particularly interested in the potential of intelligence tests to identify the intellectually gifted, which the committee viewed as national resources.⁴⁴ As Terman expressed in an appeal to the National Research Council for funding of his research at Stanford University, “the most important resources of the nation are its intellectual resources, and methods of discovering, conserving, and developing these resources offer unlimited possibilities of fruitful research.” Indeed, Terman suggested that “to discover and develop a single individual of exceptional intellectual ability may be of greater importance than to prevent the birth of a thousand feeble-minded.”⁴⁵ This stark shift away from preoccupation with degeneration toward investing positively in maximizing the potential of gifted individuals transpired in tandem with intelligence testing experts’ new recognition of intelligence as a kind of national resource.

With the identification of the nation’s intellectual resources as its guiding sentiment, the Committee on National Intelligence Tests commenced broad surveys of the

42 “Committee on National Intelligence Tests Evolution,” Folder: Committee on National Intelligence Tests: Activities Summary, 1921-1932, Series: Division of Anthropology and Psychology, 1919-1939, NAS.

43 Memorandum for Dr. Barrows, February 4, 1936, Folder: Finance: Funds, National Intelligence Tests: Royalties Use, 1936-1939, Series: Division of Anthropology and Psychology, 1919-1939, NAS.

44 Terman’s and Whipple’s interest in identifying intellectually-gifted children dates from before the United States’ entry into the war. Whipple had complained to Abraham Flexner of the overemphasis on “sub-normal children” prior to the war. Guy M. Whipple to Abraham Flexner, March 25, 1916, Folder: 3646, Box: 353, Series 1.3, FA058, GEB, RAC.

45 Lewis M. Terman, “Research in Intelligence Tests and Mental Development at Stanford University, with Statement Regarding Need for Additional Financial Support,” Folder: Committee on National Intelligence Tests: General, 1920-1923, Series: Division of Anthropology and Psychology, 1919-1939, NAS.

intelligence of American children. Joining forces with private foundations, most notably the Rockefeller Foundation's General Education Board, the National Committee on Intelligence Tests conducted the first surveys of the intelligence of schoolchildren in the United States. This venture marked the fruition of a longstanding desire by the leading intelligence testing experts to expand the use of intelligence tests beyond their original and intended diagnostic role in institutional settings. Indeed, Yerkes and Terman had first approached the General Education Board in an unsuccessful appeal for support of intelligence surveys of schoolchildren before the war. The war helped demonstrate the potential of intelligence testing on a national scale. Yerkes had alluded to this potential during the war when he wrote to Abraham Flexner, a personal friend and Secretary of the General Education Board, "I very much wish that you might drop in on us some time to visit and to find out just what psychology is doing for our military organizations."⁴⁶ The success of the Army intelligence testing, and the feeling that "it would be very advantageous to the whole movement of mental testing if this adaptation could be made carefully, systematically, under the auspices of some institution or organization with prestige," influenced the National Research Council's decision to approach the General Education Board for financial support for research into the intelligence of American schoolchildren at the war's end.⁴⁷ The demonstrated ability of intelligence tests to measure the resource of national intelligence proved convincing and earned the National Research Council the General Education Board's support.

46 Robert M. Yerkes to Abraham Flexner, January 8, 1918, Folder: 7206, Box: 700, Series 1.3, FA058, GEB, RAC.

47 Guy M. Whipple, "The National Intelligence Tests," *Journal of Educational Research* 4(1) (June 1, 1921), 16.

In 1919, Yerkes organized the Committee on the Preparation of Intelligence Tests for Elementary Schools with the assistance of a grant of \$25,000 from the General Education Board for “financing the preparation of mental measurements for school children.” The committee included Haggerty, Terman, Thorndike, and Whipple, with Yerkes acting as committee chair.⁴⁸ The initial grant from the General Education Board was fully spent in the preparation of the tests, after which point the committee financed its activities and revisions principally from the royalties from the sale of the tests.⁴⁹ With the funds received from the General Education Board, the committee set to work devising twenty different tests they “desired to try out thoroughly.” The tests not only assessed the intelligence of the test-takers, but also requested that students provide key demographic information. The tests required students to provide information regarding the nationality of their parents and to state their race, which allowed the committee to aggregate data on the intelligence of students according to race and immigrant status.⁵⁰ As was true of the Army tests, the content of the tests was considerably skewed in favor of children born in the United States who grew up speaking English and would have been introduced to advanced vocabulary and historical and cultural references. For instance, one question on the tests required students to answer, “the British armies in France were led by: Haig, Jellico, Joffre, or Pershing?” Another asked for the definition of “sudorific.” The tests were designed with the intention of “compar[ing] the child with the average child of his

48 Memorandum from Robert M. Yerkes to Dr. Kellogg, October 31, 1919, Folder: Committee on Preparation of Intelligence Tests for Elementary Schools, 1919, Series: Division of Anthropology and Psychology, 1919-1939, NAS; Memorandum for Dr. Barrows, February 4, 1936, Folder: Finance: Funds, National Intelligence Tests: Royalties Use, 1936-1939, Series: Division of Anthropology and Psychology, 1919-1939, NAS.

49 Memorandum for Dr. Barrows, February 4, 1936, Folder: Finance: Funds, National Intelligence Tests: Royalties Use, 1936-1939, Series: Division of Anthropology and Psychology, 1919-1939, NAS.

50 *Examiner's Guide*, Folder: 3224, Box: 308, Series 1.3, FA058, GEB, RAC.

age in general intelligence.”⁵¹ However, the data collected on the race and parentage of the students implied comparison between racial and immigrant groups as well, and required informational or learned knowledge unrelated to the innate intellectual skills that the tests professed to measure. Thus the earliest group tests were created with the express intent of disaggregating the intellect of discrete socioeconomic and racial groups within the nation, as well as measuring aggregate national levels of intelligence.

In the early 1920s, the leftover wartime supply of intelligence testers enabled rapid and large-scale expansion of group intelligence testing. These professionals often had graduate training in the fields of education and psychology, and many had received instruction in administering group intelligence tests from the United States Army during the war.⁵² By the end of its first year, the Committee on the Preparation of Intelligence Tests for Elementary Schools had tested over five thousand children with twenty different tests.⁵³ The tests varied in their structure and questions, and were chosen among those already in existence with the goal of identifying the most accurate scales of intelligence.⁵⁴ The immediate postwar years were identified a “peculiarly opportune time” to affect large-scale examinations of the intelligence of schoolchildren. As noted in a General Education Board memorandum: “A very large number of psychologists and those skilled in conducting educational tests and measurements was mobilized for war service. Those men are now being demobilized.... Never before has it been possible to secure such competent men to such an advantage, and doubtless the opportunity will never again be

51 Robert M. Yerkes, “Report to the Chairman of the General Education Board, 61 Broadway, New York City, on the work of the committee for the preparation of a group scale for the measurement of intelligence in pupils of elementary schools [1919],” Folder: 3224; Box: 308; Series 1.3, FA058, GEB, RAC, 2.

52 Kevles, “Testing the Army’s Intelligence,” 572.

53 “Report of the Committee on Preparation of Intelligence Tests for Elementary Schools, December 17, 1919,” Folder: 3224, Box: 308, Series 1.3, FA058, GEB, RAC.

54 Ibid, 1-2.

so favorable.”⁵⁵ With such a large force of trained and experienced intelligence testing experts at hand, the committee conducted surveys of schoolchildren in tandem with the Rockefeller Foundation’s own investigations in Virginia, North Carolina, Maryland, Indiana, Delaware, and New York, experimenting with various intelligence tests in order to identify the most effective scales in the years immediately following the war.⁵⁶

This testing venture marked the beginning of the fruition of hopes for in-depth, extensive inventories of the intellect of populations and subgroups within those populations. While the General Education Board aspired primarily to report on educational conditions in order to recommend legislative and policy changes, intelligence testing experts viewed the surveys as a means to assess national intelligence and its variations among racial and socioeconomic groups.⁵⁷ Each of the tests administered required students to list their “nationality” and race, which enabled the collection of data on discrete ethnic, racial, and socioeconomic groups.⁵⁸ Indeed, Yerkes had proposed a survey of city schoolchildren to Flexner as early as 1917 with the express intent of identifying intellectual differences between classes. His intention was to “discover the mental status, intellectual and affective, and the proportions of various grades of intelligence and affective types in a given community,” and “to place on record accurate data concerning several thousand school children which might later be used in connection with inquiries into the social and economic status of the individuals.” Yerkes particularly

55 “Virginia Survey,” Folder: 1767, Box: 188, Series 1.3, FA058, GEB, RAC.

56 The education surveys conducted by the General Education Board were logistically separate from the National Research Council; however, the administrators of intelligence testing in the General Education Board surveys were members of the National Research Council committees on intelligence testing. Abraham Flexner to Alexander Inglis, November 6, 1919, Folder: 1767, Box: 188, Series 1.3, FA058, GEB, RAC.

57 Harris Hart to Abraham Flexner, August 2, 1918, Folder: 1767, Box: 188, Series 1.3, FA058, GEB, RAC.

58 “Examiner’s Guide,” Folder: 3224, Box: 308, Series 1.3, FA058, GEB, RAC.

hoped to accrue “social data” on “important environmental influences and family history.”⁵⁹ His plans for a survey inspired by the desire to assess populations’ intelligence presaged the extensive longitudinal studies on the relation of I.Q. to class, environment, and psychological characteristics that would dominate the field of intelligence testing in the 1930s and 1940. The work of the committee greatly impacted the course of early testing of schoolchildren in the United States. Within just a few years of the release of the Army exams, they were administered to thousands of American schoolchildren, introducing a culture of standardized testing into the United States system of education.⁶⁰

The work of the committee had no less significant of an impact elsewhere in the world. In 1926, Professor Luis Miro Quesada of the University of San Marcos in Lima, Peru translated the National Intelligence Test into Spanish. The National Research Council was “gratified to learn of the extension of these tests in their application in a second language and hopes that their use in Spanish form will be found helpful in the same way in which it is believed that these tests have served a useful purpose in the schools of the United States.”⁶¹ When Quesada traveled to the United States for a meeting of the Pan-American Union, he visited the National Research Council to discuss the “possibility of making an arrangement for printing the tests and for thus making his translation available in other Spanish-speaking countries.”⁶² The early American group

59 “Proposed Plan for a Survey of the Population of a City School System, January 16, 1917,” Folder: 7206, Box: 700, Series 1.3, FA058, GEB, RAC, 1-3.

60 James C. De Voss, *Manual of Instruction for Use with the Army Alpha Intelligence Tests, Forms V, VI, VII, VIII, IX in Public Schools* (Emporia: Kansas State Bureau of Educational Measurements and Standards, 1922), 3.

61 Vernon Kellogg to Luis Miro Quesada, March 23, 1926, Folder: Director of National Intelligence Tests, 1926-1927, Series: Division of Anthropology and Psychology, 1919-1939, NAS.

62 Albert L. Barrows to Caspar Hodgson, April 13, 1926, Folder: Director of National Intelligence Tests, 1926-1927, Series: Division of Anthropology and Psychology, 1919-1939, NAS.

testing movement thus exerted considerable influence internationally, and a culture of standardized testing in education took root at this time in many nations across the globe.

In these early years following the First World War, the National Research Council conducted another major and unprecedented foray into intelligence testing when it began an investigation into the relationship between I.Q. and other traits through the work of its Committee on Scientific Problems of Human Migration. The committee members included psychologists Carl C. Brigham, Raymond Dodge, Walter V. Bingham, and C.S. Yoakum.⁶³ This committee sought “the internationalizing or universalizing of methods of mental measurement” at the same time that the United States turned to a policy of immigration restriction through a quota system based on national origins.⁶⁴

Acknowledging the need “to proceed wisely and justly, [and] attempt to see the world-situation clearly and without individual, national, or racial bias,” Yerkes outlined two goals for the committee: first, the improvement of the instruments of measuring human intellect, and second, the thorough investigation of the phenomena of differential fertility and race-mixture.⁶⁵ Yerkes’s desire for “well considered and wisely planned investigation of the differential birth-rate in the United States, especially in relation to immigration and the stability of population,” was intimately related to the measurement of national intelligence.⁶⁶ At a Conference on Human Migration hosted by the committee in 1922, one participant averred, “the relative scarcity of high mental ability [in the United States] and the relative abundance of muscular power and manual skill may be accounted for in

63 “Report of the Committee on Scientific Problems of Human Migration, National Research Council, July 1, 1923, Prepared for Director of Russell Sage Foundation,” Folder: 629, Box: 58, Laura Spelman Rockefeller Memorial Fund, RAC.

64Ibid.

65 “Suggestions for Committee on Scientific Problems of Human Migration. Submitted by the Chairman of the Committee for consideration at meeting called for January 25, 1923,” Folder: 629, Box: 58, Laura Spelman Rockefeller Memorial Fund, RAC, 1-3.

66 Ibid, 2. (Emphasis in original.)

many different ways. One reason may be that there is a higher birth rate among the people of low mentality than among those of high mentality.”⁶⁷ This concern was driven in no small part by the differential performance of racial and socioeconomic groups on intelligence tests, and the subsequently alleged negative correlation between greater fertility and test performance. According to demographic experts, those groups more prone to poor performance on intelligence tests, which historians contribute to language or cultural barriers, as well as unequal educational opportunities and conditions of testing, experienced higher rates of fertility in comparison to the rest of the United States population. These same experts shared the concerns expressed by intelligence testing experts, like Terman, that the most intelligent were reproducing at a much slower rate than the least. This led to an assumption that specific socioeconomic and racial groups, who were believed to be innately less intelligent, were contributing to the intellectual degeneration of the nation. The Conference on Human Migration and the work of the Committee on Scientific Problems of Human Migration were among the first efforts of intelligence testing experts to understand the issue of intelligence among and between populations. Their endeavor to conduct comparative studies of intelligence between races, socioeconomic groups, and nations directed the National Research Council’s experts toward the problem of the relationship of intelligence to differential fertility.

One solution was the creation of international intelligence tests.

“Internationalized” intelligence tests could be applied to assess intelligence between nations and racial groups in addition to measuring the intelligence of groups within nations. They also held the promise of resolving the question of the relationship between

67 “Proceedings Conference on Human Migration, Arranged by the Committee on Scientific Problems of Immigration, Division of Anthropology and Psychology, National Research Council, November 18, 1922,” Folder: 629, Box: 58, Laura Spelman Rockefeller Memorial Fund, RAC, 6.

differential fertility and intelligence. Thus the goal of creating an “internationalized” intelligence test was viewed by experts as a key to improving understanding of the influence of patterns of differential fertility on national intelligence. Soon after the committee’s establishment, “an individual verbal scale written around universal situations and easily translatable into numerous languages” was reportedly “well advanced.”⁶⁸ The express goal of the internationalization of intelligence testing was to “extend the applicability of methods of mental measurement that they shall be suitable for a comparative study of ethnic groups.”⁶⁹ The work of the committee was dependent on the fiscal support of private foundations. Once again, the primary donor to the National Research Council’s committee was a branch of the Rockefeller Foundation, which viewed intelligence testing as an integral component of its broader campaign for the improvement of education. In 1923, the Laura Spelman Rockefeller Foundation awarded a grant of \$60,000 to the Committee on Scientific Problems of Human Migration. The committee additionally received grants in the sum of \$10,000 from the Russell Sage Foundation between 1922 and 1923.⁷⁰ In 1925, the Laura Spelman Rockefeller Foundation awarded a subsequent grant of \$25,000 to further the work of the committee.⁷¹ The committee’s activities were dependent on the continued generosity of private foundations that viewed their subsidization of these studies as an extension of

68 “Meeting of Committee on Scientific Problems of Human Migration, Washington, D.C., 10 AM February 29, 1924,” Folder: 630, Box: 58, Laura Spelman Rockefeller Memorial Fund, RAC, 4.

69 “Report and Recommendations of the Committee on Scientific Problems of Human Migration. Presented to the Division of Anthropology and Psychology, March 18, 1924,” Folder: 630, Box: 58, Laura Spelman Rockefeller Memorial Fund, RAC, 3.

70 Beardsley Ruml to Vernon Kellogg, May 9, 1923, Folder: 629, Box: 58, Laura Spelman Rockefeller Memorial Fund, RAC; “Report of the Committee on Scientific Problems of Human Migration, National Research Council, July 1, 1923, Prepared for Director of Russell Sage Foundation,” Folder: 629, Box: 58, Laura Spelman Rockefeller Memorial Fund, RAC; “Report and Recommendations of the Committee on Scientific Problems of Human Migration. Presented to the Division of Anthropology and Psychology, March 18, 1924,” Folder: 630, Box: 58, Laura Spelman Rockefeller Memorial Fund, RAC, 18-19.

71 Arthur Woods to Vernon Kellogg, May 28, 1925, Folder: 631, Box: 58, Laura Spelman Rockefeller Memorial Fund, RAC.

their humanitarian philanthropic missions and as an extension of their missions to improve education. This model of partnership between states and foundations was characteristic of surveys of national intelligence in the twentieth century. At times state-led intelligence testing ventures more clearly reflected the prerogatives of the private foundations that funded them. At other times, the opposite held true, demonstrating a sometimes tension between the two. Occasionally, foundations even used the face of the state to cloak their activities from clear view, offering financial assistance with the guarantee of non-disclosure. This practice of states depending upon foundations for financial support of research into national intelligence significantly impacted the progress and direction of the intelligence testing surveys that helped fuel the I.Q. controversies of this century. At times this relationship would allow foundations and states to pursue joint research agendas in a symbiotic fashion. At others, it would enable foundations to promote their own unique research agendas through state agencies, sometimes even dictating or manipulating the agendas of state agencies.

In spite of at-times conflicting agendas, the work of private foundations did much to “internationalize” intelligence testing, beginning in the interwar period. Indeed, the internationalization of intelligence testing in the years following the First World War would not have been possible without the contributions of private foundations, which largely operated through state institutions like the National Council on Research. Beyond their funding of the research projects of government committees, foundations were largely responsible for enabling international exchanges. The Rockefeller Foundation in particular offered instrumental grants to psychologists in Europe, such as psychometrician Andre Rey of the *Institut des sciences de l’education* in Geneva, a

student of French psychologist Jean Piaget. Rey traveled to both England and the United States on Rockefeller funds, and was one of many to augment the exposure of Europeans and Latin Americans to the psychometric practices and theories of the United States and Britain, then the two leading nations of intelligence testing movement.⁷² The unique marriage of private and state interest had a profound impact on the history of modern intelligence testing. For instance, numerous foundations viewed their funding of international intelligence testing endeavors as a part of their missions to promote world peace and to prevent the recurrence of war and international conflict. Indeed, in the years following the Great War, intelligence testing experts increasingly perceived a connection between declining levels of national intelligence and international conflict. Declining or low levels of national intelligence were theorized to predispose nations to enter into war and to place nations at a disadvantage when at war. The proceedings of the First World Population Conference helped to cement further this proposed link between national intelligence and war, and to encourage additional investigation into the relationship between differential fertility and I.Q. as a result.

The First World Population Conference, held in Geneva in 1927, reinforced anxieties about differential fertility and intelligence in relation to war and international conflict. The conference drew population experts, Malthusians, proponents of the birth control movement, and other human science experts from across the globe. Following the First World War, experts began perceive a direct and causal link between population problems and the problems of international peace and war. The problem of differential

⁷² Robert Havighurst, "Visit to the Institut des Sciences de l'Education, Geneva, July 13-14, 1936," Folder: 1946, Box: 204, Series 1.3, FA058, GEB, RAC.

fertility and its relationship to intelligence featured centrally in the conference's enumerations of world population problems. The conference aspired to consider objectively and scientifically the bearing of population questions on international problems and affairs with the goal of preventing subsequent world wars. War and international conflict were regularly invoked in expert appeals to control and regulate populations, both nationally and internationally.⁷³ In the years following the Great War, eugenicists continued to warn of imminent population degeneration, the birth control movement gained international recognition and notoriety under Margaret Sanger's leadership, and measures to sterilize the intellectually or physically unfit passed in many nations, at times as an integral component of state welfare programs.⁷⁴ The newly perceived connection between war and population problems undergirded the goals and proceedings of the conference.

The population experts who organized the conference were candid in their intention of avoiding all traces of politics and ideology at the conference, and including objective scientific ideas. In part this reflected the professionalization of demography and the desire of demographers to distance their profession from ideological or in-objective science. The interwar years were critical for the professionalization of demography. Prior to this era, population experts had most commonly identified professionally as biologists, sociologists and economists. With the establishment of professional organizations and conferences for demographers, demography matured into a distinct field of inquiry. Yet while their profession grew increasingly relevant to

73 Matthew Connelly, *Fatal Misconception: The Struggle to Control World Population* (Cambridge: The Belknap Press of Harvard University, 2008), 82.

74 Connelly *Fatal Misconception*, 41-2.

policymakers, population experts endeavored to distinguish their profession from politics.⁷⁵ Indeed, anxieties about ideological science proved a constant theme in the I.Q. controversies of the century, with accusations of ideologically-inflected science driving much of the tension between opponents. The organizers of the World Population Conference in Rome thus aspired to promote professional collaboration to resolve the relationship between intelligence, population problems, and world war, while maintaining a clear distance from the taint of politics and ideologically-motivated science.

The United States government, through the National Research Council, sought to establish an early role for itself in addressing international population problems while remaining wary of the dangers of propaganda and political entrapments. One year prior to the conference, the National Research Council had moved that “an International Union for the scientific Study of population is desirable, and that the Council in the future would be inclined to receive favorably detailed proposals for the organization of such a Union, and the relationships of such an organization to the International Research Council.”⁷⁶

The desire for such a union to study populations from an international perspective extended to many of the organizers of the World Population Conference, including private foundations like the Rockefeller Foundation, which once again played a crucial role in financing the conference. Through his connection to Beardsley Ruml, the director of fellowships of the Laura Spelman Rockefeller Memorial Fund, Henry Pratt Fairchild was able to ascertain the interest of the fund in supporting such an endeavor. Having gauged the fund’s amenability to a request for aid, the National Research Council moved

75 Edmund Ramsden, “Social Demography and Eugenics in the Interwar United States,” *Population Development Review* 29:4 (2003), 547-8.

76 Vernon Kellogg to Raymond Pearl, May 1, 1926, Folder: International Congresses, World Population Conference, General, 1926-1927, Series: Division of Foreign Relations, 1919-1939, NAS.

to request financial support “for the purpose of studying the population question from an international point of view and for taking steps toward the formation of a permanent International Union on Population.”⁷⁷ Like many experts at the time, the National Research Council believed an international union on population had the potential to resolve population problems that could jeopardize world stability.

Concerns about the intrusion of ideology kept the conference organizers, participants, and funders wary. For instance, Rummler confided in Vernon Kellogg that the Laura Spelman Rockefeller Memorial Fund would be willing to fund the National Research Council’s participation in the conference only if “its scientific character and freedom from propaganda could be guaranteed by some body that they felt responsible,” even as he affirmed the Fund’s officers’ great interest in the “population question,” and eagerness to fund such an enterprise.⁷⁸ The Fund ultimately awarded the sum of \$10,000 to the National Research Council to participate in the conference, requesting “no public announcement were made of this gift, other than that which is made by you in your regular annual report.”⁷⁹ Considerable anxiety over the objectivity of the proposed conference abounded in all quarters. However, the organizers prioritized the goal of maintaining “a high plane of objectivity” above all others, largely out of the hope that a scientific international union equipped to tackle ongoing population issues might be established at the conference. Objectivity entailed an avoidance of the influence of ideology and politics, as well as the eschewal of “controversial questions” that might

77 Memorandum to the Committee on Budget, National Research Council, from L.J. Cole, Chairman, Division of Biology and Agriculture, April 25, 1927, Folder: International Congresses, World Population Conference, General, 1926-1927, Series: Division of Foreign Relations, 1919-1939, NAS.

78 Raymond Pearl to Vernon Kellogg, April 9, 1927, Folder: International Congresses, World Population Conference, General, 1926-1927, Series: Division of Foreign Relations, 1919-1939, NAS.

79 Beardsley Rummler to Vernon Kellogg, May 23, 1927, Folder: International Congresses, World Population Conference, General, 1926-1927, Series: Division of Foreign Relations, 1919-1939, NAS.

derail scientific debate.⁸⁰ Raymond Pearl assured Kellogg that the conference was “to be a purely scientific matter.” The purely scientific nature of the conference was all but ensured by the participation of “all the leading people in England and the continental countries in this field.”⁸¹ However, while the conference proceedings downplayed the extremist nature of the claims of ideologues, it did not dismiss them.

In spite of the conference organizers’ determination to remain objective, the conference endorsed a more composed version of the alarmist views of eugenicists. The proceedings of the conference led to the consensus that differential fertility was a demonstrated phenomenon, which would only prove detrimental to the state of nations and world affairs if (as the majority of experts on intelligence then believed) intelligence was an innate and heritable trait. The official report, authored by Executive Secretary of the National Research Council Committee on Sex Problems Earl Zinn concluded: “the consideration of the question of differential fertility, and the evident temper of the conference to interpret the facts somewhat less pessimistically than many eugenists, was significant.” While “reports from various countries indicated clearly that in almost all civilized nations different classes are multiplying at different rates,” and “the intellectual classes are reproducing themselves the least rapidly,” there was not necessarily cause for immediate alarm or concern. For though “the facts of differential birth rate were not disputed,” the conference was inconclusive in its interpretation of the data. The proper interpretation of the phenomenon of differential fertility hinged on the question of “whether there is any hereditary difference in the average physical or mental endowments

80 Earl F. Zinn, “Report of the World Population Conference, Geneva, Switzerland, August 31, September 1, 2, and 3, 1927,” Folder: International Congresses, World Population Conference, General, 1926-1927, Series: Division of Foreign Relations, 1919-1939, NAS, 2.

81 Raymond Pearl to Vernon Kellogg, March 22, 1927, Folder: International Congresses, World Population Conference, General, 1926-1927, Series: Division of Foreign Relations, 1919-1939, NAS.

of the various classes.”⁸² On this point, opinions voiced at the conference varied, yet few were optimistic. Many assumed differing degrees of inequality in the natural endowments of the various classes on the basis of eugenic evidence of the links between pauperism, criminality, and degeneracy, and race and class. Eugenics in the United States during this period was predicated on largely racist and classist theories, which were generally informed by a hardline approach to the inheritance of traits. These traits were innate and immutable, unable to be overcome by cultural or environmental forces.⁸³ With the rise of immigration in particular, many eugenic experts warned that more fecund immigrants of lesser stock threatened to replace middle class Anglo Saxon stock. The leading consensus of the conference was the belief that “while the situation was not so hopeless as some eugenicists would have us believe, still it could not under any circumstance be considered a favorable condition, and the tendency if unchecked would be constantly to lower the quality of human stock.”⁸⁴ The threat of differential fertility to national levels of intelligence was thus associated with identifying racial and class differences as innate and inferior, which proved instrumental to the perpetuation of race science and eugenics through the twentieth century.

In spite of the lack of firm resolution on the bearing of differential fertility on national levels of intelligence, it was agreed that “an auspicious beginning has been made” in the international investigation of world population problems and potential.

However, its organizers recognized that it was only the beginning. Zinn concluded in his

82 Earl F. Zinn, “Report of the World Population Conference, Geneva, Switzerland, August 31, September 1, 2, and 3, 1927,” Folder: International Congresses, World Population Conference, General, 1926-1927, Series: Division of Foreign Relations, 1919-1939, NAS, 3-4.

83 Alexandra Minna Stern, *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America* (Berkeley: The University of California Press, 2008), 16-7.

84 Earl F. Zinn, “Report of the World Population Conference, Geneva, Switzerland, August 31, September 1, 2, and 3, 1927,” Folder: International Congresses, World Population Conference, General, 1926-1927, Series: Division of Foreign Relations, 1919-1939, NAS, 3-4.

report to the National Research Council: “The success of this new movement for the scientific study of population will depend in large measure on the wisdom of the committee appointed to effect an organization, and prepare plans. The task of further organizing the work rests with a group of representative scientists.” Zinn urged the utmost support and consideration, asserting, “they should have every encouragement and aid in their efforts to deal effectively with what is considered by many persons to be the most urgent problem confronting mankind – the problem of quantity and quality of population.”⁸⁵ In both private correspondence and public statements, the National Research Council considered the conference productive. Pearl confessed his confidence to Kellogg that “it was a great success, and we succeeded in taking the first step towards the formation of a permanent International Union.”⁸⁶ To the Executive Board of the National Research Council, Pearl attested that it was “generally agreed by everybody that the conference was a great success,” having convened “a more distinguished and competent group of men interested in various aspects of the population problem than had ever been assembled in any place.”⁸⁷ In 1928, following the conclusion of the World Population Conference, the International Union for the Scientific Investigation of Population Problems was established with the assistance of the Milbank Memorial Fund, a private American foundation invested in population research.⁸⁸ The International Union took up the task of resolving population problems through international cooperation

85 Zinn, “Report of the World Population Conference,” Folder: International Congresses, World Population Conference, General, 1926-1927, Series: Division of Foreign Relations, 1919-1939, NAS.

86 Raymond Pearl to Vernon Kellogg, September 28, 1927, Folder: International Congresses, World Population Conference, General, 1926-1927, Series: Division of Foreign Relations, 1919-1939, NAS.

87 “Informal statement concerning the World Population Conference, held at Geneva, Switzerland, August 31 to September 3, 1927 by Doctor Raymond Pearl, Meeting of the Executive Board, October 11, 1927,” Folder: International Congresses, World Population Conference, General, 1926-1927, Series: Division of Foreign Relations, 1919-1939, NAS, 1.

88 Frank Lorimer, Carmen Miró, Wilson H. Grabill, and Vasilios Valaores, “The Role of the International Union for the Scientific Study of Population,” *The Milbank Memorial Fund Quarterly* 49:4 (October 1971), 86-94.

following the World Population Conference, and continued inquiries into the relationship between differential fertility and intelligence into the 1950s when a subsequent world conference assembled to discuss the population problems of the post-World War Two era.

Following the First World War, experts, states, and foundations came to view population as a peculiar kind of threat to international peace if left unregulated. Populations that expanded too rapidly, or reproduced the most unfit classes at disproportionate rates risked not only their nation's security, but also the stability of world affairs. This was true of both nations and their colonial holdings. Experts increasingly connected investigations and inventories of national intelligence with studies of differential fertility in the context of a hyperawareness to the causes and consequences of war. Degenerate populations could predispose nations to war, and war could in turn decimate populations. War had expanded the use of intelligence tests, and in consequence, experts and states came to understand intelligence as a vital resource and bulwark against war. As a result, expert anxieties about the relationship between national levels of intelligence and predilection to war would animate much of the dialogue surrounding intelligence surveys through the Cold War years. Entering into the 1930s, the precipitous increase of nationalism in Europe transpired in tandem with rising concern about national levels of intelligence. Against this backdrop, the Scottish Council for Research in Education embarked upon the first comprehensive national survey of intelligence.

In 1932, the Scottish Council for Research in Education undertook the examination of the intelligence of schoolchildren in an effort to determine whether national levels of intelligence in Scotland were in decline. The first major national investigation of the intelligence of an entire section of a civilian population, the survey functioned as the model for subsequent surveys conducted in England, France, and elsewhere in the years immediately following the Second World War. Fear of intellectual decadence compelled the first Scottish Mental Survey. “Exaggerated statements respecting the number of mental defectives in the school community” since the First World War, and “generalisations of an alarmist nature... regarding the increase of mental deficiency in the population as a whole” motivated the council’s decision to embark on the first comprehensive national assessment of schoolchildren.⁸⁹ At the core of the council’s concerns about declining levels of intelligence in Scotland was the fear that differential fertility was driving decline. These experts hypothesized that a negative correlation between family size and individual intelligence was leading to national degeneration.

Intelligence testing studies investigating the question of the relationship between family size, differential fertility, and intelligence dated from the years following the First World War, and smaller scale investigations of the relationship between family size and intelligence conducted in the United States, Scotland, and England all corroborated concerns about national decline. The Scottish Mental Survey was lead by British psychologist Godfrey Thomson, who began research into the relationship between

⁸⁹ Scottish Council for Research in Education, *The Intelligence of Scottish Children: A National Survey of an Age-Group* (London: University of London Press, Ltd., 1933), 4-5.

individual intelligence and family size in the 1920s.⁹⁰ In 1925 and 1926, Thomson, along with British educational psychologist H.E.G. Sutherland, conducted a study of Scottish schoolchildren in the Isle of Wight out of the “fear that our present social conditions are tending to breed intelligence out of the race.”⁹¹ Building on Godfrey’s previous research, which hypothesized a correlation between I.Q. and occupational status, and the research of E.J. Bradford, Karl Pearson, and Lewis Terman, Godfrey and Sutherland tested the intelligence of 1,924 children. A total 840 students were given a group test in 1925 and 1,084 were tested in 1926. The children tested hailed from three separate schools, and the tests varied between the two years.⁹² The Isle of Wight study concluded that while “there is no clear proof of any correlation between intelligence and position in family... there is a correlation of about -.2 between intelligence and size of family,” indicating a slight negative correlation between intelligence and larger families that was in their interpretation statistically significant. This finding, they pointed out, corroborated too the findings of J.C. Chapman and D.M. Wiggins in the United States.⁹³

Observed differential fertility patterns led experts to connect the hypothesized negative correlation between intelligence and family size to socioeconomic status, defined by parental occupation. Contemporary studies hypothesizing a connection between parental occupation and children’s I.Q.s abounded. These studies generally observed a correlation between occupational class and family size.⁹⁴ The professional

90 Godfrey Thomson, “Occasional Papers on Eugenics, Number Three, The Trend in National Intelligence, The Galton Lecture, 1946,” Folder: SA/EUG/P.3, Eugenic Society Papers, Wellcome Library, 4.

91 H.E.G. Sutherland and Godfrey H. Thomson, “The Correlation between Intelligence and Size of Family,” *British Journal of Psychology* 7(2) (1926): 81.

92 Sutherland and Thomson, “The Correlation between Intelligence and Size of Family,” 81-83.

93 Ibid, 88.

94 James F. Duff and Godfrey H. Thomson, “The Social and Geographical Distribution of Intelligence in Northumberland,” *British Journal of Psychology* 14(2) (October 1923), 192; Hector Macdonald, “The Social Distribution of Intelligence on the Isle of Wight,” *British Journal of Psychology* 16(2) (October 1925), 123; Melvin E. Haggerty and H.B. Nash, “Mental Capacity of Children and Paternal Occupation,”

classes, whose children scored highest on intelligence tests, tended to also have the smallest families, whereas the least-skilled working classes, whose children underperformed on the tests, had the largest families. The degree of correlation suggested by these studies varied. One British study suggested a negative correlation coefficient of $-.25$ between family size and intelligence.⁹⁵ In the United States, Terman's research indicated a negative correlation coefficient of $-.271$.⁹⁶ Chapman and Wiggins found a negative correlation coefficient of $-.33$.⁹⁷ Sutherland and Thomson projected the most conservative estimate with a negative correlation coefficient of $-.15$.⁹⁸ These studies contributed to building expert anxiety about the impact of differential fertility on the intelligence of nations. Effectively, concerns about differential fertility and its negative impact on the intelligence of individuals from large families drew disproportionate attention to working class families, who on average had more children than their middle and upper class counterparts. The Scottish Mental Survey sought to provide a preliminary answer to the question of whether differential fertility between social classes was provoking a decline in national intelligence in Scotland.

Thomson, a professor of education and director of the Moray House Teacher Training College at the University of Edinburgh, was the driving force behind the Scottish Mental Survey.⁹⁹ Thomson had actively researched the connection between family size and intelligence since the end of the First World War, and in his capacity as director of Moray House had gained experience in the preparation of mental tests. Under

Journal of Educational Psychology 15 (1924), 559.

95 E.J. Bradford, "Can Present Scholastic Standards be Maintained?" *Forum of Education* 3 (1925), 186.

96 Lewis M. Terman, ed., *Genetic Studies of Genius, Volume I: Mental and Physical Traits of A Thousand Gifted Children* (Stanford: Stanford University Press, 1925).

97 J.C. Chapman and D.M. Wiggins, "The Relation of Family Size to Intelligence of Off-spring and Socio-economic Status of Family," *Pedagogical Seminary and Journal of Genetic Psychology* 32 (1925), 414.

98 Sutherland and Thomson, "The Correlation between Intelligence and Size of Family," 81.

99 Scottish Council for Research in Education, *The Intelligence of Scottish Children*, 12.

Thomson's direction, the Scottish Council for Research in Education elected to test all Scottish schoolchildren born in 1921 to "obtain data about the whole distribution of the intelligence of Scottish pupils from one end of the scale to the other."¹⁰⁰ It collected the students' names, sex, school or county name, date of birth, and grade in school.¹⁰¹ On the day of the examinations, all students born in 1921 were given the group test.¹⁰² These students were tested using a Moray House Test (No. 12) devised by Thomson, which had been recently applied to a group of English schoolchildren in Halifax.¹⁰³ The group test, which "consisted of two pages of picture items and five pages of verbal items," was administered communally.¹⁰⁴ These group intelligence tests were adapted from individual intelligence tests so that they might be proctored to large groups of test-takers at once without the resource-costly one-on-one administration of individual I.Q. tests. Experts generally designed group tests in multiple-choice format to expedite their grading, which meant that group tests offered a less detailed and nuanced clinical view of individual intelligence but enabled easy scoring and comparison between individual test-takers. Unlike individual tests, group intelligence tests, like the Moray House Test and the Army intelligence tests, could be readily administered to large numbers of testers, and were graded on scales that required conversion in order to calculate I.Q.

For the purposes of conversion, and to serve as a control, an individual test was given to a random sample of approximately 1,000 children. Under the direction of D. Kennedy-Fraser, this random control group of "a thousand pupils were tested individually with the Terman revision of the Binet scale" was selected "from those born on the 1st of

100 Ibid, 23.

101 Ibid, 10-11.

102 Ibid, 23.

103 Ibid, 72.

104 Ibid, 55.

June 1921, or as near thereto as possible.”¹⁰⁵ This random sample became known as the “Binet One Thousand.” Yet this group was not a wholly representative sample. While the group test was given to all children born in 1921, including those who were already “ascertained mental defectives,” no children with pre-identified mental deficiencies were included among the Binet One Thousand. The committee based this decision on the desire to obtain a truly representative cross-section of “normal” schoolchildren, separate from those already identified as mental defectives. They therefore determined that “the six children below 70 I.Q. in the unadjusted distribution of individual test scores are really unascertained ‘mental defectives.’” In spite of the council’s rationale, the intentional exclusion of “mental defectives” provoked outside criticism of the survey.¹⁰⁶

Local educators proctored the tests and the survey was successful largely due to the cooperation of the local education authorities. The Scottish Council for Research in Education determined that, due to limited funds and time, “the testers had to be chosen from a group who were already trained, and who were further able and willing to give some of their spare time gratuitously to the work.” Each examiner was “personally recommended by the Committee, and included training college lecturers, directors of education, school psychologists, school medical officers, teachers, and students in training, all of whom had special training in mental testing.” In addition to the examiners’ previous experience and training, meetings convened in Edinburgh and Glasgow, “at which general instructions as to procedure were given by the Chairman and areas of testing were allocated.”¹⁰⁷ This was done largely to ensure uniformity in the tests’ administration across all of Scotland. Instructions for the administration of the

105 Ibid, 14.

106 Ibid, 39.

107 Ibid, 37.

exams were strict, with assistance only to be provided to “obvious blunderers who need a special eye on them... *Otherwise no assistance is to be given, and no questions whatever are to be answered.*”¹⁰⁸ Prior to proctoring the official examination, examiners were instructed “to familiarise the pupils with what was to be required of them” with “the usual procedure of setting a preliminary practice test, not to be evaluated in the results.”¹⁰⁹ In this way, the committee hoped to give the students equal exposure to the format of the exams and prevent biases in the exam scores.

Depending on the conversion calculation used, the Scottish Mental Survey showed the average I.Q. of Scottish boys to be “very close to 100, and not less than 99,” the exact midpoint of the range for normal or average intelligence. While there was some indication among the survey data that the average I.Q. of Scottish girls among the age group might be somewhat lower, the committee determined that it did “not think there is any proof of a significant difference between boys and girls in average I.Q.”¹¹⁰ Yet in spite of the relative gender equality of the scores, the council reported, “there seems, however, fairly definite proof that the intelligence quotients of the boys are more widely scattered than those of the girls.”¹¹¹ A more dismaying observation was the differentiation in the scores of Scottish children on the Moray House Test compared with those of English children, who outperformed their Scottish peers by several I.Q. points. The council maintained, “we are naturally inclined to hope that the poorer performances in Scotland at all levels of ability are sufficiently explained by the less intense motivation in Scotland (where nothing depended on the test) and the total absence in most districts of

108 Ibid, 24-25.

109 Ibid, 11.

110 Ibid, 102.

111 Ibid, 103.

previous experience of such tests, or of coaching for them. Equally naturally, however, the Secretary to the Halifax Education Committee is not inclined to admit that this explanation is adequate.”¹¹² Because the 1,278 children tested in Halifax were not tested with the express intention of drawing a true comparison between English and Scottish students, the council ultimately considered the data to be “insufficient to enable a valid comparison to be made.”¹¹³ The reluctance of the council to accept the difference in the scores of English and Scottish students highlights ongoing tension between efforts to universalize intelligence tests, and anxieties over the comparative intelligence of nations. In total, 87,498 Scottish eleven-year-olds were tested using the group test. In its final report, the council concluded that, “despite the many difficulties associated with a nationwide undertaking, the Committee’s ambitious attempt to test a complete cross-section of the community was entirely successful.”¹¹⁴ The survey was deemed successful, not only for the fact of its accomplishment, but also in its unprecedented provision of data on levels of national intelligence. Hitherto, Scottish psychometricians had only been able to draw conclusions from literature and research based from foreign studies on intelligence.¹¹⁵

Yet the Scottish Mental Survey was strongly informed by foreign influences. The survey was directly inspired by the wartime testing of United States Army recruits. Indeed, this wartime trial of group intelligence tests proved the possibility and potential of group assessments. The council attributed the evolution of group testing to the United States, which “in time of war was faced with the task of assessing within a period of a

112 Ibid, 74.

113 Ibid, 124.

114 Ibid, 121.

115 Ibid, 124.

few months the intelligence of almost 2,000,000 army recruits,” leading to the invention of the first group tests that served as models for the rest of the world. Furthermore, although nominally a national survey, it was an inherently transnational enterprise that underscores the perpetual tension between national and international forces in the history of mass intelligence testing. While the Scottish Council for Research in Education conducted the survey, the Carnegie Corporation of America funded both the expenses of the survey and the printing of the final report.¹¹⁶ The Carnegie Corporation had a vested interest in the production of the survey and was an influential force in its implementation. The Carnegie Corporation’s International Examination Inquiry Committee of the Research Council intended “to use the data of this Survey in connection with their investigations.”¹¹⁷ The International Examination Inquiry Committee formed in the early 1930s, and included members from the United States, England, France, Germany, Switzerland, and Scotland. Notable members of the International Examination Committee included intelligence testing experts Charles G. Spearman, Edward Thorndike, and Godfrey Thomson.¹¹⁸ The committee’s work centered on the scientific investigation of education and the expansion of secondary education through international research and inquiry.¹¹⁹ Thus while the national survey was conducted by the Scottish government in name, in practice it was largely influenced by a foreign foundation with a transnational membership. The confluence of the national and

116 Ibid, viii.

117 Ibid, viii.

118 Ian J. Dreary, Martin Lawn, David J. Bartholomew , “A Conversation between Charles Spearman, Godfrey Thomson, and Edward L. Thorndike: The International Examinations Inquiry meetings 1931-1938,” *History of Psychology* 11(2) (May 2008): 122-142.

119 Martin Law, ed., *An Atlantic Crossing? The Work of the International Examination Inquiry, its Researchers, Methods and Influence* (Providence: Symposium Books, 2008).

international in the Scottish mental survey would prove a theme in the national surveys of intelligence that followed it.

Although the survey was hailed as a success, it was unable either to substantiate or dismiss fears of national declines in intelligence. The council determined that a second mental survey should be conducted, no less than twenty-five years from the first study, with the hopes of achieving a true assessment of the trend in national levels of intelligence.¹²⁰ Until that time, anxieties about national levels of intelligence in Scotland and elsewhere persisted. Concerns about the possible relationship of the differential birthrate to levels of intelligence were further fueled by the fear of international conflict in the late interwar period. Eugenic experts capitalized off of these concerns to promote their own relevance as the threat of a second world war loomed.

In the late interwar period, a wealth of alarmist literature projected not only national intellectual decline, but international turmoil and war as well. Much of this eugenic literature demanded or implored state action to control or take measures to influence population quantity and quality. In one expert's estimation, "satisfactory data for population studies can only be collected by State action armed with compulsory powers over a whole population," and that "one of the principle aims of population studies" should be to provide the state with data that would enable state efforts to "control fertility."¹²¹ Leading up to the Second World War, the desire to ameliorate the effects of

120 Scottish Council for Research in Education, *The Trend of Scottish Intelligence: A Comparison of the 1947 and 1932 Surveys of the Intelligence of Eleven-Year-Old Pupils* (London: University of London Press, Ltd, 1949), 2.

121 Enid Charles, "Differential Fertility," *Sociological Review* 29 (1937): 243.

differential fertility through population control measures was predominately restricted to experts in the United States, England, and Scotland, though by the war's end the question of the relationship of differential fertility to intelligence would become a global issue of concern to major international organizations like the United Nations. Pessimistic projections during these years helped to ensure the endurance of the eugenics movement, which was diminishing in both relevance and credibility in much of the world by this time. In a bid for popular and political influence, these experts ominously predicted not merely intellectual decline, but world war triggered by unmitigated population problems.

Experts on intelligence testing and population in the late interwar period were overwhelmingly negative in their outlook, in spite of a continued dearth of hard data indicating declines in national intelligence. Even studies that produced data leading to more optimistic assessments of national levels of intelligence were received pessimistically in many quarters. For example, research on "test sophistication" fed into fears that even data implying possible increases in group intelligence might be skewed by the growing experience of test-takers with intelligence tests. One such study on intelligence test-takers by English psychologist Philip E. Vernon identified a considerable increase in I.Q. from the first to second test taken. He concluded, "if the same effect occurred in persons of average intelligence it would correspond to a rise of at least 8 points in intelligence quotient. ...the results indicate alarming possibilities of derangement of the norms for superior-adult tests."¹²² Therefore, as more individuals gained greater experience in test-taking, the data from surveys might be compromised by experience and not show true gains or even stasis, in spite of the fact that experts continued to maintain

122 Philip E. Vernon, "Intelligence Test Sophistication," *British Journal of Education Psychology* 8 (1938): 242-243.

that intelligence tests tested innate ability and not learned knowledge or abilities. Such theories fed into the dark outlook of the vocal majority of eugenic experts, including the American Eugenics Society.

The American Eugenics Society eagerly took up the issue of the intellectual quality of the United States population in an effort to assert eugenics' continued importance. It included among its membership at this time prominent experts on intelligence and population, such as Frederick Osborn, who would exert considerable influence on the future of mass intelligence testing. Eugenics had been slipping in relevance and influence since its broad acceptance in the 1920s. By the 1930s, the broader scientific community began to scrutinize more closely the activities, scientific practices, and provocative claims made by prominent eugenicists. Geneticists and anthropologists in particular criticized the remarks and activities of early eugenicists, labeling them racist, anti-Semitic, and scientific. The political maneuvering of once prominent eugenicists like Harry H. Laughlin, Charles B. Davenport, and Madison Grant further suggested to critics that eugenics was a primarily political, rather than scientific, endeavor, increasingly detached from the progress of science.¹²³ As genetics professionalized, geneticists distanced themselves from eugenics, even as they continued many of the practices and techniques deployed by eugenicists in their emerging role as genetic counselors.¹²⁴ Likewise, demographers worked to distance their field from its early ties to the field of eugenics as they continued to professionalize.¹²⁵

123 Garland E. Allen, "The Eugenics Record Office at Cold Spring Harbor, 1910-1940: An Essay in Institutional History" *Osiris*, 2(2) (1986), 250; Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (New York: Alfred A. Knopf, 1895), 193.

124 Alexandra Minna Stern, *Telling Genes: The Story of Genetic Counseling in America* (Baltimore: Johns Hopkins University Press, 2012), chapter 1.

125 Ramsden, "Social Demography and Eugenics," 549-550.

The eugenics movement, however, proved remarkably resilient in its ability to modify and adapt to surroundings. From the 1930s to the 1950s, eugenics – or *reform* eugenics – underwent considerable changes. Under the post-World War Two leadership of Frederick Osborn, the American Eugenics Society would disavow the errors of its predecessors and create a new identity for itself through its new focus on population genetics.¹²⁶ This adaptability proved crucial to the movement’s geographic and temporal expansion. Confronted with its own diminishing relevance, the American Eugenics Society aligned itself with the birth control movement in the 1930s, moving beyond its historic focus on preventing immigration and the institutionalization and sterilization of the feeble-minded.¹²⁷ The society seized upon the opportunity presented by fears of national decline to argue that “eugenics should receive new impetus” due to the “recent studies in psychology and in the field of population, [which] make it clear that many of the changes which are desirable from the point of view of eugenics are no less desirable for the improvement of our social environment and the retention of the best of our cultural inheritance.”¹²⁸ Eugenics would provide a path to rational state population planning. Dismissing the notion that eugenics sought “to breed genius or specialized types,” the society suggested that “a few basic qualities are almost universally regarded as highly desirable,” including “intelligence, good health, relative immunity from physical and mental disease, and certain qualities of character ...courage and self-control,

126 Edmund Ramsden, “Confronting the Stigma of Eugenics: Genetics, Demography and the Problems of Population,” *Social Studies of Science* 39:6 (2009), 856-857.

127 On the geographic and temporal expansion of eugenics, see: Stern, *Eugenic Nation*; Wendy Kline, *Building A Better Race: Gender Sexuality, and Eugenics from the Turn of the Century to the Baby Boom* (Berkeley: University of California Press, 2001); Johanna Schoen, *Choice and Coercion: Birth Control, Sterilization, and Abortion in Public Health and Welfare* (Chapel Hill: The University of North Carolina Press, 2005); Edward J. Larson, *Sex, Race, and Science: Eugenics in the Deep South* (Baltimore: The Johns Hopkins University Press, 1995).

128 American Eugenics Society, “*The Development of Eugenic Policies: Scientific Backgrounds for a New Orientation of Eugenics*,” (New York: American Eugenics Society, 1937), Folder: 5175, Box: 427B, Series I, Subseries 74, Social Science Research Council (SSRC), Accession 2, RAC, 5.

kindness and tolerance, initiative, self-reliance, honesty, and a spirit of cooperation.”¹²⁹

These general qualities should be universally desired by all, and eugenics offered a means to achieve them among the population. The society proposed a more genteel and permissive approach to population policy, compared with its former controversial policy suggestions which included the sterilization and colonization of the “unfit.” In contrast to such harsh measures of intervention and control, “the practical policies now being proposed by eugenicists would leave the question of size of family in the hands of parents, as at present, but would give them a more intelligent and less restricted choice” through genetic counselling.¹³⁰ In addition, it was hoped that the state might do more to encourage responsible and intelligent parents – who might feel it necessary to restrict their family size due to concerns about the scarcity of resources – to have more children than they might otherwise.¹³¹

Anxiety about the degenerative danger posed by war undergirded the American Eugenics Society’s revitalized mission to enact population control measures. War and international conflict were antagonistic to the progress of civilization. The society argued, “war is a threat to the hope for orderly eugenic advance.... the American Eugenics Society will continue to emphasize the dysgenic aspects of war, and the drastic measures which might be necessary to preserve the qualities of our people during a prolonged and devastating conflict.” Indeed, the society maintained that eugenicists would “cooperate in every possible way with existing agencies to develop means of preventing war.”¹³²

129 American Eugenics Society, “*The Development of Eugenic Policies*,” Folder: 5175, Box: 427B, Series I, Subseries 74, SSRC, Accession 2, RAC, 10-11

130 Ibid, 11.

131 Ibid, 13.

132 American Eugenics Society, “*Practical Eugenics, Aims and Methods of the American Eugenics Society*,” New York: American Eugenics Society, 1938, Folder: 5175, Box: 427B, Series I, Subseries 74, SSRC, RAC, 20.

One means by which the society proposed to prevent war was through further “research by psychologists and others on the reasons why families differ in size, and on the effect of physical and cultural environments on sex, marriage, children, and family life.”¹³³ If degenerative conditions of national intelligence predisposed nations to war as numerous experts hypothesized, then eugenic measures could reverse general intelligence trends and prevent war. Or, in the case that war should prove inevitable, higher national intelligence would place nations at a competitive advantage. Through such research, the society hoped to promote policies that might reverse the perceived downward trends in intelligence that were believed by numerous population experts and psychologists to have been caused by the differential fertility of the least intelligent classes.

Voices outside of the United States corroborated concerns about national intelligence and the threat of war. British psychologist and psychometrician Raymond B. Cattell in his 1937 publication, “The Fight for our National Intelligence,” encouraged these very fears. Not only did Cattell assert that England must defend itself against the degenerative effects of differential fertility on the nation’s overall intelligence, he claimed that, if left unchecked, this downward trend would set England and many other European nations on the path to world war. He ominously argued that population problems inherently heightened the risk of international conflict, and population control was the ultimate preventative measure to both safeguard against war and ensure the nation’s success in war, should it prove unpreventable. Though “not so easily dramatized as political reaction or war,” Cattell explained, “the approach, foreseen by scientists of a generation ago, of a grave decline in the level of national intelligence” threatened the

133 Ibid, 20.

progress of western civilization. Conquering “this enemy is the special task of the twentieth century.”¹³⁴ Indeed, according to Cattell, “the decline of average I.Q. is the most serious threat to national security.”¹³⁵ This perceived decline in intelligence was therefore an urgent and extreme threat to the nation itself.

Both the quantity and the quality of population mattered greatly in Cattell’s representation. Whereas “a nation may achieve success in the arts of peace only by the possession of a sufficient body of able and enterprising citizens, it may use for purposes of war a mentally lower grade.... Mussolini made an army out of his unemployables, or, at least, his unemployed.” Thus dictators might more readily convince unintelligent nations to rise up and attack their neighbors. Cattell warned that, “the temptation to such a solution must exist wherever an undue birth rate has been encouraged in a low-grade population,” implying that an increase in the number of people of lesser intelligence would prod England in the direction of restlessness and warmongering.¹³⁶ Cattell alluded to the data accrued from intelligence surveys conducted in the United States to support his claim that “the most stable and quietly progressive countries of Europe are those which... [are] the highest in average intelligence.”¹³⁷ Not only would an intelligent population ensure peace, it would also ensure the advance of civilization, for the “expansion of a population at a low level of mental capacity is the surest single factor leading to war; for even a rat will fight fiercely, but only a man can be counted on to construct a civilisation.” This pattern, Cattell maintained, could be traced throughout history. For “every relapse of intelligence foreshadows in history a regression to the

134 Raymond B. Cattell, *The Fight for Our National Intelligence* (London: P.S. King & Son, Ltd., 1937), 1.

135 Cattell, *The Fight for Our National Intelligence*, 80.

136 Ibid, 51.

137 Ibid, 51.

more primitive machinery of evolution which is war.”¹³⁸ Thus, Cattell argued for the inevitability of war, should the trend in the national decline of intelligence remain unchecked. And should the national decline in intelligence not be put to rest by political measures, “the machine-guns of an enemy will stop it for us. But the flower of the nation will go down with it.”¹³⁹

According to Cattell, a decrease in population quality inclined nations to war, whereas increasing the quality of the population had an ameliorative effect against impulses toward international aggression. However, should the worst occur and the nation be forced to enter into war, the nature of modern warfare ensured the victory of the most intelligent people because it placed greater demands on the innovation and intellect of its combatants and military officials. “in a war of tanks, submarines and large fleets of aeroplanes, victory to the nation with the larger percentage of high I.Q.'s is even more certain, for the men fit to handle these instruments successfully are not found every day.”¹⁴⁰ Cattell thus advocated for greater optimization of the national “biological reserves of intelligence” through methods of identification and selection, such as those utilized by the United States Army during the First World War.¹⁴¹ Cattell left England soon after his publication in 1937 to join Columbia University, later joining the faculties at Clark University and then Harvard. He would also serve as a psychological consultant to the United States Army during the Second World War. For Cattell and many other psychologists engaged in the question of the relation of differential fertility to intelligence and the decline of national levels of intelligence, the connections to war were much more

138 Ibid, 77.

139 Ibid, 77-78.

140 Ibid, 77-78.

141 Ibid, 79.

profound than analogy. These experts perceived direct and causal links between war and national declines in intelligence, and “by any long-distance view of national security, reckless folly could go no further.”¹⁴²

The Army intelligence testing experiment and the subsequent efforts to measure national levels of intelligence were invoked by eugenicists and race scientists to substantiate eugenic fears about declining levels of national intelligence as a result of differential fertility. The early twentieth-century argument that national intellectual decadence was the result of the greater fertility of the least intelligent, coupled with a belief in the innateness of intelligence, would continue to define the positions of eugenicists and race scientists in the I.Q. controversies of this century. These controversies, which variably identified racial minorities and the poorest classes as the least intelligent groups, would ultimately help to perpetuate race science and eugenics late into the twentieth and twenty-first centuries by prolonging the anxieties these experts professed. Though race science and eugenics would at times be supplanted and undergo significant transformations over these decades that enabled their endurance, they continued to be a force within studies on differential fertility and intelligence, discussions of intelligence as a national resource, and alarm about national intellectual decline.

War continued to act as a catalyst in the expansion of group intelligence testing and national surveys, and ultimately therefore of race science and eugenics as well. Numerous nations would follow the model set by the United States and submit their militaries to group intelligence testing during the Second World War in order to identify

¹⁴² Ibid.

their best assets for various skilled combat roles. A series of larger and more expansive national surveys of intelligence would follow the Second World War in a continued quest to determine definitively whether national levels of intelligence were in fact in decline, and whether that decline was indeed a result of differential fertility. Against the backdrop of world war and international conflict, intelligence testing experts further conceived of intelligence as a vital national resource that had the potential to tip the scales in favor of war or peace. As the world entered once again into war in 1939, the use of group intelligence tests expanded, even as eugenics and race science were gradually supplanted with new rhetoric. This new rhetoric perpetuated their designs but effectively circumvented their controversy following the revelation of the horrors of Nazi *rassenhygiene*.

CHAPTER TWO

Mass Intelligence Testing in the Wake of the Second World War

During the Second World War, race science came under attack. An article in *The Chicago Defender* on the research of Allison Davis, a black professor of education at the University of Chicago, observed the irony that “while we are fighting a war in an attempt to unravel world problems, scientists and scholars continue quietly in their work of increasing misconceptions which periodically lead to violence. Most notorious of these misconceptions – that some human beings are innately inferior to others – gave rise to the Nazi ‘superman’ philosophy, and is used by Americans to justify the persecution of the Negro.” There was hope, however, that change was imminent. Davis’s research, “aimed at the undermining of this ridiculous and dangerous misconception of races,” promised to mount a “large-scale attack upon currently used intelligence tests which seemingly support the ‘inferior race’ notion.”¹⁴³ Indeed, Davis and others made considerable strides in elaborating upon the exclusionary qualities of intelligence tests during these years. Mainstream scientific consensus did reject the precepts of race science and eugenics, embracing more complex understandings of the formation of individual intelligence and disavowing discriminatory and racist science. Yet race science did not disappear from intelligence testing. Paradoxically, the very war that called attention to the grave abuses committed in the name of race science in Nazi Germany and elsewhere helped to further mass intelligence testing, anxieties about national intellectual decline, and ultimately race science itself.

143 Jacqueline Lopez, “U. of C. Project to Devise IQ Test Fair to All Groups,” *The Chicago Defender*, July 14, 1945.

The Second World War and the horrors of the Holocaust rendered the already disreputable eugenics and race science intolerable within liberal democratic societies. The tragic display of crimes against humanity under the Third Reich helped lead to their discrediting. Yet contrary to the claims of historians including Elazar Barkan, Nancy Stepan and others, race science did not retreat during these years.¹⁴⁴ Eugenics underwent considerable changes, particularly in the wake of accusations that United States sterilization law and eugenic research had informed Nazi Germany's "Final Solution" and unethical scientific experimentation on humans during the war. Intelligence testing experts endeavored to distance themselves and their disciplines from both eugenics and race science as a result. Demographers, geneticists, and psychologists styled their professions as critical of the premises of race science and eugenics, even as these professions continued to reproduce eugenic practices and ideas, revealing a tension within the human sciences between eugenic origins and overt attempts on the part of these professions to distance themselves from those origins.¹⁴⁵ Rhetorical shifts helped to facilitate the survival of eugenics and race science. First, the language of race was largely supplanted by the language of class, often acting as a proxy for discussion of differences between racial groups. Second, the tropes of eugenics and race science that had driven intelligence testing controversies to date persisted in spite of the discrediting of the theories underlying them. These tropes, which included allegations of national intellectual decadence wrought by the effects of differential fertility, continued to animate

144 Elazar Barkan, *The Retreat of Scientific Racism: Changing Concepts of Race in Britain and the United States between the World Wars* (New York: Cambridge University Press, 1992); Nancy Stepan, *The Idea of Race in Science: Great Britain, 1800-1962* (Hamden, CT: Archon, 1982); George W. Stocking Jr., *Race, Culture, and Evolution: Essays in the History of Anthropology* (Chicago: University of Chicago Press, 1968).

145 Edmund Ramsden, "Social Demography and Eugenics in the Interwar United States" *Population and Development Review* 29:4 (2003): 547-593.

the major research on group intelligence testing during this period. Finally, those individuals and organizations that had most prominently supported eugenics and race science in intelligence testing research continued to guide many of the wartime and postwar investigations on intelligence. These entities restyled themselves at times, or concealed their involvement at others. In this way they utilized new rhetorical shifts in order to perpetuate the goals and designs of race science and eugenics while avoiding their polemics.

The Second World War further legitimated intelligence testing as a tool of assessment. Following the example of the United States Army in the First World War, whose wartime testing experiment was perceived by experts internationally as a tactical success, many European nations employed intelligence tests on an unprecedented scale to prepare their armed forces for combat. Even as intelligence testing was perceived by experts as a tool to mitigate the threats of war and international conflict, war continued to prove crucial to the expansion of the intelligence testing movement. In the years immediately following the Second World War, the mass intelligence testing achieved widespread international acceptance, although it met with challenges as well. The work of experts like Davis called the fairness and efficacy of the tests into question, and a review of the transnational history of mass intelligence testing after the Second World War highlights ongoing tensions between national and international concerns. While mass intelligence testing surveys were conducted by national agencies, they were often funded by complex transnational networks and their results were frequently extrapolated to promote international as well as national policy solutions. Such a review furthermore calls national exceptionalism into question by revealing strong similarities between

Western nations' concerns regarding the relationship between differential fertility and intelligence, and national intellectual decline. Even countries with divergent early histories of intelligence testing, like the United States and France, shared more similarities than dissimilarities in their resort to mass intelligence tests in the postwar years. Numerous Western nations embarked on missions to survey their overall levels of intelligence through mass intelligence testing after the war. These surveys were driven by fear of declining levels of intelligence and consequential fear for the future of world peace. As these surveys were carried out, another significant rhetorical shift in intelligence testing parlance occurred. Intelligence as "*le capital humain*" was progressively understood by experts as a kind of national resource. The depletion of this resource would necessarily place nations at a disadvantage in international conflict and endanger not only national security, but would portend world war.

The results of these national surveys all gestured toward the anxieties initially professed by eugenicists and race scientists in the years leading up to the war: principally, that national levels of intelligence were declining as a result of differential fertility. Although the original rhetoric of eugenics and race science fell away during these years, the tropes of eugenics and race science remained, and the rhetorical shifts that occurred during these years helped to further the goals of race scientists and eugenicists in new language. These factors enabled the survival of race science and eugenics through these years, even as they outwardly appeared to indicate retreat.

“Conscripts called up for selective service will get a serious shock, unless the War Department wakes up, when they take tests to determine the military service for which they are best fitted,” the *Los Angeles Times* reported on the eve of the United States entry into the Second World War. Once again the United States Army turned to intelligence tests to help sort recruits for service. According to the article, “one theory is that the brass hats in the War Department want to fill up the infantry first and figure the test will show few draftees are qualified for any other duty.”¹⁴⁶ As in the First World War, military officials resorted to intelligence tests to rapidly sort recruits, selecting the most intelligent to serve in special roles and as officers, sending the least intelligent to the front lines. When world war broke out for the second time in 1939, numerous combatant nations turned to intelligence testing to marshal their intellectual resources to win the war. Learning from the experience of the United States Army in the First World War, European nations integrated intellectual assessments into their mobilization for combat for the first time. Germany began this process of integrating intelligence testing into its armies early on, serving as partial motivation for Allied nations to similarly engage in intelligence testing programs. Great Britain and France as well turned to intelligence testing to assess and select troops for various appointments within their armed forces.

The British Armed Forces turned to intelligence tests for personnel selection and recruit training for the first time in its history during the war. As reported in the newspapers, “an intelligence test – only here they call it a selection test – will be instituted soon in this country and every man called to the armed forces will undergo it with his medical examination.”¹⁴⁷ Referencing the American testing experiment in the

146 “Conscripts to Face Tough ‘Intelligence Tests,’” *Los Angeles Times*, September 29, 1940.

147 H.J.J. Sargent, “British I.Q. Tests,” *The Sun*, September 28, 1941.

Great War, in which “the American Army applied a series of tests to about 2,000,000 men with very good results,” British military officials determined that “with compulsory service and almost universal mechanization of land forces, selection became of vital importance,” necessitating a more routinized and scientific approach to sorting recruits.¹⁴⁸ A white paper issued by the Select Committee on National Expenditure specifically recommended intelligence tests for officer selection. In the committee’s view, “the present system leads to waste of both money and man-power, and should be revised in accordance with modern medical and psychological experience” as “little attention has been paid to the importance of filling the most highly specialized branches of the Army with recruits of the right type.”¹⁴⁹ The incorporation of intelligence tests would ensure both efficiency and expediency in the processing of recruits, in addition to guaranteeing the selection of the most intelligent recruits for special service. The need for talented recruits was heightened due to the changing tactical nature of modernized warfare. The brightest British men were required for service, “since valuable weapons and equipment are wasted if put in the hands of unintelligent, and therefore unskillful, users.”¹⁵⁰ Moreover, in contrast to their German enemies who had already integrated a system of intelligence testing into their military, the British Armed Forces were far behind. The article lamented, “very extensive research has been carried out by the Germans, who have put the results to the fullest practical use both in the posting of men and in the selection of officers.”¹⁵¹ With the realization that both allies and enemies had surpassed them in the utilization of military intelligence testing, the British Armed Forces rapidly pursued development of their own military testing program.

148 Ibid.

149 “Army’s Use of its Men: Intelligence Tests,” *The Manchester Guardian*, August 27, 1941.

150 Ibid.

151 Ibid.

Psychologist Philip E. Vernon spearheaded the British military testing experiment. Vernon had spent considerable time studying psychometrics in the United States on a fellowship from the Rockefeller Foundation. During his time in the United States he had collaborated with psychologist Gordon Allport to devise the Allport-Vernon Study of Values, though his work also demonstrated the influence of British psychologist Charles G. Spearman's work on "general intelligence." In the First World War, psychometric testing had played no role in the British Armed Forces, and did not assume a role until the second year of the Second World War.¹⁵² By the war's end however, the British Armed Forces had made considerable strides in the institutionalization of a system of military intelligence testing. Vernon boasted that the "scope of personnel selection" in the British Armed Forces at the war's completion as "quite comparable with those described by American psychologists" and, compared to the United States Armed Forces, "at least as large a proportion of the population as in America has passed through psychological selection procedure."¹⁵³ The United States Armed Forces had set the gold standard for military intelligence testing and, in Vernon's view, the British Armed Forces matched that standard by the war's end.

Between the army and the navy, thirty-five varieties of tests were implemented, a significant leap from Britain's total lack of psychometric assessment in the First World War.¹⁵⁴ Like the original United States Army exams, many of these were group examinations, rather than individual tests, designed to be administered to large numbers of test-takers simultaneously and scored quickly. Although group tests lacked the nuance

152 Philip E. Vernon, "Research on Personnel Selection in the Royal Navy and British Armed Forces" *American Psychologist* 2 (1947), 35.

153 Vernon, "Research on Personnel Selection in the Royal Navy and British Armed Forces," 35.

154 Ibid, 36-37.

and subtlety of individual tests, the results of which required expert interpretation, Vernon was confident that “evidence in the Services suggests that... the intelligence of adolescents and adults can be measured as effectively by a battery of suitable group tests as by an individual scale.” As group tests in general required less time and fewer resources to administer, and were able to provide “useful predictions of capacity for almost any Service job,” they were among the most commonly utilized. Similar to the original United States Army group intelligence tests, the group intelligence tests employed by the Royal Navy and Army delivered a “grade,” rather than an I.Q. score. Indeed, many of the tests employed by the Royal Navy and Army were adaptations of tests created in the United States. For example, the Royal Navy and Army employed the Wechsler Adult Intelligence Scale, created by United States psychologist David Wechsler in 1939, as an individual test.¹⁵⁵ However, the British adaptations differed in considerably in format. Answers to test questions were not standardized by a multiple choice answer format, but by free response, a decision motivated by the general lack of multiple-choice tests in the British education system. This pronounced cultural difference in testing highlights one of many important national differences that persisted in spite of the efforts of intelligence testing experts to internationalize testing during the interwar years. In consequence, assessment in the British Armed Forces demanded considerably more time and judgment than in the United States Armed Forces.¹⁵⁶

At the start of the war, the Admiralty Senior Psychologist’s Department and the War Office Directorate for the Selection of Personnel consisted of only twenty senior psychometric experts, and expanded considerably over the course of the war to employ

155 Philip E. Vernon, “Recent Developments in the Measurement of Intelligence” *British Medical Bulletin* 6 (1949), 21.

156 Vernon, “Research on Personnel Selection in the Royal Navy and British Armed Forces,” 37.

over 2,000 psychometric technicians.¹⁵⁷ The new existence of an unprecedented cohort of professional British psychometric examiners with military experience markedly altered perceptions on the use and desirability of psychometric assessment in British society broadly speaking. The experience helped to professionalize a new class of intelligence testing experts within Britain. In Vernon's own words, "it is the boast of British vocational psychologists that they know more about the validity of their tests or other selection techniques than do doctors or teachers or any of the innumerable organisations which conduct scholastic, professional or trade examinations."¹⁵⁸ Follow-up studies after the war confirmed that psychological testing had improved the placement of recruits, as shown by increases in recruits' successful completion of training for specialized roles.¹⁵⁹ These achievements helped to instill "a readiness to consult psychologists in the early stages of planning instruction or of producing training devices, which would have been unthinkable five years ago."¹⁶⁰ This zeal for widely employing intelligence tests in new contexts extended beyond Britain to other European nations.

Through their own wartime experiences, the French shared this eagerness to apply intelligence tests in new contexts. During the Second World War, the French Armed Forces also turned to the example set by the United States in the First World War. Although not as comprehensively as their British counterparts, the French military engaged in the psychometric testing of recruits in the navy and air force for the first time in its history. Under the direction of psychiatrist Angélo Hesnard, the navy undertook the adaptation of United States intelligence tests that would confer "classifications limited

157 Ibid, 35.

158 Ibid, 41.

159 Ibid, 46.

160 Ibid, 51.

strictly to technical aptitudes” to assist in identifying potential helmsmen, radio operators, and gunners.¹⁶¹ Hesnard acknowledged that the field of psychometric selection for aptitudes most appropriate to naval service, while still “significantly new,” was “full of promise.” One such promise was the identification of “the capital element of ability to serve one’s country in combat: not referring so much to that immeasurable moral value that fosters a patriotic ideal of sacrifice, but of the more concrete value that is the aptitude for calm and opportune action, an innate value that is difficult to measure.”¹⁶² It was this particular innate “*capital*” that the Marine “*tests d’intelligence*” aspired to measure. Although experts had hitherto referred to intelligence as a vital national resource, the French were among the first to identify this particular resource as a form of human capital.¹⁶³ The Armée de l’Air also engaged in research in collaboration with the Service National de la recherche appliquée (National Service for Applied Research) at the suggestion of French psychologist Henri Laugier, of a battery of tests, including one of “*intelligence générale*” along the lines of Spearman’s “general intelligence,” to assist in identifying recruits to serve as pilots.¹⁶⁴ The French Armed Forces’ intelligence testing projects thus received influence from other nations’ models, most particularly those of the United States and Britain.

161 Angélo Hesnard, “Les Applications de la Psychotechnique à la Marine,” Cote: 520 AP/14, Bobine: 39 2/3, Archives Nationales, Pierrefitte-sur-Seine (AN), 2-3. (Translated by author from the original French: *...c'est-à-dire du classement professionnel limité aux strictes aptitudes techniques.*)

162 Hesnard, “Les Applications de la psychotechnique à la Marine,” Cote: 520 AP/14, Bobine: 39 2/3, AN, 13. (Translated by author from the original French: *... le problème de la sélection des aptitudes dans la Marine par les méthodes psychotechniques est vaste nouveau et plein de promesses... l'élément capital de l'aptitude à servir le Pays pendant le combat: je ne parle pas tant de ce ressort moral incommensurable que donne l'idéal patriotique de sacrifice personnel, qu de cette valeur plus concrète qu'est l'aptitude à l'action calme et à la décision opportune; valeur biologique bien difficilement mesurable...)*

163 Hesnard’s invocation of the term “human capital” is the earliest instance of discussion of intelligence as a form of human capital I have discovered over the course of my research.

164 Henri Piéron, “Rapport: Sélection et classement psychotechnique du personnel navigant,” January 19, 1940, Cote: 520 AP/14, Bobine: 39 2/3, AN, 1- 2.

Although the birthplace of the modern intelligence test, mainstream French psychology had rejected *psychotechnique* in favor of a system of technocratic testing. Rather than testing for intelligence, the French turned to educational and civil service exams that tested knowledge, skills, and abilities to permit professional and educational advances.¹⁶⁵ However, contrary to the dominant narrative that intelligence testing never gained traction in France, interest among a small cohort of French psychologists initiated a niche movement during the interwar years that came to fruition during the Second World War.¹⁶⁶ Mainstream French psychology did not warmly embrace psychometric testing until the postwar period, yet even though the first mass intelligence tests were not proctored in France until after the Second World War, French connections to psychologists in the United States and Great Britain indicate an intelligence testing movement in France that dates much earlier. These psychometricians were highly transnational in their intellectual formation, many having spent considerable time in England and the United States, and their correspondence and exchange with their peers abroad greatly influenced the trajectory of intelligence testing in the Second World War and the years to follow by promoting an expansion of Anglo-American applications of intelligence testing throughout Western Europe.

This network was vast. For instance, French psychologist Henri Piéron corresponded with numerous leaders of intelligence testing movements abroad, including Cyril Burt in England and Louis Thurstone in the United States, and encouraged the translation of contemporary French intelligence tests into other languages, such as

165 John Carson, *The Measure of Merit: Talents, Intelligence, and Inequality in the French and American Republics, 1750-1940* (Princeton: Princeton University Press, 2006), 65-68.

166 Carson, *The Measure of Merit*; William H. Schneider, "After Binet: French Intelligence Testing, 1900-1950," *Journal of the History of the Behavioral Sciences* 28 (April 1992): 111-132.

Portuguese, in the hopes of aiding research in intelligence testing abroad.¹⁶⁷ French psychologist, Henri Wallon, too, engaged a broad international correspondence with leaders of intelligence testing movements. Wallon also compiled a collection of intelligence tests from the United States and translated several, in particular the Dearborn, into French.¹⁶⁸ This influence traveled in both directions. French psychology students actively pursued academic exchanges with United States universities, such as with University of Chicago, which housed Louis Thurstone's psychological laboratory, and were eagerly welcomed by these institutions.¹⁶⁹ Piéron himself was even inducted in the United States National Academy of Sciences in 1949.¹⁷⁰ Private foundations in the United States likewise played a powerful role in these exchanges through researcher fellowships. Otto Klineberg jokingly confided to Piéron at one point that he was a "slave" of the Rockefeller Foundation, sent whither he was granted funding.¹⁷¹ Piéron's connections at Harvard, Princeton, Brown, Stanford, and other universities tied him closely to developments in United States psychometry.¹⁷² During the Second World War, these connections and experiences served him in his capacity as a consultant on *psychotechnique* to the Bureau Scientifique de l'Armée.¹⁷³ Indeed, Piéron expressed his admiration for the "truly remarkable" war effort of United States psychologists, whose role expanded considerably during the Second World War.¹⁷⁴

167 Cyril Burt to Henri Piéron, February 6, 1923; Henri Piéron to Nelson de Campos Pires, June 2, 1953, Cote: 520 AP/4, Bobine: 13 2/2; Herbert S. Langfeld to Henri Piéron, November 11, 1925, Cote: 520 AP/7, Bobine: 19 1/3, AN.

168 Henri Wallon, "Test collectif d'intelligence de Dearborn," Folder: Tests, Box: 360 AP/9, Fond: Henri Wallon, AN.

169 Jean Cardinet to Henri Piéron, January 16, 1954, Cote: 520 AP/4, Bobine: 13 2/2, AN.

170 Leonard Carmichael to Henri Piéron, May 2, 1949, AN.

171 Otto Klineberg to Henri Piéron, March 16, Cote: 520 AP/6, Bobine: 16 1/3, AN.

172 W.B. Cannon to Henri Piéron, January 14, 1920, Leonard Carmichael to Henri Piéron, November 1, 1932, Cote: 520 AP/4, Bobine: 13 2/2, AN.

173 Monsieur le Chef d'Escadron Chandessais to Henri Piéron, November 15, 1948, Cote: 520 AP/4, Bobine: 14 ½, AN.

174 Henri Piéron to Herbert S. Langfeld, April 27, 1945, Cote: 520 AP/7, Bobine: 19 1/3, AN.

Piéron and his wife Margéurite closely followed the United States intelligence testing movement from the early interwar years, with Piéron translating the Terman-Merrill intelligence test into French.¹⁷⁵ They additionally devised their own French versions of many popular United States intelligence tests, which were utilized by the Institut national d'orientation professionnelle (National Institute of Professional Development).¹⁷⁶ From the United States, numerous students traveled to France to study with French psychometricians like the Piérons from the early twentieth century. These exchanges challenge the idea that national context proved the most formative context for the history of intelligence testing in France or elsewhere. It furthermore shows the existence of a truly transnational collaboration that proved an equally formative influence on the trajectory of intelligence testing in France. These exchanges provided the setting for a truly transnational network and movement in mass intelligence testing that transpired across multiple and diverse national contexts, and challenge the notion of United States exceptionalism in the history of mass intelligence testing. The war helped to further these exchanges, as more nations developed complex systems of testing into their armed forces.

The Second World War was a watershed as well for the implementation of mass intelligence testing into the United States military. Much more so than during the First World War, intelligence testing became centrally integrated into the war effort, both before and after the United States entry into combat. In preparation for war, the National Research Council established a Committee on Selection and Training of Air Pilots and a Committee on the Selection and Training of Personnel, and in 1940, a Personnel Testing

175 Félix Cesselin to Henri Piéron, December 21, 1951, Cote: 520 AP/4, Bobine: 14 ½, AN.

176 Schneider, "After Binet," 119.

Section was instituted within the War Plans and Training Officer of the Adjutant General's Office. In 1943, the National Research Council established the Committee on Classification of Military Personnel Advisory, which set to work devising the Army General Classification Test, which replaced the intelligence tests in use the First World War.¹⁷⁷ The Army General Classification Test was a modified I.Q. test that was designed to measure both natural intellectual endowment and learned knowledge, or "general learning ability." All Army recruits sat for this exam and by the war's end the Army General Classification Test was administered to over nine million recruits.¹⁷⁸ Military psychologists also introduced the Navy General Classification Test for naval recruits and developed a naval program that would exempt exceptional recruits from combatant service, sending them to college instead.¹⁷⁹ In the Air Force, military psychometricians played an even more profound role in the Aviation Psychology Program with the administration of the new Aviation Cadet Qualifying Exam, which was among the most selective of the military's exams.¹⁸⁰ In 1950, the United States military established the general Armed Forces Qualification Test, which would remain in use until the institutionalization of the Armed Services Vocational Aptitude Battery, introduced in 1968 and still in use to this day.¹⁸¹ Historians have noted the central role that psychology played in the selection and training of recruits and personnel during the Second World War; however, in addition to providing critical military support, this wartime testing

177 The Adjutant General's Office, "The Army General Classification Test" *Psychological Bulletin* 42 (1945), 760.

178 James H. Capshew, *Psychologists on the March: Science, Practice, and Professional Identity in America, 1929-1969* (New York: Cambridge University Press, 1999), 101-102; Nicholas Lemann, *The Big Test: The Secret History of the American Meritocracy* (New York: Farrar, Straus and Giroux, 1999), 53; The Adjutant General's Office, "The Army General Classification Test," 760.

179 Lemann, *The Big Test*, 55.

180 Capshew, *Psychologists on the March*, 107.

181 *Ibid*, 101.

experience also contributed to the transnational shift toward the embrace of mass intelligence testing outside of the armed forces.¹⁸²

Intelligence testing in the Second World War reinforced expert concerns about the relationship between differential fertility and declining levels of intelligence. The wartime testing experience provided an expanse of new testing data and a battery of new tests with which to approach these fears, and experts often drew conflicting conclusions from them. British psychologist Raymond B. Cattell, having moved to the United States in 1937, served as a consultant on intelligence testing to the United States government during the war, and thereafter continued the research he had begun in England on the relationship between family size and intelligence. In the process of this work, he also continued to preach on the inevitable catastrophic decline in national levels of intelligence.¹⁸³ Others, such as American psychologist Read Tuddenham, assumed a more positive perspective. Tuddenham proposed that the wartime data “suggests that the future may not be as black as the eugenicists would have us believe.” Whereas eugenicists had predicted overall decline, according to Tuddenham, the testing data from the war “indicate at least for that fraction of the population selected for military service, that performance on a group test of the kind usually described as measuring ‘general learning ability’ or ‘verbal intelligence’ has markedly increased from World War I to World War II.” This finding seemed to contradict the theories of experts who “have contended that the mean I.Q. of the population is declining at the rate of three or four

182 Capshew, *Psychologists on the March*, 99; Lehman, *The Big Test*, 53-55; Ellen Herman, *The Romance of American Psychology: Political Culture in the Age of Experts* (Berkeley and Los Angeles: University of California Press, 1995), 126.

183 Raymond B. Cattell, “Effects of Human Fertility Trends Upon the Distribution of Intelligence and Culture” in Guy Montrose Whipple, ed., *Intelligence: Its Nature and Nurture. Thirty-ninth Yearbook of the National Society for the Study of Education, Part I*. (Public School Publishing Company: Bloomington, 1940), 225.

points per generation” as a result of an inverse relationship of family size to intelligence.¹⁸⁴

Even such optimists, however, were reluctant to dismiss concerns about the relationship of intelligence to differential fertility. Tuddenham’s conclusion was, he admitted, complicated by significant differences in samples between the world wars. While “the members of the armed forces constitute by far the largest and most representative sample of the general population ever subjected to psychometric procedures,” the World War I sample was considerably less representative. United States citizens benefited from greater education, better nutrition and overall fitness, and greater familiarity with tests at the time of the Second World War compared to their earlier counterparts, which could explain their elevated scores.¹⁸⁵ The fact that the samples only included men eligible for enlistment, however, appeared to be less of a concern. Thus, although Tuddenham expressed doubt about alarmist assertions that “national I.Q. is dropping at a rapid rate,” he conceded, “one cannot rule out the possibility of a decline in the purely native component of intellectual performance were it possible to measure it.”¹⁸⁶ While experts were undecided on how best to interpret newly available data, intelligence testing in the postwar years enjoyed much broader acceptance and usage than ever before.¹⁸⁷ The expansion and opening of higher education with the passage of the Serviceman’s Readjustment Act in 1944, entailed an even greater expansion of the intelligence testing industry and a developing culture of standardized testing as well.

184 Read D. Tuddenham, “Soldier Intelligence in World Wars I and II,” *The American Psychologist* (1948), 54.

185 Tuddenham, “Soldier Intelligence,” 55.

186 *Ibid.*, 56.

187 Michael Ackerman, “Mental Testing and the Expansion of Educational Opportunity,” *History of Education Quarterly* 35:3 (1995), 280-286.

The Second World War generated considerable momentum for the intelligence testing movement, and once again invigorated efforts to assess the intelligence of nations. A series of national surveys burgeoned across the Western world in the years immediately following the Second World War in nations such as the United States, England, Scotland, and France. As during the interwar years, psychometricians spearheaded assessments of national populations, framing their concerns in terms national crises, even as they engaged in internationalizing projects and rhetoric. These conflicting impulses reflect an ongoing tension between national and international prerogatives within the global community of intelligence testing experts. Experts within these nations desperately sought answers and policy solutions to redress fears that national levels of intelligence were sharply declining as a result of differential birthrates while also seeking the internationalization of intelligence tests. Yet even as the language of race science and eugenics fell away from much of this discourse, the tropes of race science and eugenics remained. In the years leading up to and following the Second World War, human scientists and the public increasingly viewed eugenics and race science as fringe or extremist ideologies.¹⁸⁸ However, eugenicists and race scientists successfully managed to resurrect the specter of national intellectual decline as a result of differential fertility again and again, in spite of a perpetual lack of evidence demonstrating that this was the case. This particular trope, and the inability of experts to eradicate it or even recognize it as the creation of eugenicists and race scientists, contributed to the survival of race science and eugenics. Thus even when the rhetoric of race science and eugenics was supplanted, its tropes perpetuated their designs and alarmist fears.

188 Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (New York: Alfred A. Knopf, 1895), chapter 11.

These fears worked their way into the popular press as well. In the United States, the *New York Times* reported to its readership that “population experts have discovered a possibility that the intelligence of the American people is declining.” According to an expert from the Population Reference Bureau, the article read, “the most alarming threat to intelligence is the pattern of human reproduction.” Unless checked, differential fertility was poised to lower the intelligence of the nation. Drawing on United States Census data, this expert explained that “parents with the least mental and financial ability to raise children produce twice as many children as parents of the highest intelligence and income.” Birth control programs were the only means proposed by which government might intervene to reverse the decline in intelligence.¹⁸⁹ Concerns were so widespread that letters to editors from the general public poured in to newspaper offices, projecting the decline of national intelligence. One G.C. Miller, who wrote to the editor of *The Baltimore Sun*, reported on fertility statistics according to I.Q., informing the editor that individuals with I.Q.s ranging between 60 and 80 had an average of 4.13 children, compared to geniuses, who had a mere 2.35.¹⁹⁰ Similar fears were reported in the papers in Britain and France as well. The institutionalization of mass intelligence testing in diverse national contexts helped to fuel the anxieties of experts, governments, and publics alike that nations were in states of intellectual decline, even as the sources of these fears became increasingly discredited by mainstream science.

In part, this was because national intelligence had become a matter of national security. This conviction, sustained and encouraged by the Second World War, cleared the path for a transnational mass intelligence testing movement that would

189 “U.S. Intelligence Seen on Decline: Some Educational Leaders Agree to Hypothesis Based on Reproduction Pattern,” *New York Times*, July 20, 1947, 15.

190 G.C. Miller, “Sees Decline in Intelligence,” *The Sun*, June 13, 1950, 14.

unintentionally help to perpetuate race science and eugenics. Psychology had progressed considerably from early eugenic arguments that genetics exclusively governed innate intelligence, and mass intelligence testing in the postwar period breathed new life into the debate on the role of environment in the development of general intelligence. Experts developed increasingly nuanced theories of the origins of intelligence, moving away from earlier eugenic theories that intelligence was strictly governed by genetics, toward more fluid understandings of the relationship between heredity and environment. By the time of the Second World War, few experts believed that intelligence was derived strictly from heredity or environment. Rather, experts began to debate the degree to which heredity and environment were responsible for the development of intelligence, and how these factors related to one another.¹⁹¹ In the United States, England, Scotland, and France, psychometricians reexamined the influence of environment in the context of mass intelligence testing surveys.

Although it was accompanied by the belief that equal conditions might eliminate differences between groups, the turn toward environmental influences in the development of intelligence was not necessarily a wholly progressive development. Indeed, the eugenic and race science theories, which had undergirded hereditarian theories on intelligence, adapted to new surroundings. Couching difference in environmental language, especially that of class, often masked racist views in new rhetoric, thus avoiding the stigma of race science. Indeed, class became the most common proxy for race in this context. This research did not necessarily give way to gentler or more generous beliefs regarding the development of intelligence. It did however increase

191 Hamilton Cravens, *The Triumph of Evolution: American Scientists and the Heredity-Environment Controversy, 1900-1941* (Philadelphia: University of Pennsylvania Press, 1978), 224-265.

general confidence in the ability of early education and welfare interventions by social and government agencies to affect overall or individual intelligence, and introduced new language to describe and identify intellectual differences between individuals and groups. When intervention fell short of expectations, most often due to their inability to recognize and dismantle systemic inequalities, they eventually would be invoked as evidence by race scientists and eugenicists of the true inequalities between groups. Thus though the terms of the I.Q. controversy had largely shifted by this point in time, old prejudices and the trope of the dilemma of the relationship between differential fertility and intelligence remained, as did the as yet unsubstantiated claim that national levels of intelligence were declining. This helped to perpetuate the designs of race scientists and eugenicists even after their discrediting.

Following the cessation of hostilities, a series of intensive studies on intelligence spearheaded by population research institutions, private foundations, and universities sought to gather data that could answer conclusively whether the level of intelligence in the United States was declining, and if so, why. Among these studies numbered those funded by the Milbank Memorial Fund, Allison Davis's work on culturally-equalized intelligence tests, and Lewis Terman's work on genius. Commensurate with recent shift in thinking about the cultivation of intelligence, these studies endeavored to identify the foundations of individual intellectual ability in order to better understand trends in group and national intelligence. Representing conflicting views, these researchers hoped to gain insight into the respective roles of social and demographic factors, environmental factors, cultural factors, and genetic factors in the formation of individual intelligence so

as to generate recommendations as to what states could do to prevent the decline of intelligence or promote its increase. Though tempting to view these studies as a break from eugenics and race science, which none of these studies openly endorsed, they nevertheless helped to further interest in differential fertility and declining levels of intelligence and ensured the continued relevance of this relationship. Thus although many experts invested in intelligence testing research at this time had abandoned or rejected race science and eugenic theories, in many instances they continued to embrace the very themes that had animated those theories in decades prior.

The Milbank Memorial Fund directed studies that were among those to carry on most clearly the themes in intelligence testing research that were characteristic of race science and eugenics. The Fund led the landmark Indianapolis Study. Formally called the Study of Social and Psychological Factors Affecting Fertility, this study represented the first major demographic investigation of factors influencing individual intelligence in the United States.¹⁹² Established in 1905, the Fund was predominantly invested in demographic and population research in the years leading up to and following the Second World War. In 1936, it established the Office of Population Research at Princeton University under the directorship of demographer Frank Notestein. At the time of the Indianapolis Study, the Office of Population Research was and would continue to be a central institution of the population studies movement in the United States well into the 1960s.¹⁹³ Founded at a time during which eugenics was still accepted in many quarters, the Fund in particular continued to be animated by the concerns authored by past

192 Clyde V. Kiser, "The Indianapolis Fertility Study-An Example of Planned Observational Research," *The Public Opinion Quarterly* 17(4) (Winter 1953-1954): 496.

193 Matthew Connelly, *Fatal Misconception: The Struggle to Control World Population* (Cambridge: The Belknap Press of Harvard University, 2008), 106.

eugenicists. Principally, it produced research leading to the conclusion that differential fertility did indeed pose considerable risk to the population. The Indianapolis Study's primary contribution was what it claimed as proof of the existence of significant fertility differentials between social classes, as well as proof that these differentials derived from psychological factors, including intelligence.

Work began on the Indianapolis Study in 1938 when, with financial backing from the Carnegie Institute of Washington, the Milbank Memorial Fund formed the Committee on the Study of Social and Psychological Factors Affecting Fertility. Demographers Frank Lorimer, Clyde Kiser, Frederick Osborn, and Notestein, who would later serve as experts for various United Nations and UNESCO projects, numbered among the members of the committee.¹⁹⁴ The study focused on the fertility and reproductive patterns of a narrow subset of the population, which the committee took as a representative sample of the United States. The committee restricted the study to “native-white Protestant couples that were married during 1927-29, with neither spouse previously married, with husband under 40 and wife under 30 at the time of marriage, with residence in a large city most of the time since marriage, and with both husband and wife having a complete grammar school education.”¹⁹⁵ Based on its ready supply of couples meeting this description, the committee selected Indianapolis as the site of the study. In total, the committee surveyed 2,589 couples, interviewing 1,977 of those.¹⁹⁶ The surveys and interviews were structured to discover how couples planned the number and spacing of pregnancies, as well as how psychological, economic, or social factors motivated their decisions. The study enlisted psychologists to assist with interviews,

194 Kiser, “The Indianapolis Fertility Study,” 497.

195 Ibid, 499.

196 Ibid, 501-502.

however, it did so imperfectly. A key criticism of the study was its inability to measure in a sophisticated manner the correlation between particular psychological factors and fertility practices, which undercut the validity of the connections the study intended to draw.¹⁹⁷ The major contribution of the study was the affirmation of differential rates of fertility between socioeconomic groups measured by monthly rental costs. Couples of lower socioeconomic status tended to have more children, even though this led to greater feelings of economic insecurity. The principal finding was that “in all cases fertility tended to be inversely related to socio-economic status except at the highest rental and educational levels.”¹⁹⁸ Experts attributed this inverse relationship to the “factor of differential preference and effectiveness of contraceptive practice,” implying that couples in the lower socioeconomic brackets both preferred to have more children and had less dependable access to contraception.¹⁹⁹ In their view, this finding bore considerable consequences for the nation’s intelligence should I.Q. be proven to have a strong genetic basis, since this group routinely underperformed on intelligence tests.

In the years following the Second World War, the Fund prioritized studies of socioeconomic differences in fertility, contraception, social and psychological factors influencing fertility, and world population issues.²⁰⁰ Soon after its publication of the Indianapolis Study, the Fund made additional progress in confirming a correlation between performance on the Otis Intelligence Test and desired fertility.²⁰¹ The most intelligent (as measured by scores on the test) were the most likely to bear their

197 Ibid, 500.

198 Ibid, 505.

199 Ibid, 506.

200 “The Fund's Work in Population Problems, 1928-1950,” Folder: 340, Box: 22, Accession 1, Series 1, FA210, Population Council (PC), Rockefeller Archive Center (RAC), 2.

201 Frederick Osborn to Charles F. Westoff, December 17, 1954, Folder: 340, Box: 22, Accession 1, Series 1, FA210, PC, RAC.

predetermined number of children. The converse of this observation suggested that the least intelligent were less capable of achieving the desired number of children, which could lead to the birth of many more children to less intelligent parents. Experts affiliated with the Fund, such as Frederick Osborn, particularly encouraged other organizations invested in demographic research, like the Rockefeller Foundation's Population Council, to also investigate of the connection between psychological traits and family size both in the United States and abroad.²⁰² Private foundations also played a considerable role in exporting United States population research. For instance, John D. Rockefeller III organized the Population Council in 1952 with the express intention of training demographic experts who would serve as ambassadors of population control to developing nations. The Ford Foundation too joined forces with the Population Council to help institute family planning measures in the developing world, demonstrating the considerable reach of the influence of this research beyond national borders.²⁰³

Demographers increasingly viewed intelligence, socioeconomic status, and fertility as interconnected as a result of this research. Massive statistical surveys investigating the relationship between these factors, like the Indianapolis Study, were at this time generating an unprecedented amount of data on the relation between fertility and psychological factors in populations that was then utilized by analysts proposing policy solutions to population problems in both the United States and the world. The United States was a major international leader in the collection and dispersion of demographic information and population studies.²⁰⁴ Following the Second World War, the United States population lobby played a critical role in integrating family planning policies into

202 Ibid.

203 Donald T. Critchlow, *Intended Consequences: Birth Control, Abortion, and the Federal Government in Modern America* (New York: Oxford University Press, 1999), 3-5.

204 Connelly, *Fatal Misconception*, 11.

both domestic and international policies. Domestically, population experts perceived a relationship between population control and the diffusion of crime, poverty, and environmental concerns.²⁰⁵ This thinking likewise informed United States population experts' views of global population issues. Yet not all research at the time supported arguments purporting that socioeconomic status, family size, or other demographic factors influenced the development of individual native intelligence. The work of experts like Allison Davis and Lewis Terman challenged the notion – albeit from very different perspectives – that demographic factors determined intelligence or that they could provoke a true decline in national intelligence.

Allison Davis's research on culturally-equalized intelligence tests challenged the argument that apparent trends of socioeconomic disparities in I.Q. were a reflection of innate intellectual inequalities. Davis, a black professor of Education, conducted his longitudinal study on intelligence tests at the University of Chicago with the support of the Rockefeller Foundation's General Education Board. Although he has only received brief mention in histories of intelligence testing, Davis's research illuminated the ways in which race science was at work in the intelligence testing establishment.²⁰⁶ Davis implicated intelligence tests in perpetuating discriminatory beliefs in the intellectual inequality between socioeconomic groups. Significantly, he avoided the subject of race in his publications, focusing instead on the ways in which intelligence tests discriminated against social classes. Even as he attacked the intelligence testing establishment for its eugenic vestiges, his research reflected the broader rhetorical shift away from framing intellectual differences in terms of race toward framing those differences in terms of

205 Critchlow, *Intended Consequences*, 4-5.

206 Lemann, *The Big Test*, 66.

class, which often served as a proxy for eugenicists and race scientists to discuss race during these years. Though he did not challenge the premise of intelligence tests as measures of intellectual ability, or offer resistance to the idea that genetics determined intelligence, Davis argued that the symbols and cultural basis of those tests in use perpetuated discrimination against children from working class backgrounds. These symbols placed middle class children at an advantage, placed working class children at a disadvantage, and therefore produced skewed data on the distribution of I.Q. within populations and between groups. In consequence, Davis argued, biases in the tests resulted in the tremendous loss of national human resources. If the tests remained unaltered, these resources would be forever lost.

The remedy for this loss of resources was the creation of tests that were equally accessible to all. Davis's research on culturally-equalized intelligence tests received funding from the General Education Board for six years, beginning in 1944, when he submitted a proposal "for the development and standardization of a verbal test of general intelligence which will measure and offer a means of comparing the abilities of children of all socio-economic levels."²⁰⁷ In his proposal, Davis asserted that the use of tests that privileged middle class symbols and cultural knowledge was detrimental to the nation as well as the futures of individuals in the lower socioeconomic strata. He identified the tests' wide acceptance "as primary measurements of innate ability" as one of the greatest problems facing intelligence testing. In general, experts believed that intelligence tests, though imperfect instruments, were adequate in their assessment of innate intelligence. This misconception was responsible for "causing incalculably severe educational loss in

207 Flora M. Rind to Ralph W. Tyler, November 15, 1944, Folder: 5289, Box: 496, Series 1.3, FA058, General Education Board records (GEB), RAC.

the public schools.”²⁰⁸ This loss was caused by a faultiness in the tests’ construction; they failed to adjust for the differences wrought on individual intelligence by environmental factors, particularly cultural differences across social classes. As long as the tests remained inaccessible to non-middle class children, the belief that the tests gave an accurate measure of innate intelligence would result in continued failure to recognize the innate intellectual ability of poor and working class children. Davis’s proposed solution was the creation of new tests that utilized language and cultural symbols that were equally accessible across class divides. This, Davis concluded, would finally allow the tests to measure accurately innate intelligence and ensure the maximization of national intellectual resources.²⁰⁹

Davis premised his research on the conviction that it was impossible to generate a truly culture-free test. Therefore, he suggested, a “general test of intelligence” should draw only upon “general culture” to which all members of a given nation had access. He concluded, “the basic flaw in all available verbal tests of general intelligence may be overcome by including only those items which imply experience which is part of both the middleclass and lowerclass cultures, that is, part of the general American culture.”²¹⁰

Rather than attempting the impossible goal of a culture-free test, Davis proposed to create culturally equal tests of intelligence. His study was guided by three objectives: testing children across socioeconomic levels; assessment of trends in “problem-solving behavior” across socioeconomic classes; and construction of culturally-equalized exams

208 Allison Davis, “Proposal for the Development and Standardization of a Verbal Test of General Intelligence which will Measure and Offer a Means of Comparing the Abilities of All Socio-Economic Levels,” Folder: 5289, Box: 496, Series 1.3, FA058, GEB, RAC, 3.

209 W. Allison Davis and Robert J. Havighurst, “The Measurement of Mental Systems (Can Intelligence be Measured?)”, Reprinted from *The Scientific Monthly*, Vol. LXVI, No. 4 (April 1948), Folder: 5291, Box: 496, Series 1.3, FA058, GEB, RAC, 301. (Emphasis in original).

210 Davis, “Proposal for the Development and Standardization of a Verbal Test of General Intelligence,” Folder: 5289, Box: 496, Series 1.3, FA058, GEB, RAC, 1-2. (Emphasis in original.)

that could accurately detect an individual's innate intellectual abilities regardless of socioeconomic status. Although Davis couched his study in terms of socioeconomic difference, this language served as a placeholder for racial difference as well. For its preliminary samples, the study examined intelligence test results of black children from Gary, Indiana and white children from Rockford, Illinois, across different ages and socioeconomic levels.²¹¹ Thus although race was not addressed directly, it was taken into consideration in the process of sample selection. This initial comparative study yielded two significant findings expressed in socioeconomic terms. First, that there was no evidence of lower class children's inability to solve all kinds of intellectual problems. Second, that "the primary handicap of the lower-class children in responding to the present tests is the symbols."²¹² As many as 74 percent of words appearing in ten standard intelligence tests "were significantly less familiar to lower-class pupils."²¹³ When more accessible words were used in place of the unfamiliar ones, students across socioeconomic levels performed equally well.²¹⁴ Analogies also proved far less accessible to lower-class children compared to their middle class peers.²¹⁵ Davis set out to produce a series of tests that drew on general experiences and were capable of identifying innate ability in all individuals, regardless of socioeconomic background. In this way, he believed culturally-equalized tests would "salvage a great deal of potential

211 Allison Davis to Ralph W. Tyler, February 13, 1946, Folder: 5289, Box: 496, Series 1.3, FA058, GEB, RAC.

212 "General Education Board Study of Cultural Factors in Intelligence-Tests. I. Progress-Report on Study of Cultural Factors in Ten Standard Tests of Intelligence. II. Proposal for the Development of Culturally Equalized Group-Tests of Intelligence," Folder: 5289, Box: 496, Series 1.3, FA058, GEB, RAC, 3. (Emphasis in original).

213 Ibid, 3-4.

214 Ibid, 4.

215 Ibid, 5.

ability, which is now lost to American civilization,” by identifying the intellectually-gifted from all socioeconomic backgrounds.²¹⁶

Davis’s research attracted national as well as international attention. In the years to come, UNESCO would solicit his insights on problems of national intelligence. In the United States, educators in particular favored his research. His public appearances and speeches, such as his presentation on “Education and the Conservation of Human Resources” at the American Association of School Administrators, earned him the respect and affirmation of those in education who had similarly questioned extant test-based evidence of the intellectual inferiority of children from lower socioeconomic levels.²¹⁷ Although most who wrote to Davis referred to doubts about socioeconomic differences in intelligence, some shared that their doubts also extended to claims about the intellectual inferiority of racial groups. One educator confided in Davis: “I have always been a bit skeptical of most of the so-called intelligence examinations. This skepticism was greatly increased during my period in the United States Indian Service when I discovered that Indian children appeared always to rate so much lower by these tests than white children, whose intellectual capacity I would have rated no higher...”²¹⁸ Thus while race was often not explicitly acknowledged in research at this time, it was often implied or just beneath the surface. The experiences of educators across the United States bore out the conclusions of Davis’s study, which pushed back against intelligence testing experts’ concerns about the detrimental impact of differential fertility on national levels of intelligence. However, while his results were well accepted among educators, they were

216 Ibid, 10.

217 W. Hugh Stickler to Allison Davis, March 2, 1949, Folder: 5290, Box: 496, Series 1.3, FA058, GEB, RAC.

218 R.D. Baldwin to Allison Davis, March 9, 1949, Folder: 5290, Box: 496, Series 1.3, FA058, GEB, RAC.

less positively received among intelligence testing experts in the United States who continued to ponder the relationship of differential fertility to intelligence and the negative correlation between family size and intelligence suggested by other research.

While Davis's research challenged the status quo in some ways, in other ways it did not. Davis never explicitly attacked the notion that intelligence was genetically determined. Although he was critical of Lewis Terman's studies on "gifted" children, which he believed "entrenched belief that these tests are in fact measures of hereditary ability, across social strata" as well as the "belief that the I.Q. is an index of 'gift,' of innate ability," Davis did not reject the notion that intelligence was heritable.²¹⁹ Rather, he identified what he perceived as an absence of convincing "evidence that lower-class groups contain a larger proportion of genetically inferior individuals than do other social strata," maintaining that "no geneticist, of any national or international standing, furthermore, will venture even the opinion that lower-class groups are genetically inferior."²²⁰ In the years following the Second World War, this reluctance to openly attribute differences in intelligence test performance across class lines to genetic inferiority was shared by almost all participants in the intelligence debate. The revelation of the horrors of Nazi *rasenhygiene* prompted scientists in the United States and Europe to distance themselves from strictly hereditarian theses and both race science and eugenics, which fell under heavy scrutiny during these years. While race science and eugenics were hardly reputable in the interwar period, *reform* eugenicists had achieved

219 Davis, "Proposal for the Development and Standardization of a Verbal Test of General Intelligence," Folder: 5289, Box: 496, Series 1.3, FA058, GEB, RAC, 4.

220 "General Education Board Study of Cultural Factors in Intelligence-Tests. I. Progress-Report on Study of Cultural Factors in Ten Standard Tests of Intelligence. II. Proposal for the Development of Culturally Equalized Group-Tests of Intelligence," Folder: 5289, Box: 496, Series 1.3, FA058, GEB, RAC, 11-12.

considerable success in distancing their science from their delegitimized predecessors.²²¹

Following the Second World War, even reform eugenics became highly suspect. For instance, when University of Chicago psychologist, Ernest A. Haggard presented the results of Davis's study at the Invitational Conference on Testing Problems sponsored by the Educational Testing Service, October 29, 1949, in New York, he asserted only that "the intelligence test scores are, in themselves, irrelevant data so far as any proof or disproof of genetic theories are concerned." Haggard simply stated, "the burden of proof for demonstrating that the upper socio-economic groups inherit a complex of gene characteristics which are tied to superior mental ability, and lower socio-economic groups inherit inferior genetic structures, rests on the shoulders of those who interpret differences in mental test scores as being due to differential inheritance."²²² This rhetorical refusal to disavow old eugenic ideas became a normative tactic for proponents of hereditarian theories during these years.

Nevertheless, experts invested in perpetuating the use of standard intelligence tests were highly adverse to Davis's criticisms of bias in intelligence tests. His critics challenged his work on the basis of what they described as a sophomoric understanding of the genetic factors determining I.Q. and an overemphasis on cultural factors. Terman in particular challenged Davis's assertions that intelligence tests failed to measure accurately the intellectual capacity of children from all socioeconomic backgrounds. Terman drew upon his own research on genius as evidence against claims of the inefficacy of standard intelligence tests, arguing that his geniuses came from diverse socioeconomic backgrounds, which "tells you how little truth there is in the statements by

221 Kevles, *In the Name of Eugenics*, chapter 11.

222 Ernest A. Haggard, "Influence of Culture Background on Test Performance," Folder: 5291, Box: 496, Series 1.3, FA058, GEB, RAC, 10.

some educators and others to the effect that I.Q.'s are invalid and meaningless.”²²³

Terman resolutely denied that it was “undemocratic to try to develop every pupil to the maximum of his potentialities.” Indeed, he declared, “we have been too much swayed by the all-American feeling for the fellow at the foot. We have too long taken as our motto that if we look out for the hindmost, the foremost will take care of himself.”²²⁴ Terman thus argued for the need to seek out talent and develop it, rather than focus national attention on catching up the less gifted. Other experts, including Alan Gregg, chairman of a Harvard committee on psychology and medicine, were critical of Davis’s privileging of social factors over that of genetic factors. Gregg protested, “we grossly underestimate the importance of hereditary factors in human behavior as well as in human medicine... Medicine and psychology share a neglect of genetics which is perhaps best described by saying that they seem to think that heredity is a study of one's uncontrollable ancestors whereas it is one of the few fields that offers any dependable control over one's descendants.”²²⁵ Thus, though Davis’s critics stopped short of declaring socioeconomic disparities in intelligence test performance were a direct result of genetic differences, they were quick to accuse him of overly simplifying the genetic basis of I.Q.

Throughout his studies, Davis maintained that intelligence tests that privileged exclusionary symbols were harmful to democracy and the nation; as they stood, he asserted that the tests were in fact depriving the nation of crucial human resources. By passing over such talent, the United States was failing to bring its citizens to their full

223 “Educator Defends Validity of the IQ: Dr. L.M. Terman Analyzes his Long Study of 'Geniuses' for Administrators,” *New York Times*, February 27, 1949, Folder: 5290, Box: 496, Series 1.3, FA058, GEB, RAC.

224 Ibid.

225 “Wider Intelligence Tests Urged by Psychologists,” *Boston Herald*, September 9, 1948, Folder: 5290, Box: 496, Series 1.3, FA058, GEB, RAC.

potential, and much talent was lost early on schools. In a preliminary report, Davis's study argued that, "the standard tests, fail to tap many aspects of intelligence. Both the tests and the schools are caught in a circular process. They define only certain kinds of activities as "intelligent," namely those activities which are highly valued in middle-class academic culture. Then the schools, supported by the test-results, conclude that only those pupils who rank high on this special, limited range of activities are "intelligent." This is a circular process of in-grown education, which costs our nation and our industries a tremendous loss, through the failure of the schools to uncover and train many other kinds of ability in all our children."²²⁶ Davis adopted the increasingly prevalent language of the capitalization of human resources, in addition to the rhetoric of socioeconomic difference in place of that of race. Davis's choice of language highlights a significant rhetorical shift in modes of thought about intelligence as a kind of national resource that can be traced to the earliest instance of mass intelligence testing. This shift and new mode of thinking about the cultivation of intellectual talent transpired alongside the spread of mass intelligence testing and anxieties about national intellectual decline. In the decade following the Second World War, when repeat surveys of intelligence started to indicate that intelligence was increasing, rather than decreasing, the language of human resources and capital would feature prominently in the transition toward anxieties about failing to maximize national intelligence.

Davis's research is also representative of the crucial ways in which class dialogue increasingly supplanted race dialogue in debates about intelligence tests after the Second

226 "General Education Board Study of Cultural Factors in Intelligence-Tests. I. Progress-Report on Study of Cultural Factors in Ten Standard Tests of Intelligence. II. Proposal for the Development of Culturally Equalized Group-Tests of Intelligence," Folder: 5289, Box: 496, Series 1.3, FA058, GEB, RAC, 8. (Emphasis in original.)

World War. This shift was provoked in part by the extreme unpopularity of eugenics and racial profiling following the Second World War. Critical conversation about race is conspicuously absent from Davis's research materials and reports, with the emphasis of his interpretation placed squarely on discussion of socioeconomic difference. It is possible this was a conscious conflict-avoidance tactic on Davis's part, yet it also reflected a broader change among intelligence testing experts' parlance. In choosing the language of socioeconomic difference over racial difference, Davis drew upon a more neutral language to convince Americans and the world of the faultiness of standard intelligence tests in measuring true ability, the diversity of intellectual capabilities across diverse groups of people, and the loss of talent caused by limitations of the tests. However, this broader change in dialogue from race to class represented not the absence of race science thinking, but rather its creative refashioning. Socioeconomic difference often served as a proxy for racial difference during these years, which enabled race science to lurk in new and differentiated language. Although the emphasis of the debates on intelligence testing during these years began a gradual shift away from concerns about degeneration toward anxieties about maximization, race science and eugenics were able to adapt through such rhetorical shifts during this time of their disrepute.

Davis's and others' anxiety over loss of talent and intellectual resources was shared by multiple Western nations and, in the case of Scotland, prompted a preemptive re-visitation of the intelligence of Scottish school children. The 1932 Scottish mental survey, though a landmark investigation of the group intelligence of a representative subset of an entire population, had fallen short of producing definitive conclusions as to

the source of the apparent relationship between intelligence and family size. It had also failed to resolve the fears that national intelligence was declining due to differential fertility. This first survey laid the groundwork for the second Scottish mental survey, which was carried out in the context of continued expert allegations of national intellectual decline following the Second World War. The widespread anxiety that national levels of intelligence were declining in the years leading up to the Second World War was once again voiced by experts with renewed urgency. A second national survey of intelligence promised to either validate or allay concerns about national levels of intelligence by enabling experts to track change or stasis over time. The proposal for the second survey came from J.A. Fraser Roberts, a British medical geneticist, through Sir Alexander Carr-Saunders, Chairman of the Population Investigation Committee, “in view of the presumed decline of national intelligence by reason of the differential birthrate.”²²⁷ Although nominally a national, state-run survey of intelligence, the second Scottish mental survey was in fact funded and spearheaded by organizations and individuals with strong ties to eugenics. Thus, while eugenics was at this time widely discredited, it also maintained a strong and clear presence in intelligence testing by operating behind the facade of state-led studies like the 1947 Scottish mental survey.

While both Scottish mental surveys were nominally conducted by the Scottish Council for Research in Education, they were planned, arranged, and funded by organizations with designs and agendas foreign to those of the council. As in the first Scottish mental survey, the second was financed by private foundations. Among these outside interests was the British Population Investigation Committee, which was founded

²²⁷ Scottish Council for Research in Education, *The Trend of Scottish Intelligence: A Comparison of the 1947 and 1932 Surveys of the Intelligence of Eleven-Year-Old Pupils* (London: University of London Press, Ltd, 1949), 2.

in 1936 through an initiative of the British Eugenics Society to investigate “the problems of population.” During the Second World War, the committee halted its activities and did not resume them until late 1944, after its merger with the Royal Commission on Population. British biologist and demographer Sir Alexander Carr-Saunders served as Chairman of the committee from its foundation. Although British in name, the committee enjoyed a vast network of international connections. Initial funding for the activities of the committee came from the English Eugenics Society, as well as from the Carnegie Corporation of New York.²²⁸ The committee also enjoyed connections to the United Nations Population Commission and actively solicited financial support from the English Eugenics Society as well as private foundations outside of Great Britain, such as the Rockefeller Foundation.²²⁹ Beginning in 1947, the committee also represented Britain in the International Union for the Scientific Investigation of Population Problems.²³⁰ As was true of the first Scottish mental survey, the second survey was a similarly transnational enterprise, in spite of its national scope. Although the survey was funded by the British Population Investigation Committee, the committee was itself the beneficiary of transnational financial support.

The Population Investigation Committee assumed responsibility for the financing of the entire 1947 survey; however, funding for the survey came from the English Eugenics Society and the Nuffield Foundation.²³¹ Committee member and sociologist David Glass urged Carr-Saunders’ proposal to fund the second Scottish mental survey,

228 Application to Nuffield Foundation, April 9, 1945, SA/PIC/C/2 File 2 of 2, Population Investigation Committee (PIC), Wellcome Library Archive (WLA), 1-2.

229 David V. Glass to Sir Alexander Carr-Saunders, August 1, 1947, SA/PIC/C/2 File 1 of 2, PIC, WLA.

230 Minutes of a Meeting of the Population Investigation Committee, June 11, 1947, SA/PIC/A/1/2/1 PIC, PIC, WLA, 4.

231 Scottish Council for Research in Education, *The Trend of Scottish Intelligence*, 4-5.

confiding in him, “my own feeling is that, so far as studies of the relationship between fertility and intelligence are concerned, we could hardly spend our funds to greater advantage than by sponsoring and subsidising a repeat inquiry in Scotland.”²³² With this purpose, the Population Investigation Committee approached the Nuffield Foundation, established by Lord Nuffield in 1943 to fund research in the interest of public welfare, to support the Scottish Mental Survey in the hopes that it might “bear directly upon the question of formulating correct qualitative population policies.”²³³ The second Scottish mental survey provided an opportunity to accomplish just that. In funding the survey, the interests of the Population Investigation Committee were represented in the survey’s design. For example, the decision to collect much more expansive information on the schoolchildren’s home lives, medical and sociological histories, was solely done “to achieve the aims of the Population Investigation Committee.”²³⁴ One of these aims was to provide data to the ongoing British Royal Commission on Population, which was responsible for authoring policy suggestions to population problems in Great Britain.²³⁵ Thus, while the survey was conducted by the Scottish government, in practice it was supported and directed by the agendas of expressly eugenic agencies.

While eagerly welcomed by eugenic organizations, the timeliness of a second survey was subjected to debate. Some experts believed too little time had passed since the first survey to accurately chart change over time. Although the survey’s committee recognized that “the shortness of the interval” between the first survey and the second might pose some difficulty in interpreting the data, they determined “no objection could

232 David V. Glass to Alexander Carr-Saunders, August 28, 1945, SA/PIC/C/2 File 1 of 2, PIC, WLA.

233 Application to Nuffield Foundation, April 9, 1945, SA/PIC/C/2 File 2 of 2, PIC, WLA, 5.

234 “The Scottish Council For Research in Education, The Scottish Mental Survey, 1947, Preliminary Report, Draft,” SA/PIC/F/8/3, PIC, WLA, 7.

235 Ibid, 12.

be sustained against the statistical reliability of the survey on that ground.”²³⁶ Thus, even if the interval was unideal, the results of a second survey would nevertheless be a valid representation of the current state of intelligence. The other primary concern regarding the timing of the survey was the possibility that the interruption of education and the evacuation of children during the Second World War had disproportionately disadvantaged Scottish children born in 1936, compared with the previous survey’s cohort, born in 1921. This concern was ultimately dismissed as the committee concluded that the children in the first survey had suffered comparably as a result of the Great Depression, and therefore had experienced similar hardships in terms of both stability and schooling.²³⁷ In spite of these concerns about the timeliness of retesting, the committee justified the second survey on the basis of the increasing urgency of worries regarding the status of national intelligence, and the need for additional data.

The second Scottish mental survey committee members included notable survey veteran Godfrey Thomson, as well as several contemporary leaders of the British group intelligence testing movement, James Maxwell, J.A. Fraser Roberts, who contributed considerable psychometric military experience, and noted sociologist David V. Glass. In the preface to the published findings of the second survey, Thomson declared that the survey was conducted “in the hope that it might throw light on the causes of a remarkable quantitative social fact, namely, that the results of intelligence tests show that the average score of members of large families is less than that of members of smaller families.” Thomson expressed the fear shared by many that such a demographic trend “might be leading to a steady fall in the national intelligence, if its cause is that intelligent parents

236 Ibid, 3.

237 Scottish Council for Research in Education, *The Trend of Scottish Intelligence*, vii.

are limiting their families.” If, however, the underlying cause of the negative impact of family size on intelligence was in fact environmental, Thomson suggested that it was “a duty to discover this and to strengthen the hand of social reformers.” He concluded that the results of the survey would “convince any reader that the negative association between size of family and average intelligence score, whatever its cause, is undeniable.”²³⁸ Moreover, Thomson maintained that this association was evident across both occupation and class lines. In spite of interwar research and analysis of the results of the first Scottish mental survey, the dilemma of whether large families “are large because they are unintelligent, or unintelligent because they are large,” persisted.²³⁹

In total, 75,451 students were administered a group test during the Second Scottish mental survey, and basic sociological data was collected from all of the students who took the group intelligence test as well (see image 3).²⁴⁰ The committee decided to additionally select a sample of approximately 10 percent of survey participants from which to collect a more detailed sociological and medical history. This data was collected through interviews conducted during home visits by trained professionals. This sample, known as the “thirty-six day sample,” was selected randomly by date of birth.²⁴¹ Those chosen were born on the first, second and third days of each month in 1936; from this group, another sample of children born on the first of each month, known as the “six day sample,” was selected.²⁴² These two samples were given the Terman-Merrill individual intelligence test in addition to the group test.²⁴³ The “thirty-six day sample”

238 Ibid, vii.

239 Ibid, viii.

240 Ibid, 79.

241 Ibid, 27.

242 Godfrey Thomson, “Intelligence and Fertility: The Scottish 1947 Survey” *Report of the Eugenics Society* (London Press, August 19, 1949), 163.

243 Thomson, “Intelligence and Fertility,” 163.



Image 3: Eleven-year old Scottish School Children from the 1947 Scottish Mental Survey

Sophie Goggins, “The Lothian Birth Cohort: Medical Imaging in Our New Galleries” National Museum of Scotland (<http://blog.nms.ac.uk/2016/01/08/the-lothian-birth-cohort-medical-imaging-in-our-new-galleries/>).

included 7,000 children and the “six day sample” 1,200.²⁴⁴ In a presentation before the English Eugenics Society, Thomson witnessed that “steep descent of average score in the group test with larger and larger families was fully confirmed” in both samples.²⁴⁵

However, “in spite of this apparent multiplication of the less intelligent, there was no evidence, in the average scores of all children in 1947 compared with 1932, of any general decline of intelligence.”²⁴⁶ Thus, the survey data failed to confirm fears that national intelligence was declining. In fact, to the chagrin of the surveyors, it appeared to demonstrate an overall increase in the intelligence of the participants. This “apparent paradox” did not dismiss Thomson’s “uneasy fear that environmental improvement may

244 Ibid, 163.

245 Ibid.

246 Ibid, 164.

be only masking a hidden selection going on behind, a steady selection which might in the long run defeat any temporary environmental improvement.”²⁴⁷

Contrary to expectations, the data thus presented an optimistic picture of the state and direction of national intelligence in Scotland. The survey found, “in 1947 as compared with 1932, not only no fall in the average score, on the self-same test, of a Scottish year group of eleven-year-olds but an increase – quite a substantial increase from about 34.5 to about 36.7 points in a test with a maximum of 76 points.”²⁴⁸ This overall rise in average test score was statistically significant and could not be dismissed as aberrant or an anomaly. There were also notable changes observed in the correlation between gender and gains in the group test scores. Girls’ scores improved more than their male peers, with the girls beginning “during the war years to draw ahead of boys.” The surveyors, however, were reluctant to embrace this observation, concluding this was “possibly be due to the war, which perhaps disturbed boys in their devotion to studies more than it did girls.” They also suggested that “perhaps girls, more docile and obedient than boys (I am told!) have acquired more ‘test-sophistication.’”²⁴⁹ On the individual tests, however, the boys continued to outperform their female classmates, which shed some doubt on the reliability of group tests in assessing intelligence relative to individual tests. Thomson acknowledged that “one reaction to all this may be, indeed has been in the case of one of our number, a disparagement of all intelligence tests, or at least of group intelligence tests... This, I myself feel, would be unfortunate, and I believe it to be untrue.” Referencing his thirty years of experience, Thomson assured readers of the final report that “few can be more fully aware of their dangers and pitfalls than I am. They

247 Ibid.

248 Scottish Council for Research in Education, *The Trend of Scottish Intelligence*, viii.

249 Ibid, xiii-xiv.

are, of course, like all human instruments, far from infallible: but they are less fallible than most other methods of estimating human ability.”²⁵⁰ In spite of their shortcomings, Thomson staunchly defended his instruments and his faith in their efficacy, brushing aside the evidence of disparities between group and individual tests.

Even though the second Scottish mental survey was generally hailed by experts as a success, the Scottish Council for Research in Education concluded, “the full value of the results of the 1947 survey will not, in fact, be extracted until a further survey is carried out.”²⁵¹ The evidence at hand, though sufficient to ward off fears of an immediate decline in national intelligence, was insufficient to dismiss these fears entirely. The survey’s inconclusiveness was variably interpreted. While some experts’ concerns were assuaged, others remained skeptical. Among these were experts hesitant to let go of the specter of national decline that had for so long guided research on group intelligence. For others, the data appeared conclusive enough to move beyond fears of decline toward interest in the possibility of elevating national intelligence. These experts began to propose that nations divert their attention toward the maximization of intelligence, rather than the prevention national decline. Yet regardless of their interpretations, experts agreed that more information was necessary. Moreover, experts almost universally affirmed the importance of breaking down impediments to intellectual development. The final report affirmed, “it is of the utmost importance to society to know what happens to individuals with varying degrees of intelligence, and how far obstacles to the full application of that intelligence can be removed by individual or social action.”²⁵² More

250 Ibid, xiv.

251 Ibid, 147.

252 Ibid, 149.

research was necessary to ensure that any and all such “obstacles” to intelligence be removed in order to take full advantage of human intellectual potential.

Expert debate on the interpretation of the data highlights ongoing tension between hereditarian and environmental approaches to understanding the development and limitations of individual intelligence. Although the survey data suggested that environment played a considerable role in the formation of intelligence, a number of experts remained wary of underestimating the role of genetics. In a draft of the published report, Thomson acknowledged, “undoubtedly this [survey] strengthens the environmental side of the argument,” whether environmental influence presented in the form of test-sophistication or the impact of family and home environment.²⁵³ Thomson, however, was not prepared to embrace an environmentalist approach in place of a genetic one. He warned that such conclusions were “obviously highly speculative, even more so than the speculation that a genetic loss is actually going on and is merely being masked by environmental causes which can only be temporary and must be defeated in the long run by persistent selection.” In Thomson’s opinion, it was too early to say. Thus the only responsible course was to “suspend judgment.”²⁵⁴ In a preemptive response to his critics he assured, “it must not be imagined that, as one friendly critic has put it, ‘you have hoped for a fall in average score, and now that you have instead found a rise, you are trying to explain it away.’” Denying such a notion, he warned “we must remember that ‘if fears were liars, hopes may be dupes.’” Thomson counseled against being “deceived in our strengthened hope that national intelligence is not falling.” The prudent course required considering “every possible explanation which may leave open the possibility

253 “The Scottish Council in Education, Draft/Strictly Confidential, The Trend of Scottish Intelligence,” SA/PIC/F/8/4, PIC, WLA, ii.

254 Ibid, v.

that adverse selection is still going on behind a facade of temporary improvement.”²⁵⁵

Indeed, in correspondence, the committee members were scornful of what they perceived as naive efforts to imagine away a decline. One surveyor ruthlessly criticized British geneticist Lionel Penrose’s “‘theoretical scheme’ for enjoying a differential birth rate with no loss of intelligence,” which in his view seemed “almost a classical demonstration of special pleading.”²⁵⁶ The intransigence of these old eugenic anxieties reflect that while eugenics and race science were now relegated to a more circumspect role in intelligence testing, they remained a powerful force in the imaginations of experts unable to relinquish fears of intellectual degeneration in spite of evidence that disproved decline.

In order to resolve definitively whether intelligence was declining, and whether this decline was prompted by fertility differentials, additional surveys of similar scale were necessary. In a report on the progress of the survey to Carr-Saunders, Glass affirmed, “it is of the greatest importance to set a precedent for repeated intelligence surveys, and there is every reason to believe that the 1947 inquiry will make a substantial contribution to our knowledge of the factors bearing upon the relationship between fertility and intelligence.”²⁵⁷ The survey had largely achieved these aims. In spite of experts’ reluctance to accept it, the survey data demonstrated the possibility that national levels of intelligence were not in fact declining, but might even be on the rise. This profound and unanticipated finding gestured to the possibility of maximizing national intelligence, which would largely animate research and conversations about human capital in the postwar years. The second Scottish mental surveyors hoped to establish a

255 Ibid, vi.

256 Robert C. Cook to C.P. Blacker, June 2, 1952, SA/PIC/D/3, PIC, WLA.

257 David Glass to Alexander Carr-Saunders, July 29, 1947, Enclosure: Report on the Activities of the Population Investigation Committee, August 1946-July 1947, SA/PIC/C/2 File 1 of 2, PIC, WLA.

“precedent” through their “initiation of the first of a series of repeat surveys which, in the long run, would clarify the relationship between measured intelligence and other factors, and which, when properly interpreted in the light of detailed analysis, might make it possible ultimately to draw a curve of the course of intelligence over time.”²⁵⁸ In this respect as well, the survey was deemed a success. Although much less systematic and smaller in scale, an English intelligence survey was conducted in this general time as well. Under W.G. Emmett, Moray House tested 31,728 and 28,505 from different school districts at an interval of ten years.²⁵⁹ Within a few years, France would also conduct a national survey, similar to the Scottish and English surveys, yet on a much greater scale. Beyond the Scottish mental survey’s influence on surveys to come, the findings of the survey were crucial in the drafting and reception of the report of the British Royal Commission on Population, which was released the year following the survey’s report.²⁶⁰

The first major national study of population, the 1949 Royal Commission on Population investigated alleged connections between family size and intelligence, and the subsequent effects on population. The Royal Commission on Population was instituted to generate data to support the development of population policies in Great Britain. The final report of the commission was well received in Britain and abroad, with United States demographer Frank Notestein hailing it as “a remarkable document that should greatly facilitate the discussion of population policy in Britain and attract worldwide

258 “The Scottish Council for Research in Education, Draft/Strictly Confidential, the Trend of Intelligence in Scottish Children, a Repetition in 1847 of the Mental Survey of 1932,” SA/PIC/F/8/4, PIC, WLA, 97.

259 Thomson, “Intelligence and Fertility,” 165.

260 David Glass to Alexander Carr-Saunders, July 29, 1947, Enclosure: Report on the Activities of the Population Investigation Committee, August 1946-July 1947, SA/PIC/C/2 File 1 of 2, PIC, WLA.

interest.”²⁶¹ The United States public learned of the commission in a special enclosure to the *New York Times*. London correspondent Clifton Daniel shared, “as a result of population trends Britain is in danger of a decline in her productive power and military potential and the innate intelligence of her people.”²⁶² Although the second Scottish mental survey had begun to shed doubt on allegations of decline, the survey data was still new and insufficient to reverse decline narratives. Similar to other studies that emphasized declining national levels of intelligence, the commission attributed the threat of population decline to the eugenic trope of differential fertility: “in the difference between the birthrates of the better educated and more intelligent classes and of lower social groups there is a tendency toward lowering the level of the nations (sic) innate intelligence.”²⁶³ The report signaled a future for government intervention in demographic planning, presenting such planning as rational, universally beneficial for all, and desirable for the preservation of human resources.

The commission enlisted the assistance of the English Eugenics Society, which undertook research into the question of the relationship of differential fertility and intelligence on behalf of the commission. In its final memorandum to the commission, the society advised that intelligence – defined as “inborn, general, intellectual ability” – was almost certainly declining as a result of differential fertility. This decline was attributed to evidence “that there is in this country a negative correlation between innate intelligence and size of family.”²⁶⁴ Psychometrician Cyril Burt – who would achieve

261 Frank W. Notestein, “The Report of the Royal Commission on Population: A Review” *Population Studies* 3(3) (1949), 232.

262 Clifton Daniel, “Population Crisis Seen for Britain: Royal Commission Warns of Decline in Productive Power and Military Potential,” *New York Times*, June 21, 1949, 7.

263 Ibid.

264 Cyril Burt, *Occasional Papers on Eugenics, Number Two. Intelligence and Fertility: The Effect of the Differential Birthrate on Inborn Mental Characteristics* (The Eugenics Society and Cassell and Company, Ltd., London, 1952) SA/EUG/P.2, WLA, 4-5.

notoriety in future years following allegations that he fabricated the results of his research on the genetic basis of intelligence in twins – delivered the society’s findings to the commission. According to the evidence at hand, Burt relayed, though the decline in national intelligence did not appear dire, “it seems almost certain that there is in this country a negative correlation between innate intelligence and size of family, and that the size of the correlation (about - 0.20) is large enough to demand urgent practical attention.” The projected decrease in overall intelligence amounted to a loss of 2.0 I.Q. points per generation from the national average.²⁶⁵ However, the situation could yet become more dire. Burt warned, “if the rate assumed continues, then in little over 50 years the number of pupils of ‘scholarship’ ability would be approximately halved and the number of feeble-minded almost doubled.”²⁶⁶ Burt’s alarmist interpretation of the surveyed data invoked the eugenic trope of imminent national decadence as well as old eugenic remedies. The *Chicago Tribune* reported on Burt’s warnings, describing what he termed “a distant prospect of a galloping plunge to intellectual bankruptcy,” the remedy for which was “more intelligent parents contributing enough to the next generation to balance the quota added by parents at the other end of the scale.”²⁶⁷ In addition to policies that would promote the fertility of the most intelligent, the need for additional information was paramount, for “as a nation we should know our resources in mind-power as accurately as we do in man-power, iron or coal.”²⁶⁸ Burt’s invocation of the rhetoric of resources mirrored that of his transnational peers. Burt’s “resources in mind-power,” Allison Davis’s “human resources,” and French demographer Alain Girard’s “humain capital” signaled a change in the rhetoric drawn on to address crises in

265 Burt, *Intelligence and Fertility*, SA/EUG/P.2, WLA, 5.

266 Ibid, 32.

267 “Intellectual Decline Predicted for Britain,” *Chicago Daily Tribune*, February 16, 1947, A5.

268 Burt, *Intelligence and Fertility*, SA/EUG/P.2, WLA, 33.

intelligence testing. During these years, intelligence was increasingly framed by experts as a national resource in its own right.

Expert stylization of intelligence as a resource abounded leading up to, during, and after the Second World War. Its increase was to be desired, just as its decline was to be feared. As Thomson testified, “it is true that there is a reservoir of insufficiently trained or utilized intelligence.... No one can say how much high intelligence we need in our society, but surely there is good reason to think that we could profitably use all that we have now got. If so, it follows that a decline in national intelligence is a national loss.”²⁶⁹ This held true whatever the factors that governed individual intelligence. Regardless of “whether the decline calculated from the differential birthrate be genetic or environmental, it is in either case a serious matter for the nation.”²⁷⁰ Government intervention was warranted for this reason alone. In his memorandum to the Royal Commission on Population, Thomson attributed the alleged decline in national intelligence in part to “the later marriages of intelligent people, their restraint in producing fewer children, and the inheritance of their intelligence by their offspring.”²⁷¹ However, in regard to the question of the consequences for national levels of intelligence, “much of course depends on the relative influences of nature and nurture in determining intelligence.” On this matter, Thomson conveyed skepticism and indecision. However, he insisted, “if intelligent and ambitious parents were assured that their children even if numerous would certainly have every chance to reach what they considered a desirable

269 Godfrey Thomson, *Occasional Papers on Eugenics, Number Three, The Trend in National Intelligence, The Galton Lecture, 1946, by Godfrey Thomson, With a Symposium in 1947 by Sir Alexander Carr-Saunders, Sir Cyril Burt, Professor Lionel Penrose, Professor Godfrey Thomson* (The Eugenics Society and Hamish Hamilton Medical Books: London, 1946), SA/EUG/P.3, WLA, 27.

270 Thomson, *The Trend in National Intelligence*, SA/EUG/P.3, WLA, 14.

271 *Papers of the Royal Commission on Population, Volume V, Memoranda Presented to the Royal Commission* (London: His Majesty's Stationary Office, 1950), 35.

position in life, they might, and I think they would, have larger families.”²⁷² As such, he advocated for incentives to ensure that such people did not feel the need for conservatism in their family planning. In response to Thomson’s predictions, J.A. Fraser Roberts submitted a post script to the memorandum, stating, “in light of the Scottish Survey, fears of an immediate catastrophic fall in intelligence as measured, due to differential fertility, may be set aside.” Even so, “it is clear that important problems remain, and it is highly desirable that they should be intensively studied.”²⁷³ This sentiment was shared by experts outside of Great Britain, particularly in the United States and France. Following the examples of the Scottish and English surveys of intelligence, for the first time in its history France also began to investigate these questions vigorously, executing its first national survey of French intelligence in the year following the survey conducted by the Royal Commission on Population.

As early as 1929, French psychologists had proposed surveys of schoolchildren using United States intelligence tests and scoring systems.²⁷⁴ Yet professional support for mass intelligence testing in France did not achieve a quorum until the Second World War. The French return to intelligence testing began during the Popular Front, when psychologists Henri Wallon and Georges Dumas, and psychiatrist Georges Heuyer set out to study the level of mental deficiency among French children in 1936. Under the Vichy regime, this work was continued by the Fondation Française pour l’étude des problèmes humaines (French Foundation for the Study of Human Problems), instituted in 1941 and

272 *Papers of the Royal Commission on Population, Volume V*, 41.

273 *Ibid*, 45.

274 Jean-Maurice Lahy to Henri Piéron, March 11, 1929, Cote: 520 AP/6, Bobine: 17 2/3, AN.

directed by physician Alexis Carrell, who applied his forty years of experience in the United States.²⁷⁵ The Institut national d'études démographiques (National Institute of Demographic Studies), which carried out the first successful mass intelligence testing surveys in France in 1950 and 1954, was established by the provisional government of Charles de Gaulle within the department of public health in 1945, replacing the Fondation Française pour l'étude des problèmes humaines.²⁷⁶

Following the Second World War, French *psychotechnique* enjoyed greater reach and professionalization than ever before. This was related in part to the greater expansion of the use of psychometrics in the war mobilization effort, as well as the increasing internationalization of mass intelligence testing and studies into perceived connections between national intelligence and differential fertility. Psychometrics in France enjoyed increasing relevance and legitimacy, which was evidenced by the professionalization of psychometricians and the formation of professional psychometric associations, such as the Association professionnelle des Psychotéchniques diplômés (Professional Association of Certified Psychometry,) founded in 1947.²⁷⁷ The National Institute of Demographic Studies represented the merger of population studies and psychometrics in France. It drew together a diverse cohort including noted psychiatrist Georges Heuyer, demographer Alfred Sauvy, sociologist Jean Stoetzel, geneticist Jean Sutter, and psychologists Henri and Margéruite Peiron among others.

The French national survey of intelligence surpassed all others before it in its volume and range of test subjects. The first national survey of the intelligence of French

275 Schneider, "After Binet," 123-126.

276 *Ordonnance No. 45-2499 portant création de l'institut national d'études démographiques*, October 24, 1945, pour le gouvernement provisoire de la République Française.

277 R. Brunnell, "Regards sur la Psychologie appliquée," *Le Travail humain* 15(1) (1952), 1.

schoolchildren took place in 1944. A total of 91,237 students between the ages of six and 12 were tested. Of these, 47,567 were boys and 47,670 were girls.²⁷⁸ The study was hailed by its progenitors as “the most widespread that has ever been accomplished in the world” in contrast to the Scottish mental survey, which was limited to children of eleven years of age.²⁷⁹ The study collected statistics on intellectual level according to age in both months and years, as well as sex.²⁸⁰ The study additionally collated data on the children’s home, father’s occupation, and the number of children in each family.²⁸¹ The institute administered a mosaic intelligence test, adapted by French psychologist René Gille. The test did not “pretend to give an absolute estimation of the subjects’ ‘intelligence.’”²⁸² However, it seemed “from a practical point of view, without doubt, one of the most important findings ever obtained.”²⁸³ Through demographic analysis and intelligence testing, the institute’s study hoped to draw conclusions about the formation of intelligence in French children: “Is aptitude hereditary or innate, or, to the contrary, purely acquired? ... This study does not at all pretend to find an answer to these questions, but the observations provide clarity.”²⁸⁴ In its analysis of the collected data, the institute found that “differences observed in test performance, in accordance with the home, the father’s occupation, and the number of children in each family, match with

278 Jean Stoetzel and Alain Girard, “Une Enquête National sur le niveau intellectuel des enfants d’âge scolaire,” *Population* 5:3 (1950), 569.

279 Stoetzel and Girard, “Une Enquête National sur le niveau intellectuel des enfants d’âge scolaire,” 570. (Translated by author from the original French: *...la plus étendue qui ait jamais été entreprise dans la monde.*)

280 Ibid, 570.

281 Ibid, 571.

282 Ibid, 575. (Translated by author from the original French: *...ne pretend pas donner une appréciation absolue de l’ “intelligence” des sujets.*)

283 Ibid, 575. (Translated by author from the original French: *Il semble hors de doute qu’un résultat très important ait été obtenu ainsi, du point de vue pratique.*)

284 Ibid, 571. (Translated by author from the original French: *Sont-ils héréditaires ou innés, ou bien, au contraire, purement acquis ? Une transplantation, qui les modifierait, entrainerait-elle des variations dans le développement psychique et mental de l’enfant ? L’enquete ne prétendait nullement chercher la reponse a de telles questions, mais, par suite des differences observées, elle les pose avec netteté.*)

those observed in the very numerous additional studies conducted in France and the rest of the world.”²⁸⁵ This corroboration with the results of studies conducted in other nations still left the question of the cause of individual intelligence unresolved. In their summary of the study, Stoetzel and Girard concluded, “we must above all never lose the point of view that the development of intelligence of the ages studied can result from environment as well as from hereditary factors.”²⁸⁶ Therefore, although the French survey confirmed a correlation between demographics and the formation of individual intelligence, it did not conclusively demonstrate causation along the lines of either genetics or environment.

Although the initial impulse for a national survey was driven by the desire to assess mental deficiency as did the interwar research of Wallon, Dumas, and Heuyer, the institute determined that “in a study of national levels of intelligence, it would be a loss and grave error to consider only the least intellectually gifted.”²⁸⁷ As such, the institute decided to proceed with the assessment of children of all intellectual levels. However, the work of assessing France’s national level of intelligence, its sources, impairments, and improvements, was far from complete. As with the first Scottish mental survey, the initial data could only offer a brusque though tantalizing view of the situation in France. Indeed, Alfred Sauvy warned in the first volume published by the survey, that the work “only delivered part of the results or, rather, the results in all their brutality, which is to say that the work presents all the perils of superficial interpretation.

285 Ibid, 574-575. (Translated by author from the original French: *Les différences observées dans les performances au test, selon la résidence, selon la profession du père ou selon le nombre des enfants dans la famille, recourent des constatations déjà faites au cours de très nombreuses études, accomplis en France et à l'étranger.*)

286 Ibid, 575. (Translated by author from the original French: *Il ne faut surtout jamais perdre de vue que le développement intellectuel aux âges enquêtés peut résulter du milieu aussi bien que des facteurs héréditaires.*)

287 Ibid, 575- 576. (Translated by author from the original French: *Dans un bilan national du niveau intellectuel, ce serait à la fois un manque et une erreur grave que de considérer seulement les moins doués.*)

And that peril is great.”²⁸⁸ The institute was hesitant to proclaim the findings of the study conclusive. Regardless of the institute’s reticence to make definitive statements, socioeconomic status appeared to be the primary differentiating factor in individual intelligence.²⁸⁹ In this respect, the institute considered its own findings commensurate with those of the Scottish mental surveys. Girard concluded that family information, age of mother, height, weight, and residence, “are always associated with socioeconomic status, identifiable by the father’s occupation.” Therefore paternal occupation “constitutes the common denominator in the differentiation of intellectual level.” The initial French survey suggested that socioeconomic status, determined by the father’s occupation, was the best predictor of individual intelligence. Even so, Girard recognized and concurred with Thomson’s warning against the assumption that “this factor is the cause of such differentiation. The question therefore remains open and must be left to be answered by future research.” Yet above all, to the great relief of the institute, “the intellectual and human capital of the nation has not deteriorated markedly after the hardships which the country was subject to.”²⁹⁰ France appeared safe, for the present, from rapidly declining levels of national intelligence.

288 Alain Girard, “Le niveau intellectuel des enfants d’âge scolaire: La détermination des aptitudes. L’influence des facteurs conditionnels, familiaux et sociaux,” *Population* 9:2 (1954), 276. (Translated by author from the original French: *ne livre qu’une partie des résultats, ou plutôt, livre les résultats dans toute leur brutalité, c’est-à-dire avec les pièges qu’ils tendent à l’interprétation superficielle. Et ces pièges sont nombreux.*)

289 Girard, “Le niveau intellectuel des enfants d’âge scolaire,” 277.

290 Ibid, 278. (Translated by author from the original French: *...sont toujours associées aux variations de catégorie sociale, définies par la profession du père. Celle-ci constitué le facteur commun de la différenciation. Ce qui ne signifie pas, ajoute Sir Godfrey THOMSON, dans la préface du livre, que ce facteur agisse comme cause : ‘there is no suggestion that it is the cause.’ La question reste donc ouverte, et demande à être suivie au cours de nouvelles recherches.*) (*le capital humain et intellectuel de la nation n’aurait pas subi de détérioration trop marquée par suite des privations auxquelles le pays se trouvait soumis.*)

The institute's study attracted the attention of the international community, both as a result of its findings and its interdisciplinary approach to the problem of national intelligence. Henri Laugier of the United Nations "particularly emphasized interest in the encouragement of 'multidisciplinary' research. Considering 'these studies of differential biometrics' as 'the substance of wise application of the diverse abilities of different individuals, from distinct social scientific positions,'" Laugier expressed "his desire that such collaboration be continued and augmented."²⁹¹ This desire for greater interdisciplinary collaboration on social issues would inform the international activities of organizations like the United Nations, and UNESCO specifically, as discourse on intelligence increasingly invoked the rhetoric of mind-power, resources, and human capital. In the following decade UNESCO would address the relationship of intelligence as a national resource to international tensions, broadening concerns about national levels of intelligence to concerns about world peace. The abundance of research on national levels of intelligence following the Second World War, and the alleged connection to differential fertility and population issues this research indicated, brought experts in the 1950s to perceive differential fertility and declining levels of national intelligence as potential threats to international peace and stability. Experts following the First World War were among the first to draw this connection between war, population, and intelligence. With the introduction of the rhetoric of capital and resources, this connection sharpened.

291 Ibid, 278. (Translated by author from the original French: *Il insiste, en particulier, sur l'intérêt et la fécondité des recherches 'multidisciplinaires.' Considerant 'ces études de biometrie differentielle' comme 'le fond même de toute sage utilisation des aptitudes diverses des divers individus, dans les differents postes de l'activité sociale,' il formule le voeu qu'elles puissent être poursuivies et amplifiées.*)

At the threshold of the Cold War, western nations feared for both the intellectual quality of their populations and what declining national levels of intelligence might mean for world peace. Domestic studies of the relationship between intelligence and differential fertility revitalized interwar concerns that as populations increased, they declined in intellectual quality as a consequence of differential fertility. Cooperation was never more necessary, and human scientists increasingly perceived a unique role for their professions in the maintenance of peaceful international collaboration to resolve issues of understanding that posed threats to international stability. As one human scientist explained, “we are living in a world that threatens to brush aside everything that intelligence stands for. Two great wars and the prospect of more; over half the population of the earth caught in this maelstrom of destruction: ten years of depression with millions everywhere still without employment; confusion over issues and values that leaves men frustrated and uncertain – it is little wonder that the temptation is to forsake reason and resort to force.”²⁹² This global temptation to “resort to force” in response to population problems deeply informed the future of mass intelligence testing and research into the question of national levels of intelligence. Anxieties about declining levels of national intelligence now provoked international action, as the problem of the relationship of differential fertility to intelligence was taken up by UNESCO under its *Tensions Affecting International Understanding*. Experts increasingly viewed national intelligence as a contingency of world peace, sharing the view that “in these critical times it is impossible to over-emphasize the value of cooperation at the international level.”²⁹³ UNESCO would assume the role of organizing international cooperation within the social

292 Raymond B. Fosdick, “The Rockefeller Foundation: A Review for 1939,” Folder: Bourse Rockefeller, 1930-1945, Box: AJ/16/6974, AN, 38-39.

293 George W. Wisker to Henri Piéron, October 1, 1948, Bobine: 16 1/3, Cote: 520 AP/6, AN.

sciences in the years leading up to the Cold War. Alongside concerns about international tensions, a subsequent crisis was forming within the human sciences. While the impact of ideology on science had come under scrutiny leading up to the Second World War, by the 1950s, Western human scientists strove to avoid the taint of ideological science at all costs. This led to a culture of openness that briefly repressed, but ultimately proved permissive to, the survival of race science and eugenic thought. All through these developments, race science and eugenics quietly persisted via rhetorical shifts, the perpetuation of fears that intelligence was declining, and the belief that differential fertility was the root of it all. As these fears were challenged in the decades to come, eugenicists and race scientists would again alter their tactics to remain a force in the I.Q. debates of this century.

CHAPTER THREE

The Crisis of Ideology in Intelligence Testing during the Cold War

“At the mid-century it is appropriate to consider the shifting ground of the perennial hereditary-environment controversy in the perspective of the last fifty years,” United States sociologist Bernhard J. Stern announced to the American Philosophical Association in Philadelphia in 1949.²⁹⁴ Whereas eugenicists like Karl Pearson had “equated class status with biological ability” and had “bemoaned decreased fertility among the ‘superior stocks,’ and large families among what he called the ‘reckless and improvident,’” Stern remarked on the progress made by genetics.²⁹⁵ The profession had moved beyond the “crudeness” and “naivete” of its eugenic cousin, professing a more nuanced understanding of the relationship between environment and genetics in the inheritance of traits like intelligence. “Any contemporary linking of eugenics and genetics might, perhaps, be thought of as unwarranted stirring up of dead issues belonging to the early, groping neo-Mendelism of the past.” However, Stern warned, “because of the reluctance of geneticists to relinquish entirely the hope for human genetic engineering the linkage of genetics to eugenics is a real one.”²⁹⁶ Indeed, “eugenics has a tenacious and pernicious hold on genetics.”²⁹⁷ The present threat derived from geneticist Curt Stern’s most recent work, *Principles of Human Genetics*, which posited that “the intellectual endowment of Western populations is in danger of decreasing because of differential fertility along class lines.”²⁹⁸

294 Bernhard J. Stern, “Human Heredity and Environment” *Science and Society* 15 (1950), 122.

295 Stern, “Human Heredity and Environment,” 122-123.

296 Ibid, 124-125.

297 Ibid, 125.

298 Ibid, 126.

In the immediate postwar years, the tropes of eugenics and race science persisted. Geneticists, demographers, and psychologists continued to hypothesize a potential linkage between the alleged declines in national levels of intelligence and differential fertility. Mass surveys of large populations, such as the Scottish and Paris surveys of schoolchildren in the 1930s and 1940s, as well as the intellectual assessments of the United States, British, and French militaries during the war, fed these fears of decline. Studies, including the United States Indianapolis Study (1947) and the United Kingdom's Royal Commission on Population (1950,) yielded statistics that exacerbated concerns about the link between differential fertility and declining national intelligence, even as the mounting evidence indicated that national levels of intelligence were not in decline. This era is best characterized as one of disarray. Global witness of the devastating consequences of ideologically motivated science in the Second World War drove human science experts to eliminate any taint of ideology from their research conclusions. While the majority of human scientists openly disavowed race science and eugenics, their corresponding fixation on openness of scientific discourse in the I.Q. debate ultimately helped to preserve a space for the possibility of race science and eugenics.

This chapter relates the crises of ideology facing the intelligence testing community in the 1950s to what Edward Purcell has described as an association of democracy with relativism among American scientists, and a corresponding association of fascism with absolutism, in scientific research.²⁹⁹ Purcell's contrast of conceptions of United States scientific practice as tolerant, pluralistic, and non-ideological with Communist scientific practices, which were viewed as intolerant, dogmatic, and

299 Edward A. Purcell, Jr., *The Crisis of Democratic Theory: Scientific Naturalism and the Problem of Value* (Lexington: University of Kentucky Press, 1974), part III.

ideological, demonstrates the development of a kind of conservatism in scientific practice that eschewed ideology and subsequently enabled the preservation of the status quo.³⁰⁰ In its rejection of ideological influence, the community of intelligence testing experts practiced considerable reticence in its scientific conclusions. Experts erred on the side of not overstating available scientific knowledge lest they give the appearance of twisting scientific evidence to fulfill ideological agendas, leading to reticence on the part of many experts. In consequence, race science and eugenics, although briefly repressed, did not disappear from the I.Q. controversy. Indeed, the intelligence testing community's fixation on openness helped to create the preconditions for the reemergence of race science and eugenics once the horrors of Nazi *rassenhygiene* faded from the public's imagination.

Amidst this ideological crisis, environmental explanations for group differences increasingly overshadowed hereditarian ones. The language of socioeconomic difference supplanted that of racial difference, and the impact of environment was broadly acknowledged as a significant factor in determining I.Q. As Edward Ramsden has shown, in their transition from hereditary to environmental explanations, experts rebuked ideology in favor of objectivity, which was associated with scientific and social progress.³⁰¹ However, this shift in explanations of human difference, while distancing the human sciences from the stigma of ideologically-motivated science, was not effective in eradicating race science or eugenics, in spite of their steep decline in credibility.³⁰² This chapter contributes to an emerging body of literature that argues for the longevity of

300 Purcell, *The Crisis of Democratic Theory*, part IV.

301 Edmund Ramsden, "Confronting the Stigma of Eugenics: Genetics, Demography and the Problems of Population," *Social Studies of Science* 39:6 (December 2009), 859-860.

302 Ramsden, "Confronting the Stigma of Eugenics."

eugenics and its perpetuation throughout the twentieth century.³⁰³ Juxtaposing old eugenics with the new, eugenicists argued that knowledge gained from failed applications and the development of genetics had finally prepared eugenics to author adequate and scientific solutions for the world's population problems.³⁰⁴ These self-styled "new eugenicists" perceived a new future for the course of eugenics that they consciously distinguished from "old eugenics." Population genetics provided the way toward the repurposing of eugenics. This new focus on population dynamics and characteristics in genetics and eugenics overlapped with developments in demography and psychology in particular as concerns about the impact of levels of intelligence on populations amplified during the Cold War.

Anxieties over potentially declining levels of national intelligence were intimately connected to broader anxieties over maintaining world peace and assuring national success amidst international conflicts and rivalries. The human scientific experts that directed their energies toward resolving the population intelligence dilemma viewed their activities as operating in the service of the maintenance of world peace. These experts argued that population control was imperative to national security, global peace, and the expansion of democracy. The postwar moment – characterized by the massive decolonization of Asia and Africa, the beginnings of the Cold War, and growing consciousness of the scarcity of natural resources – proved a formative context for the changing relationship of the human sciences to the nation state. From modernization theory to the development of area studies, postwar human science was both the agent and

303 Alexandra Minna Stern, *Telling Genes: The Story of Genetic Counseling in America* (Baltimore: Johns Hopkins University Press); Nathaniel Comfort, *The Science of Human Perfection: How Genes Became the Heart of American Medicine* (New Haven: Yale University Press, 2014).

304 Ramsden, "Confronting the Stigma of Eugenics," 853-857.

benefactor of state power. International conflict created unique opportunities for human science expertise that joined demography, psychology, and genetics to generate solutions to population problems that threatened global peace.³⁰⁵ As Cold War engagement intensified, the perceived value of investing in and promoting the intellectual quality of populations increased markedly, and human scientists began to perceive an ever more active role for themselves in the resolution of world conflict and the promotion of national security. Intelligence came to be considered and understood by experts and nations as a kind of human resource that could serve as a particular kind of capital at the disposal of the nation state. Through their claims to an ability to define and measure intelligence as a complex genetic and environmental phenomenon, human scientific experts sought to establish for themselves an advocacy role in world affairs and helped to reimagine intelligence as a national resource in the process. Once experts began to dismiss fears of national intellectual decline, and nations diverted their energy toward the maximization of intelligence, old anxieties about the differential fertility of the poorer classes and minorities persisted and were shared by experts, nations, and publics alike. This is observable especially in the findings of the UNESCO committee on the relation of differential fertility to intelligence, formed under the mandate of easing international tensions.

305 Joy Rohde, *Armed with Expertise: The Militarization of American Social Science Research during the Cold War* (Ithaca: Cornell University Press, 2013); David C. Engerman, *Know Your Enemy: The Rise and Fall of America's Soviet Experts* (New York: Oxford University Press, 2009); Joel Isaac. "The Human Sciences in Cold War America," *The Historical Journal* 50:3 (September 2007), 725-746; Audra J. Wolfe. "Defending Cold War Science," *Berfrois* (2013.)

The United Nations and its specialized agencies organized the 1954 World Population Conference in Rome to address the population concerns of a postwar world. From its founding in 1945 as a global peace-keeping institution and protector of international human rights, the United Nations viewed population problems as potentially as threatening to world peace as war.³⁰⁶ The specialized agencies of the United Nations, including the World Health Organization, Food and Agricultural Organization, and the United Nations Educational, Scientific and Cultural Organization (UNESCO), sought to address population concerns through their individual mandates.³⁰⁷ The United Nations Population Commission, founded in 1946 as an advisory council to the Economic and Social Council of the United Nations and later renamed the Population Division, proposed convening a world population conference at the urging of the International Union for the Scientific Study of Population and its executive director, United States demographer Frank Lorimer.³⁰⁸ The International Union for the Scientific Study of Population had been founded in 1928 with the financial assistance of the Milbank Memorial Fund following the World Population Conference of 1927.³⁰⁹ During the first three years of its existence, the Fund provided its primary support totaling \$30,000. Originally called the International Union for the Scientific Investigation of Population Problems, it boasted a strong United States and French membership, including notable American demographers Henry Pratt Fairchild, Frank Lorimer, and Frank Notestein. The International Union for the Scientific Study of Population likewise shared a close relationship with the United Nations Population Division in the postwar era, and its

306 Matthew Connelly, *Fatal Misconception: The Struggle to Control World Population* (Cambridge: The Belknap Press of Harvard University, 2008), 123-125.

307 Connelly, *Fatal Misconception*, 126.

308 Ibid, 126, 132, 144.

309 Clyde V. Kiser to Frederick Osborn, February 1, 1965, Folder: Frederick, Osborn, Box: 17, American Eugenics Society Papers, American Philosophical Society, Philadelphia (APS.)

proposal of the conference was well received by the United Nations.³¹⁰ Acknowledging the seriousness of global population concerns, the United Nations Executive Board concluded: “such a Conference of demographic problems should direct the attention of both Governments and scientists to the importance of the current changes in the world population situation and, in particular the growth of population in the less-developed areas.”³¹¹ The specialized agencies each contributed research on concerns particular to their unique mandates. Concerns about declining national levels of intelligence animated UNESCO’s contributions to the World Population Conference in Rome.

The postwar era ushered in a new host of population concerns about the overall quality and quantity of populations, and the scarcity of resources. Malthusian fears about natural resources motivated a spate of development projects in the Third World, while anxiety over a new kind of national resource, intelligence, sustained growing national concerns about human capital.³¹² In response to the trepidations expressed by population experts about the alleged declining intellectual quality of populations, UNESCO’s Social Science Division prepared a report on “Differential Fertility and Intelligence” for the World Population Conference. The committee on differential fertility and intelligence and its reports have received only passing mention by historians.³¹³ However, the history

310 Lorimer, Frank, Carmen Miró, Wilson H. Grabill, and Vasilios Valaores, “The Role of the International Union for the Scientific Study of Population,” *The Milbank Memorial Fund Quarterly* 49:4 (October 1971), 86-94.

311 Henri Laugier to Julian Huxley, April 21, 1948, File: SOA/20/05, Folder: 312 A 06(45)“54” - World Population Conference - Rome - 1954 - Part I up to 30 April 1953, Box: 312 to 312: 406(45)“54,” UNESCO Archives, Paris (UNESCO.)

312 For a recent comprehensive treatment of the rise of population studies and efforts to control populations in the postwar era, see Connelly, *Fatal Misconception*. On development and aid, see especially Nick Cullather, *The Hungry World: America’s Cold War Battle against Poverty in Asia* (Harvard University Press, 2010); David C. Engerman, “The Romance of Economic Development and New Histories of the Cold War,” *Diplomatic History* 28(1) (January 2004), 23-54.

313 UNESCO’s Social Science Department presented one other session at the 1954 World Population Conference in Rome, entitled “Distribution of Genetic Factors in Relation to Population Change,” proposed originally by Frederick Osborn. Alison Bashford, “Internationalism, Cosmopolitanism, and Eugenics,” in Alison Bashford and Phillippa Levine, editors, *The Oxford Handbook of Eugenics* (New York: Oxford

of this committee reveals the thus far unrecognized centrality of concerns about intelligence to broader postwar global population concerns. The Social and Economic Council of the UN funded the group under the Tensions Affecting International Understanding Project, which the UN had established to “encourage social scientists to engage in work touching upon and promoting international understanding” in the postwar era to help maintain global peace.³¹⁴ The project’s mandate tasked UNESCO with “dealing boldly and concretely with the problem of eliminating from the minds of men those ideas which lead to misunderstanding and conflict.”³¹⁵ Among those ideas leading to misunderstanding and conflict were the tropes of national intellectual decline wrought by fertility differentials.

Concerns about international tensions thus informed the activities of the UNESCO working group on the relationship between differential fertility and intelligence. The convening of a world conference on population had been suggested by UNESCO’s first Director-General, British eugenicist Julian Huxley, as early as 1948, but was delayed due to concerns that “such a conference would evoke ideological rather than technical responses.”³¹⁶ The Tensions Project charged the departments of UNESCO with utilizing “the experience and information gained” from its “wide network of direct

University Press, 2010), 162-164; Connelly, *Fatal Misconception*, 118.

314 Memorandum from Dr. A. Brodersen, Social Sciences to Head of External Relations, copy to Director-General, Deputy Director-General, Assistant Director-General, March 23, 1948, File: 3/899, Folder: 312 UN/A02 - U.N. Population Commission, Box: 312 (5) A06 (540) “63” to 32 (6) A06 (676.1) “64” TA Part I, UNESCO; Memorandum from S. Chandrasekhar to Social Sciences Department Head, undated, File: 302.063 ED, Folder: 312: 620.91 A 06 (41-4) “49” - International Congress on Population & World Resources in Relation to the Family - Cheltenham (U.K.) - 1949, Box: 312 to 312: 406(45)“54,” UNESCO; Connelly, *Fatal Misconception*, 126, 132, 144.

315 “Social Implications of Science,” January 21, 1949, File: unknown, Folder: 5 : 304 Social Implications of Science, UNESCO.

316 Memorandum from S.V. Arnaldo to Dr. Huxley, Mr. Laves, Dr. Brodersen, M. de Blonay, May 15, 1948, File: unknown, UNESCO; Henri Laugier to Julian Huxley, April 21, 1948, File: SOA/20/05, Folder: 312 UN/A02 - U.N. Population Commission, Box: 312 (5) A06 (540) “63” to 32 (6) A06 (676.1) “64” TA Part I, UNESCO.

contacts with social scientists and social engineers” in order “to stimulate and coordinate further work, and bring problems and results to the knowledge of the world.”³¹⁷ Critical of the dedication of human scientific resources to national prerogatives, this mandate recognized that “reconstruction and social development after the war naturally have a first claim on [human scientists’] time and energy. But the postwar situation poses new international problems too. The peoples of the world will have to think and live and work together in a community of international cooperation if they are to be spared a new and final catastrophe.”³¹⁸ With the goals of the Tensions Project in mind, UNESCO voiced its support for the World Population Conference in Rome, and gathered a team of human science experts to form its working group on the relationship between differential intelligence and fertility.

The working group brought together a diverse international and interdisciplinary cohort with competing professional claims to understand intelligence. By the Second World War, multiple professions beyond psychology viewed intelligence as within their profession’s domain. Geneticists, sociologists, demographers, and anthropologists all participated in the I.Q. debate, which at times led to conflicting claims of authority. As genetics continued to professionalize and its practitioners labored to distance it from its controversial cousin, eugenics, geneticists endeavored to create a leading role for themselves in the intelligence debate. Yet this distancing proved imperfect. As recent histories of postwar genetics have shown, the professionalization of genetics in fact

317 “Social Science Programme 1948,” June 17, 1947, File: unknown, Folder: X 07.55 SS - Programme Budget of Organization Department Social Sciences - Part II - from 1/I/48 up to 31/XII/50, Box: X07.55 SS through X07.55 SS Part IV, UNESCO.

318 “Social Sciences,” File: 13.1.48 (B-0-3), Folder: X 07.55 SS - Programme Budget of Organization Department Social Sciences - Part II - from 1/I/48 up to 31/XII/50, Box: X07.55 SS through X07.55 SS Part IV, UNESCO.

significantly overlapped with eugenics. Early geneticists utilized many of the same practices and techniques of eugenicists, and numerous prominent geneticists of this era identified previously or additionally as eugenicists, as was true of many of the UNESCO geneticists.³¹⁹ However, in differentiating their profession from the false prophet of eugenics, they seized upon the contentious question of the genetic component of intelligence as within the domain of their scientific expertise.³²⁰ As sociologists increasingly entered into the intelligence debate, psychologists and sociologists each laid competing claims to the authority to explain group variations in performance on intelligence tests. Psychologists remained divided among themselves as to the relative weight of genetic and environmental factors, while sociologists offered predominantly cultural explanations for intellectual disparities between groups.³²¹ UNESCO formed its interdisciplinary working group conscious of these competing professional claims. The makeup of the working group was precisely premised on the question of “whether some of the differences of opinion in this field did not arise from the fact that experts in different disciplines had been working separately and along their own lines, without any collaboration with other disciplines.”³²² In integrating these distinct professions, UNESCO aspired to bridge disciplinary and national divides to bring a diverse cohort of experts together to speak definitively to the problem of intelligence and differential fertility.

319 On the professionalization of genetics, see especially Stern, *Telling Genes*; Nathaniel Comfort, *The Science of Human Perfection*.

320 The following chapter will trace the continued efforts of geneticists to speak definitively on the question of the genetic inheritance of intelligence in its exploration of the connection between genetics and the postwar history of the American Eugenics Society.

321 Ramsden, “Confronting the Stigma of Eugenics,” 120.

322 Working Party on the Relation between Fertility of Different Groups and the Development of Intelligence in New Generations, “Summary Report of the First meeting held at Unesco House, Paris on Monday, 1 February 1954,” File: UNESCO/SS/POP.M./Conf.1/1/S.R.1, Folder: 312.1 A 54 - Fertility Studies - General - Part III from 1st February 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO.

Psychologists, demographers, and geneticists from Europe and the Americas collaborated in the production of UNESCO's working papers on the relationship between differential fertility and intelligence. In spite of its international character, the group was dominated by British experts and though numerous American experts – including Frederick Osborn, Executive Vice President of the Rockefeller Foundation's Population Council, Curt Stern of the University of California, Berkeley, J.V. McNeel of the University of Michigan, and Allison Davis of the University of Chicago – were invited and consulted, only one American was able to complete the journey to Paris for the drafting of the group's working papers.³²³ Invited by UNESCO's Social Science Department, the final group that met in Paris in February of 1954 at UNESCO House to prepare the working papers for the World Population Conference included: Swedish geneticist J.A. Böök of Uppsala University; English demographer and sociologist David V. Glass of the London School of Economics; Danish geneticist Tage Kemp of the Institute of Human Genetics in Copenhagen; Italian demographer Livio Livi of the University of Rome; Scottish psychologist James Maxwell of the University of Edinburgh; American psychologist Dael Wolfle of the United States Commission on Human Resources and Advanced Training; English geneticist and eugenicist Lionel Penrose of the University of London; English geneticist J.A. Fraser-Roberts of the London School of Hygiene and Tropical Medicine; French geneticist Jean Sutter of the Institut National d'Études Démographiques and French demographer Alain Girard, also of the Institut National d'Études Démographiques.³²⁴ By bringing diverse perspectives to

323 Frederick Osborn to Alva Myrdal, December 11, 1953, File: 9485 SS, UNESCO; David Glass to Alva Myrdal, March 25, 1953, File: 302.063.300.2, Folder: 312.1 A 53 - Fertility Studies - General - Part II from 1st July 1953 to 31 January 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO.

324 "Expert Meeting on Intelligence-Fertility Problems," Paris, February 1954, Unesco House, File: unknown, Folder: 312.1 A 53 - Fertility Studies - General - Part II from 1st July 1953 to 31 January 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO.

bear on the interpretation of collected data on the relationship between differential fertility and intelligence, the Social Science Department hoped to develop new and conclusive insights into the issue at hand.

Prior to the Second World War, research conducted by eugenicists, demographers, and population geneticists had predicted that national intelligence quotient averages would decline between 0.9 and 5.0 points annually.³²⁵ This anxiety was due in part to pessimistic readings of data from decades of intelligence testing surveys, demographic surveys, and eugenic predictions of racial degeneration. Anxiety over the question of the relationship of differential fertility to national levels of intelligence was thus not novel. However, following the war and two major conferences held in England by the English Royal Commission on Population (1950) and in the United States by the Milbank Memorial Fund (1947), human scientific experts and national governments revisited the issue with renewed urgency.³²⁶ Contemporary research suggested a negative correlation ($r = -.25$) between intelligence and family size.³²⁷ Additional evidence that family size in fact had deleterious effects on children's intelligence focused human scientific attention on the fertility and reproductive practices of particular groups within national populations who tended to underperform on intelligence tests: the poor and racial minorities.

UNESCO's working group on the relationship between intelligence and differential

325 Jean Sutter and Léon Tabah, "Relation between Differential Fertility and Average Intelligence," Working Paper 5, Working Party on the Relation Between Fertility of Different Groups and Development of Intelligence in New Generations, Unesco House, 1-4 February 1954, File: UNESCO/SS/POP.M/Conf.1/1, Folder: 312.1 A 53 - Fertility Studies - General - Part II from 1st July 1953 to 31 January 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO, 1.

326 Sutter and Tabah, "Relation between Differential Fertility and Average Intelligence," File: UNESCO/SS/POP.M/Conf.1/1, UNESCO, 1-2.

327 Sutter and Tabah, "Relation between Differential Fertility and Average Intelligence," File: UNESCO/SS/POP.M/Conf.1/1, UNESCO.

fertility confronted directly the controversial issue of genetic and environmental impact on intelligence.

The group's individual members presented a total six working papers authored by James Maxwell, Jan A. Böök, Livio Livi, Jean Sutter and Léon Tabah, Alain Girard, and Lionel S. Penrose from psychological, sociological, demographic, and genetic perspectives for discussion at the preparatory meeting in February 1954 at UNESCO before authoring its final report for the World Population Conference in Rome. These papers consolidated information on current international and interdisciplinary research into the question of differential fertility and intelligence in an attempt present a synthetic statement. They drew upon recent studies and a large body of recently acquired data from populations-based intelligence test surveys including the Scottish mental surveys, the French mental surveys, the Indianapolis Study, and Allison Davis's research on culture-free intelligence tests. Joined by Social Science Department Director Alva Myrdal and UNESCO psychologist Otto Klineberg, the group convened in Paris for four days to discuss extant research on the relationship between differential fertility and intelligence, which centered on population studies, generational studies of intelligence test data, and environmental considerations of family life. It prioritized four areas in which it would present its recommendations for further research: the measurement of intelligence, the genetics of intelligence, differential fertility, and the combination of factors that bear upon intelligence.³²⁸

328 "Groupe de Travail sur la Fecondite Differentielle et ses Effets sur la Niveau d'Intelligence d'une Population," Paris, February 1954, Unesco House, File: unknown, Folder: 312.1 A 54 - Fertility Studies - General - Part III from 1st February 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO.

The working group struggled to agree upon a definition of what the tests actually measured. Some members suggested that the tests measured “test intelligence,” “observed intelligence,” or Spearman’s “general intelligence.” Regardless of their uncertainty as to what exactly the tests measured, they agreed that the tests measured something valuable. The preliminary meeting of the working group in Paris confirmed the group’s consensus that the tests were capable of predicting both social and economic success.³²⁹ In spite of their consensus on the ultimate value of the tests, the group could not agree upon a definition of intelligence., nor could they agree upon the relative weight of various factors in determining individual intelligence. This was due largely to cultural and professional differences. At a subsequent meeting, Wolfle highlighted the problem of disparities in cultural definitions of intelligence.³³⁰ In his working paper, Böök expressed reservations over drawing any definitive conclusions about the inheritance of I.Q. precisely due to the inability to definitively and precisely define what it measured. He observed in his preliminary report, “from the geneticist's viewpoint the crucial problem is, of course, the heritability of the IQ test responses. Though psychologists have generally remained skeptical, a great many biologists and geneticists seem to have accepted IQ tests, more or less at their face value, as a measure of natural ability. One cannot be sufficiently warned against many of these conclusions... as long as not even the most qualified psychologist can tell exactly what qualities the IQ test measures.”³³¹

329 “Summary Report of the First meeting held at Unesco House, Paris on Monday, 1 February 1954,” File: UNESCO/SS/POP.M./Conf.1/1/S.R.1, Folder: 312.1 A 54 - Fertility Studies - General - Part III from 1st February 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO, 4, 7.

330 “Working Party on the Relation between Fertility of Different Groups and the Development of Intelligence in New Generations, Summary Report of the Second meeting held at Unesco House, Paris on Tuesday, 2 February 1954,” File: UNESCO/SS/POP.M./Conf.1/1/S.R.3, Folder: 312.1 A 54 - Fertility Studies - General - Part III from 1st February 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO.

331 Jan Böök, “Differential Fertility and its Effect on the Intelligence of the Population Stock,” File: unknown, Folder: 312.1 A 53 - Fertility Studies - General - Part I to 30 June 1953, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO, 2

Böök thus identified a critical professional divide on the matter of I.Q. and its inheritance. Although psychologists in general continued to express their uncertainty of the value of I.Q. as an innate quality, geneticists increasingly weighed in on this debate and asserted the importance of their own profession's contributions. The group's final report settled upon an "operational definition" of test intelligence without resolving the genetic implications of this definition.³³²

The group continuously struggled to generate a decisive conclusion on the relative importance of genetics in determining an individual's intelligence. In an early draft of their report, the group stated that up to 50 percent of intelligence was heritable. Another of the working papers estimated that heredity was responsible for 50 to 75 percent of intelligence.³³³ In later drafts, they revised the report to state that at least 50 percent of intelligence was heritable. During the group's preliminary meeting, Livi, Maxwell, and Girard expressed the need for longitudinal studies in order to assess how accurately test performance in childhood correlated with performance in adulthood, in order to properly assess the relationship of intelligence to genetics and therefore to demographic concerns.³³⁴ In spite of the fact that they could not agree upon what precisely the tests measured, or to what degree environment and heredity factored, the group ultimately determined that "a substantial proportion of the variance in the test performance in the populations tested is to be explained by genetic factors which determine the range within which measured intelligence can develop. This makes the test results relevant to the

332 "Summary Report of the Second meeting held at Unesco House, Paris on Tuesday, 2 February 1954," File: UNESCO/SS/POP.M./Conf.1/1/S.R.3, Folder: 312.1 A 54 - Fertility Studies - General - Part III from 1st February 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO.

333 Sutter and Tabah, "Relation between Differential Fertility and Average Intelligence," File: UNESCO/SS/POP.M./Conf.1/1, UNESCO.

334 "Summary Report of the First meeting held at Unesco House, Paris on Monday, 1 February 1954," File: UNESCO/SS/POP.M./Conf.1/1/S.R.1, Folder: 312.1 A 54 - Fertility Studies - General - Part III from 1st February 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO, 3-7.

problem of differential fertility.”³³⁵ In proposing that intelligence tests were valid instruments for measuring the undetermined degree of genetically-determined intellectual potential, the experts preserved the ambiguity of the nature-nurture balance while simultaneously affirming the relevance of intelligence testing data to differential fertility and population problems.

The point on which the group was most conclusive, was the impact of family size on children’s intelligence. Léon Tabah and Jean Sutter, drawing attention to research indicating a negative correlation between children’s levels of intelligence and family size, suggested that this discrepancy was primarily environmental and due to socioeconomic status rather than genetics. They moreover identified parental occupation as an important factor in the determination of children’s levels of intelligence.³³⁶ Tabah and Sutter based their conclusions on survey data collected during the French mental surveys of schoolchildren. A remarkable finding of the French study was the significance of sibship in the determination of intelligence quotient. Although the survey found that girls’ intelligence quotients were unaffected by the sex of their siblings, this appeared to be a critical factor in the determination of boys’ intelligence quotients. Boys with a younger brother tended to underperform compared with their male peers, while boys with a younger sister typically outperformed their male peers. Likewise, boys with an older sister outperformed boys with an older brother. The French survey found this pattern to hold true in both urban and country settings, as well as across occupational groups. Similarly, age gap between siblings was a statistically significant factor; the greater the

335 “Differential Fertility and Intelligence: Statement made by a group of scientists meeting at Unesco House in February 1954,” File: UNESCO/SS/Population/54/Paris, UNESCO, 1.

336 Sutter and Tabah, “Relation between Differential Fertility and Average Intelligence,” File: UNESCO/SS/POP.M/Conf.1/1, UNESCO.

age gap between siblings, the higher their intelligence test scores were likely to be. Only children tended to score the highest on intelligence tests, while multiples tended to score lower.³³⁷ Tabah and Sutter's conclusions appear to support an environmentalist stance on the development of intelligence, though they protested they were "still far from being able to make any definitive statements."³³⁸ Their environmentalist leanings were nevertheless far from optimistic. While they recognized the importance of environment on the formation of intelligence over that of genetics, their conclusions reinforced theories that the largest families were among the least intelligent, whether by nature or nurture. One could not control one's birth order, nor the occupational or socioeconomic status of one's parents. Tabah and Sutter's conclusions ultimately reinforced older conclusions about the intelligence of the poor in new language.

Race was conspicuously absent from the working groups' report. In the years following the Second World War, the human science professions grappled intensely with questions of racial equality and prejudice. Studies such as Gunnar Myrdal's *An American Dilemma* and Otto Klineberg's research on racial intellectual equality, combined with the first stirrings of the American Civil Rights Movement and the horrors of the Holocaust, placed considerable pressure on human scientific professions to root out instances of prejudice and bias in psychological research. This transition corresponded with greater attention to the influence of environment and culture on psychological data.³³⁹ Postwar psychologists especially perceived for their profession a duty to pursue socially responsible research that demonstrated racial equality, yet many remained highly

337 Ibid.

338 Ibid.

339 Ellen Herman, *The Romance of American Psychology: Political Culture in the Age of Experts* (Berkeley and Los Angeles: University of California Press, 1995,) 181.

wary of the influence of ideology on objective scientific research.³⁴⁰ This resulted in the reticence of many experts to make assertions beyond what they could concretely and specifically prove. The majority of intelligence testing experts thus erred on the side of caution, assiduously avoiding all traces of ideology in their research and conclusions. Ironically, this desire to shield science from the influence of ideology resulted in an intellectual and political climate permissive to the survival of race science and eugenics. The reticence that avoidance of ideology inspired led to reserved statements of scientific knowledge that ultimately created a space for race science and eugenics to emerge from latency in the late 1960s and 1970s.

The tropes of eugenics and race science persisted in part due to the reservations of intelligence testing experts who were reluctant to overstate available scientific knowledge. For instance, in spite of widespread anxieties that national levels of intelligence were declining due to differential fertility, data from the 1947 Scottish Mental Survey in fact suggested that national levels of intelligence were actually on the rise. Yet though the UNESCO experts relied heavily upon this data in forming their conclusions, they neglected to directly engage this evidence of rising national levels of intelligence. The final statement prepared by the group noted that, of all the mass surveys conducted, that, “the most important example, the Scottish Surveys of all 11-year-old schoolchildren in 1932 and 1947, showed no change in the average I.Q. over this 15-year period.” This indicated “no proof of a decline in general intelligence.”³⁴¹ This representation, however, was inaccurate; not only did the survey results not indicate declining levels of intelligence – they revealed an increase in overall intelligence that the

340 Herman, *The Romance of American Psychology*, chapter 7.

341 “Differential Fertility and Intelligence: Statement made by a group of scientists meeting at Unesco House in February 1954,” File: UNESCO/SS/Population/54/Paris, UNESCO.

UNESCO experts rationalized as statistical anomaly.³⁴² Although some expressed optimism, many of UNESCO's experts proffered a number of explanations that diminished the statistical significance of survey's demonstration of this apparent rise in intelligence. "Test sophistication" was one of these explanations for this apparent improvement in test intelligence scores.³⁴³ According to this theory, as a population grew more familiar with psychometric tests, its improved performance was attributable to the advantage gained by familiarity with the format or content of the test, which could result in erroneous improvement of scores. Thus in some instances the reticence of human scientists to engage in ideological arguments led them to interpret data conservatively. In other instances, however, this reservation could serve eugenic agendas. Indeed, several of the group's members were self-identified eugenicists, and Penrose even held a professorship in eugenics. Penrose's heterotesis hypothesis, also known as "assortative" or "assortive" mating, was another slightly more controversial explanation for the failure of differential fertility to produce statistically observable national declines in intelligence.³⁴⁴ Penrose suggested that populations would naturally achieve a kind of equilibrium that would prevent national declines in intelligence. Though the most intelligent members of a population tended to have fewer children, those with the very lowest intelligence tended to have very low fertility. This effectively balanced the greater fertility of the moderately intellectually sub-normal population. He proposed that it was "possible to consider the increased fertility of the slightly subnormal as a natural process

342 Ramsden, "Confronting the Stigma of Eugenics," 110.

343 Ibid, 118.

344 "Summary Report of the Fifth meeting held at Unesco House, Paris on Wednesday, 3 February 1954," File: UNESCO/SS/POP.M./Conf.1/1/S.R.5, Folder: 312.1 A 54 - Fertility Studies - General - Part III from 1st February 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO.

of counterbalancing the complete absence of fertility at the very lowest levels.”³⁴⁵

Penrose concluded that assortive mating produced stasis, rather than a true decline in overall levels of intelligence. His hypothesis met with Kemp’s, Bök’s, and Livi’s approval, and demonstrates how reluctance to engage in ideology on the part of many human scientists created spaces for the continued expression of hereditarian thought.

The group’s final statement vacillated in its conclusions. It showed reluctance to declare that there was no danger of differential fertility provoking a decline in national levels of intelligence, in spite of broad evidence in favor of this conclusion. The final statement resolved, “the fact that there has been no demonstrable decline in test intelligence does not necessarily mean that differential fertility has had no effect; the possibility remains that such differential fertility may have acted to keep the population from improving.”³⁴⁶ This conclusion suggested that though nations may not observe decline, they were possibly experiencing stagnation. It furthermore perpetuated old eugenic and race science tropes and focused attention on those populations with the highest rates of fertility: racial minorities and members of lower socioeconomic classes. Yet there was not cause for immediate concern. The statement determined that there was “no basis for pessimism;” the effects of differential fertility appeared to be diminishing, the negative impact on a child’s intelligence in proportion to family size was minute, the most intelligent groups seemed to be experiencing an overall increase in their fertility, and changing mores might be “expected to produce a leveling or equalization of the

345 Lionel S. Penrose, “Differential Fertility and its Effects on the Intelligence of the Population,” File: 102803 SS, Folder: 312.1 A 53 - Fertility Studies - General - Part I to 30 June 1953, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO, 6.

346 “Differential Fertility and Intelligence: Statement made by a group of scientists meeting at Unesco House in February 1954,” File: UNESCO/SS/Population/54/Paris, UNESCO.

fertility in all groups.”³⁴⁷ The statement advised governments and society to work strenuously to improve environmental conditions for all in order to maximize “in each country a considerable reservoir of intelligence,” hitherto undeveloped. The issue of “social wastage of intelligence” was raised in the final day of the working group’s meeting in Paris and was universally acknowledged as a critical issue facing all societies.³⁴⁸ In spite of the overall optimistic tone of the statement, it concluded ambiguously with the testament: “The group stresses once again that there has been no proof of a decline in the genetic endowment of the populations studied; and no present indication that such a decline may be predicted for the future; however, although the predictions are ‘not proven,’ the problem is not one to be dismissed.” They advocated that the issue receive “more research of an international and inter-disciplinary character” so that vital national resources might not be lost.³⁴⁹

The final statement ultimately furthered past tropes in revised language. It resolved that there was “undoubtedly a substantial genetic component in test intelligence.”³⁵⁰ Though earlier drafts had incorporated approximations or estimates of the relative importance of genetic and environmental considerations, the final version avoided controversy by refraining from any conclusive statements. Any oblique reference to eugenics, in spite of the presence of several self-professed eugenicists within

347 Ibid.

348 “Working Party on the Relation between Fertility of Different Groups and the Development of Intelligence in New Generations; Summary Report of the Seventh meeting held at Unesco House, Paris on Thursday, 4 February 1954,” File: UNESCO/SS/POP.M/Conf.1/1/S.R.7, Folder: 312.1 A 54 - Fertility Studies - General - Part III from 1st February 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO.

349 “Differential Fertility and Intelligence: Statement made by a group of scientists meeting at Unesco House in February 1954,” File: UNESCO/SS/Population/54/Paris, UNESCO.

350 Ibid.

the working group, was also conspicuously absent in an effort to avoid controversy.³⁵¹ This intentional ambiguity was a means of avoiding contention, and was ultimately successful; the UNESCO paper “aroused considerable favourable comment” among the World Population Conference attendees.³⁵² Historians have contended that the turn toward environmental explanations for psychological traits, particularly between races, was more than it appeared on the surface, and that dispelling racist ideas became “the special responsibility of human scientists” during this era.³⁵³ However, the UNESCO working group buried race rather than confront it. In an irony of the working group’s conclusion, arguments that environment played a critical role in the development of general intelligence were not anathema to the possibility of decline of genetic potential. Although the group acknowledged that environmental factors played an important role in the formation of individual intelligence, factors like the occupation or socioeconomic status of one’s father, one’s birth order, number of siblings, or gender, were not factors that individuals could control. The fact of environmental influence did not reject genetic determinism outright, nor did it rebuke the tropes of race science and eugenics. The reluctance of many human scientists to overstate the influence of environmental factors over those of genetic ones helped to preserve a space for the apparent return of race science in the late 1960s. Moreover, the group’s explanation helped to further entrench the idea that differential intelligence was a reflection of socioeconomic difference. This

351 “Working Party on the Relation between Fertility of Different Groups and the Development of Intelligence in New Generations; Summary Report of the Seventh meeting held at Unesco House, Paris on Thursday, 4 February 1954,” File: UNESCO/SS/POP.M/Conf.1/1/S.R.7, Folder: 312.1 A 54 - Fertility Studies - General - Part III from 1st February 1954, Box: 312.1 A 53 Part I to 314.371 (910) 079, UNESCO.

352 Memorandum from Otto Klineberg to the Director General, September 14, 1954, File: SS/Memo/5982, Folder: 312 A 06(45) “54” - World Population Conference - Rome - 1954 - Part III from 1st July 1954, Box: 312 A06(45) “54” 18 to 312:620.91 A06(41-4) “49,” UNESCO.

353 Herman, *The Romance of American Psychology*, 181.

distinction became ever more crucial in national contexts in which class became increasingly interchangeable with race, and nations became progressively invested in the maximization of the human resource of intelligence.

Scholars have argued that abuses during the interwar years and the Second World War led to the disappearance of race science and eugenics by the postwar era.³⁵⁴ However, contrary to suppositions that race science disappeared following the revelation of Nazi crimes against humanity committed in the name of race science and eugenics, scientific experts equivocated on the connections between race and psychological traits in the postwar years, often in ways that belied the influence of race science thinking. The UNESCO Statements on Race, which historians have often interpreted as evidence of the dismantling of race science, are in fact a reflection of its contested survival through a revised rhetoric and dialogue of difference facilitated by a gradual transition away from discussion of racial groups toward discussion of populations. The scholarship of Tracy Teslow and Perrin Selcer has shown that though race science was publicly rejected in the UNESCO statements on race, scientists sharply disagreed on the science (especially the science pertaining to the variation of mental traits within and between racial groups) and many retained racist beliefs that they ultimately suppressed for political or peacekeeping reasons.³⁵⁵ However, the significance of the statements' remarks on racial variations in

354 Elazar Barkan, *The Retreat of Scientific Racism: Changing Concepts of Race in Britain and the United States between the World Wars* (New York: Cambridge University Press, 1992); Nancy Stepan, *The Idea of Race in Science: Great Britain, 1800-1962* (Hamden, CT: Archon, 1982); George W. Stocking Jr., *Race, Culture, and Evolution: Essays in the History of Anthropology* (Chicago: University of Chicago Press, 1968).

355 Tracy Teslow, *Constructing Race: The Science of Bodies and Cultures in American Anthropology* (New York: Cambridge University Press, 2014), 228, 305, 312, 350; Perrin Selcer, "Beyond the Cephalic Index: Negotiating Politics to Produce UNESCO's Scientific Statements on Race" *Current Anthropology* 55(S5) (April 2012), S173-S175; Jenny Reardon, *Race to the Finish: Identity and Governance in an Age of*

intelligence for the repackaging and perpetuation of race science into the postwar decades has not been fully considered.³⁵⁶ Though the statements were positively received internationally as evidence of progress toward international peace and enjoyed broad support, their construction was a highly contentious process.³⁵⁷ Physical anthropologists and geneticists were especially critical of the statements. Many of these scientists wrote letters of protest to UNESCO accusing the organization of distorting the science in order to achieve ideological aims. Several even went so far as to state that the organization's scientific abuses were tantamount to Nazi abuses of science. UNESCO produced the statement in a moment of disarray within the human science community. The prerogative of disproving racial science came into conflict with the prerogative of avoiding ideologically inflected science. The statements were drafted with the intention of preventing any future international conflicts caused by racist dogma, which "comes at the very head of the list of main obstacles to human solidarity and brotherhood."³⁵⁸ The path to peace rested foremost on racial equality, yet racism did not simply dissipate with defamation of race science, and many efforts to reject race science preserved an essentialist, biological, and hereditary definition of race itself.³⁵⁹ Due to dissent among experts within and outside of UNESCO, the statements hedged on scientific consensus and conspicuously avoided asserting any radical claims. The experts responsible for drafting the statements walked a fine line between upholding political ideals and

Genomics (Princeton: Princeton University Press, 2005).

356 UNESCO produced four statements on race in 1950, 1951, 1964, and 1967. This chapter examines the first two UNESCO Statements on Race.

357 Selcer, "Beyond the Cephalic Index," S173-S174.

358 "Address Delivered by the Director-General to the Meeting of Physical Anthropologists and Geneticists for a Definition of the Concept of Race," File: UNESCO/DG/131, Folder: 323.12 A 102/064(44) "51" - Statement on Race - Expert Meeting of Physical Anthropologists & Geneticists - Paris 1951, Box: 323.12 A 102 Part II - 323.12 A 102/064 (44) "51" UNESCO, 2.

359 Teslow, *Constructing Race*, 228.

shielding objective scientific conclusions from ideological influence. In consequence, the first statements were largely equivocal. The reticence of these experts produced a statement that fell far short of its political goals by reducing its claims to the absence of proof of unequal genetic intellectual endowment between racial groups.

Anthropologist Ashley Montagu drafted the first UNESCO statement in consultation with a group of UNESCO experts. The initial 1950 “Statement on Race” defined race as “a group or population characterized by some concentrations, relative as to frequency and distribution, of hereditary particles (genes) or physical characters, which appear, fluctuate, and often disappear in the course of time by reason of geographic and/or cultural isolation.”³⁶⁰ The statement’s definition thus largely preserved race as a biological category. On the subject of intellectual traits, the statement demurred that intelligence tests were yet unable to distinguish between genetic endowment and environmental influence in the cultivation of intellectual capacity. In the event that environment of various groups was equal, expert consensus was that intellectual capacities would be similar across all groups. Though it stopped short of criticizing the nature of intelligence tests or declaring the faultiness of testing data that supported the conclusions of racial intellectual disparities, statement concluded: “according to present knowledge there is no proof that the groups of mankind differ in their innate mental characteristics, whether in respect of intelligence or temperament. The scientific evidence indicates that the range of mental capacities in all ethnic groups is much the same.”³⁶¹ This first statement sparked debate over the validity of the science behind UNESCO’s claims, particularly the science behind the claim of the similarity of

360 UNESCO, “Statement on Race,” 1950, UNESCO.

361 Ibid.

intellectual capacity across groups. The statement was accused of being too ideologically motivated to the point of overstating scientific evidence. The ensuing dispute among UNESCO and outside experts resulted in the production of a yet more ambiguous statement in the following year.

The 1951 “Statement on the Nature of Race and Race Differences” was drafted largely in response to an outpouring of criticism that the preliminary UNESCO statement relied too exclusively on the testimony of sociologists and had failed to consult physical anthropologists or geneticists. The revised statement offered a much broader definition of race and acknowledged that no single definition was universal across all professions.³⁶² The revision also included a more equivocal and complicated assertion on the question of racial variation in innate intellectual ability. It reflected, “even those psychologists who claim to have found the greatest differences in intelligence between groups of different racial origin and have contended that they are hereditary, always report that some members of the group of inferior performance surpass not merely the lowest ranking member of the superior group but also the average of its members.” Therefore, “it is possible, though not proved, that some types of innate capacity for intellectual and emotional responses are commoner in one human group than in another, but it is certain that, within a single group, innate capacities vary as much as, if not more than, they do between different groups.”³⁶³ The revision reflected expert disagreement about whether the statement was in danger of overstating scientific consensus on racial variation in innate intellectual abilities, and the threat to free and objective science incumbent in such an overstatement. Anxiety that the statement appear ideological rather than scientific

362 UNESCO, “Statement on the Nature of Race and Race Differences,” 1951, UNESCO.

363 Ibid.

informed its production as well as subsequent revisions, all of which reflected the reticence of experts to exaggerate available knowledge.

There was substantial disagreement over the drafting of the statement's sections on the inheritance of mental traits. In their letters to the Acting Head of the Social Sciences Department, Robert C. Angell, the experts consulted by UNESCO harshly criticized what many interpreted as gross overstatement of available information on the role of genetics and environment in the inheritance of mental traits. In his recommendations for the first draft, geneticist and evolutionary biologist Theodosius Dobzhansky advised Angell to "delete the phrase 'so far as temperament is concerned, there is no evidence that there exist any inborn differences between human groups.' There is no conclusive evidence to the contrary either."³⁶⁴ Geneticist L.C. Dunn, in agreement with Dobzhansky, wrote, "the case for the general position is so good that it should not be weakened by overstatement. A few of the statements assume more knowledge than we have at the moment; such are (p. 3, par. 3) 'no evidence that there exist any inborn differences between human groups.' This is subject to misunderstanding because there is evidence that the frequency of genes indirectly affecting temperament differ in different groups."³⁶⁵ Psychologist Otto Klineberg urged a "less dogmatic" tone for the statement, attesting "that it is premature to say that there are no inborn psychological differences between racial groups; it is, however, possible and desirable to say that there is no acceptable scientific proof of the existence of inborn psychological

364 Theodosius Dobzhansky to Robert C. Angell, January 17, 1950, File: unknown, Box: 323.12 (68.01) A 02 UN - 323.12 A 06 (494) "55" UN, UNESCO.

365 L.C. Dunn to Robert C. Angell, Acting Head, Social Sciences Department, January 11, 1950, File: unknown, Box: 323.12 (68.01) A 02 UN - 323.12 A 06 (494) "55" UN, UNESCO.

differences between racial groups.”³⁶⁶ Julian Huxley, too, recommended “pretty drastic redrafting” and criticized the statement’s conclusions about intellectual differences, asserting “it is still impossible to disentangle genetic from environmental factors in intelligence quotients, so that it is impossible to give an answer to the question whether there are any measurable differences in regard to the mean genetic intelligence of different groups.”³⁶⁷ Concern that the statement reflected political goals more so than an accurate picture of the state of available knowledge on the subject of race and psychological differences between races inflicted most of the feedback from experts. Their fixation on openness and the assertion only of evidence that was tested and proven helped to produce ambiguities within the UNESCO statements on race and beyond them.

Though all of these experts expressed support for the goals and ideals behind the statement, a majority were highly critical of what they viewed as the willing ignorance of the statements toward the state of the field of genetics. In his instructions to Montagu for the 1951 revision, Angell advised, “almost all the experts feel that you have gone too far in the direction of stating that we know that genetic factors have nothing to do with temperamental and mental characteristics, so far as racial groups are concerned.” Angell thus proposed a softening of the claim, stating “all of them seem to feel we should state this negatively: that our knowledge at the present time is not certain on this point, though making it clear that we have no scientific knowledge on the matter of intelligence which would support a race doctrine.”³⁶⁸ This revision resulted in a much less forceful

366 Memorandum from Otto Klineberg to Robert C. Angell, January 25, 1950, File: unknown, Box: 323.12 (68.01) A 02 UN - 323.12 A 06 (494) “55” UN, UNESCO.

367 Julian Huxley to Angell, January 26, 1950, File: unknown, Box: 323.12 (68.01) A 02 UN - 323.12 A 06 (494) “55” UN, UNESCO.

368 Robert C. Angell to Ashley Montagu, February 8, 1950, File: SS/146.334, Box: 323.12 (68.01) A 02 UN - 323.12 A 06 (494) “55” UN, UNESCO.

statement that reflected the primary critique of the statement's resort to ideology.

Angell's response to criticism of the initial statement highlights the conflicting goals of refuting race science and preserving the image of an ideology-free scientific statement during this era. However, in seeking to avoid the harmful effects of ideology on science, as in the painfully recent examples of Nazi race science and Soviet Lysenkoism, the UNESCO experts reduced the question of the validity of race science to a question strictly about biology. This placed the burden of refuting scientific racism on evidentiary scientific consensus on the nonexistence of genetic differences between races, and ultimately reinforced a principally biological understanding of race.

This had profound consequences for the I.Q. controversy and the perpetuation of race science. The lack of consensus among psychologists, demographers, and geneticists regarding intelligence tests demonstrated in the context of the working group on the relationship between intelligence and differential fertility fueled much of the debate over the statement's wording. Uncertainty over the degree to which the tests measured innate ability or environmental influences prompted many experts to question the certitude with which the statement asserted intellectual equality between races. Klineberg, who authored the influential and progressive pamphlet "Race and Psychology" as part of an UNESCO series entitled, "The Race Question in Modern Science," particularly criticized the statement's claims about intelligence tests.³⁶⁹ He corrected the statement, reflecting, "the tests do enable us to differentiate between what is due to innate capacity and what is the result of environmental influences, if these tests are applied to a group of individuals who have had more or less the same environmental opportunities." Opportunity for such

369 Otto Klineberg, *Race and Psychology: The Race Question in Modern Science* (UNESCO, 1951).

comparison was severely limited by the fact that it was not possible to assume that different racial groups experienced the same environmental opportunities, and only therefore differentiation between environmental and genetic influences was not possible.³⁷⁰ Thus this tendency toward reticence and reservation inflected the responses of even those experts most invested in progressive interpretations of the available scientific data. The eschewing of all ideology helped to bring about a kind of relativism that helped to produce a climate tolerant of the persistence of race science.

Many experts felt a need for caution. They warned that predicating equal rights on equal innate intellectual endowments could prove deeply threatening to equality, should scientific evidence later suggest the inequality of innate endowments between races. United States geneticist Leslie Clarence Dunn expressed his concerns to Angell that “some of the overstatements would, if exploited by opponents of racial equality, lead to discrediting of the entire portion of this statement which I believe to be otherwise reasonable and sound.”³⁷¹ Another expert refuted the notion that abilities must be equal in order to assure equality of treatment and opportunity, and that “the effort to belittle [biological differences] on humanitarian grounds is a tactical mistake because if some one (sic) SHOULD prove them, you are out on a limb. Human beings deserve treatment as equals because of their quality of being human, and not because no one has yet found a way to prove some less brilliant than others.”³⁷² United States geneticist Curt Stern agreed that the second statement was “somewhat colored by its intentions.” Stern

370 Memorandum from Otto Klineberg to Robert C. Angell, January 25, 1950, File: unknown, Box: 323.12 (68.01) A 02 UN - 323.12 A 06 (494) “55” UN, UNESCO.

371 L.C. Dunn to Robert C. Angell, January 11, 1950, File: unknown, Box: 323.12 (68.01) A 02 UN - 323.12 A 06 (494) “55” UN, UNESCO.

372 C.S. Coon to Alfred Métraux, October 25, 1951, File: unknown, Folder: 323.12 A - Statement on Race - Part III from 3/IX/1951 to 31/XII/1951, Box: 323.12 A 102 Part II - 323.12 A 102/064 (44) “51,” UNESCO. (Emphasis in original.)

likewise criticized what he believed was an overstatement, asserting that “if Science wants to destroy prejudice it can only hope to accomplish this if its position is as relatively unassailable as its very best founded facts. Our knowledge of the importance of genetic and non genetic (sic) factors in accounting for group differences in mankind has not yet reached that position.”³⁷³ United States geneticist H.J. Muller agreed that it was “absurd” to state that psychological traits were not in any way subject to the laws of heredity. On the contrary, Muller argued that “we do have every reason to infer that genetic differences, and even important ones, probably do exist between one living racial group of men and other, and our statement should not imply the contrary.” However, “it would be a tragic mistake to suppose that the above realistic, scientific view leads to the conclusion that race prejudices are justified.”³⁷⁴ These experts actively sought to separate politics and ideology from science, viewing political and legal equality as separate and unrelated to genetic equality. Apart from demonstrating the controversy surrounding the drafting of the statements, these experts’ testimonies highlight a reticence to discount the notion that genetic differences in innate mental abilities existed between races, adding further weight to the argument that the statements were never intended to remove race as a scientific or biological category.³⁷⁵ This tension helped to produce the ambiguous language of the statements and highlights the important role of politics and ideology in the creation of this very public international attack on race science.

373 Curt Stern to Alfred Métraux, January 1, 1952, File: unknown, Folder: 323.12 A 102 - Statement on Race - Part IV from 1/1/1952 to 31/III/1943, Box: 323.12 A 102 Part II - 323.12 A 102/064 (44) “51,” UNESCO.

374 H.J. Muller to Alfred Métraux, April 2, 1952, File: unknown, Folder: 323.12 A 102 - Statement on Race - Part IV from 1/1/1952 to 31/III/1943, Box: 323.12 A 102 Part II - 323.12 A 102/064 (44) “51,” UNESCO.

375 Reardon, *Race to the Finish*; Selcer, “Beyond the Cephalic Index,” S174.

Some of the experts consulted went so far as to accuse the statement of dogmatism, offering dramatic comparisons to fascist and communist science. Dunn and Klineberg each offered criticisms to this effect. The alleged “slanting of scientific data to support a social theory” provoked another critic to compare the actions of UNESCO to Hitler and the Soviet Union in reference to Lysenko.³⁷⁶ Although many critics who raised this point affirmed their support for social equality among all races, they expressed varying degrees of concern and alarm at what they perceived as the doctrinaire tone of the statements. For example, Eugen Fischer, a German anthropologist and eugenicist who had been a member of the Nazi Party, expressed wariness at how the statements privileged “certain scientific doctrines as the only correct ones.” He asserted his opposition “to the principle of advancing them as doctrines. The experiences of the past have strengthened my conviction that freedom of scientific inquiry is imperilled (sic) when any scientific findings or opinions are elevated, by an authoritative body into the position of doctrines.”³⁷⁷ This extreme sensitivity to dogmatism and doctrine colored the responses of many experts and created a dilemma for the political goals behind the drafting of the statements. These accusations highlight the tendentious expert reception of the UNESCO statements on race with regard to questions of intellectual differences among or between races, and demonstrate the extremeness of the prerogative of ideology-free science in the postwar years and its influence on the statement of scientific knowledge and consensus.

376 C.S. Coon to Alfred Métraux, October 25, 1951, file: unknown, Folder: 323.12 A - Statement on Race - Part III from 3/IX/1951 to 31/XII/1951, Box: 323.12 A 102 Part II - 323.12 A 102/064 (44) “51,” UNESCO.

377 “Views of Professor Eugen Fischer of Freiburg i.Br., on Unesco's 1951 Statement on Race,” File: Job 12887, Folder: 323.12 A - Statement on Race - Part III from 3/IX/1951 to 31/XII/1951, Box: 323.12 A 102 Part II - 323.12 A 102/064 (44) “51,” UNESCO.

As a result of multiple experts' critique of the UNESCO statements for misrepresentation of scientific knowledge in the interest of advancing social goals, the language of the statements remained ambiguous and conservative. Experts proved highly reticent to assert the innate equality of intellectual endowment between all races in positive and affirmative terms, and expressed their eagerness to err on the side of uncertainty. This characterization of dissent was especially true for genetic experts. The dialogue surrounding the UNESCO statements on race suggests the entrenchment and tenacity of racialized thinking about intelligence, even among those who considered themselves progressive and liberal. The statements failed to deliver a strong ideological or political statement, and the human scientific community expressed reluctance to engage in ideological or political arguments of any kind. This desire to insulate objective science from ideological taint ultimately placed the burden of proof on demonstrating the innate intellectual quality of all racial groups beyond a shadow of a doubt. It furthermore separated legal equality from innate equality, treating the former as a political possibility and the latter as an uncertainty incapable of being addressed by extant scientific knowledge. In consequence, the terms of the conversation remained focused on the identification of heritable, genetic endowment, rather than establishing the scientific irrelevance of hypothetical differences between individuals and groups. This dilemma became progressively tangled in the politics of population control in the Cold War years. Yet even as they criticized the close and compromised relationship between science and the state in communist and fascist regimes that produced unobjective and ideological science, human scientific experts increasingly saw a political role for human science in the realm of international affairs.

As nations increasingly viewed intelligence as a national resource and a form of human capital necessary for success in war and for security during times of international conflict, intelligence testing experts grew in importance to the state. Experts perceived a decisive connection between population control, global order, and the expansion of democracy to the developing world. These experts, particularly those from the United States, held the firm conviction that their scientific expertise was fundamental to the preservation of world peace.³⁷⁸ This proved especially true in the aftermath of the first displays of atomic power and initial stirrings of the Cold War. The human scientific experts at UNESCO perceived a changing role for science vis-à-vis democracy. Although it never convened, the proposed 1951 conference on the “Role of the Social Scientist in World Affairs” presented a vision for the contributions of human science to the spread of democracy and freedom throughout the world. The proposed conference represented, “for the Social Sciences Department, a most important educational aim for social science activities in general, and the Tensions Project in particular.” It promised “wide practical implications, and which [would] furnish concrete indication that Unesco is dealing boldly and concretely with the problem of eliminating from the minds of men those ideas which lead to misunderstanding and conflict.”³⁷⁹ The discussion between human scientists across Europe and the United States in particular exposes the changing way in which these experts conceived of their disciplines in the service of nations and the maintenance of world peace and affairs. The experts consulted on the conference

378 Donald T. Critchlow, *Intended Consequences: Birth Control, Abortion, and the Federal Government in Modern America* (New York: Oxford University Press, 1999), 13.

379 “Social Implications of Science,” January 21, 1949; File: unknown, Folder: 5 : 304 Social Implications of Science, UNESCO.

forthrightly expressed their conviction that the human sciences had an important role to play in the prevention and amelioration of international tensions that might lead to conflict and war. The Cold War featured in the letters of these experts, who expressed concerns at a growing divide between east and west, along with concerns about the impact of ideology on the practice of science in the world.³⁸⁰ Though the conference was not held, likely for budgetary reasons, the insights and opinions of this internationally focused human science cohort highlight the changing implications of human science for the prevention of war and international conflict.

Acting Director of UNESCO Robert C. Angell solicited the opinions of an international cohort of human scientists on the proposed meeting on the role of social scientists in world affairs. Angell consulted twenty-five human scientists, predominantly from the United States, Great Britain, and other European countries, on whether such a conference would be desirable at that time. Several experts voiced concerns about the viability of so large a conference and the possible threat of a reductionist debate narrowly focused on differences in ethical beliefs.³⁸¹ A few expressed trepidation that such a meeting might be too broad in its aims.³⁸² Even though many of these experts expressed doubts or worries, the majority responded positively and in favor of the conference's potential to address the changing role of the social scientist in world affairs. German sociologist Max Horkheimer captured the sentiment of many of those consulted when he wrote to Angell, "the task of an objective and profound diagnosis of the ills of modern

380 David C. Engerman, "Social Science in the Cold War," *Isis* 101(2) (June 2010), 393-400; David C. Engerman. "Bernath Lecture: American Knowledge and Global Power," *Diplomatic History* 31(4) (September 2007), 599-600; Herman, *The Romance of American Psychology*, 9-12, 124-126.

381 Robert Redfield to Robert C. Angell, March 27, 1950, File: unknown, Folder: 327.6 : 3 A 06: Meeting of Social Scientists on "The Role of Social Scientists in World Affairs," UNESCO.

382 Quincy Wright to Robert C. Angell, March 22, 1950, File: unknown, Folder: 327.6 : 3 A 06: Meeting of Social Scientists on "The Role of Social Scientists in World Affairs," UNESCO.

society should not be neglected, even if such a diagnosis will not result immediately in positive suggestions.”³⁸³ These experts perceived a political role for their professions. While they continued to emphasize the need to sequester ideology from scientific practice, they simultaneously sought to expand their professional jurisdiction. These experts saw the conference as an opportunity to construct a role for their professions in the resolution of international tensions in a decade significantly rocked by political, ideological, and military conflict.

The respondents overwhelmingly stressed the importance of neutrality in their feedback to Angell. They recognized that important national distinctions between the professions might prove problematic in such a conference, in spite of concerted efforts over the decades to internationalize the tools and methods of these very professions as in the case of intelligence testings particularly. United States psychologist Gordon Allport expressed particular concern that the conference not become “a sounding board for national interests.”³⁸⁴ Allport still expressed desire for a trial attempt of a conference that superseded national needs in order to achieve international needs. If this could be achieved, “the world has turned a corner and adopted a promising method for healing its wounds.”³⁸⁵ Pleas for objectivity closely followed those of neutrality. Horkheimer emphasized, “it should be kept in mind that it is not one of the least functions of modern social science that it is capable, by treating controversial issues in an unbiased and detached way, to dispel part of the emotional clouds, which in Europe usually surround social and political problems. Social science is by its very existence an anti-dote against

383 Max Horkheimer to Robert C. Angell, March 24, 1950, File: unknown, Folder: 327.6 : 3 A 06: Meeting of Social Scientists on “The Role of Social Scientists in World Affairs,” UNESCO.

384 Gordon W. Allport to Robert C. Angell, April 1, 1950, File: unknown, Folder: 327.6 : 3 A 06: Meeting of Social Scientists on “The Role of Social Scientists in World Affairs,” UNESCO.

385 Ibid.

the climate of hate and violence.”³⁸⁶ The feedback on the proposed conference thus highlighted a consciousness of differences in the practice of human science in the United States compared with Europe. For some of the experts consulted, the United States served as an example to all of Europe for its emphasis on application over theory. For others, fear that such national distinctions might stymie progress lessened the practicality and desirability of the proposed conference.

This feedback exemplified the growing political divide between the first and second world as the Cold War conflict heightened. These particular anxieties revolved around broader concerns about the global impact of communism, and highlight the extent to which experts from democratic nations viewed communism as synonymous with ideological science, and democracy as synonymous with detached objectivity. The respondents contrasted scientific practice in the democratic West with Lysenkoism in the East, describing the former as objective and the latter as ideological. One expert’s feelings were pessimistic at the potential of scientists to play any profound role in world affairs as long as this political and ideological divide persisted. He confided in Angell, “my feeling is that world affairs are so bedeviled by the insoluble antagonism between East and West; so that little, if anything, can come out of any meeting – let it be of social scientists, atomic experts, philosophers or any other sort of specialists – while the Moscow centre of anti-liberal and anti-humanistic activities hold sway over half our earth.”³⁸⁷ Another expert expected that “the East-West conflict will be at the back of all our minds. I don’t suppose that it will be possible to get any Russian social scientists. I

386 Max Horkheimer to Robert C. Angell, March 24, 1950, File: unknown, Folder: 327.6 : 3 A 06: Meeting of Social Scientists on “The Role of Social Scientists in World Affairs,” UNESCO.

387 Salvador de Madariaga to Robert C. Angell, March 25, 1950, File: unknown, Folder: 327.6 : 3 A 06: Meeting of Social Scientists on “The Role of Social Scientists in World Affairs,” File: unknown, Folder: 327.6 : 3 A 06: Meeting of Social Scientists on “The Role of Social Scientists in World Affairs,” UNESCO.

would however, like to see the conference oriented around the problem of ritualising (sic) the east-west (sic) conflict and turning it into more fruitful channels.”³⁸⁸ The communist approach to human science was ultimately incompatible, in the minds of these experts, with the democratic approach. These human scientific experts therefore remained pessimistic in their ability to achieve a truly international role for their professions that could bridge the divide between the first and second world so long as communism persisted.

Above all else, the experts consulted by Angell emphasized an active role for the social scientist in world affairs. In their letters, these human scientists drew attention to their professions’ unique abilities to bring their research to bear upon the most urgent and human problems of the world, which was becoming increasingly interconnected even as it was shaken by tension and conflict. One expert expressed “at the present time social scientists, other scientists, administrators and policy makers are all confused as to what the social scientist can do, or how much he might be expected to do; and as long as this confusion exists, social scientists will not pull their fair weight in the world.”³⁸⁹ The proposed conference was an opportunity to articulate these capabilities to the international community. Gunnar Myrdal likewise saw great potential in the conference, stating “we must strive for a broad view of the social process in full perspective, bringing together its economic, political, and psychological aspects, in a way which both explains how things happen, and provides a basis on which effective policies of control can be

388 Kenneth E. Boulding to Robert C. Angell, March 29, 1950, File: unknown, Folder: 327.6 : 3 A 06: Meeting of Social Scientists on “The Role of Social Scientists in World Affairs,” UNESCO.

389 Ernest Beaglehole to Robert C. Angell, March 30, 1950, File: unknown, Folder: 327.6 : 3 A 06: Meeting of Social Scientists on “The Role of Social Scientists in World Affairs,” UNESCO.

established.”³⁹⁰ In the view of these experts, international cooperation and collaboration by human scientists would urge the application of human scientific knowledge to solve the problems of human suffering. International tensions had created opportunities for such exchanges, while simultaneously complicating them.

War and international conflict were thus crucial in the reshaping of the human sciences over the twentieth century. As tensions continued to build, the human sciences sought advisory roles in international affairs. The Tensions project supplied UNESCO with the mandate to deal “boldly and concretely with the problem of eliminating from the minds of men those ideas which lead to misunderstanding and conflict.”³⁹¹ In the human sciences, this doubled as a mandate to establish professional authority to speak to the issues causing social tension internationally. This is apparent in the proposed UNESCO conference on the role of the social scientist in human affairs, the working groups on the statements on race, and the working group on the relationship between intelligence and differential fertility. As the natural sciences grew in importance to national governments for defense and national resources, so too did the human sciences. The problem of the intelligence levels of populations in particular increased the significance of the human sciences to nation states as experts and nations increasingly understood intelligence as a kind of human capital and national resource of crucial importance during times of war and conflict.

The United States government began to formally recognize intelligence as a vital resource in the years between the Second World War and Cold War through both military

390 Gunnar Myrdal to Robert C. Angell, May 3, 1950, File: unknown, Folder: 327.6 : 3 A 06: Meeting of Social Scientists on “The Role of Social Scientists in World Affairs,” UNESCO.

391 “Social Implications of Science,” January 21, 1949, File: unknown, Folder: 5 : 304 Social Implications of Science, UNESCO.

and federal initiatives. In the years following the passage of the 1948 Selective Service Act, military officials explored the possibility of exempting or deferring service for talented individuals on the basis of their “potential worth,” beyond those in critical professions.³⁹² The 1948 act required all male citizens to register for Selective Service on their eighteenth birthday. Under the leadership of General Lewis B. Hershey, the Selective Service System began to consider options for draft-deferment based on intelligence test scores in the context of the beginnings of the Korean War.³⁹³ In 1950, as proposals for a policy of draft-deferment based on I.Q. testing emerged, Henry Chauncey – head of the Educational Testing Service, founded in 1947 to administer the SAT exam – approached General Hershey and entered into a contract to develop and administer the draft-deferment test. The following year, President Truman signed an executive order authorizing the test and the Selective Service System entered into a contract with the Educational Testing Service to begin work on it.³⁹⁴ In this way, the United States government discriminated between draftees, preserving the most intelligent from combat with the expectation that their unique abilities might be applied elsewhere to the benefit of the nation.

The proposal for the draft-deferment intelligence test marked the greatest testing endeavor on the part of the United States Army in time of peace.³⁹⁵ It reflected the degree to which mass applications of intelligence tests had become normalized in the United States Armed Forces. Although Chauncey firmly advised General Hershey against calling the tests “intelligence tests,” they were scaled for easy comparison with the Army

392 Nicholas Lemann, *The Big Test: The Secret History of the American Meritocracy* (New York: Farrar, Straus and Giroux, 1999), 74.

393 Lemann, *The Big Test*, 73.

394 *Ibid.*, 73-78.

395 *Ibid.*, 73.

General Classification Test, which closely resembled other I.Q. tests.³⁹⁶ Approximately two-thirds of test-takers surpassed the score required for eligibility for draft-deferment; however, the policy sparked considerable public criticism. Many saw this path to draft-deferment as an exemption for the privileged few.³⁹⁷ Although the G.I. Bill had been in force since 1944, and higher education was expanding, a university or college education was still out of reach for the vast majority of Americans. This was particularly the case for poor and minority Americans. In spite of the unpopularity of the policy, the United States Armed Forces determined that it was in the interest of national security to postpone and redirect the military service of the most intelligent. This decision reflected changing views on intelligence as a vital national resource worthy of protection and investment. In response to changing views on intelligence and the Cold War, the government began to channel its support into legislation designed to maximize the intelligence of its citizens and exempt the brightest among these from certain obligations of citizenship, specifically, selective service.

In addition to adjustments made to the Selective Service System, the federal government increased expenditure on higher education, particularly in science, technology, engineering, and mathematics, in the name of national defense. The Cold War and developing views on intelligence as human capital were largely responsible for this policy shift. In its nuclear arms race with the Soviet Union, the United States saw the maximization of its intellectual resources as critical to its ultimate victory in the Cold War. Although the Cold War did little to protect academic freedom, it did contribute

396 Ibid, 73-78.

397 Ibid, 77.

immensely to the expansion of government funding of academic research.³⁹⁸ In 1958, the United States Congress passed the National Defense Education Act. The act was drafted largely in response to the launch of the Soviet Union satellite, Sputnik, the year before and the growing feeling that the United States students were falling behind their Cold War enemy in science and math. The act funneled federal funding into universities with the goal of catching up to the Soviets in the international arms race.³⁹⁹ This act was part of a larger movement toward the investment of government resources in the maximization of citizens' intellectual potential in the name of national defense. Institutions of higher education responded to this wartime drive. For instance, in 1952 the College Board initiated what would become the Advanced Placement Program, which allowed the brightest students to take courses in high school for college credit. Early on, students were typically selected for this program according to their I.Q.⁴⁰⁰ The defense relevant fields of biology, chemistry, physics, and mathematics numbered among the first subjects in which exams were offered.⁴⁰¹ These developments marked the growing national recognition of intelligence as a vital resource for defense. This recognition coincided with growing acceptance of intelligence testing – particularly group intelligence testing – and the validity of intelligence test results.

The increased popular acceptance of the validity of intelligence tests corresponded with a wider embrace of the profession of psychology more generally. In 1957, *Life Magazine* ran a five-part series on psychology written by journalist Ernest

398 Jessica Wang, *American Science in An Age of Anxiety: Scientists, Anticommunism, and the Cold War* (Chapel Hill: University of North Carolina Press, 1999.)

399 Lemann, *The Big Test*, 85.

400 Eric Rothschild, "Four Decades of the Advanced Placement Program" *The History Teacher* 32:2 (1999), 176-179.

401 Rothschild, "Four Decades of the Advanced Placement Program," 179.

Havemann. The second installment elaborated on advances and achievements in psychometrics. Havemann declared, since Binet's initial intelligence test, "individual and group tests have been perfected and the initials – I.Q. – have become a household phrase." In Havemann's popular representation of the field of psychometrics, by "giving intelligence tests to hundreds of thousands of people the psychologists have established beyond doubt that intellectual capacity is inherited."⁴⁰² Thus the crucial question of the heritability of intelligence, which the UNESCO working group on the relationship between differential fertility and intelligence and the UNESCO committee that produced the statements on race attempted to address, was brought before the public. Havemann explained, intelligence as a trait was not directly inherited, and thus "college professors sometimes have dull sons and stupid parents sometimes have brilliant children, or the same family may have one bright, one average and one dull child."⁴⁰³ However, "it works out by and large that brighter parents tend to have brighter children. The children of professional men have been shown to have the highest I.Q.'s (averaging around 115) and those of day laborers the lowest (around 96)."⁴⁰⁴ In its popular distillation of information on intelligence tests, the article reproduced old eugenic and race science tropes that the poor on average had less intelligent children than the middle and professional classes. It raised, but did not confront, the socioeconomic and racial implications of the proposition that intelligence was a heritable trait.

Yet Havemann did acknowledge a role for environment in the development of intelligence, however controversially. He informed readers, "a child born into a poor

402 Ernest Havemann, "The Tools Psychologists Invented: Tests and Experiments Show How We Really See and Hear, How to Learn Efficiently, How Heredity Affects Intelligence" *Life Magazine* 42(2) (1957), 118.

403 Ernest Havemann, "The Tools Psychologists Invented," 118.

404 Ibid.

home often shows improvement in I.Q. if adopted by a more intelligent and stimulating family, and it has been found that Negro children born into backward rural families improve steadily if they move to the city. Nevertheless,” he noted, “the amount of improvement is always limited by the mental capacity that was there at birth.”⁴⁰⁵ Havemann insisted that intelligence testing data proved intelligence was heritable, and that environment could only maximize innate potential. His assertion that professional occupation corresponded with innate potential implied without directly stating that socioeconomic divisions were symptomatic of unequal innate capacities. Within the United States population, Havemann reported, “46 percent of us score between 90 and 109” and were considered of “average” intelligence. Only 1 percent of the population was “very superior,” while 15 percent were “low average,” 6 percent were “borderline,” and 3 percent were “mental defectives.”⁴⁰⁶ Havemann explained that scientists were already engaged in research that might one day allow them to isolate the genes for intelligence. He described a “most provocative experiment” in which 142 rats were divided into intelligent and unintelligent groups, based on their ability to learn to memorize a maze. These rats were then mated within their respective groups and their progeny became increasingly unequal in intelligence over the course of several generations. Havemann concluded, “doubtless this experiment has some theoretical implications for the human race,” even if “it hardly promises us a breed of super-geniuses for tomorrow.”⁴⁰⁷ The theoretical possibility of maximizing intelligence in humans through selective reproduction echoed the intentions of the eugenics of a bygone era. The *Life Magazine* article blended stock eugenic interests along with the language of

405 Ibid.

406 Ibid, 120.

407 Ibid.

environmental explanations for human difference invoked by the UNESCO experts on the committees on race and on the relationship between differential fertility and intelligence. The article thus represented old ways of thinking about intelligence in a new language born out of the postwar and post-Holocaust context, demonstrating the lingering influence of eugenics and race science in their latency.

Conversations about intelligence in the postwar years increasingly turned to the language of capital. Experts and nations continued to conceive of intelligence as a type of human capital and national resource, especially in the context of the Cold War. Human scientists entered into this dialogue in profound ways. In claiming the authority to define and identify innate intellectual ability for their professions, they advocated for an increased role for human science in world affairs and the distillation of international conflict through the resolution of population problems, especially those related to intelligence. In response to the altered political and social climates of the postwar period and the discrediting of race science and eugenics, these human scientists reconceptualized intelligence as a complex genetic and environmental phenomenon. This reconceptualization, however, was highly attentive to race and class differences. Experts more and more concluded “society is deprived of untapped resources of human ability” as a result of older methods of identifying intelligence.⁴⁰⁸ The UNESCO Meeting of Physical Anthropologists and Geneticists for a Definition of the Concept of Race determined “the most urgent task is to provide opportunities for education and development for the underprivileged everywhere, both underprivileged classes and

408 “Standard Intelligence Tests Held Remiss in Evaluating Children's Mental Capabilities,” *New York Times*, March 23, 1950, Folder 5290, Box 496, Series 1.3, FA058, GEB, RAC.

underprivileged societies and nations. This will release immense reservoirs of capacity which are now unutilized; and, once accomplished, will permit us to determine more accurately the residual genetic differences.”⁴⁰⁹ In this way, environment became a way of discussing populations’ intellectual potential and paths to maximizing that potential. This potential was largely discussed utilizing a language of socioeconomic difference that masked racial tensions and discriminatory inclinations that were no longer socially acceptable means of identifying human difference in the post-Holocaust moment. It moreover created space for the expectation that equal environmental conditions could reveal innate genetic inequalities between groups, an expectation that race scientists and eugenicists would exploit in the decades to come.

During the Cold War, governments and scientists undertook initiatives to increase intelligence, rather than merely prevent its decline, in the hopes of maximizing national intellectual potential. War and international conflict had created opportunities for the rise of populations-based intelligence testing that coincided with the professionalization of demography, the growing relevance of population studies to international affairs, and the increasing legitimacy of the field of genetics. The promise of genetics was strong for those invested in questions of population quality control. The turn to genetics did not, however, necessarily imply a departure from race science and eugenics. The UNESCO group on the “Social and International Implications of Science” celebrated that “knowledge about genetics and human heredity is already sufficiently advanced to be of direct practical value in genetic prognosis, i.e., the furnishing of genetic advice in

409 Julian Huxley, “Meeting of Physical Anthropologists and Geneticists for a Definition of the Concept of Race, Working Paper, Addendum II, Note on Possible Racial Differences in Psychological Characters,” March 31, 1951, File: UNESCO/SS/RACE/CONF.2/2, Folder: Folder: 323.12 A 102/064(44) “51” - Statement on Race - Expert Meeting of Physical Anthropologists & Geneticists - Paris 1951, Box: 323.12 A 102 Part II - 323.12 A 102/064 (44) “51,” UNESCO.

prospective marriages and families... and finally in the broad field of engenics (sic). Human genetics has placed the equality of man on a solid scientific foundation. It has proved a powerful factor in fighting and liquidating racial antagonism on a scientific front."⁴¹⁰ In many instances, however, postwar genetics built its foundation on prewar eugenics.⁴¹¹ Even as anxieties about declining levels of national intelligence faded, concerns about differential fertility remained in the context of endeavors to maximize national intelligence, demonstrating the adaptability of race science and eugenics to changing political climes and contexts.

The semantics of population difference perpetuated numerous assumptions that had fueled race science and eugenics before the Second World War. As the following chapter explores, genetics and eugenics shared an at times overlapping trajectory on the question of human difference. The idea of human intelligence as human capital that had gained traction in the immediate postwar years would further animate questions of nature and nurture in explanations of population differences. Population genetics, and the intersecting aims of psychology, demography, and eugenics in the proceeding Cold War years would help to further cement the transformation of intellect into a kind of human capital and national resource. This transformation transpired alongside critical developments in eugenics and race science that led them back to prominence by the late 1960s.

410 Memorandum on Group Discussions on the Social and International Implications of Science, File unknown, Folder: 5 : 304 Social Implications of Science, 3.

411 Stern, *Telling Genes*; Comfort, *The Science of Human Perfection*.

CHAPTER FOUR

The Reinvention of Eugenics and Reemergence of Race Science

“A storm is brewing over a suggestion by a leading educational psychologist that intelligence is determined largely by heredity and cannot be significantly altered by improving environment,” a *New York Times* article informed its readers.⁴¹² This leading psychologist was Arthur Jensen, an educational psychologist at the University of California, Berkeley. According to the article, Jensen’s research determined that “compensatory education programs designed to raise the intelligence of disadvantaged children by enriching their cultural surroundings are misdirected.” In a stark rejection of the past decade’s embrace of a more environmental approach to understanding the development of intelligence and subsequent effort to minimize environmental inequalities between groups, Jensen proposed that “the measured mental differences between racial and ethnic groups are as much a part of group identity as skin color, hair texture, and blood chemistry.”⁴¹³ Jensen’s article appeared to represent a sudden reemergence of race science following its discrediting in the wake of the Holocaust. Yet in spite of their discrediting, race science and eugenics did not disappear during these years of liberal scientific consensus. In response to changing political climates, race science entered into a period of latency while eugenics underwent reinvention at the hands of new leadership in the 1960s.

412 Robert Reinhold, “Psychologist Arouses Storm by Linking Heredity to I.Q.,” *New York Times*, March 30, 1969, 52.

413 Reinhold, “Psychologist Arouses Storm by Linking Heredity to I.Q.,” 52; Ivan Kaye, “Nature versus Nurture: An Old Debate is Revived,” *The Sun*, April 6, 1969, K2.

The survival of race science and eugenics was largely the result of their adaptability to changing political climates and the liberal scientific community's repudiation of science for ideological aims. The reticence of experts to dismiss concerns about the decline of nations' intelligence in relation to differential fertility, along with their reluctance to offer statements or remarks that might be interpreted as ideological, helped to construct an environment permissive to the perpetuation of race science and eugenics. This was evident in the UNESCO committee on the relationship of differential fertility to intelligence as well as the UNESCO committee that produced the statements on race. In their efforts to not overstate available scientific knowledge, these experts were not able to extinguish race science definitively. Instead of disappearing, race science entered into a period of latency until conditions changed and eugenicists actively engaged in processes of reinventing eugenics. As experts increasingly invoked the language of socioeconomic difference in place of racial difference, race scientists readily adapted to the changing political climate, and would continue to adapt as the political context changed leading into the late 1960s and the 1970s. In revisiting this era, it is possible to trace a narrative of the continuity of race science and eugenics, rather than one of rupture.

This chapter highlights the role of newly formed relationships between demographers, geneticists, and psychologists in the perpetuation of eugenic thought and practices in the decades following the Second World War. In so doing it builds on the work of scholars who have demonstrated the longevity of race science and eugenics in the twentieth century.⁴¹⁴ As anxiety over the relationship between differential fertility and

414 Alexandra Minna Stern, *Telling Genes: The Story of Genetic Counseling in America* (Baltimore: Johns Hopkins University Press, 2012); Nathaniel Comfort, *The Science of Human Perfection: How Genes Became the Heart of American Medicine* (New Haven: Yale University Press, 2014); Tracy Teslow,

declining levels of intelligence subsided in the wake of a mass of data disproving declines in national intelligence, I.Q. experts redirected their energies toward recommendations for the maximization of intellectual capital and in the process reinvented eugenics. Reversing their allegations that levels of intelligence were declining, experts reframed their concerns around the growing anxiety that nations were failing to exploit their populations' potential fully. This anxiety focused expert attention once again on those groups who consistently underperformed on intelligence tests, which ultimately created an opening for the reassertion of race science and eugenics. War and international conflict in the Cold War years further ingrained the idea that intelligence was a form of human capital and a vital national resource that should be maximized. During time of war and international uncertainty especially, this resource came to be viewed by experts as necessary for states to maximize. An intelligence race transpired in tandem with the Cold War arms race. Concerns that United States students were falling behind their Soviet counterparts drove the institution of Advanced Placement courses in mathematics and the sciences, and the space race established profound ties between government and academic research in the natural sciences. Human science experts as well sought to carve a niche for themselves vis-a-vis the state through their claims to expertise on intelligence. The idea of intelligence as human capital, which had gained traction in the 1950s, continued to feature in conversations about intellectual differences within and between populations into the late 1950s and the early 1960s. The maximization of intelligence and the impact of differential fertility on national levels of intelligence largely animated the major

Constructing Race: The Science of Bodies and Cultures in American Anthropology (New York: Cambridge University Press, 2014); Perrin Selcer. "Beyond the Cephalic Index: Negotiating Politics to Produce UNESCO's Scientific Statements on Race" *Current Anthropology* 55(S5) (April 2012): S173-S184.

population conferences of this decade that were instrumental in the reframing of eugenics, its applications, and prerogatives.

Race and class were all but absent from this 1960s reframing. Intelligence was increasingly viewed by psychologists, geneticists, and other experts as not a question of nature or nurture, but a question of how environmental factors conditioned the development of genetic endowments. The UNESCO statements on race, as well as the work of experts like Otto Klineberg and Allison Davis, identified environmental conditions as the cause of seeming differences in native intelligence between racial and class groups. Environmental explanations for differences in group and individual intelligence, as demonstrated in the previous chapter, created an opportunity and a language for race science to make what seemed to be a sudden reappearance in the 1970s. In their rebuke of race science and eugenics, experts demonstrated a reticence to overstate scientific knowledge or engage in ideologically-motivated science. Thus the postwar liberal scientific consensus, in its effort to practice sound science, inadvertently helped to create the conditions for the evident return of race science and eugenics following the lack of success of efforts in the 1950s and 1960s to equalize the environmental conditions of all. In spite of the widespread turn toward environmentalism, blatant attacks on the idea of equality between racial groups still reached broad audiences. As discussions about intellectual human capital shifted from decline toward maximization, overt racist assumptions sporadically surfaced against the background of the ongoing the Civil Rights Movement and provoked experts to engage new publics in response. The passage of the Civil Rights Act in 1964, the revision of the national origins immigration quota policy in the 1965 Immigration Act, the 1965 Moynihan Report, and President Lyndon B.

Johnson's "War on Poverty" and expanding welfare programs all provided the backdrop for a rapidly changing United States society. This expansion of efforts to improve the opportunities of all and minimize racial and class inequality ultimately elicited a backlash from components within the scientific community – whose views would be represented in the work of Arthur Jensen, William Shockley, and Richard Herrnstein – who argued strongly against the efficacy of government intervention in the maximization of I.Q. for certain racial groups. Arthur Jensen's controversial thesis that black students were genetically less intelligent than white students would help to spark a culture war that would span the decades to follow.

The maximization of population potential was seized upon by the American Eugenics Society as a platform for reinventing itself in the service of nations. These self-styled "new eugenicists" viewed population genetics, psychology, and demography as the foundational disciplines of their new vision for eugenics. Contrary to beliefs that eugenics disappeared in the postwar era, it continued to thrive in multiple contexts and to attract the interests of new groups.⁴¹⁵ Beginning in the 1960s, the American Eugenics Society seized upon population genetics as the legitimizing discipline for its new eugenic vision. Through its invocation of population genetics as the chosen handmaiden of eugenics, the society endeavored to craft a narrative of eugenics that utilized its past offenses as a foil for distinguishing eugenics' future instrumentality to states.⁴¹⁶ The new eugenic vision drew on population genetics, guided by demography and psychology, to maximize population quality through state intervention. In the views of members of the American Eugenics Society, scientific breakthroughs in medical birth control, and

415 Stern, *Telling Genes*; Comfort, *The Science of Human Perfection*.

416 Edmund Ramsden, "Confronting the Stigma of Eugenics: Genetics, Demography and the Problems of Population," *Social Studies of Science* 39(6) (December 2009): 853-884.

advances in genetic knowledge of native intelligence, character, and personality, assured the legitimacy of putting a eugenic plan into action.

This chapter demonstrates the malleability of race science and the persistence of eugenics in the 1960s. As the world grew more concerned with the conservation of resources and the control of global populations, eugenicists took advantage of the changing times. Conservation was “intimately bound to the matter of population control, to the prevention of war, to the ultimate welfare of man, and, right now, to the ideal of ‘The Great Society.’”⁴¹⁷ I.Q. experts of the 1960s viewed population control, the maintenance of world peace, and the maximization of human resources, alongside the conservation of natural resources, as a means of building up societies and nations. In viewing eugenics and race science as movements that were highly responsive to changing climates, it becomes clear that the work of the neohereditarians of the 1970s, and even the emergence of neohereditarianism in the 1990s, was not an aberration, but a development along a continuum.

The Princeton Conferences on Population Genetics and Demography demonstrate this continuity. The Princeton Conferences were organized by the American Eugenics Society and funded by the Rockefeller Foundation’s Population Council with the express intention of bringing demographers and geneticists into conversation to address current issues confronting population genetics. Though the focus of the early conferences remained on genetics and demography, psychology was recognized as an essential

417 Preston E. Cloud, Jr., “Terrestrial Resources and the Future of Man, from Preston E. Cloud,” February 7, 1965, Folder: 1963, Box: 105, Series 4, Population Council, Accession I, FA210, Rockefeller Archive Center (RAC), 2.

collaborative discipline in population genetics. Secretary of the American Eugenics Society Frederick Osborn was a driving force behind the organization of the conferences, which marked a crucial opportunity for greater unification across disciplinary divides to pave the way toward a more complete population genetics that integrated the particular expertise of demographers and psychologists. In Osborn's words, "the purpose of the conference was to discuss [demographers' and geneticists'] joint interests in present genetic trends." Demographers would provide demographic information on "differential fertility and mortality as between people of different measurable types, marriage, mate selection, consanguinity," while "the geneticist must take this material and tell us how it is affecting the distribution and frequency of genes." Together the geneticist and demographer might assess the "genetically determined structural limitations on behavioral development," or, the upper limits of genetic capacity.⁴¹⁸ The conferences drew a wide swath of population geneticists, demographers, and psychologists interested in questions of differential fertility, assortative mating, and population-based assessments of I.Q. The experts who participated in these conferences viewed population genetics as a necessarily interdisciplinary exercise. Osborn summed up the sentiment of the conferences' participants when he stated, "population genetics must draw on medicine and medical genetics for criteria and hereditary factors in defect and susceptibility to disease; on psychology for methods of measurement and analysis of the interaction of heredity and environment in the development of personality, intelligence, and character, and on sociology and more particularly demography for rates of deaths and births, mating patterns and the relative or decrease of particular genetic types, and the social and

418 Frederick Osborn to Dudley Kirk, October 26, 1964, Folder: AES – Princeton Conferences, 1st #1, Box: 8, American Eugenics Society Papers, American Philosophical Society, Philadelphia, PA (APS.)

physical factors which determine these rates.”⁴¹⁹ Population genetics thus depended to a significant extent upon interdisciplinary human scientific knowledge and expertise. The Princeton Conferences heralded the beginning of the process of bridging disciplinary gaps between professions that had hitherto remained relatively distinct in their parallel projects of assessing the qualities and potential of various human groups. The conferences also represented one of several postwar efforts aimed at the reformation of eugenics.

Five Princeton Conferences convened in the 1960s.⁴²⁰ In contrast with the sundry interdisciplinary population-focused conferences of geneticists and social scientists in the 1950s, the focus and tenor of the conferences signaled a shift away from preoccupations with declining levels of intelligence toward interest in the maximization of levels of intelligence. In spite of this change in attitude, assortative mating and differential fertility remained issues of primary interest among human scientists invested in the assessment and increase of national levels of intelligence. In his memorandum to conference attendees, Osborn emphasized the focus of the initial conference would be on “studies of differential rates of reproduction of individuals differing in mental and emotional traits of character, personality and intelligence,” areas of research that had been at the heart of the intelligence controversy. The initial conference was held under the general assumption that “differences in the psychological traits of individuals and families in similar environments are at least to some degree related to differences in genetic inheritance.” Though genetics was thus recognized as a driving force behind population variation in

419 Memorandum from Frederick Osborn, September 24, 1964, Box: 8, Folder: AES – Princeton Conferences, 1st #2, Box: 8, American Eugenics Society Papers, APS.

420 The first Princeton Conference was held from October 16-17, 1964, the second from November 18-20, 1965, the third from October 20-22, 1966, the fourth from November 9-11, 1967, and the fifth from November 6-8, 1969.

intelligence, Osborn notably bracketed the question of the extent of the genetic basis of this variation during the first conference. Apart from the controversial nature of the question of the genetic basis for population differences, often demarcated in intelligence testing data along class and racial lines, the first conferences lacked balanced participation from psychologists.⁴²¹ It was thus decided that once a more interdisciplinary conference body was achieved, the attendees would proceed in their efforts to assess the extent of the genetic basis of psychological differences between and among populations.

Transparency and legitimacy in the conference proceedings were prioritized from the start. This was in part related to the effort of the American Eugenics Society to restyle both itself and eugenics as a reinvented and valid enterprise with the ability to redress important national and international issues facing the postwar world. Osborn was the public face of this renaissance. A widely known philanthropist, scientist, and General during the Second World War, Osborn offered a new and authoritative narrative that juxtaposed the new eugenics with the old. The conference organizers and attendees were keen to utilize the conferences as a foundation for developing this new vision for eugenics, which largely redefined eugenics as population genetics. Speaking for the American Eugenics Society, Osborn identified one of the society's foremost goals as "fostering a closer relationship of population geneticists with demographers and other social scientists" who shared "a common interest in factors affecting the quality of population."⁴²² This recognition of a shared venture between geneticists and social scientists was essential to the rehabilitation of eugenics in the postwar era. Demographer

421 Memorandum from Frederick Osborn, September 24, 1964, Folder: AES – Princeton Conferences, 1st #2, Box: 8, American Eugenics Society Papers, APS.

422 Clyde V. Kiser, "Types of Demographic Data of Possible Relevance to Population Genetics," Folder: AES – Princeton Conferences, 1st, #3, Box: 8, American Eugenics Society Papers, APS, 1.

and conference participant Clyde V. Kiser affirmed that “there is an interaction between genetic and demographic trends and that a better understanding of this reciprocal relationship is needed for the fuller development of each discipline and for the fuller development of any rational eugenic program or public policy concerned with health, welfare, and quality of the population.”⁴²³ This new vision for eugenics, however, retained significant vestiges of the old eugenics. Like eugenics prior to the Second World War, it focused on the differential qualities of populations, yet broke with the past by emphasizing the maximization of quality rather than the prevention of degeneration. In spite of this change, the new eugenicists still endeavored to craft national policy solutions to population issues as did their predecessors, and innate intelligence remained the focus of eugenic concerns.

One critical issue hindered the American Eugenics Society’s progress toward a re-envisioning of eugenics as the handmaiden of population genetics. This was the inability of psychologists to agree upon a finite definition of intelligence. Until psychologists could reach consensus on a definition of intelligence, its origins and influences, with certitude, eugenic proposals to maximize a population’s intelligence would rest on shaky science. In his paper for the initial Princeton Conference, Kiser submitted, “perhaps one of the fondest dreams of the population geneticist is to secure a simple and workable yet reliable and meaningful direct measure of native intelligence. Many of the so-called studies on the relationship of intelligence to given variables have suffered from the inadequacy of the measure of intelligence itself.”⁴²⁴ This issue was hardly new. Contention over definitions of I.Q., and what qualities psychometric tests actually

423 Ibid.

424 Ibid, 5.

measured, had characterized much internal discussion between psychologists and psychometricians since the first intelligence test applications. This issue had similarly plagued the experts who gathered to form the UNESCO working group on the relationship between intelligence and differential fertility, hindering their ability to fully elaborate the relationship between intelligence, environment, and genetics. The transition toward population-based intelligence testing away from an initial focus on individuals, combined with the professionalization of genetics, however, rendered the question of the true definition of intelligence and its formation newly relevant. This question undergirded all of the conferences' work on differential fertility, assortative mating, and assessments of levels of intelligence within and between populations. The answer to this question was highly germane to those who sought to legitimate eugenics as a means of deriving science-driven policy solutions to population issues nationally and internationally.

The conference attendees recognized an important development in the field of psychology: the breakdown of any semblance of a dichotomy between environment and heredity. Increasingly, psychologists, demographers, and geneticists viewed environment and genetics as deeply interrelated phenomena in the determination of I.Q.⁴²⁵ During the initial conference participants agreed that the development of intelligence was analogous to the development of stature. Like height, intelligence was controlled by multiple genetic factors and yet was also significantly influenced by environmental factors. They compared I.Q. tests to rulers, and I.Q. to units of measurement.⁴²⁶ This analogy preserved

425 Transcripts No. 8, American Eugenics Society Workshop on Population Genetics and Demography, Princeton Inn, Princeton, New Jersey, Friday, October 16, 1964, Folder: AES – Princeton Conferences, 1st, Transcripts #8, Box: 8, American Eugenics Society Papers, APS, 186-196.

426 Ibid, 195-196.

the relevance of I.Q. tests as tools of measurement and comparison while allowing for the ambiguity and uncertainty created by a more environmental approach to understanding the determination of intelligence. In spite of the lack of professional consensus on the exact weight and relationship of factors responsible for I.Q. and performance on intelligence tests, the conference proceedings focused on the question of innate intelligence and its measurement among populations, recognizing that “the relation of family size to intelligence of parents is a question of importance not only to geneticists and demographers but to all interested in questions of social welfare and public policy.”⁴²⁷ In Kiser’s words, “about all we can say with assurance is that it is jointly influenced by genetic and environmental factors. However, the position of many eugenicists today is that whatever relation of fertility to intelligence is not a situation to which either the geneticist or the social engineer can view with indifference.”⁴²⁸ Even though inconclusive findings on the precise relationship between differential fertility, intelligence, genetics, and environment remained evasive, the conferences reinforced the importance of the subject for both nations and the new eugenics.

In spite of their unanimous agreement that the resolution of the relationship between differential fertility and intelligence was paramount, conference participants regularly confronted disciplinary differences, which the conferences were largely intended to address and overcome. The road to achieving this goal was complicated by each discipline’s assurance of its own particular contributions. The conferences

427 Kiser, “Types of Demographic Data of Possible Relevance to Population Genetics,” older: AES – Princeton Conferences, 1st, #3, Box: 8, American Eugenics Society Papers, APS, 22.

Carl J. Bajema was awarded a fellowship for his research on the relation between genetics and demography after recommendations made at the First Princeton Conference. Memorandum from Frederick Osborn to Participants of the Second Princeton Conference, February 17, 1966, Folder: AES – Princeton Conferences, 2nd, Papers#1, Box: 9, American Eugenics Society Papers, APS.

428 Clyde V. Kiser, “Types of Demographic Data of Possible Relevance to Population Genetics,” older: AES – Princeton Conferences, 1st, #3, Box: 8, American Eugenics Society Papers, APS, 25.

highlighted several areas of disagreement and contestation between professions. Osborn often complained that geneticists had a poor grasp on psychological data, and that the demographers proved only “slightly more aware,” which he attributed to their social scientific background.⁴²⁹ One psychologist (who was later accused of being less a psychologist than a geneticist by another attendee) expressed concern that many of the geneticists present were “inclined to take some of the older data on the heritability of the I.Q. and accept it in a very uncritical way.”⁴³⁰ One of the issues of greatest contention was the relative usefulness of I.Q., psychometric tests, and how best to interpret their data. One geneticist made the comment that culture-free tests would in fact defeat the very purpose of I.Q. tests, which were most useful as predictors of success in society, an argument that was contemporaneously made in justification of the SAT, which was criticized early on for its favoring of students from privileged socioeconomic backgrounds. Since social success was closely related to the cultural mores of the society in question, a culture-free test would be unable to produce useful forecasts of individual success.⁴³¹ One psychologist corroborated this claim that the “intelligence” measured by the tests was culturally-determined, stating that “it is important not to forget intelligence is not something measured by I.Q. tests. It is something that is developed and there is a certain, undoubtedly a certain genetic component to this but the expression might be greatly limited... [and since] intelligence is something which is developed, you see it is

429 Frederick Osborn to Dr. Gardner Lindzey, January 20, 1965, Folder: AES – Princeton Conferences, 2nd, June 1962-May 1965, Box: 8, American Eugenics Society Papers, APS.

430 J.P. Scott to Frederick Osborn, February 3, 1965, Folder: AES – Princeton Conferences, 2nd, June 1962-May 1965, Box: 8, American Eugenics Society Papers, APS.

431 Dudley Kirk, “Notes at the Conclusion of the Second Princeton Conference (Princeton, N.J., Nov. 18-20, 1965,” Folder: AES – Princeton Conferences, 2nd, Miscellaneous, Box: 8, American Eugenics Society, APS, 2-3.

not going to be culture-free because no child is brought up without culture, in a vacuum”⁴³² The social scientists in attendance were thus the likeliest to be critical of cultural biases in the tests and to call their efficacy into question on those grounds.

Though the dialogue at the conferences was often characterized by disciplinary disagreement, the conferences were planned with the explicit intention to work across and through professional divides in order to achieve a comprehensive approach to population issues and the problem of the relationship of differential fertility to intelligence. The second Princeton Conference, in 1965, was similarly organized “to bring the experience and wisdom of several disciplines to bear on the problem of measuring variations in human heredity and of determining the selective forces which operate to change gene frequencies.” Its ancillary mission was to combat the “overwhelming tide of sociological and social determinism which has almost monopolized thinking on these questions in the social sciences.”⁴³³ In an effort to institutionalize more natural channels of communication and exchange between social and natural science professions invested in population questions, this conference produced a proposal for a Training Program in Population Genetics and Demography to be hosted at the University of Chicago, the same institution that had supported Allison Davis’s research on culture free tests.⁴³⁴ The project received a grant from the National Science Foundation in the sum of \$40,000 for the establishment of the program.⁴³⁵ The

432 Transcript of the Second Princeton Conference of the American Eugenics Society, Inc., Friday, November 19, 1965, Folder: AES – Princeton Annual Conference, 2nd, Transcripts #8, Box: 9, American Eugenics Society Papers, APS, 194-195.

433 Kirk, “Notes at the Conclusion of the Second Princeton Conference (Princeton, N.J., Nov. 18-20, 1965,” Folder: AES – Princeton Conferences, 2nd, Miscellaneous, Box: 8, American Eugenics Society, APS, 1.

434 Memorandum from Frederick Osborn to Participants of the Second Princeton Conference, February 17, 1966, American Eugenics Society Papers, APS.

435 Minutes - Second Meeting of the Populations Genetics Research Committee - January 6, 1967, Folder – AES – Population Genetics Research Committee, Box: 8, American Eugenics Society Papers, APS, 1.

conferences thus did aid the progression toward greater cooperation across disciplinary divides, if they did not succeed entirely in overcoming them.

Differential fertility and assortative mating were the issues of primary concern across all of the conferences, but assortative mating in particular was the focus of the fourth Princeton Conference, held in 1967. Research on assortative mating dated back to early twentieth century research on population dynamics, however, interest in assortative mating sharply increased in the wake of the findings of the second Scottish Mental Survey of 1947.⁴³⁶ In the early 1950s, Lionel Penrose's theory of heterosis offered a widely accepted explanation of the second survey's observation of an unexpected increase in national levels of intelligence, and had partially informed the UNESCO working group on the relationship between differential fertility and intelligence's conclusions. Following the UNESCO report, interest in assortative mating as an explanation for fertility trends, reproductive patterns, and variations in populations' levels of intelligence grew into the postwar years. During the Princeton Conferences, the genetic and socioeconomic dynamics governing the phenomenon of assortative mating drove discussion. Some participants offered environmental explanations for the phenomenon. Bruce K. Eckland of the Educational Testing Service, for instance, protested the notion that mate-selection was a free choice; such choice was always conditioned by environmental conditions like class, education, as well as other factors that might prevent individuals from meeting their "ideal" mates.⁴³⁷ He offered five explanations for class endogamy in assortative mating. First, members of the same class

436 Frank Lorimer and Frederick Osborn, *Dynamics of Population: Social and Biological Significance of Changing Birth Rates in the United States* (New York: The Macmillan Company, 1934), Introduction.

437 Bruce K. Eckland, "Theories of Mate Selection," Folder: AES – Princeton Conferences, 4th, Papers #1, Box: 10, American Eugenics Society Papers, APS, 5-6.

were expected to share similar values. Second, place of residence acted as a means of segregating groups during the courtship process. Third, Eckland admitted that class endogamy frequently was “simply a function of the interlocking nature of class and ethnicity.” Fourth, families often pressured their children to pursue a mate of their own class. And finally, educational advantages or disadvantages presented by one’s family served to reinforce class inequalities and inhibit social mobility.⁴³⁸ All of these factors collaborated to result in “like” marrying “like,” and the preservation of homogeneity within groups.

In spite of his strong assertions on the subject, Eckland nevertheless expressed dissatisfaction with extant knowledge of assortative mating and in particular its effects on a population’s gene frequencies and distribution. The relationship between differential fertility and assortative mating particularly required greater clarification and understanding. A correlation between differential fertility and assortative mating would have significant implications for a population’s overall intelligence, for better or worse. According to Eckland’s survey of the literature, “in the absence of differential fertility, assortative mating alone does not alter the gene frequencies of the total population. Nevertheless, it does change the distribution of genes (Stern, 1960) and this, itself, is of considerable importance.” He gave the example of mate selection based on similarity in educability or intelligence; this would over time increase “the proportion of the relevant homozygous genotypes which over successive generations” would “produce a biotic model of class structure in which a child’s educability and, therefore, future social status are genetically determined.” Thus, even though assortative mating might be governed by

438 Ibid, 19-20.

social circumstances, it would still influence the genetic attributes of populations, resulting in greater genetic similarity within social classes and greater genetic dissimilarity between classes. This same logic could be extended to racial groups. Under these circumstances, Eckland impressed, “assortative mating would seem to have consequences just as relevant as any other mechanisms involving the genetic character of human societies.”⁴³⁹ Other experts at the conference corroborated these anxieties. The second paper drew similar conclusions to those of Eckland, stating that although one could not yet lay claim to certainty of the degree to which genetics influenced intelligence and educational attainment, there was certainly a genetic component. Due to this, “assortative marriages for intelligence and educational attainment will be of eugenic importance if accompanied by differential fertility of the different marriage groups.” Even if the correlation “between the genetic components of intelligence and fertility are nearly zero” the correlation would prove highly statistically significant, for even “a very small positive or negative correlation over a period of many generations would be of great significance for the evolution of intelligence.”⁴⁴⁰ In this case, should even a rigidly environmental explanation for the development of intelligence be accepted, the genetic ramifications of assortative mating rendered the intelligence of populations – and its maximization – a matter of eugenic concern.

Building on the theme of the preceding conference, the fifth, held in 1969, focused on further investigation of the relationship between differential fertility and assortative mating. Between the fourth and fifth conferences, Eckland’s conclusions

439 Ibid, 2.

440 Robert J. Garrison, V. Elving Anderson, and Sheldon C. Reed, “Assortative Marriage,” Fourth Princeton Conference, Folder: AES – Princeton Conferences, 4th, Papers #2, Box: 10, American Eugenics Society Papers, APS, 4.

somewhat shifted course as a result of the availability of new demographic research. From his examination of data collected by Project Talent (a longitudinal study of the intelligence of American high schoolers begun in 1960), the Educational Testing Service, and other sources, he observed that “traditional mating boundaries, such as class specific and ethnic factors, tend to be giving away to new boundaries which probably for the first time in human history control the process of assortative mating for a highly heritable and functional trait.” This was highly germane to the dialogue on the relationship between assortative mating and intelligence, because, Eckland concluded, “the new boundaries operate primarily within our educational system and the character specific trait is mental ability.”⁴⁴¹ Mental ability, as measured by educational attainment was beginning to surpass the influences of class and race on assortative mating. Education, more than any other factor was determining who married whom, as well as the number of their children. Kiser’s contributions supported Eckland’s conclusion that education was particularly significant to understanding the relationship between differential fertility and assortative mating. Kiser investigated the quantitative effects of assortative mating on differential fertility as assessed by couples’ educational attainment. His findings indicated that assortative mating influenced the differential fertility of those at educational extremes. Across racial groups, those with the least education experienced the greatest disparity in expected and actual fertility, and higher educational attainment tended to suppress fertility in white men and women particularly.⁴⁴² This revelation had significant consequences for the future of eugenic family planning: the most intelligent were

441 Bruce K. Eckland, Abstract: The Construction of New Mating Boundaries, Fifth Princeton Conference, Folder: AES – Princeton Conferences, 5th, Abstracts #2, Box: 11, American Eugenics Society Papers, APS, 1.

442 Clyde V. Kiser, “Assortative Mating by Educational Attainment in Relation to Fertility,” Fourth Princeton Conference, Folder: AES – Princeton Conferences, 4th, Papers #2, Box: 10, American Eugenics Society, APS, 13-14.

deciding to limit their family size, while those of lesser intelligence continued to have larger families. The final Princeton Conference of the 1960s also turned its focus outside of the United States, concentrating on the broader social implications of changing trends in fertility across the globe. Marriage outside of caste in India, and changing fertility patterns in Japan and Korea featured in the proposals for the conference.⁴⁴³ Also, race was recognized as a more statistically significant factor in changing patterns of differential fertility. Kiser proposed that, “with respect to differentials there has been a widening of the variations in fertility by color and perhaps also by religion. There has been a narrowing of differentials in fertility by region, urban-rural, and socio-economic status.”⁴⁴⁴ Race therefore became an increasingly explicit and significant category to the relation of differential fertility, assortative mating, and population quality in the minds of the Princeton Conference attendees.

The Princeton Conferences were organized on the principal that because of the “obvious connections between the genetical (sic) study of populations and the study of their ecology, it is an extraordinary fact that demographers and population geneticists carry on their affairs in ignorance of each other’s existence.”⁴⁴⁵ The conferences made strides in unifying these professions in the pursuit of answers to their shared questions. The Princeton Conferences underscore the continued focus on the relationship between intelligence and differential fertility, connecting the history of intelligence testing with

443 Richard Osborne to the 1969 Princeton Conference Committee, Dudley Kirk, and Richard Lewontin, December 26, 1968, Folder: AES – Princeton Conferences, 5th, Box: 11, American Eugenics Society Papers, APS.

444 Clyde V. Kiser, Preliminary Draft of Paper for American Eugenics Society Workshop, Princeton Inn, November 6-8, 1969, “Changing Patterns of Fertility in the United States,” Folder: AES – Princeton Conferences, 5th, Abstracts #1, Box: 11, American Eugenics Society Papers, APS, 13.

445 Memorandum from Frederick Osborn to Participants of the Second Princeton Conference, February 17, 1966, Folder: AES – Princeton Conferences, 2nd, Papers #1, Box: 9, American Eugenics Society Papers, APS.

the history of population studies in a profound way which not been explored in extant scholarship. Because they were unable to overcome disciplinary divides, the Princeton meetings were generally deemed less than successful by their organizers and participants in their endeavor to bridge genetics, demography, and psychology to address issues of population quality control. However, they remain highly significant for their unprecedented effort to bring these disciplines' expertise to bear upon issues of population intelligence to articulate a vision of a new eugenics. The conferences were a formative step in the direction of a more interdisciplinary eugenics that emphasized a clean and conscious break from what they viewed as the pseudoscience of prewar eugenicists while nevertheless maintaining a focus on the question of human intelligence and differential fertility.

Studies on differential fertility in the immediate postwar years had assuaged concerns that the poorest members of society were reproducing at threateningly higher rates than the rest of the population, resulting in national declines in intelligence. The baby boom marked significant changes in fertility patterns, which helped to redirect eugenic concerns about levels of intelligence away from anxiety over declining rates of intelligence toward explorations of how to increase national levels of intelligence. The conclusions of studies on assortative mating and differential fertility that had "showed widespread and persistent negative associations between fertility and intelligence" were reevaluated as representative of a transitional phase in reproductive habits. This helped to inspire a shift away from anxiety over "a possible deterioration in man's genetic

resources” to research in improving genetic resources.⁴⁴⁶ The American Eugenics Society helped to lead this shift away from preventing degeneration to ensuring maximization of intelligence.

The American Eugenics Society underwent great changes during the postwar era. The changing of the guard ushered in a significant recalibration of the society’s identity and agenda. The revitalized society consciously distinguished its past focus on medical genetics from its new focus on population genetics, “which is the field of the geneticists and demographers with assists from psychologists.”⁴⁴⁷ However, the postwar activities of the American Eugenics Society, renamed the Society for the Study of Social Biology in the 1970s, underscore the continued centrality of concerns about levels of intelligence among populations to postwar eugenics and suggest continuity in spite of the society’s narrative of metamorphosis. The restyled society additionally demonstrates the significance of the working relationships between demographers, psychologists, and self-professed eugenicists to the history of postwar ideas about intelligence as a national human resource.

In tandem with eugenics’ reincarnation as population genetics, the society’s membership and board of directors underwent considerable changes during these years. First, membership became more international. A significant percentage of society membership represented international members in the 1960s; nearly a third of individual memberships and library memberships were foreign.⁴⁴⁸ Second, the board of directors

446 Frank Lorimer, “The New Outlook in Eugenics,” Folder: 4849, Box: 398, Series 1.74, FA021, Social Science Research Council (SSRC), RAC, 125-126.

447 Frederick Osborn to Raymond B. Cattell, September 19, 1967, Folder: AES – Princeton Conferences, 4th, #4, Box: 10, American Eugenics Society papers, APS.

448 Circulation Report, *Eugenics Quarterly*, May 4, 1967; Circulation Report, *Eugenics Quarterly*, ca. 1966; Circulation Report, *Eugenics Quarterly*, ca. 1965, Folder: 4849, Box: 398, Series 1.74, FA021, SSRC, RAC.

became more enmeshed within a network of foundations and institutions acutely concerned with population issues. The members of the board of directors typically had simultaneous affiliations with numerous foundations, including the Milbank Memorial Fund, the Rockefeller Foundation's Population Council, and Princeton's Office of Population Research in particular, in addition to sustaining connections with governmental programs or offices, especially the UN and UNESCO. Clyde Kiser, for example, served as President of the American Eugenics Society, while also serving as Vice President of Technical Affairs for the Milbank Memorial Fund. Frank Lorimer, also on the board of the American Eugenics Society and formerly the Administrative Director of IUSSP, maintained a position as an ad hoc consultant to the UN Population Division and UNESCO's Department of Social Sciences. Frederick Osborn regularly consulted UNESCO's Social Science Department and had extensive connections to the United States federal government from his military service during the Second World War. The Princeton Office of Population Research was largely created with funding from Milbank, and was put under the charge of Milbank affiliate, Frank W. Notestein.⁴⁴⁹ The restyling of the American Eugenics Society and eugenics itself was thus carried out by individuals with international reach who were established in a broad network of foundations related to the study of population. These individuals, while working toward the creation of national eugenic policies, also engaged in projects and initiatives of international scope, emphasizing the transnational nature of their enterprise as well as a continued tension between national and international focuses.

449 William H. Tucker, *The Funding of Scientific Racism: Wickliffe Draper and the Pioneer Fund* (Illinois University Press, 2007.)

These foundations routinely funded each other's research projects, creating a complex international web of fiscal exchange. A relatively small number of individuals with overlapping institutional ties were responsible for moving research funds among and between themselves via these various institutional affiliations. For instance, in 1960 the Population Council awarded Milbank a grant of \$30,000 so that they might be able to continue a study on psychological factors affecting fertility being conducted at Princeton.⁴⁵⁰ The American Eugenics Society in fact received the majority of its funding in the 1960s from institutions affiliated with its board members, principally Milbank and Rockefeller. From the Milbank Memorial Fund, the society received an annual sum of \$4,000 for the years 1959 to 1970, and continued to receive Milbank support into the 1970s in slightly reduced amounts.⁴⁵¹ The Rockefeller Foundation's Population Council also awarded the American Eugenics Society annual grants in the sum of \$4,000 from the middle of the 1950s into the 1970s, with the exception of yearly grants of \$6,000 in 1969 to 1971.⁴⁵² Between 1965 and 1970, Milbank donated \$24,000 and the Population

450 Dudley Kirk to Frank G. Boudreau, October 26, 1960, Folder: 1960, Box: 105, Series 4, FA210, Population Council, Accession I, RAC.

451 Frederick Osborn to Alexander Robertson, October 13, 1965, Folder: Osborn, Frederick, Letters on Eugenics, Box: 18; Alexander Robertson, to Frederick Osborn, December 12, 1963, Folder: Milbank Memorial Fund Grants, 1963-1967, Box: 16; Alexander Robertson to Frederick Osborn, December 9, 1965, Folder: Milbank Memorial Fund Grants, 1963-1967, Box: 16; Alexander Robertson to Frederick Osborn, December 14, 1967, Folder: Milbank Memorial Fund Grants, 1963-1967, Box: 16; Clyde V. Kiser to Frederick Osborn, July 14, 1969, Folder: Milbank Memorial Fund Grants, 1968-1970, Juan Inclán to Frederick Osborn, January 5, 1972, Folder: Milbank Memorial Fund Grants, 1971-1972, American Eugenics Society Papers, APS.

452 H.G. Hammons to The Population Council, Inc, April 29, 1957, Folder: Population Council – Grants to AES, 1951-1962, Box: 18; Dudley Kirk to H.L. Shapiro, May 19, 1959, Folder: Population Council – Grants to AES, 1951-1962, Box: 18; Dudley Kirk to Harry L. Shapiro, October 17, 1962, Folder: Population Council – Grants to AES, 1951-1962, Box: 18; Clyde V. Kiser to Frank W. Notestein, April 29, 1964, Folder: Population Council – Grants to AES, 1964-1967, Box: 18; Clarkson Hill to Frederick Osborn, October 23, 1967; W. Parker Mauldin to Frederick Osborn, November 26, 1968, Folder: Population Council – Grants to AES, 1968-1970, Box: 18; Frederick Osborn to Bernard Berelson, November 5, 1969, Folder: Population Council – Grants to AES, 1968-1970, Box: 18; Bernard Berelson to Frederick Osborn, June 23, 1971, Folder: Population Council – Grants to AES, 1971-1973, Box: 18, American Eugenics Society Papers, APS.

Council donated \$33,000 to the American Eugenics Society.⁴⁵³ The endorsement of these foundations and institutions reflect a new degree of legitimacy attained by the American Eugenics Society in the postwar years, due in part to its change in image and in part to its new and well-connected body of members and board of directors.

A major shift in the identity of the American Eugenics Society from the prewar to postwar era was its transition away from medical genetics toward population genetics. Its Committee on Population Genetics Research signaled this significant shift. The initial meeting of the Research Committee on Population Genetics of the American Eugenics Society was held in 1966.⁴⁵⁴ The society organized the committee to “seek projects in the field of population genetics” and to author “research proposals to be given to foundations to obtain funds for pilot projects or short-term studies, just to get them going and recognized.”⁴⁵⁵ The Population Genetics Research Committee’s membership included psychiatrist Gordon Allen of the New York Psychiatric Institute, biologist Carl Jay Bajema, Demographic Director of the Population Council Dudley Kirk, geneticists Richard Lewontin and Richard Osborne, and demographers Frank Lorimer and Frederick Osborn. In his recommendations to the committee, Bajema emphasized that “although the capacity for reproduction may be influenced by genetic factors and by such environmental conditions as nutrition and disease, variations in fertility between different sub-groups within existing human populations arises chiefly from social and psychological factors.” For this reason, the Research Committee on Population Genetics

453 The American Eugenics Society, Inc., Six-Year Report of the Officers: 1965-1970, Folder: 5149, Box: 427, Series 1.74, FA021, SSRC, RAC, 13.

454 Minutes of the First Meeting of the Research Committee of American Eugenics Society, Folder: AES – Population Genetics Research Committee, Box: 8, American Eugenics Society Papers, APS, 1.

455 Ibid.

asserted that further research on the relationship between intelligence and fertility patterns would be of the utmost importance and potential value.⁴⁵⁶

The committee followed and promoted numerous studies in population genetics investigating population intelligence including the Berkeley Growth Study, Project Talent, Terman's study of Genetic Genius, the Harvard Growth Study, the Educational Testing Service's Mental Growth Survey, the Minneapolis I.Q. and Social Mobility Study, and the University of Wisconsin Study.⁴⁵⁷ The American Eugenics Society itself lacked the funds to do any more than continue to publish the *Eugenics Quarterly* by the 1960s, however, it played a patronage role by proxy, utilizing its massive network of potential funders established by its members' abundant institutional and foundational connections. The American Eugenics Society primarily saw its role as the facilitator of foundation funding for worthy research projects. In 1967 the society contacted the National Institutes of Health, National Institute of Communicable Diseases, the Russell Sage Foundation, Ford Foundation, and Carnegie Institute of Washington to inquire about financial support for these and other projects investigating the influence of I.Q. on population genetics.⁴⁵⁸

The American Eugenics Society claimed an influential role in the genetization of medicine generally, and the rise of population genetics particularly. This role involved building bridges across disciplinary divides between demographers, geneticists, and psychologists to produce a forward thinking eugenic vision to further human evolution.

456 Carl J. Bajema, "Some Thoughts Concerning Future Eugenic Research with Respect to IQ from the Standpoint of Human Population Genetics," Folder: AES – Population Genetics Research Committee, Proposals, Box: 8, American Eugenics Society Papers, APS, 1-4.

457 Minutes - Second Meeting of the Populations Genetics Research Committee - January 6, 1967, Folder: AES – Population Genetics Research Committee, Box: 8, American Eugenics Society Papers, APS, 2-3.

458 Ibid, 1.

The society focused its attention on medical genetics beginning in the early 1950s and claimed the distinction of having been an influence on the spread of medical genetics and hereditary clinics in American medical schools.⁴⁵⁹ By the 1960s, many medical schools in the United States and Europe hosted programs in medical genetics as well, providing services in hereditary counseling. Frederick Osborn identified the 1960s as a critical moment in the history of eugenics because, “for the first time the active cooperation of demographers and geneticists and psychologists can be enlisted in the study of present trends in human evolution. Scientific as well as public interest has been aroused by the too rapid growth of world population and this has led to a new interest in problems of population quality.”⁴⁶⁰ A global postwar population boom brought the attention of national governments, non-governmental organizations, and international institutions to development and overpopulation in the Third World. A transnational movement to control the populations of developing nations coincided with developments in modern birth control technology and social movements for women’s rights and self-determination.⁴⁶¹ Rising anxieties over rapid global population growth, the scarcity of resources, and the maximization of population potential in the First World informed the American Eugenics Society’s postwar vision for eugenics. The society saw the promotion of research in population genetics by geneticists, demographers, and psychologists that would inform national and international policy solutions as its new role.⁴⁶²

459 Comfort, *The Science of Human Perfection*, chapter 3.

460 Frederick Osborn to Alexander Robertson, October 13, 1965, Folder: 4849, Box: 398, Series 1.74, FA021, SSRC, RAC.

461 Matthew Connelly, *Fatal Misconception: The Struggle to Control World Population* (Cambridge: Belknap Press, 2010); Donald T. Critchlow, *Intended Consequences: Birth Control, Abortion, and the Federal Government in Modern America* (New York: Oxford University Press, 1999).

462 Frederick Osborn, Chairman Executive Committee, Population Council, Secretary-Treasurer, American Eugenics Society, September 15, 1965, Folder: 4849, Box: 398, Series 1.74, FA021, SSRC, RAC.

During the 1960s, the American Eugenics Society went to great lengths to craft a narrative of its history that could invoke its controversial beginnings as a foil for its modern incarnation. The society now openly condemned the presence of racial biases at the time of its founding, yet charitably chronicled its break from racism beginning in the 1920s. Since the changes to board membership in the 1930s, the society claimed that it had clung firmly as well to an anti-racist and anti-classist stance.⁴⁶³ Adopting a much more moderate perspective in the 1960s, the board alleged that it broke with past stances when it maintained that “the position of the American Eugenics Society is that there is no scientific evidence justifying a belief in the general ‘superiority’ in genetic potential of one race as against another. It is agreed that differences in the environment are sufficient to account for the differences in personal characteristics between racial groups in this country.”⁴⁶⁴ This narrative and official position represented a reformed stance for the society. In reality, however, the American Eugenics Society’s practices had fallen under scrutiny for racist and classist agendas well into the 1930s, and languished in relative obscurity for much of the interim between the 1940s and 1950s.⁴⁶⁵

In an effort to clarify its new eugenic position, the society released a special statement in 1961. It recognized the diversity of its members, who were united by a “common interest... to promote the advancement, discussion and dissemination of scientific knowledge of human genetics, as it relates to the welfare and improvement of individuals and populations.”⁴⁶⁶ The statement emphasized the society’s focus on

463 Board of Directors Meeting, May 14, 1963, Folder: 4849, Box: 398, Series 1.74, FA021, SSRC, RAC, 1.

464 Ibid, 2.

465 Garland E. Allen, “The Eugenics Record Office at Cold Spring Harbor, 1910-1940: An Essay in Institutional History,” *Osiris* 2(2) (1986): 225-264.

466 Gordon Allen, Dudley Kirk, J.P. Scott, Harry L. Shapiro, and Bruce Wallace, “Statement of the Eugenics Position by the Special Committee of the Board of Directors,” reprinted from *Eugenics Quarterly* 8(4) (December 1961,) Folder: 4849, Box: 398, Series 1.74, FA021, SSRC, RAC, 181.

improving the quality of populations, particularly as related to intelligence. Though concrete knowledge on the genetic transmission of intelligence was still lacking, the statement asserted the importance of bringing genetic research, along with psychological and demographic studies, to bear upon fertility patterns and overall population quality. The society assumed responsibility for furthering this research to better understand the influence of socioeconomic and psychological factors on fertility.⁴⁶⁷ Above all, the society stated its role as facilitator of eugenic progress, politically as well as scientifically: “the Eugenics Society has a definite and important role to play in the development of population policies within the United States. Where information is lacking, the Society will exert its influence to gain knowledge. Where dissemination is poor, the Society will sponsor conferences and encourage publication. And where there is failure to utilize available information, the Society will seek to promote a better understanding of what might be accomplished by application of existing knowledge.”⁴⁶⁸ In this respect, the society was perpetuating its early role as an agent of political change and dissemination of eugenic information.

This refined version of eugenics recognized the impact of the changing global context on fertility patterns, particularly as they related to questions of levels of intelligence within and between populations. As nations became more technologically advanced, they underwent changes in reproductive patterns. For instance, advances in modern medicine and public health meant that fewer members of society died of natural causes, which placed “new emphasis on the question of handing on the genetic factors basic to high vitality, character, and intelligence. Here there are new dangers to genetic

467 Ibid, 181-183.

468 Ibid, 184.

quality, and possibly new opportunities for improvement.”⁴⁶⁹ The society chose to focus on opportunities for improvement. Increasingly what had appeared to be a negative relationship between fertility and intelligence was reinterpreted as a phase by many within the society. As population expert and society member Frank Lorimer asserted, “it is now clear that the negative association between fertility and indices of intelligence, which in the past was sometimes viewed as inherent in the structure of modern society, was in large part a transitional phenomenon.” Lorimer therefore encouraged optimism about the progress that eugenic policies might affect on a population’s overall level of intelligence or other desirable psychological traits. As Lorimer explained, “the challenge of eugenics today is less apocalyptic than it formerly seemed to some people. Humanity is not on the verge of dysgenic disaster. On the other hand, the possibilities of positive advances in influencing the future course of human evolution seem brighter than ever before.”⁴⁷⁰ In place of its past pessimism about the future of the race, the newly styled American Eugenics Society offered an ambitious and optimistic vision. Population genetics, with its integration of genetics, demography, and psychology, promised to guide the progress of human evolution as never before possible.

Director Frederick Osborn was a driving force behind the changes within the American Eugenic Society. Osborn was a key promoter of this new image of the society and its refined eugenic vision that integrated genetics, demography, and psychology to formulate policy solutions to population issues. Osborn emphasized that the role of eugenics in the future would be positive, that of “maintaining” or “improving”

469 The American Eugenics Society Inc, Two-Year Report: 1958-1959, Folder: 5175, Box: 427B, Series 1.74, FA021, SSRC, RAC, 7.

470 The New Outlook in Eugenics, Frank Lorimer, Statistical Center, Manila, Philippines, Reprinted from Eugenics Quarterly, enclosure in promotional letter from Clyde V. Kiser dated April 16, 1965, Folder: 4849, Box: 398, Series 1.74, FA021, SSRC, RAC, 125-6.

populations' genetic qualities. To fill this role, eugenics must partner with geneticists, demographers, psychologists and others. In Osborn's words, "genetics provides the core of genetic theory while any implementation must be broadly based in population studies, medicine, psychology, and sociology."⁴⁷¹ The society emphasized the importance of interdisciplinarity when it released a promotional statement in 1966 explaining that eugenics "draws from the field of genetics for an understanding of the processes of heredity; from psychology for analysis of the part played by variations in heredity and in the development of personality, intelligence and character; and from demography for the rates of births and deaths, mating habits, and relative increase or decline of groups with different characteristics, and the social and psychological factors which are related to these rates."⁴⁷² This more complete and new configuration of eugenics would enable eugenicists to articulate effective policy proposals to further the development of populations.

As director, Osborn was active in his efforts to erase any traces of ideology, scientism, or controversy from the American Eugenics Society. Whereas the old eugenics was openly ideological, Osborn's new vision for eugenics represented it as science wholly untainted by ideology. In his endeavor to alter the image of the society and eugenics in general, he emphasized the society's new focus on population genetics as well as its professionalism and grounding in the hard science of genetics. As he boasted to a colleague, "our Board of Directors is now composed of leading geneticists, demographers, and psychologists and our membership is increasingly from men in the fields related to eugenics. The Society at present is scientific and not propagandistic and

471 Frederick Osborn, January 15, 1965, Folder: 4849, Box: 398, Series 1.74, FA021, SSRC, RAC.

472 Promotion Campaign - Spring '66 Letter sent to members of the Population Asso. of American and the Amer. Genetic Asso., Folder: 4849, Box: 398, Series 1.74, FA021, SSRC, RAC.

we think this is wise until our scientific backing is more completely developed.” Though he acknowledged the “need [for] powerful propagandists and we welcome them in the field,” he demurred that it would be “unwise to tie the name of the Society into propaganda at this time,” signaling that the society would, for the present, refrain from proselytizing.⁴⁷³ In demonstrating restraint, Osborn sought to cultivate an air of respectability. Osborn also led his own public campaign to improve the image of eugenics in his solicitation of members of the press. In a letter to a representative of *Science Writer*, he impressed that “the eugenic movement is no longer racists, nor social class, nor propagandist, but a serious attempt in an applied science to find out what is going on in human evolution and what could be done to improve it.”⁴⁷⁴ Osborn celebrated what he considered the great potential of eugenics for society. He asserted that “for the first time the active cooperation of demographers and geneticists and psychologists can now be enlisted in the study of present trends in human evolution. Scientific as well as public interest has been aroused by the too rapid growth of world population and this has led to a new interest in problems of population quality.”⁴⁷⁵ The greatest potential contribution of eugenics would be that of the maximization of population quality and, principally, the maximization of population intelligence.

The American Eugenics Society was optimistic about the prospect of achieving the goal of the maximization of population intelligence. It reversed its concerns about the decline of national levels of intelligence, believed to be caused by differential fertility. In

473 Frederick Osborn to M.H. Mothersill, October 7, 1964, Folder: Osborn, Frederick, Letters on Eugenics, Box: 18, American Eugenics Society Papers, APS.

474 Frederick Osborn to Mr. Philip Boffey, October 26, 1964, Folder: Osborn, Frederick, Letters on Eugenics, Box: 18, American Eugenics Society Papers, APS.

475 Frederick Osborn to Alexander Robertson, October 13, 1965, Folder: Osborn, Frederick, Letters on Eugenics, Box: 18, American Eugenics Society Papers, APS.

its review and consolidation of information from multiple longitudinal studies, the society observed fertility differentials between classes undergoing a process of reversal. The observation that members of the lowest classes, who consistently underperformed on intelligence tests, were reproducing at much greater rates than the highest classes had been for many years a source of anxiety that “these trends would mean a slow wearing away of intellectual capacity.” In the event that intelligence had any genetic basis, “the inverse relationship between intelligence and reproduction was a deep cause of concern.”⁴⁷⁶ However, following the end of the Second World War and the baby boom, this fertility pattern began to reverse; “by 1950 college[-educated] couples and high school[-educated] couples were having substantially more children than were needed for their own replacement while the birth rate of elementary school[-educated] couples was little if any higher than it had been during the depression.” Some studies even suggested “a direct positive relationship between education and size of family at all levels,” which would supplant previous claims that differential fertility was governed by socioeconomic class.⁴⁷⁷ Osborn was optimistic that this reversal in fertility trends might be channeled into a eugenic program capable of improving the overall quality of the population.⁴⁷⁸ He went so far as to declare the field of “positive eugenics” now implied “raising the level of intelligence and character” of populations.⁴⁷⁹

One reason for Osborn and the American Eugenics Society’s optimism at the possibility of achieving a “wholly voluntary system of eugenics” was the improvement

476 Frederick Osborn to Philip Boffey, October 26, 1964, older: Osborn, Frederick, Letters on Eugenics, Box: 18, American Eugenics Society Papers, APS. On the distinction between positive and negative eugenics, see: Kevles, *In the Name of Eugenics*, 85.

477 Ibid.

478 Ibid.

479 Frederick Osborn to Robert E. Causbie, February 24, 1966, Folder: Osborn, Frederick, Letters on Eugenics, Box: 18, American Eugenics Society Papers, APS.

and availability of reliable medical birth control. For this, “the most important first step would be making the new forms of birth control – the pill and the IUD available to everyone so that the less intelligent, less responsible parents would reduce their present high birth rates to a minimum, which we now know they would do if they had the opportunity.”⁴⁸⁰ In fact, the society attributed the reduction of “the negative relationship between fertility and social class” to the “recent increase in availability and effectiveness of contraception.”⁴⁸¹ Thus, though they proceeded with newfound optimism, the American Eugenics Society’s vision was still profoundly shaped by the imperative to control individual reproductive practices, however altered the context or tools for doing so. The American Eugenics Society promoted the view that population genetics, with the assistance of technological developments in birth control, could ultimately produce policy solutions to population problems and greatly improve overall population quality. In his report before the United States Commission on Population Growth and the American Future, Michael Tietelbaum espoused somewhat utopian visions for American society, such as the idea that “if the more intelligent in each class had the most children it should equalize class abilities and move us closer to a ‘classless’ society in which a specialized group would be increasing its general intelligence.”⁴⁸² The society recognized the likelihood of “undoubtedly an enormous reservoir of untapped genetic resources in the lower economic groups” that might be tapped into.⁴⁸³ Borrowing from the 1968 *International Encyclopedia of the Social Sciences*, the society defined “eugenics” as “an applied science that seeks to maintain or improve the genetic potentialities of the human

480 Ibid.

481 Some Genetic Indications of Population Policy, Michael Tietelbaum, Office of Population Research, Ms. for the U.S. Commission on Population Growth and the American Future. With modifications suggested by F.O. 3/3/72, Folder: 5149, Box: 427, Series 1.74, FA021, SSRC, RAC, 4.

482 Ibid, 5.

483 Ibid, 4.

species.”⁴⁸⁴ In order to do so, population policies would be necessary as guiding inspiration; “present population policies are beginning to have this effect,” however, it was recognized that “the situation should be continuously studied, and where necessary, policies modified to meet the needs of genetic adaptation to our rapidly changing environments.”⁴⁸⁵ Such policy suggestions focused emphatically on directing energies toward maximization of population potential, which meant concentrating on the maximization of I.Q. Though the society always shied away from formal policy recommendations itself, lest its actions be construed as propagandistic or ideological, it did not hesitate to encourage such recommendations from other quarters.

In 1972, the American Eugenics Society changed its name to the Society for the Study of Social Biology. This change reflected the bridging of the social and biological sciences that the society had endeavored to bring about over the previous decade and also distanced the society from the taint of the word “eugenics,” which was reinforced by the emerging historical literature on eugenics and its relation to the Holocaust. In Eckland’s words, “the traditional and sometimes artificial boundaries separating the biological and social sciences are undergoing revision. We are experiencing a convergence of interests and a synthesis of principles.”⁴⁸⁶ There was substantial “evidence of the emergence of a new field that takes as its central problem the coactions of social and biological variables is widely scattered across the scientific community.”⁴⁸⁷ This new field of “social biology”

484 The American Eugenics Society, Inc., Six-Year Report of the Officers: 1965-1970, Folder: 5149, Box: 427, Series 1.74, FA021, SSRC, RAC, 5.

485 Some Genetic Indications of Population Policy, Michael Tietelbaum, Office of Population Research, Ms. for the U.S. Commission on Population Growth and the American Future. With modifications suggested by F.O. 3/3/72, Folder: 5149, Box: 427, Series 1.74, FA021, SSRC, RAC, 5.

486 Bruce K. Eckland, “Social Biology,” reprinted from Howard E. Freeman, Sol Levine, and Leo G. Reeder, eds., *Handbook of Medical Sociology*, New Jersey: Prentice-Hall, 1972, pp. 108-128, Folder: 5169, Box: 427A, Series 1.74, FA021, SSRC, RAC, 108.

487 Eckland, “Social Biology,” reprinted from Howard E. Freeman, Sol Levine, and Leo G. Reeder, eds., *Handbook of Medical Sociology*, New Jersey: Prentice-Hall, 1972, pp. 108-128, Folder: 5169, Box: 427A,

integrated genetics, demography, and psychology to produce a eugenic vision sensitive of the combined prerogative of the natural and social sciences to control population quality, free of the stigma of eugenics. This change transpired in tandem with the reemergence of several highly public controversies against the background of the Civil Rights Movement in the United States over the question of native intellectual inequalities between racial groups.

The American Eugenics Society's transformation transpired within the context of the developing Cold War, the rapidly increasing global population, the Civil Rights Movement, and Johnson's Great Society. Concern with natural and human resources was at the heart of this dynamic context. As one expert advised the National Academy of Sciences, "the foremost danger confronting man, in addition to his exponentially expanding population and the threat of nuclear war, is a deeply ingrained belief in some 'natural' rate of economic and material growth that can and must continue into the infinite future, but which, in plain truth, cannot do so."⁴⁸⁸ This perceived danger threatened the global population, and required introspection on the part of the United States: "no measure of 'The Great Society' or any society can be more telling than its ability to analyse (sic) its own ills, and to act with compassion and with good judgment as far as other parts of the world and the yet unborn are concerned."⁴⁸⁹ Initiatives like Project Talent, a longitudinal study begun in 1960 that tested a representative sample of

Series 1.74, FA021, SSRC, RAC, 109.

⁴⁸⁸ Terrestrial Resources and the Future of Man, from Preston E. Cloud, Jr., to Governing Board, NAS-NRC, February 7, 1965, Folder: 1963, Box: 108, Series 4, Population Council, Accession I, FA210, RAC, 1.

⁴⁸⁹ Ibid, 2.

440,000 high school students in order to draw up “an inventory of human resources” and “a set of standards for educational and psychological measurement” to predict success, aspired to map out the most optimal measures to identify and increase national intellectual resources.⁴⁹⁰ Increasingly, mainstream human science experts, and behavioral scientists in particular, reached the consensus view that “all living things and each of their characteristics are the products of any interaction between genetic material and an environment, and differences in the genetic material as well as differences in the environment make for different types of living things and differences in their characteristics.”⁴⁹¹ This view reflected an embrace of interaction between environment and genetics in the development of most traits. This perspective began to emerge as the the most compelling model of genetics in the 1950s and was dominant by the 1960s. New studies in intelligence sought to better understand this relationship. For instance, in South Africa, the Carnegie Institute of Washington embarked on studies of intelligence and the final months of individual development in utero in an effort to better understand the role of the emerging field of epigenetics in the development of intelligence.⁴⁹² Some demographic studies in intelligence suggested that increasing fertility control was in fact leading to higher fertility rates among the more intelligent members of society, with some studies indicating, “that the relation of I.Q. to the fertility of individuals was not negative and might even be positive in a major part of our population.”⁴⁹³ One study by Carl Jay

490 Carl J. Bajema, “Some Thoughts about the Role of the Population Genetics Research Committee of the American Eugenics Society,” Folder: AES – Population Genetics Research Committee – Proposals, Box: 8, American Eugenics Society, APS, 2.

491 Frederick Osborn to Alfred L. Boegehold, September 16, 1964, Folder: Osborn, Frederick, Letters on Eugenics, Box: 18, American Eugenics Society Papers, APS.

492 American Eugenics Society Workshop on Population Genetics and Demography, Transcripts, Princeton Inn, Princeton, New Jersey, Saturday, October 17, 1964, Folder: AES – Princeton Conferences, 1st, Transcripts #14, Box: 8, American Eugenics Society Papers, APS.

493 “The American Eugenics Society, Inc., Six-Year Report of the Officers: 1965-1970,” Folder: 5149, Box: 427, Series 1.74, FA021, SSRC, RAC, 6.

Bajema, a leading postwar expert on intelligence testing and fertility, suggested the possibility of “a positive relationship between ability (as measured by I.Q.) and fertility right across the board, the more intelligent in every class having more children than the average of their class.”⁴⁹⁴ These findings reflect a shift in the postwar era away from a focus on the negative effects of differential fertility on national intelligence toward efforts to maximize national levels.

However, one dilemma particularly stood in the way of the goal of maximizing overall levels of intelligence. This was the dilemma of persistent trends in racial disparities on intelligence test performance. Arthur Jensen, a professor of education at the University of California, Berkeley, incited a war between neohereditarians and environmentalists in 1969 with his incendiary article, “Can We Boost I.Q. and Scholastic Achievement?,” published in the *Harvard Educational Review*. Jensen’s article on intellectual differences between black and white students in the United States launched a standoff between neohereditarians and environmentalists against the backdrop of the Civil Rights Movement and a series of reports that highlighted the failures of social programs intended to redress inequalities between groups. Jensen claimed these disparities were genetic in nature and that social and government programs intended to rectify inequalities through environmental interventions had failed to close the achievement gap as a result. Two federal reports in the mid-1960s sought to tackle the dilemma of the persistence of racial inequality in spite of the institution of formal political and civil rights. These were the Coleman Report and the Moynihan Report.

Both reports, which focused on social and cultural factors as the cause of persistent racial

494 “Some Genetic Indications of Population Policy, Michael Tietelbaum, Office of Population Research, Ms. for the U.S. Commission on Population Growth and the American Future. With modifications suggested by F.O. 3/3/72,” Folder: 5149, Box: 427, Series 1.74, FA021, SSRC, RAC, 5.

inequality unintentionally helped bring about the reemergence of hereditarian arguments regarding the intelligence of black Americans by providing Jensen and others with the opportunity to claim that interventions designed to provide equal environmental conditions for all in fact laid bare the genetic basis of inequalities. In this manner, the apparent failure of Great Society programs, combined with the cultural backlash against the advances of the Civil Rights Movement, in part enabled the revival of race science from its period of latency.

In 1965, sociologist and Assistant Secretary of Labor Daniel Patrick Moynihan published his controversial report explaining the persistence of economic inequality between white and black Americans, *The Negro Family: The Case for National Action*.⁴⁹⁵ Although not intended to play into the hands of race scientists, his report in part helped to fuel the neohereditarianism that surged at the end of the 1960s following the publication of Jensen's article. The Moynihan Report was premised on the observation that the "gap between the Negro and most other groups in America is widening," and that this was attributable to the nature of the black family.⁴⁹⁶ The report concluded, "a national effort towards the problems of Negro Americans must be directed towards the question of family structure. The object should be to strengthen the Negro family so as to enable it to raise and support its members as do other families."⁴⁹⁷ In order to achieve this goal, "the programs of the Federal government bearing on this objective shall be designed to have the effect, directly or indirectly, of enhancing the stability and resources of the American

495 Daniel Geary, *Beyond Civil Rights: The Moynihan Report and its Legacy* (Philadelphia: University of Pennsylvania Press, 2015), 2.

496 Daniel Patrick Moynihan, *The Negro Family: The Case for National Action* (Washington, D.C.: Office of Policy Planning and Research, Department of Labor, 1965), preface.

497 Moynihan, *The Negro Family*, 47.

Negro family.”⁴⁹⁸ The Moynihan Report was met with widespread public disapproval and civil rights groups particularly protested the report’s findings. The Johnson administration soon abandoned its support of the report due to outcry that it “blamed the victim.”⁴⁹⁹

According to historian Daniel Geary, the report’s controversy derived from “multiple and conflicting meanings” and ambiguities characteristic of postwar liberalism and its assumptions related to race and government intervention, as is evidenced by the support and criticism it drew from individuals and groups that defy neat political and ideological divisions.⁵⁰⁰ In focusing on the unit of the family, the Moynihan report emulated mass intelligence testing studies trends that explored the relation between differential fertility and intelligence. However, by drawing on an environmental explanation for the persistence of racial inequality, Moynihan’s report attracted the attention of neohereditarians who believed first that the report demonstrated a failure of government initiatives to eliminate racial inequalities through environmental manipulations, and second, that national efforts to uplift black families would ultimately waste national resources. The Coleman Report, which derived from the Civil Rights Act of 1965, additionally focused on an alleged waste of national resources. The Civil Rights Act had expanded the application of intelligence testing in two respects. First, the act included an amendment that allowed the use of intelligence tests for employment.⁵⁰¹ Second, it created a provision for a study of school performance disparities between

498 Ibid, 48.

499 Geary, *Beyond Civil Rights*, 3.

500 Ibid, 3-5.

501 Lemann, *The Big Test*, 158.

white and black schools that resulted in the Coleman Report.⁵⁰² Sociologist James S. Coleman headed the study, which released its report, *Equality of Educational Opportunity*, in 1966, one year following the unpopular Moynihan Report. The Coleman report concluded that government spending did not measurably influence school performance. Rather, social factors appeared to determine performance rather than government intervention.⁵⁰³ Like the Moynihan Report, the Coleman Report failed to factor institutionalized racism into its account of racial inequality and achievement disparities. These influential reports provided neohereditarians with the ammunition to forge arguments that failed social and governmental interventions in fact demonstrated the validity of hereditarian theses. While such arguments would have found few receptive audiences a decade or two prior, the tumultuous political and social climate of the late 1960s, and the considerable cultural backlash against the expansion of the rights of minorities, created conditions for what appeared to be a return of race science.

It was against the backdrop of the findings of the Moynihan and Coleman reports that Jensen released his article in the *Harvard Educational Review*. The article opened with the damning assertion, “compensatory education has been tried and apparently it has failed.” The “uncritical acceptance” of the “deprivation hypothesis” or, the theory of that discriminatory practices and socioeconomic disadvantage were the driving cause of disparities in school performance, had in Jensen’s interpretation led to “unprecedented support from Federal funds” which had largely gone to waste.⁵⁰⁴ In addition to the Moynihan and Coleman reports, Jensen cited a 1967 study of the United States

502 Geary, *Beyond Civil Rights*, 183; Nicolas Lemann, *The Big Test: The Secret History of the American Meritocracy* (New York: Farrar, Straus and Giroux, 1999), 159-161.

503 Geary, *Beyond Civil Rights*, 182-183; Lemann, *The Big Test*, 158-161.

504 Arthur R. Jensen, “How Much Can We Boost I.Q. and Scholastic Achievement?” *Harvard Educational Review* 39:1 (Winter 1969), 2.

Commission on Civil Rights, indicating no appreciable rise in school performance with compensatory education, to corroborate his claims.⁵⁰⁵ Given this evidence of the diminutive impact of governmental investment in remediating educational disadvantages, Jensen alleged that these disparities were largely genetic. Jensen asserted, “genetic factors in individual differences have usually been belittled, obscured, or denigrated, probably for reasons of interest mainly on historical, political, and ideological grounds.”⁵⁰⁶ This neglect of genetic factors, he argued, precluded the development of effective policy solutions, resulting in wastage of resources. He contended, “the belief in the almost infinite plasticity of intellect, the ostrich-like denial of biological factors in individual differences, and the slighting of the role of genetics in the study of intelligence can only hinder investigation and understanding of the conditions, processes, and limits through which the social environment influences human behavior.”⁵⁰⁷ The failure of social programs demonstrated definitively, in Jensen’s view, that intellectual differences derived primarily from genetics; any other opinion reflected the influence of political or ideological preferences.

Jensen did not wholly discount a role for environmental conditions in the cultivation of individual intelligence. He offered a modified perspective on the relation of environmental factors in the development of intelligence. Recognizing that heredity and environment were not “in opposition to each other,” he did not discount the role of environment entirely. Rather, Jensen viewed environment as a “threshold,” comparing it to good or bad nutrition for the achievement of one’s full genetic potential of height.⁵⁰⁸

505 Jensen, “How Much Can We Boost I.Q. and Scholastic Achievement,” 3.

506 Ibid, 28.

507 Ibid, 29.

508 Ibid, 59-60.

This characterization echoed that of Ernest Havemann's 1957 explanation in *Life Magazine*, as well as explanations prominent in the Princeton Conferences. When discussing the heredity of intelligence he described it as a *population* statistic rather than a means of measuring up individuals. He suggested that "there is no way of partitioning a given individual's IQ into hereditary and environmental components, as if the person inherited, say, 80 points of IQ and acquired 20 additional points from his environment."⁵⁰⁹ Thus while it was appropriate to discuss the relative percentages of the influence of environment and genetics on intelligence among groups, the ratio of environmental and genetic influence would necessarily vary between individuals. For this reason, "the question of *race* differences in intelligence comes up not when we deal with individuals as individuals, but when certain identifiable *groups* or subcultures within the society are brought into comparison with one another *as groups or populations*."⁵¹⁰ However, offering his statistic that black Americans scored approximately 15 I.Q. points below white Americans on eighty-one different I.Q. tests as an example, Jensen maintained "the possible importance of genetic factors in racial behavioral differences has been greatly ignored, almost to the point of being a tabooed subject."⁵¹¹ At points in the article Jensen's language in some ways bore a strange resemblance that of the UNESCO statements on race, which had emphasized that "innate capacities vary as much as, if not more than, they do between different groups."⁵¹² Jensen imitated this sentiment in his assertion that a predominately genetic model of intelligence should not form the basis for individual discrimination. He proposed, "since, as far as we know, the full range of human talents is represented in all the major races of man and in all socioeconomic

509 Ibid, 42.

510 Ibid, 78 (Emphasis in original.)

511 Ibid, 80-81.

512 UNESCO, "Statement on the Nature of Race and Race Differences," 1951, UNESCO.

levels, it is unjust to allow the mere fact of an individual's racial or social background to affect the treatment accorded to him."⁵¹³ Thus, even if disparities between racial groups persisted as a result of genetic differences, this only accounted for population differences; individuals would still need to be assessed on their own unique merits and abilities.

Jensen was careful to distinguish between socioeconomic status and race.⁵¹⁴ He acknowledged that a genetic approach to intelligence also had ramifications for class distinctions in the maximization of intelligence, citing as evidence that "mild subnormality... is virtually confined to the lower social classes. Indeed, there is evidence that almost no children of higher social class parents have IQ scores of less than 80."⁵¹⁵ Jensen, like others before him, attributed this phenomenon largely to the selective process of assortative mating. He maintained, "assortative mating can have a profound effect on a people's intellectual resources, especially at the levels of intelligence required for complex problem solving, invention, and scientific and technological innovation," whereas those at the lower end of the I.Q. scale were less likely to be successful in finding partners with whom to have families.⁵¹⁶ As society advanced, demand for such prime intellectual resources would only increase. Indeed, Jensen validated his own assertions with the suggestion that "one may sensibly ask the question whether our collective national intelligence is adequate to meet the growing needs of our increasingly complex industrial society."⁵¹⁷ Citing the Moynihan Report's research, Jensen theorized that this could disparately affect the future success of black Americans, for whom "the differential birthrate, as a function of socioeconomic status, is greater in the Negro than in

513 Jensen, "How Much Can We Boost I.Q. and Scholastic Achievement," 78.

514 Ibid, 74.

515 Ibid, 27.

516 Ibid, 36.

517 Ibid, 88.

the white population.”⁵¹⁸ Thus class and race acted as related and at times interrelated variables.

Jensen drew on both Coleman and Moynihan’s reports to argue for innate disparities in the intelligence of white and black students.⁵¹⁹ These reports would similarly influence the work of other neohereditarians, including Richard Herrnstein and William Shockley.⁵²⁰ With his controversial article, Jensen opened the floodgates to what appeared to be a sudden revival of scientific racism. Yet race science had never truly disappeared. Rather, the changing climate enabled the revival of race science from dormancy. Jensen’s article, in spite of its polemical nature, received support from neoconservatives and even from Moynihan himself, who lent the report an air of legitimacy by acknowledging that innate intellectual racial disparities were “an open question.”⁵²¹ In fact, a writer for the *New York Times Magazine* reported, “the word has filtered down that the article was distributed as ‘must reading’ by Daniel Patrick Moynihan to members of the Nixon Cabinet.”⁵²² Jensen’s article drew broad public and professional attention, attracting derision, criticism, and support. The *New York Times* expressed the view that some “geneticists, while praising the scientific rigor of Dr. Jensen’s presentation, said he may have gone too far.” Among these was Professor Steven G. Vandenberg, a geneticist at the University of Colorado. Vandenberg stated, “quite apart from science, I think one should not shout ‘fire’ in a crowded theater without good evidence. He seems to go a little beyond what is known today.” Others were more

518 Ibid, 95.

519 Geary, *Beyond Civil Rights*, 197; Jensen, “How Much Can We Boost I.Q. and Scholastic Achievement,” 81-82, 95.

520 Geary, *Beyond Civil Rights*, 197.

521 Ibid, 198.

522 Lee Edson, “jensenism, n. The theory that I.Q. is largely determined by the genes,” *The New York Times Magazine*, August 31, 1969, section 6.

supportive, such as Christopher S. Jencks, an educational specialist of disadvantaged minorities at Harvard, who concluded, “if you leave aside the discussion of race, it’s probably the best thing that’s been done on genetics and intelligence.”⁵²³ Jensen maintained that his work was not a product of race science, although many contemporaries were quick to identify it as such. In response to accusations that his research supported and encouraged racists, Jensen issued a statement in *The Sun* stating, “I don’t want to give these people the power of censorship over my research. I know many fine scholars who didn’t submit research because of the fear that it might be misinterpreted. I think it is important that people read my article before making interpretations of it.”⁵²⁴ In spite of Jensen’s insistence that his research was not race science, it heralded a revival of neohereditarianism undergirded by racial essentialism.

The environmental turn ultimately provided the fodder for what appeared to be the sudden reemergence of race science in the form of the work of Jensen, Shockley, and Herrnstein. This turn arrived on the heels of the inability of Great Society programs under the Johnson administration to achieve their stated aims. Efforts to improve the conditions of all in order to achieve equality between races and classes and to maximize each individual’s potential abilities had struggled to produce their anticipated results. The inefficacy of these programs was largely due to the fact that they overlooked the role of institutionalized racism and classism in perpetuating inequalities between groups. One consequence of their apparent failure was a reaction against the more progressive environmental explanations of differences between groups that had dominated in the 1950s and 1960s. The ostensible failure of environmental remedies to such differences

523 Reinhold, “Psychologist Arouses Storm by Linking Heredity to I.Q.,” *New York Times*, March 30, 1969, 52.

524 Ivan Kaye, “Nature versus Nurture: An Old Debate is Revived,” *The Sun*, April 6, 1969, K2.

provided an opportunity for what appeared to be a sudden reemergence of race science in the form of the work of Arthur Jensen. When Jensen's 1969 article appeared in the *Harvard Educational Review*, its conclusions that black students were less intelligent than their white peers played into the changing political climate. General disenchantment on the part of both liberals and conservatives with government programs intended to redress socioeconomic and racial inequality, which had largely failed to achieve their goals, combined with the cultural backlash against the advancing Civil Rights Movement marked a break from the preceding era's political climate. The passage of progressive federal legislation, including elimination of the National Origins Quota system of immigration with the passage of the Johnson-Reed Immigration Act of 1965 and the passage of the Civil Rights Act in 1964, disrupted the political status quo and evoked a powerful response from conservative America. Indeed, "Jensenism," inspired by the article in the *Harvard Educational Review*, flourished in neoconservative quarters in the decade to follow with profound and lasting implications for modern I.Q. controversy. The tensions of this changing political climate were compounded by the publication of the government reports, which argued that inequality was actually increasing between races and that the Great Society programs were failing.

The transition toward the focus on maximizing the intelligence of populations, rather than preventing national declines, occurred in multiple national contexts. Even France, which at the beginning of the twentieth century escaped the trend in anxiety over intellectual decline, once again became invested in the maximization of I.Q.⁵²⁵ National

525 Richard C. Lewontin to Albert Jacquard, Institut National D'Etudes Demographiques, June 2, 1976, Folder: Jacquard, Professor Albert, Richard C. Lewontin Papers, APS.

and international efforts at natural resource conservation overlapped with efforts to conserve and maximize human capital, and intelligence in particular. These efforts were evident in ongoing scientific concerns about the relationship between fertility patterns and levels of intelligence, and also in designs for the creation of national population plans. Professional organizations, however, remained highly sensitive to ideology or propaganda and endeavored to shield professional and organizational reputations from the taint of racist leanings. The tumultuous decade of the 1970s witnessed the first major reemergence of explicit endorsement of the hereditarian basis of racial intellectual differences since before the Second World War. Geneticists, demographers, psychologists, and eugenicists pooled knowledge, resources, and expertise to deliberate on avenues to the maximization of the intelligence of populations. This enterprise invited the seeming return of race science explanations for intellectual differences.

Race science had never in fact disappeared, nor had eugenics. However, the conscious restyling performed by organizations like the American Eugenics Society and individuals like Arthur Jensen posited their arguments as novel from, and not contiguous with, past arguments by leveraging new advancements in the science of genetics as a newly validating, determining factor. The history of this era demonstrates the continuity and perpetuation of the claims of race science and eugenics throughout the twentieth century, and helps to contextualize seemingly unconnected or aberrant instances of racialized science, such as Jensen's inflammatory article, among political reactions against the expansion of the formal rights of racial minorities. By the 1970s, "Jensenism" had sparked considerable debate over the appropriate response of the scientific

community in the United States while it simultaneously provoked strong reactions abroad.

CHAPTER FIVE

The Origins of the Modern I.Q. Controversy

Arthur Jensen's provocative article in the *Harvard Educational Review*, which claimed that black students were inherently less intelligent than their white peers, helped to spark a culture war between scientists that fell largely along neoconservative and liberal lines in both the United States and Europe. In the developing controversy, Jensen served as the face of group of human science experts espousing neohereditarian theories of human intelligence and neoconservative ideals. Arthur Jensen, Richard Herrnstein, and William Shockley led the neoconservative front in the United States, while Hans Eysenck, Alain de Benoist, Albert Jacquard and others represented neoconservative voice in the U.K. and France. The publication of work alleging the innate intellectual inferiority of certain groups elicited strong reactions from liberal scientists who attacked the neohereditarian camp as propositioning a return of "racist science." However, race science had never truly disappeared. The apparent failure of liberal interventions in education and Great Society programs intended to rectify racial and class inequality, in addition to the gains achieved by the Civil Rights Movement and the greater opening of American society generally, helped to establish a context receptive to the kinds of policy solutions and social responses suggested by hereditarian arguments. This ushered in the seeming return of race science in the 1970s.

While the late 1950s and 1960s had given life to the concern that nations were failing to maximize overall levels of intelligence, in the 1970s and 1980s there was a palpable shift to the concern that efforts directed at maximizing overall levels of

intelligence were futile in the case of certain groups. The apparent inefficacy of state programs geared toward addressing racial and social inequalities, caused largely by their inability to address systemic racism and classism, helped to generate doubt about the power of environmental interventions to achieve social progress and eradicate inequality. The gradual chipping away at the postwar status quo achieved by activists fighting for the rights of women and minorities further directed criticism toward these interventions. This shift established a context for a resurgence of attacks on environmental explanations for the development of I.Q. from a growing cohort of neohereditarian experts espousing or appealing to neoconservative views of the state and society. The formal expansion of the rights of racial minorities and women during this era, combined with the postwar transition toward a more environmental model of understanding the development of individual intelligence, engendered forceful responses from hardline neohereditarians in the late 1960s and into the 1970s. The passage of the Civil Rights Act in 1964, the revision of the national origins immigration quota policy in the form of the 1965 Immigration Act, the 1965 Moynihan Report and President Lyndon B. Johnson's "War on Poverty" provided the backdrop for a rapidly changing American society.

Neohereditarians organized to demonstrate publicly the futility, and even the cruelty, of programs designed by white liberals to uplift the poor and minorities. This response was sparked by the controversial figure of Arthur Jensen who became the representative leader of neohereditarians in the United States and abroad. Many of Jensen's supporters identified this neohereditarian turn as "Jensenism," which would become understood by its critics as an ideologically-motivated reaction against environmental understandings of intelligence with deep connections to the rise of

conservatism and the new right in the United States and Europe. Jensenism served as the banner under which scientists and experts, many of whom did indeed embrace neoconservative values, mobilized against government interventions in education and social welfare. Neohereditarian explanations of intellectual difference directly challenged the postwar consensus that the influence of better nutrition, early childhood educational interventions, and even affirmative action could improve individual intelligence or minimize disparities between socioeconomic and racial groups. If such disparities were innate as they argued, then government intervention was misdirected and would be unable to achieve the desired results; such programs were thus efforts in futility and examples of the wastage of state and taxpayer resources. Their case tapped into widespread public disillusionment with the failure of numerous liberal programs – which tackled inequality from a cultural perspective, rather than a structural or institutional perspective – to eradicate targeted inequalities successfully. The I.Q. controversy was thus mired in a larger culture war over the proper role of the state in regulation and intervention, as well as the rapidly changing social status quo.

Alongside this broader culture war, the resurgence of hereditarianism triggered a largely overlooked conversation among experts laying professional claim to the definition and measurement of intelligence. In response to Jensen's article, the Genetics Society of America produced a statement on the genetic basis of intelligence in a declaration that many members criticized as more political than scientific. As in the immediate postwar years, scientific experts harbored anxiety about the interference of ideology in the practice of science and sought to avoid the appearance of ideological bents within their own work and professional organizations. Indeed, accusations of ideological agendas

would echo on both sides of the I.Q. controversy up even to the present. Many members of the Genetics Society of America resisted the statement released by the society for the express reason that the statement was *ideological*, rather than being grounded in scientific fact, highlighting the perpetuation of a tension between the desire to publicly decry race science and the refusal of many experts to resort to an ideological response in order to do so. These experts preferred to err on the side of reservation, stating only what scientific knowledge they could certainly prove, even when their political or personal beliefs might otherwise compel them to put up a much stronger affront to neohereditarian assertions lest they themselves be accused of Lysenkoist tendencies and in turn do more damage than good to their cause. Openly ideological liberal scientists thus offered the most powerful and most public responses to this neohereditarian critique. Accusations of Lysenkoism were among the most powerful tools of race scientists in the I.Q. controversy, even though many of their own claims were rooted in ideology rather than accepted scientific evidence. This stock neohereditarian defense helped to set up the impossible scenario of combating ideological claims with scientific evidence. In their hesitancy to respond in a manner that might be deemed ideological, scientific societies, like the Genetics Society of America and the UNESCO committees of the 1950s before it, thus presented more reserved arguments against race science proponents.

The very effort of professional scientific organizations to maintain scientific objectivity hampered their ability to stamp out race science resoundingly in the 1970s. In allowing the specter of ideological science to dictate scientific practice from the 1950s onward, the scientific establishment unwittingly placed a powerful tool in the hands of race scientists, who deployed this tool in the 1970s. Individuals including Jensen,

Schockley, and Herrnstein would each leverage accusations of Lysenkoism against organizations that stood to confront their research, such as the National Academy of Sciences and the Genetics Society of America. This hesitancy of establishment experts and organizations to engage race science on an ideological level helped to foster an environment permissible to the survival of race science into the 1990s, as evidenced by the intransigently Jensenist publications of Richard Herrnstein and Charles Murray, which demonstrate the tenacious hold of race science into recent times. This chapter thus builds on the work of scholars who have begun to demonstrate the significant reach of race science and eugenics late into the twentieth century by offering an explanation for the seeming return of race science in the form of the work of individuals like Herrnstein and Murray, a demonstration of the international reach of this trend, and an exploration of the facets of race science that have preserved its great malleability in diverse political contexts over time.⁵²⁶

The 1960s came to a close with a series of highly public and controversial genetic explanations for alleged intellectual disparities between races and classes in the United States. While Arthur Jensen's article was largely responsible for publicizing the growing controversy, neohereditarian explanations for I.Q. began to surface in the mid-1960s, beginning with a 1967 statement presented before the National Academy of Sciences

526 Alexandra Minna Stern, *Telling Genes: The Story of Genetic Counseling in America* (Baltimore: Johns Hopkins University Press, 2012); Nathaniel Comfort, *The Science of Human Perfection: How Genes Became the Heart of American Medicine* (New Haven: Yale University Press, 2014); Tracy Teslow, *Constructing Race: The Science of Bodies and Cultures in American Anthropology* (New York: Cambridge University Press, 2014); Perrin Selcer, "Beyond the Cephalic Index: Negotiating Politics to Produce UNESCO's Scientific Statements on Race" *Current Anthropology* 55(S5) (April 2012): S173-S184; Edmund Ramsden, "Confronting the Stigma of Eugenics: Genetics, Demography and the Problems of Population," *Social Studies of Science* 39(6) (December 2009): 853-884.

endorsing research into the relationship between genetics and environment in generating alleged intellectual inequalities between racial groups. The 1967 statement, prepared by James F. Crow, James V. Neel, and Curt Stern, and presented before the National Academy of Sciences at the Symposium on Genetic Implications of Demographic Trends, brought many of the questions hitherto explored by organizations like the American Eugenics Society before a federally-funded national body of scientists. The statement considered the potential role of eugenics in mitigating environmental and genetic influences on demographic trends, including differential fertility. It moreover criticized scientists who were wary of engaging in potentially controversial research at the expense of evolutionary progress, and promoted greater research into the relationship between genetics and environment in producing demographic trends and disparities between groups within the population.⁵²⁷ Two years following the National Academy of Sciences statement, the publication of Jensen's article propelled the developing I.Q. controversy into mainstream consciousness. These occurrences would spur the primary professional society of geneticists into action in an effort to distance their profession from what they described as a reappearance of eugenics. However, eugenics had never disappeared, and several respected geneticists, including renowned biologist Richard Lewontin, were in fact members of the American Eugenics Society during these years. The developing I.Q. controversy drew eugenics and race science out of relative obscurity and into the public eye, giving the impression of a sudden and abrupt return of a pseudoscience assumed extinct.

527 James F. Crow, James V. Neel, and Curt Stern, "A Statement by the Council of the Academy," *Proceedings of the National Academy of Sciences* 59(3) (March 15, 1968,) 651-654.

Yet the neohereditarian front began to muster almost half a decade prior to the publication of Jensen's article in the form of the work of physicist William B. Shockley. Shockley would prove to be among the greatest promoters of Jensen and his research. Though it was Jensen who would provide the spark, Shockley fanned the flames. Drawing on his status as a Nobel Laureate and his affiliation with the National Academy of Sciences, Shockley mobilized his intellectual influence to rally the support of the scientific community and American public around Jensen's article and to promote an overarching critique of government intervention. Shockley openly and explicitly criticized the Great Society programs intended to remediate racial and socioeconomic inequality through an environmental approach that overlooked the role of heredity.⁵²⁸ Jensen's article provided an opportunity to bring his research agenda before the National Academy of Sciences and a broader national audience. In a 1965 interview for the *U.S. News & World Report*, Shockley had previously posed the possibility that quality of the national population as a whole was declining. "We're living in a society in which the achievements of the human mind have made it possible for people to survive with the help of machines and technology and welfare," Shockley told the *U.S. News & World Report*, reviving the old eugenic specter of national degeneration. As a result of these interventions, "one frightening possibility is that our humanitarian relief programs may be exerting a negative influence," in that they ensured the survival of the least fit of society. In consequence, the potential for dysgenic reproduction had never been greater.⁵²⁹

528 Daniel Geary, *Beyond Civil Rights: The Moynihan Report and its Legacy* (Philadelphia: University of Pennsylvania Press, 2015), 196.

529 "Is the Quality of U.S. Population Declining: Interview with a Nobel Prize-Winning Scientist," *U.S. News & World Report*, November 22, 1965, 69.

Shockley's position strikingly mirrored arguments made by early eugenicists. Reintroducing other old eugenic arguments, such as the argument that criminality was possibly genetically predetermined, Shockley cited a dearth of "scientific investigations, possibly because nobody wants to raise the question for fear of being called a racist."⁵³⁰ He insisted, as would other neohereditarians, that he was neither racist nor classist. To prove this, Shockley proposed a color-blind and class-blind solution. Rather than targeting the poor or racial minorities, as past eugenicists had done, he suggested that reproductive control should only be extended to the most genetically inferior of the population.⁵³¹ Coincidentally, in Shockley's estimation, there was considerable overlap between the most genetically inferior and minorities and the poorest classes. In another scenario, Shockley suggested that threat of nuclear war might necessarily lead to the institution of eugenic measures of population control.⁵³² He explained, "a nuclear war might inflict so much genetic damage that it would become absolutely necessary to select from the survivors those persons with sufficiently undamaged genes to perpetuate a healthy human race. This would clearly require society to make complex eugenic decisions."⁵³³ Dire circumstances would require drastic measures for the sake of the entirety of the race. In Shockley's estimation, the Cold War provided prime conditions for the revival of past eugenic impulses to control populations. Shockley used the popular press to approach the question of government population control from the perspective of national security and resources, spinning a narrative of eugenics as a tool of a benevolent government, infinitely preferable to ineffective – and even harmful – government welfare.

530 Ibid, 70.

531 Ibid.

532 Ibid.

533 Ibid, 71.

Shockley's interview with the *U.S. News & World Report* earned him the unequivocal reprobation of establishment scientists like the Department of Genetics at Stanford University, which declared his racial assertions on I.Q. to be "malice," "mischief," "pseudoscience," "hackneyed," and characterized "his innuendos about the hereditary basis of the purported intellectual and social deficits of Negroes" to be "deplorable."⁵³⁴ Shockley took their defamation of him as evidence of the "taboos that inhibit research on human quality problems and especially their racial aspects."⁵³⁵ To bolster his claim that the reaction against his interview derived from Lysenkoist tendencies, Shockley reproduced the comments he received from the chairman of the National Academy of Sciences Committee on Science and Public Policy, Harvey Brooks, following the interview. Brooks shared his qualms with Shockley about the "touchy implications" of racial arguments about I.Q. He expressed concern "that at this point any study, no matter how objectively conducted, with which your name is in any way associated will henceforth be doomed to attack as being 'racist.'"⁵³⁶ Shockley criticized what he interpreted as Brooks' endorsement of such research "taboos." Brooks' gesture of tentative support of Shockley's research is revealed in his statement, "I am becoming convinced as you are that this is a subject which badly needs further attention conducted in a low key. I am not yet entirely convinced that the National Academy is the best body to conduct such a study, but I would like to give the matter further thought."⁵³⁷ Brooks rejected Shockley's proposal that the National Academy of Sciences to tackle his suggested investigation of racial disparities in I.Q. However, it remains unclear from

534 William B. Shockley, "Human Quality Problems and Research Taboos," February 26, 1969, PP/CRI/D/2/39, Wellcome Library Archives, 2.

535 Ibid.

536 Ibid, 2-3. (Shockley's emphasis added.)

537 Harvey Brooks to William Shockley, May 4, 1966, PP/CRI/D/2/39, Wellcome Library Archives.

surviving correspondence to what degree Brooks' stance was informed by his belief that addressing I.Q. from the vantage of race "in the present climate [was] probably the kiss of death," or the belief that such research would necessarily promote race science.⁵³⁸

Neohereditarians would continuously decry what they described as the oppressive force of consensus within the scientific community and rampant liberal bias in the media. In 1969, Shockley employed this exchange as evidence of a lack of objectivity on the part of the mainstream scientific establishment in defense of Jensen and others in the field espousing Jensenist ideas.

Shockley seized the opportunity presented by Jensen's article to appeal to the 800 members of the National Academy of Sciences in addition to the press.⁵³⁹ Shockley's appeal was intended to motivate members of the National Academy of Sciences to move the organization from its current "unsearch" stance, toward an approach that "endeavors to promote vigorous inquiry directed towards establishing relevant objective realities about our national human quality problems including their racial aspects."⁵⁴⁰ Shockley framed his appeal around African-American author Kirstin Hunter's observation that black women looked to children as their "only dependable source of happiness." He encouraged the National Academy of Science members "to look aside from the probably dysgenic effects and the potential agony to all concerned if this observation is valid is an irresponsibility on the part of our nation's intellectual community quite comparable, in my opinion, to the disregard by German intellectuals of the mysterious disappearance of

538 Ibid.

539 An Information Note by William Shockley, April 28, 1969, PP/CRI/D/2/39, Wellcome Library Archives.

540 William B. Shockley to Fellow Member of the National Academy of Sciences, April 15, 1969, PP/CRI/D/2/39, Wellcome Library Archives.

Jews in their country during the Nazi era.”⁵⁴¹ Mourning “the current Lysenko-like record” of the National Academy of Sciences and several years of failed “attempts to provoke objective explorations and discussions on the part of the president and the council of the Academy,” Shockley accused the Academy of totalitarian obfuscation of science.⁵⁴²

Shockley took particular issue with Brooks’ “doubt that the NAS should study the possible dysgenic effects of welfare programs, and above all, not consider racial questions, no matter how scientific the methods!”⁵⁴³ Shockley interpreted the reluctance of Brooks and other academics in his camp “as meaning that the public should not be trusted and thus as being more in keeping with totalitarian politics than with our own. The view that controversial research results should be obscured is in conflict with the wisdom of the First Amendment.”⁵⁴⁴ The most damning criticism of Jensen’s work was that it was tantamount to eugenics. In response to one of Jensen’s attackers, Shockley replied: “Eugenics recalls Hitler’s Germany. But the lesson of Nazi history is not that eugenics is intolerable.” Rather, citing Denmark’s eugenic welfare program as an example of successful eugenics, “the lesson to be learned from Nazi history was anticipated when freedom of speech and of the press was put in our constitution. No one with faith in human nature can believe the Germans would have tolerated Jewish genocide if a free press could report the facts.”⁵⁴⁵ Although this rhetorical strategy did not win over supporters among the National Academy of Sciences membership, Shockley’s effort to lambaste the oppressive force of the biases of scientific liberal

541 Ibid.

542 Ibid.

543 Ibid.

544 Ibid.

545 “SHOCKLEY Re ALSOP, March 18, 1969,” PP/CRI/D/2/39, Wellcome Library Archives.

consensus in the popular and academic presses would be a strategy mirrored by other neohereditarians. The accusation that their critics were guilty of the same crimes as Nazi Germany and Communist Russia became a key defense of neohereditarians.

A crisis over ideological science was at the heart of the early I.Q. controversy. Shockley's research efforts encountered scrutiny and disapproval from mainstream scientists for over a decade. Yet they also enjoyed early support from unexpected quarters. As early as the late 1950s, Vermont Royster, editor of the *Wall Street Journal*, expressed affirmation of Shockley's accusations of Lysenkoism. Royster professed in an editorial, "it is certainly obvious – Dr. Lysenko to the contrary – that simple changes in the environment, which is the object and purpose of our present welfare programs, cannot repair genetic damage. Such programs can lift those capable of profiting by them; those, that is, whose only blocks to progress are environmental obstacles." Royster thus endorsed Shockley, Jensen, and other's anxieties about the turn toward toward environmental models for understanding human difference and the subsequent investment in welfare as the remedy against inequality. In defense of Shockley, Royster reasoned, "we will be served no better than the Russians if our men of intellect fall victim to the Lysenko syndrome."⁵⁴⁶ Such comparisons to Communism in the context of the Cold War tapped into contemporary concerns about totalitarianism as well as concerns about academic and intellectual freedom. Jensen's article emboldened numerous other neohereditarians to speak out publicly in popular print. Writing "in support of Arthur Jensen," a former student of Lewis M. Terman, emphatically agreed with Jensen, confessing, "I have long felt that heredity is probably of more importance than

546 Vermont Royster, "Thinking Things Over: The Lysenko Syndrome," *The Wall Street Journal*, May 22, 1958, 16.

environment in determining intelligence.”⁵⁴⁷ Another psychologist from Harvard wrote, “the environmentalists have had the microphone in recent years and they have talked up an American brand of Lysenkoism, which holds that brain power can be taught. That motion draws much of its powerful appeal from the hope we all feel that somehow we can shake the world and make it better, right now. Practically everybody is trying to improve somebody.”⁵⁴⁸ The Lysenkoist critique became a powerful tool in the neohereditarian arsenal in this and the decades to come. This critique dismissed environmentalists as naive at best, treacherous at worst, and party to a collective silencing of those holding differing opinions. In decrying the liberal consensus, neohereditarians helped to construct the I.Q. controversy along liberal and neoconservative divides with considerable political consequences.

The early I.Q. controversy was not restricted to experts. Representatives from Congress engaged in the conversation. Shockley found support in Republican Representative Charles S. Grubser of California, who openly criticized the National Academy of Sciences over its position toward Shockley. Grubser declared before the Congress that he was “shocked that men who call themselves scientists are afraid to seek the truth” and posed “the question: Is not the logical first step in solving any problem that of learning the truth about that problem?”⁵⁴⁹ Joshua Lederberg of Stanford’s Department of Genetics wrote to Grubser, insisting on incorporating the full text of the 1967 National Academy of Sciences statement into the Congressional Record, which Grubser did.⁵⁵⁰ Thus did Congress apply pressure on the National Academy of Sciences to ensure its

547 Harry F. Harlow to Editor, *New York Times Magazine*, September 15, 1969.

548 S.S. Stevens to Editor, *New York Times Magazine*, September 11, 1969.

549 Congressional Record, Proceedings and Debates of the 91st Congress, First Session, Vol. 115, No. 117, E 5970.

550 Congressional Record, Extensions of Remarks, November 5, 1969, E9398.

fulfillment of its duties to provide the government with objective and authoritative scientific knowledge in order to inform and advise legislative decisions. Democratic Representative O.C. Fisher of Texas additionally appealed to Philip Handler, president of the National Academy of Sciences to inquire after gaps in the Academy's research program. Fisher wrote, "I am vitally concerned that national policies be based on sound scientific facts. One key area is that of possible dysgenic effects associated with current national reproductive patterns." Fisher insisted Handler organize a review of Jensen's research in the hopes of drawing definitive conclusions in an area of research that had possibly been avoided intentionally for reasons of liberal bias or political correctness. He expressed, "I am most eager to make sure that considerations of national problems have an input the best available analysis, particularly as such an analysis may illuminate obscure, generally overlooked, or even evaded areas."⁵⁵¹ In thus portraying the issue as one of intellectual bracketing or intentional neglect, Shockley and other Jensen supporters were able to rally national political attention and set in place a pattern of defense of neohereditarian views.

While Shockley worked to rally the National Academy of Sciences' support for Jensen's research, Harvard psychologist Richard Herrnstein led a public appeal in his 1971 article published in *The Atlantic Monthly*. Herrnstein offered to the public a history of intelligence testing, portraying intelligence tests as instruments that had only recently become subjects of controversy, when in fact they had been controversial since their inception.⁵⁵² The editors introduced Herrnstein's remarks with a disclaimer stating their recognition of intelligence testing as an issue of paramount national significance. They

551 O.C. Fisher to Philip Handler, October 1, 1969, PP/CRI/D/2/39, Wellcome Library Archives.

552 Richard J. Herrnstein, "I.Q." *The Atlantic Monthly* 228(3) (September 1971), 45.

wrote, “*The Atlantic* believes that it is not only *possible* but *necessary* to have public discussion of important, albeit painful, social issues. The subject of intelligence is such an issue - important because social legislation must come to terms with actual human potentialities, painful because the actualities are not sometimes what we vainly hope.”⁵⁵³ This statement reflected the growing sense of urgency around the I.Q. controversy related to the development of national legislation at the start of the 1970s. It was also revealing in its acceptance of the possibility that intelligence testing might in fact expose hard truths about human potential that should inform the development of national legislation governing social welfare programs and education. In the context of a burgeoning literature on the cultivation and selection of human resources and human capital, demonstration of innate intellectual inequalities had the potential to undermine recent advances in affirmative action measures that sought to ameliorate the damaging effects of discrimination and unequal opportunity.

Herrnstein, however, assumed the position that intelligence tests in fact broke down systemic barriers to equal opportunity. In his article, Herrnstein waxed poetic about the historic ability of intelligence tests to identify superior ability in a meritocratic fashion. In his view, since the use of intelligence tests in the First World War, “intelligence tests, and the related aptitude tests, have more and more become society’s instrument for the selection of human resources.” From the wartime origins of their first mass applications, “not only for the military, but for schools from secondary to professional, for industry, and for civil service, objective tests have cut away the traditional grounds for selection – family, social class, and, most important, money.”⁵⁵⁴

553 Ibid, 44. (Emphasis in original.)

554 Ibid.

Intelligence tests thus performed an important function in identifying and cultivating human capital. This achievement was, in Herrnstein's estimation, psychology's "most telling accomplishment to date." Psychology had delivered an objective means of ensuring the meritocratic advancement of society. In Herrnstein's expert opinion, "it may be fairly said that nowhere else – not in psychotherapy, educational reform, or consumer research – has there arisen so potent an instrument as the objective measure of intelligence."⁵⁵⁵ Herrnstein's conviction of the objectivity of intelligence tests rendered them a highly relevant tool for modern times in his expert opinion; objection to the tests derived from misconceptions about the interpretation of intelligence testing data.

Professional disagreement over the definitions of "intelligence" and "I.Q." had continually undermined both the legitimacy and the efficacy of intelligence testing since the early twentieth century. The issue, according to Herrnstein, was the general failure to appreciate I.Q. as a relative measure intended to predict individual success among peers. I.Q. was not a constant and unchanging unit of measurement: "unlike inches, pounds, or seconds, the I.Q. is entirely a measure of relative standing in a given group." Rather than a concrete measurement, "the I.Q. gives one's standing among the people with whom one will live."⁵⁵⁶ In response to criticisms that intelligence tests presupposed a Western definition of intelligence, Herrnstein explained that it was not the case that "'intelligence' itself is peculiarly European or North American, even if the instrument for gauging it is."⁵⁵⁷ He also tackled criticisms that intelligence test scores were more reflective of one's social standing than one's intelligence. In Herrnstein's view, this phenomenon did

555 Ibid, 45.

556 Ibid, 48.

557 Ibid.

not “prove that I.Q. is caused by social class, any more than it proves the reverse.”⁵⁵⁸ Moreover, he asserted, “the correlation between I.Q. and social class (usually defined in terms of occupation, income, and patterns of personal association) is undeniable, substantial, and worth noting.” According to Herrnstein, “a cautious conclusion, based on a survey of the scientific literature, is that the upper class scores about thirty I.Q. points above the lower class.” Even so, “there is no basis for assuming that *no* poor people have high I.Q.s.”⁵⁵⁹ Studies such as those of Terman’s work on genius and gifted children provided considerable evidence that talent existed throughout the social strata. Those intellectually-gifted individuals from lower socioeconomic backgrounds, however, were likely to elevate their social class because, “in addition to everything else, a high I.Q. pays in money.” Terman’s longitudinal studies demonstrated “the economic advantages of a high I.Q., after discounting education, race, occupation, and geography.”⁵⁶⁰ Terman’s research thus confirmed Herrnstein’s assurances that intelligence testing was not in fact a force for perpetuating inequalities, but a powerful tool of a meritocratic society.

Turning to Jensen’s “disturbing and controversial article,” Herrnstein asked, “what evidence has he for this unexpected and unpopular conclusion” of the futility of compensatory education? “By what evidence do we test the environmental doctrine?”⁵⁶¹ In answer to this question, Herrnstein proposed that evidence of the faultiness of the “environmental doctrine” was in fact widely available to and accepted by experts. In response to critics’ portrayal of Jensen as an extremist, he insisted, “the article is cautious

558 Ibid, 50.

559 Ibid, 50.

560 Ibid, 52.

561 Ibid, 54.

and detailed, far from extreme in position or tone. Not only its facts but even most of its conclusions are familiar to experts.” Rather than introducing new or surprising data into the developing modern I.Q. controversy, “Jensen echoes most experts on the subject of the I.Q. by concluding that substantially more can be ascribed to inheritance than environment.” The controversy of the article thus derived not from its substance, but from its social implications. Indeed, Herrnstein wrote, “since the importance of inheritance seems to say something about racial differences in I.Q. that most well-disposed people do not want to hear, it has been argued that Jensen should not have written on the subject at all.”⁵⁶² However, Jensen’s claim that genetics controlled “about 80 percent [of intelligence] and that only 20 percent is left to everything else,” had been made by “most of the other experts in the field.”⁵⁶³ According to Herrnstein, “it is the relationship between heritability and racial differences that raises the hackles. Given the well-established, roughly fifteen-point black-white difference in I.Q., the argument is whether the difference arises in the environment or in the genes.”⁵⁶⁴ In portraying Jensen’s evidence as endorsed by the majority of experts, Herrnstein attempted to convince his readers that it was the social consequences of Jensen’s research, rather than its scientific conclusions, that was the source of the controversy surrounding the article.

Herrnstein argued for candid discussion and additional research into the sources of variation in heritability, stating, “no one disputes the existence of all three kinds of variation – in I.Q., environment, and inheritance – only their interconnections.”⁵⁶⁵

Explaining that “heritability” described “something about a trait in a population as a

562 Ibid, 55.

563 Ibid, 56.

564 Ibid.

565 Ibid.

whole, not about the relation between particular parents and their offspring,” he advocated greater research on the heritability of intelligence in diverse populations.⁵⁶⁶ Citing Jensen’s work, he claimed that experts lacked “a good estimate of the heritability of intelligence among blacks” in particular. While he affirmed the validity of Jensen’s “evidence for a genetic component in the black-white difference, the overwhelming case is for believing that American blacks have been at an environmental disadvantage.”⁵⁶⁷ This environmental damage would necessarily need to be assessed and better understood in order to parse its influence from that of inheritance. In short, “a neutral commentator (a rarity these days) would have to say that the case is simply not settled, given our present stage of knowledge.” Herrnstein thus advocated for greater research into innate intellectual inequalities between races. Mimicking the Lysenkoist accusations of Shockley, he openly criticized opposition to further research, branding the question of “whether inquiry shall (again) be shut off because someone thinks society is best left in ignorance” a “fundamental issue” of the day.⁵⁶⁸

Herrnstein made his final push for Jensen in his claim that the “mere fact of heritability in I.Q. is socially and politically important” in a meritocratic society.⁵⁶⁹ Indeed, unless heritability was properly understood by experts, it could pose a threat to social stability. Picturing a dark future along the lines of British sociologist Michael Young’s *The Rise of Meritocracy*, which predicted that a meritocratic society would breed greater social stratification and inequality than a non-meritocratic society, Herrnstein warned that heritability of I.Q. must be better understood in order to prevent rising

566 Ibid, 57.

567 Ibid.

568 Ibid.

569 Ibid, 58.

inequality.⁵⁷⁰ According to Herrnstein, “the measurement of intelligence is one of the yardsticks by which we may assess the growing meritocracy... The biological stratification of society would surely go on whether we had tests to gauge it or not, but with them a more humane and tolerant grasp of human differences is possible. And at the moment that seems our best hope.”⁵⁷¹ Herrnstein thus endeavored to assure readers that the acceptance of innate intellectual inequalities between both individuals and groups did not foretell a dystopian future, but might actually ensure a brighter and more fair future for all.

The publication of Jensen’s article in the *Harvard Educational Review* and the outpouring of support of neohereditarians embracing *Jensenism* initiated the modern I.Q. controversy, which would persist in decades to come. A part of the broader ongoing culture wars, the controversy largely fell along neoconservative and liberal lines, with neohereditarians siding with many neoconservative positions on the state and society, and their opposition standing in support of liberal institutions. The controversy drew in human science experts, politicians, activists, professional organizations, students, the press, and the public, all while drawing proponents of race science and eugenics out from their positions of latency. Among those to enter into the debate were professional organizations, most notably, the Genetics Society of America. However, as was ultimately true of the Genetics Society of America’s intervention in the controversy, the influence of ideology on scientific practice proved a flash-point.

570 Michael Young, *The Rise of Meritocracy 1870-2033: The New Elite of Our Social Revolution* (New York: Random House, 1959.)

571 Herrnstein, “I.Q.,” 64.

The Genetics Society of America responded to the resurgence of claims of the genetic bases for racial and class differences made by Jensen, Shockley, Herrnstein, and others with an official statement of the society's position on the relationship between genetics, race, and intelligence. In 1973, the Genetics Society of America created an ad hoc committee, headed by Elizabeth S. Russell, on Genetics, Race, and Intelligence to produce a formal statement.⁵⁷² The impulse to produce such a statement was strong. During the forty-second annual meeting of the Genetics Society of America, member Harrison Echols petitioned the Genetics Society of America to take action against the recent "revival of theories which purport to show inherited differences in intelligence between races and social classes."⁵⁷³ Drawing upon the specter of eugenics, Echols maintained that the society was under a moral and professional obligation to redress the errors of the "new hereditarianism." According to Echols, the new hereditarians embraced I.Q. as an accurate measure of genetic intelligence and professed that racial and class differences in I.Q. were heritable and unaffected by environmental measures including education; in consequence, they supported political and social measures to prevent "dysgenic trends" among the population intolerable to both scientific consensus and a free and democratic society.⁵⁷⁴ In the postwar years especially, geneticists strove to distance their profession from its shared history with eugenics. In its effort to discount neohereditarians, the statement drew a hard line between hereditary and environmental explanations for differences in I.Q., helping to revive a hereditarian/environmentalist

572 David Perkins to Dr. Whitfield J. Bell, September 22, 1977, Folder: Committee on Genetics, Race, Intelligence – Background Material, Box: 37, Genetics Society of America Papers, American Philosophical Society, Philadelphia (APS.)

573 Harrison Echols, "Petition Concerning Genetics, Race and Intelligence," Introduced at 42nd annual GSA meeting, Berkeley (1973), See *Genetics* 77 (1, Part 2); s80-81, 1974, Folder: Committee on Genetics, Race, Intelligence – Background Material, Box: 37, Genetics Society of America Papers, APS.

574 Ibid.

binary in its targeting of the “new hereditarians” as eugenicists. On matters of racial or class inequality, the committee remained particularly sensitive to maintaining its reputation and erred on the side of overstating genetic evidence of equality in its initial drafts to present a hardline against any accusations of racist or classist tendencies within the profession itself.

Following Echols’ plea before the society, a forum on Race, Genetics, and I.Q. was established to discuss the development of a formal statement to represent the society’s views on the developing I.Q. controversy. Echols’ petition had proposed that the society officially reject the work of these individuals as “scientifically invalid,” to “oppose the use of these studies to provide genetic justification for class and racial discrimination,” and to speak out against discriminatory practices in its capacity as a professional organization representative of the field of genetics⁵⁷⁵ At its forum on Race, Genetics, and I.Q., the society further elaborated Echols’ petition. The society’s primary criticism of neohereditarianism, and Jensen in particular, was its uncritical acceptance of I.Q. The forum determined, “a central assumption of Jensen's theory is that IQ score is an adequate measure of human intelligence. Apart from the objection that we don't know whether intelligence is really definable or measurable, there is no evidence whatever that the IQ test measures ‘intelligence,’ or anything beyond a set of attitudes useful in white middle class society.”⁵⁷⁶ Moreover, the forum added, “it has been shown that there are incredible errors in the hereditarian school’s first two propositions, that IQ measures intelligence and that IQ is an inherited trait.”⁵⁷⁷ These meetings served as the basis for

575 Ibid.

576 Forum on Genetics, Race and IQ, XIII Congress, Berkeley, August 1973, Folder: Committee on Genetics, Race, Intelligence – Background Material, Box: 37, Genetics Society of America Papers, APS.

577 Ibid.

the initial work toward the formation of the Committee on Race, Genetics, and Intelligence and the initial drafting of the society's formal statement.

The committee members included Harrison Echols, James F. Crow (from September 1975), Walter E. Nance, David R. Perkins (through August, 1975), Janice B. Spofford, and John R.G. Turner, and was charged with producing “an accurate and reasonable resolution on genetics, race and intelligence, which a large proportion of members can support, and which we hope will be understood and utilized by the general public, including decision makers.”⁵⁷⁸ The final statement and report of the committee were published in *Genetics* in 1976, after the committee circulated the statement among the society's members. However, the original statement – particularly its first iteration – proved highly divisive within the society. Approximately one-half of the membership of the society responded to the circulation of the statement draft. About nine out of ten responses “agreed with the substance” of the statement, however, a significant minority challenged the statement on serious grounds, which prevented the statement's formal adoption and prompted then-President Oliver Smithies to recommend a revision of the statement in 1975.⁵⁷⁹ These objectors expressed their concern that the statement was more accurately a political statement based in ideology rather than scientific fact. The very idea of a voting in favor or against the statement raised criticism from members opposed to the very notion of voting as a method of establishing the validity of scientific claims. Several members eerily echoed the claims of Shockley and other neohereditarians in accusing the society of stooping to Lysekoism. Others felt that racial

578 Elizabeth S. Russell, Report of the Ad Hoc Committee, Resolution on Genetics, Race and Intelligence, *Genetics* 83 (3/Part 1): s99-101 (1976), Folder: Committee on Genetics, Race, Intelligence – Background Material, Box: 37, Genetics Society of America Papers, APS.

579 Ibid, s99.

equality should not be, and need not be, based in science, and while recognizing the extreme sensitivity of the subject matter, many voiced reluctance to attach their names to a statement that they felt overstated knowledge of the genetic bases of differences among and between groups and individuals.

One of the foremost critiques was that the statement reduced the scientific method to politics. These critics rejected the use of a democratic process to determine scientific fact or consensus, arguing that the statement itself was not consonant with scientific practice. One geneticist claimed the statement was merely political, stating, “that it is mainly a political statement because science is simply not conducted in this manner. One does not take votes on scientific issues, one discusses them and comes to one's own decision. Therefore our motion is primarily political and its precise adherence to truth is not of first importance, as political statements are not valued for their truth or falsehood but for their effect on human behavior.”⁵⁸⁰ One member went so far as to accuse the drafting committee of distorting science to fulfill a communist agenda.⁵⁸¹ These critics viewed politics as the primary motivator behind the creation of the statement. Rather than serving as a scientific statement driven by scientific evidence, a number of members felt that the statement’s credibility was materially damaged by the fact of its political agenda. The statement was therefore necessarily inappropriate for a community of professional scientists.

Members were also critical of what they perceived as the ideological manipulation of science for political purposes. Cold War rhetoric inflected these

580 John R.G. Turner to Evelyn M. Witkin, September 23, 1975, Folder: Comm. on Genetics, Race... Corres. - Turner, John RG, Box: 37, Genetics Society of America Papers, APS.

581 Henretta Trent Band, to Oliver Smithies, August 12, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Band, Henretta Trent, Box: 37, Genetics Society of America Papers, APS.

critiques, which often cried communism. One admonished, “scientific questions are decided by evidence obtained from data, not by majority opinion. To decide this question by non-scientific means (such as voting) raises the specter of Lysenkoism.”⁵⁸² Another pleaded, “do not let us get into the business of urging all geneticists to think or express themselves alike. Lysenkoism was the unhappy result of one such attempt.”⁵⁸³ Stating, “I would oppose it even if I thought it were excellent and agreed with every word,” Crow similarly criticized the committee of resorting to Lysenkoism, before joining the committee several months later.⁵⁸⁴ Accusations of dogmatism and Lysenkoism abound in the letters submitted to the committee. One respondent wrote, “I cannot imagine a more autocratic manner of proceeding,” and that the process of voting on the statements had about “as much validity as a Russian ballot.”⁵⁸⁵ Added to this was the concern that Jensen’s position was in fact misrepresented. One of Jensen’s self-professed detractors wrote, “I am one of the few people I know (and this includes a number of friends in the Genetics Society) who has read the Jensen position, including his original paper. Further, from my discussions with numbers of my fellow geneticists, I am convinced that they have neither read nor understand the techniques attempted by Dr. Jensen.” Therefore, although he did “not disagree with much of the careful wording of the statement itself,” he expressed the fear that such a statement might “irreparably damage” academic

582 Walter A. Becker, to Elizabeth S. Russell, May 16, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Becker, Walter A, Box: 37, Genetics Society of America Papers, APS.

583 John, W. Crenshaw to Elizabeth S. Russell, February 14, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Crenshaw, John W., Box: 37, Genetics Society of America Papers, APS.

584 James F. Crow to Elizabeth Russell, January 23, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Crow, James F., Box: 37, Genetics Society of America Papers, APS.

585 Patricia St. Lawrence Berkeley to Oliver Smithies, August 4, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Lawrence Patricia St., Box: 37, Genetics Society of America Papers, APS.

freedom in genetic research.⁵⁸⁶ Such fear of ideological or political repression of freedom of scientific inquiry animated many members' letters of complaint.

Several letters expressed anxiety about the presence of bias or slant in the proposed statement. One member encouraged a "distinction between political recommendations and scientific appraisal of evidence." He urged the removal of "slanted or tendentious phrasings of the scientific evidence to provide stronger rhetorical support for political recommendations," which were appropriate from lawyers, journalists, and politicians, but never scientists. As an example, he attacked "the last statement of the section on Heredity, Race and IQ: 'there is NO CONVINCING EVIDENCE OF GENETIC DIFFERENCE IN INTELLIGENCE BETWEEN RACES.'" Though he admitted in his opinion this statement was true, he posited an "equally true statement is: 'there is no convincing evidence that there are not genetic differences in intelligence between races.'" Moreover, "to convey the impression, intended or not, that such policy recommendations depend on negative conclusions on the race differences question is at least misleading, and could even be dangerous."⁵⁸⁷ Worded in such a manner, the statement set up a "dangerous precedent;" if legal, political, or social equality were based on the presumption of genetic equality, the consequences would be terrible should evidence of genetic differences arise at some point in the future.⁵⁸⁸ One geneticist corroborated this point when he expressed, "to me the statement reads as though written by someone who is terrorized by the possibility that perhaps heredity is really an

586 John, W. Crenshaw, to Elizabeth S. Russell, February 14, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Crenshaw, John W., Box: 37, Genetics Society of America, APS.

587 John C. Loehlin to Elizabeth S. Russell, April 22, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Loehlin, John C., Box: 37, Genetics Society of America Papers, APS. (Emphasis in original.)

588 Everett R. Dempster to Elizabeth Russell, January 21, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Davis, Bernard D., Box: 37, Genetics Society of America Papers, APS.

important factor in intelligence when comparing individuals or races. Suppose it were indeed so? Shall we hide our heads in the sand? The final conclusion: 'No convincing evidence etc..., ' besides being probably debatable is also an admission of professional failure...."⁵⁸⁹ Another member echoed these concerns, raising the question, "let us suppose the Society does approve this statement, and later, convincing evidence of genetic differences in intelligence between races is obtained? The Society will be placed in an awkward position."⁵⁹⁰ In addition to setting a dangerous precedent, as one member bluntly put it, "the committee is biased and has prepared a biased statement."⁵⁹¹ The concern that scientific knowledge was still lacking was expressed by members and even in some instances expressed by the statement's collaborators. Principally, many questioned whether the evidence was substantial enough to assert that no genetic differences existed between races. As one of the authors observed, "a number of very eminent and important geneticists called our bluff over this and I can't help (sic) agreeing with them that viewed from a scientific point of view it is rather dishonest to say that there is no evidence for a racial genetic I.Q. difference without also saying that there is no very strong evidence against it either. ...whatever the propriety of our political behavior [our] probity as scientists would be considerably called into doubt by the publication of that statement."⁵⁹² One member asserted that there was insufficient information to argue either the existence or the absence of differences between races and social classes.⁵⁹³

589 G. Bertani to Elizabeth S. Russell, February 4, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Bertani, G., Box: 37, Genetics Society of America Papers, APS.

590 Walter A. Becker to Elizabeth S. Russell, February 17, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Becker, Walter A, Box: 37, Genetics Society of America Papers, APS.

591 Everett R. Dempster to Elizabeth Russell, January 21, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Davis, Bernard D., Box: 37, Genetics Society of America Papers, APS.

592 John R.G. Turner to Evelyn M. Witkin, September 23, 1975, Folder: Comm. on Genetics, Race... - Comm. Corresp. - Turner, John R.G., Box: 37, Genetics Society of America Papers, APS.

593 Jack B. Bishop to Elizabeth S. Russell, February 20, 1975, Folder: Comm. on Genetics, Race... Corresp. - Bishop, Jack B., Box: 37, Genetics Society of America Papers, APS.

Another complaint was the concern that the statement would in fact be self-defeating. One member raised the example of “the National Academy of Sciences’ efforts to squelch Jensen and Shockley by repeated published statements of panels of experts.” This affair was “not only a failure but has strengthened the public image of Jensen and Shockley. It has made them appear, in the eyes of many, as brave dissenters standing up to the mighty (sic) blows of the Establishment. A published resolution of the Genetics Society could defeat its own purpose in the same way.”⁵⁹⁴ Others viewed the statement as an unnecessary and therefore an undesirable move on the part of the society. One geneticist “rather disturbed” by the statement scornfully wrote, “perhaps I have been away too long from the States, but I can hardly believe that a statement of this kind – half political and half scientific – should be necessary from a professional group.”⁵⁹⁵ Another, who admitted the desire “to see the I.Q. issue buried once and for all,” nevertheless objected to the committee’s decision to “take a stand on moral and political issues in which scientists have no special competence.”⁵⁹⁶ Moreover, many members criticized the initial statement for the fact that it drew only upon one source – an unpublished master’s thesis – when an abundant published literature existed on the subject matter.⁵⁹⁷ This alone, in the opinion of these critics, severely reduced the credibility of geneticists’ competence in this area.

594 Tracy M. Sonneborn to Elizabeth Russell, May 20, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Sonneborn, Tracy M., Box: 37, Genetics Society of America Papers, APS.

595 G. Bertani to Elizabeth S. Russell, February 4, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Bertani, G., Box: 37, Genetics Society of America Papers, APS.

596 J.P. Scott to Oliver Smithies, October 2, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Scott, J.P., Box: 37, Genetics Society of America Papers, APS.

597 Everett R. Dempster to Elizabeth Russell, January 21, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Davis, Bernard D., Box: 37; James F. Crow to Elizabeth Russell, January 23, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Crow, James F., Box: 37; J.C. DeFries to Elizabeth S. Russell, January 27, 1975, Folder: Comm. on Genetics, Race... - Corresp. - DeFries, J.C., Box: 37, Genetics Society of America Papers, APS.

Many members expressed great dissatisfaction with the very nature of statement's endeavor. Many opposed the notion of defining intelligence, which raised several as yet unanswerable questions from the viewpoint of genetics. One criticized, "the discussion about IQ and intelligence is really needless. I would hate to have to define intelligence.... And, may I ask, is 'intelligence' a 'biological entity'? What is a 'biological entity'? Is the yardstick to measure height a more natural 'construct' than an IQ test? or is it just easier to use?"⁵⁹⁸ Several members, though favorable toward the statement's intention to establish genetic equality as scientific fact, opposed it on the grounds that scientific evidence seemed to be against its conclusion of the nonexistence of genetic differences. One such member wrote, "it is quite difficult, when one sympathizes with your goals, recognizing the serious wrongs of racial discrimination in the past as well as in the present, to have to point out what I feel are some major problems with the proposed statement. I think it is scientifically necessary to say that we expect genetic differences but do not know their direction or magnitude." In order to remain true to the data, that "we cannot say whether there are, or are not, racial differences in intelligence, is still the scientifically correct statement."⁵⁹⁹ Another expressed the belief that the society's "intentions are wholly honorable. But ends don't justify means, and I feel that it would not greatly advance rational discussion in this area, and might do appreciable damage to the scientific reputation of GSA."⁶⁰⁰ In fact, many argued, variation within and among populations was a necessary aspect of genetics. One reasoned, "there are differences between blacks and caucasians in physical traits, very probably in athletic and in musical

598 G. Bertani to Elizabeth S. Russell, February 4, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Bertani, G., Box: 37, Society of America Papers, APS.

599 Edward T. Reed to Elizabeth Russell, February 6, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Reed, T. Edward, Box: 37, Genetics Society of America Papers, APS.

600 John C. Loehlin to Elizabeth S. Russell, April 22, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Loehlin, John C., Box: 37, Genetics Society of America Papers, APS.

abilities, and it would be surprising if there were not differences in various components of intellectual ability. To admit this is not to make a judgment as to the superiority or inferiority of whole racial groups, but, especially for geneticists, is simply to recognize reality.” This did not translate into variation in merit or racist ideas, however, it would not be “fully responsible” to “flatly refuse to consider the possibility of genetic differences among groups in intelligence.”⁶⁰¹

In response to these criticisms, the society considerably revamped the statement to take a less dogmatic approach to the issue. The committee, joined by geneticist Sewall Wright and evolutionary biologist Douglass Futuyma, reconvened in Chicago in November 1975 to revise the initial statement.⁶⁰² The preamble to the second statement opened with the observation that “recent years have seen a revival of concern about the relative importance of genes and environment in determining differences in intelligence among individuals, social classes, and races. The controversy and the extreme expressed are not new.” Like the original iteration, the revised statement criticized the “naive pitfalls of hereditarian assumptions.” Yet, unlike the original, it also acknowledged that “the doctrinaire environmentalism that denies any significant role of heredity in important human behavioral traits” was “equally unsupportable,” striking a middle ground between the dichotomy supposed by the first draft and Echols’ petition.⁶⁰³ The revised statement also acknowledged the problem of defining I.Q. and intelligence, recognizing that lack of agreement on definitions necessarily complicated the

601 G. Eric Bradford to Elizabeth S. Russell, January 28, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Bradford, Eric G., Box: 37, Genetics Society of America, APS.

602 Russell, Report of the Ad Hoc Committee, Resolution on Genetics, Race and Intelligence, Genetics 83 (3/Part 1): s99-101 (1976), Folder: Committee on Genetics, Race, Intelligence – Background Material, Box: 37, Genetics Society of America Papers, APS, s99.

603 Ibid, s99.

implications of I.Q. for genetics.⁶⁰⁴ On the issue of I.Q., the statement remarked, “although there is substantial agreement that genetic factors are to some extent responsible for differences in IQ within populations, those who have carefully studied the question disagree on the relative magnitudes of genetic and environmental influences, and on how they interact.”⁶⁰⁵ The revisions thus struck a more level tone and acknowledged space for uncertainty on particular issues in the controversy in an effort to avoid ideological bent.

One of the most significant changes to the statement, which reflected a response to member criticism, was the revision to the statement’s assertion of the absence of genetic differences between races. In the section on racial differences in I.Q., the statement was altered to read, “there is no convincing evidence as to whether there is or is not an appreciable genetic difference between races.”⁶⁰⁶ The new statement, in an effort to remain true to scientific information available, was more equivocal on the question of genetic difference. It resorted to a stance similar to that assumed by the UNESCO committee that drafted the statements on race, asserting that the differences among populations were as great as differences between populations, erring on the side of reservation rather than overstatement. The revision concluded, “all human populations have a vast store of genes in common; yet within populations, individuals differ in genes affecting many characters. Each population contains individuals with those abilities far above and below average of the group.”⁶⁰⁷ Also in response to member concerns that the logic inherent in the initial statement implied the necessity of genetic equality in order to

604 Ibid, s99-s100.

605 Ibid, s100.

606 Ibid.

607 Ibid.

support social equality, the revision maintained, “whether or not there are significant genetic inequalities in no way alters our ideal of political equality, nor justifies racism or discrimination in any form.”⁶⁰⁸ The revised statement thus tempered the claims of the original statement considerably, resulting in a more scientific, if more politically reserved, formal statement. The concluding resolution of the revised statement determined that the society’s members had an “obligation as geneticists to speak out on the state of current knowledge on genetics, race, and intelligence.” The statement reflected that “although the application of the techniques of quantitative genetics to the analysis of human behavior is fraught with complications and potential biases, well-designed research on the genetic and environmental components of human psychological traits may yield valid and socially useful results, and should not be discouraged.” Additionally, the statement retained its moral prerogative for the profession, affirming, “geneticists can and must also speak out against misuse of genetics for political purposes, and the drawing of social conclusions from inadequate data.”⁶⁰⁹

At the forty-fourth annual business meeting of the society, the motion to revise the original statement passed. A majority of members present voted in favor of the revised statement over the original, and it was resolved that a draft of the statement revised by President Smithies, along with “all relevant criticisms” of the original statement, would serve as the society’s formal response to Jensenism.⁶¹⁰ James F. Crow approved the revisions, as did John Turner, who had initially expressed concerns about the dangers of

608 Ibid.

609 Ibid.

610 “Proceedings of the 44th Annual Business Meeting,” *Genetics* 83 (3/Part 1): s97-98 (1976), Folder: Committee on Genetics, Race, Intelligence – Background Material, Box: 37, Genetics Society of America Papers, APS.

repressing free inquiry.⁶¹¹ One member praised the revised statement for having “totally eliminated environmentalist clichés and dogmas” and avoiding the “extreme egalitarianism” of the original draft.⁶¹² Just over half of the members of the society submitted responses to the revised society, 94 percent of which were positive, and agreed to sign their names to the statement. Sixty-nine members rejected the appropriateness of the society issuing a statement of this kind, and twenty-nine refused to sign their name to the statement.⁶¹³ By the time the Genetics Society of America prepared and published its formal statement and final verdict on Jensenism, the I.Q. controversy had developed into a full-blown culture war that played out in institutions of higher education, professional societies, popular and academic presses, and the news media.

The question of the roles of education, opportunity, and state intervention in remediating racial and class inequality in the United States was at the center of this culture war. As British economist and historian Godfrey Hodgson described the developing situation in the United States for the American public in *The Atlantic Monthly*, “the crucial role which education has been assigned in the United States is under heavy challenge.”⁶¹⁴ Education had been long believed to be an engine of social mobility and the path to achieving the American dream. The role of education in

611 James F. Crow to Elizabeth S. Russell, December 31, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Crow, James F., Box: 37; John R.G. Turner, to Oliver Smithies, July 25, 1975, Folder: Comm. on Genetics, Race... - Comm. Corresp. - Turner, John R.G., Box: 37, Genetics Society of America Papers, APS.

612 Bernard D. Davis to Oliver Smithies, July 29, 1975, Folder: Comm. on Genetics, Race... - Corresp. - Davis, Bernard D., Box: 37, Genetics Society of America Papers, APS.

613 Russell, Report of the Ad Hoc Committee, Resolution on Genetics, Race and Intelligence, *Genetics* 83 (3/Part 1): s99-101 (1976), Folder: Committee on Genetics, Race, Intelligence – Background Material, Box: 37, Genetics Society of America Papers, APS, s100.

614 Godfrey Hodgson, “Do Schools Make a Difference?,” *The Atlantic Monthly* 231(3) (March 1973), 36.

American society as an equalizer was severely challenged by disparaging government studies on the efficacy of education in improving inequality, as well as neohereditarian claims that individual potential was ultimately controlled by genetics, at a time of neoconservative critiques of government interventions and regulations. The Coleman Report had sent the initial “seismic shocks through the academic and bureaucratic worlds of education,” and the work of Jensen – spread and popularized by Shockley and Herrnstein – invited widespread scrutiny of social programs and national policy concerning equality of opportunity and education.⁶¹⁵ In Hodgson’s words, Jensen had “marched straight into the fiercest of this cross fire.”⁶¹⁶ I.Q. was quickly becoming the issue for liberals and neoconservatives that instantiated the social and political crises facing the American government and society.

Hodgson described the developing I.Q. controversy as a clash between liberals and neoconservatives exacerbated by racist conclusions: “after more than a generation of widespread IQ testing, it is an experimental finding, beloved of racists and profoundly disconcerting to liberals, that while the average white IQ is 100, the average black IQ is 85.” Not passing judgment on the scientific validity of this “experimental finding,” he explained, “racists have seen in this statistical finding confirmation of a theory of innate biological inferiority. Conservatives have seen in it an argument against heavy expenditures on education, and against efforts to desegregate. And liberals have retorted that the lower average performance of blacks is due either to cultural bias in the tests used or to unfavorable environmental factors which require redoubled efforts on the part of social policy makers.”⁶¹⁷ The I.Q. controversy thus became a battleground for a

615 Hodgson, “Do Schools Make a Difference?,” 38.

616 *Ibid.*, 39.

617 *Ibid.*

neoconservative backlash against Great Society liberalism with the consequence of perpetuating race science and racist scientific beliefs. The controversy overlapped neoconservative movements not only in the United States but overseas as well. For instance, Jensenism took hold in France among members of the *Nouvelle Droite*. The editor of the French journal, *Nouvelle Ecole*, introduced the debate surrounding Jensen to French intellectuals in its publication of the article, “‘Jensenism:’ Scientists Take Position,” and even conducted an interview with Jensen himself. “I must add that we felt it as a necessity to inform the French reader and/or scientist from a non-environmentalistic (sic) point of view. It is probably the longest article ever appeared on that question in continental Europe.”⁶¹⁸ The international appeal of Jensenism demonstrates the adaptability of race science across numerous national contexts according to changing political climes and impulses.

The I.Q. controversy rocked the faith of establishment liberals in the ability of their interventions and programs to reverse social and racial inequality in the United States. This was particularly true of liberal human scientists. According to Hodgson, liberal education policies “have lost support in the ranks of the social scientists who provided America, from Roosevelt to Johnson, with a major part of its operating ideology.”⁶¹⁹ Alongside this loss of faith, neohereditarians constructed a narrative of the willful, ideologically-motivated ignorance of the liberal scientific and political communities. Neohereditarians continued to accuse their opposition of intentionally closing off scientific inquiry in order to avoid unpleasant scientific conclusions. They moreover portrayed their opposition as unable to muster scientific evidence to counter

618 Alain de Benoist to H.C. Crick, July 9, 1974, PP/CRI/D/2/14, Wellcome Library Archives.

619 Hodgson, “Do Schools Make a Difference?,” 46.

their claims. As Jensen himself alleged, “in the barrage of criticisms directed against Herrnstein, it is most noteworthy that no substantive counter evidence to his argument has yet come forth. Thus Herrnstein’s opposition in the debate has raged on ideological rather than scientific grounds.”⁶²⁰ In support of Jensenism, Herrnstein as well attempted to cast the opposition as unscientific, hasty, and overeager, stating, “today’s scholars do not see that their environmental explanation is every bit as rash a leap as the genetic conclusions of early testers.”⁶²¹ Narrative construction and efforts to craft historical memory of the production of scientific knowledge were among the foremost tools of the “new hereditarians.” This tactic imitated that of contemporary eugenicists who sought to construct an image of themselves that distinguished them from their predecessors, much in the way that postwar eugenicists had carefully crafted historical memory of the prewar eugenics in order to present a narrative of postwar eugenics as an enlightened and reformed rejection of the old eugenics.

Almost immediately following the publication of Jensen’s article, Jensenism came under attack from a variety of quarters. Some of the most vocal initial reactions against Jensenists came from university campuses. At Harvard and Berkeley, students denounced Herrnstein and Jensen, defaming them and their university administrations for supporting racist science. At one point the protests were so violent, prominent neohereditarians took measures to ensure their personal safety. Following Eysenck’s publication of *Race, Intelligence and Education*, a defense of Jensen’s research, both he and Jensen required personal body guards to move in public safely.⁶²² A protest broke out

620 Arthur R. Jensen, “Expanding the Thesis: The I.Q. Controversy,” *Chicago Tribune*, June 24, 1973, F4.

621 Richard Herrnstein, “On Challenging An Orthodoxy,” *Commentary* 55(4) (1973), 53.

622 William H. Honan, “Hans J. Eysenck, 81, a Heretic in the Field of Psychology” *New York Times* September 10, 1997.

as well at the offices of *The Atlantic Monthly* following its publication of Herrnstein's defense of Jensen.⁶²³ Academics published a plethora of books, statements, and treatises criticizing and countering the work of neohereditarians. Psychologist Leon Kamin was at the fore of the academic attack against Jensenism. First published in 1974, his book, *The Science and Politics of I.Q.*, asserted "there exist no data which should lead a prudent man to accept the hypothesis that I.Q. test scores are in any degree heritable. That conclusion is so much at odds with prevailing wisdom that it is necessary to ask, how can so many psychologists believe the opposite?"⁶²⁴ Kamin aimed to instill a greater awareness of the historical construction of I.Q. in the American public. In so doing, he portrayed intelligence tests as instruments of ideology rather than of science. Intelligence testing had "been fostered by men committed to a particular social view. That view includes the belief that those on the bottom are genetically inferior victims of their own immutable defects. The consequence has been that the I.Q. test has served as an instrument of oppression against the poor - dressed in the trappings of science, rather than politics."⁶²⁵ Kamin was among the first academics to speak out publicly against intelligence tests amid the I.Q. controversy as an inherently political instrument, advancing the view that "to pretend that the two are separable is either naive or dissembling."⁶²⁶ However, in spite of his claim that intelligence tests lacked of scientific validity, Kamin warned that dismissing I.Q. tests was a grave error given the tests' considerable impact on Western society. To demonstrate their seriousness he warned, "the views of Professors Jensen and Herrnstein have been influential in circles extending considerably beyond the academy. Their interpretations of the I.Q. data have been

623 Arthur R. Jensen, "Expanding the Thesis: The I.Q. Controversy," *Chicago Tribune*, June 24, 1973, F4.

624 Leon Kamin, *The Science and Politics of I.Q.* (New York: Routledge, 2009,) 1.

625 Kamin, *The Science and Politics of I.Q.*, 1-2.

626 Ibid, 2.

presented to committees of the Congress concerned with the formulation of domestic welfare policies.”⁶²⁷ Thus, however much one might criticize the legitimacy of intelligence tests as scientific instruments, they continued to hold very tangible implications for society and government.

Kamin attempted to separate science from politics in his argument against Jensen and his supporters. He thus sidestepped scrutiny from neohereditarians who rebutted their opposition with accusations of ideologically-driven attacks on intelligence testing data. Kamin allowed, “there is, of course, the theoretical possibility that the genetic theorists are correct. Perhaps I.Q. is high heritable; and perhaps differences between races as well as among individuals, are in large measure due to heredity.” Rather than precluding the possibility of further research, which neohereditarians uniformly decried as Lysenkoism, Kamin recognized that “serious scholars who have assumed this... they deserve careful scrutiny. That scrutiny is a scientific necessity.” However, Kamin maintained, “the social and political policies advocated by many hereditarian theorists are in no sense compelled or justified by the facts which they assert to be true.”⁶²⁸ Rather than denying any genetic basis for intelligence, he isolated the social from scientific consequences of this question and directed his readers’ attention toward the scientific dilemma of distinguishing genetic from environmental influences, suggesting, “the apparent genetic effects, upon analysis, have invariably been confounded with environmental factors that have been slighted or ignored.”⁶²⁹ Continuing from a scientific perspective, Kamin admitted, “to assert that there is no genetic determination of I.Q.” as some extreme environmental proponents had done in reaction to Jensen, “would be a

627 Ibid, 3.

628 Ibid, 30.

629 Ibid, 175.

strong, and scientifically meaningless, statement. We cannot prove the null hypothesis, nor should we be asked to do so.” Rather, “the question is whether there exist data of merit and validity that require us to reject the null hypothesis.”⁶³⁰ The data, Kamin determined, was not of sufficient merit. The impossibility of separating environmental from genetic influence rendered a sound scientific statement on the definitive roles of genetics and environment in the determination of intelligence not possible. Thus Kamin concluded, “where the data are at best ambiguous, and where environment is clearly shown to have effect, the assumption of genetic determination of I.Q. variation in any degree is unwarranted.”⁶³¹ Kamin presented a strong affront against neohereditarian claims in a manner that precluded him from accusations of Lysenkoism or twisting scientific research to meet ideological ends. Numerous other voices joined with Kamin’s to refute neohereditarian science.

Kamin and others’ assault nevertheless did little to silence Jensen and his supporters. Neohereditarians weaponized accusations of ideological science, leveraging claims of fraudulent and dishonest science against mainstream scientific conclusions that race and other group status had no relation to innate differentials in intelligence. This had two primary effects. The first of which was to coerce neohereditarian opponents into a defense of their scientific practices, and the second was to once more encourage reticence in their opposition’s response to neohereditarian arguments, as in the case of the Genetics Society of America’s formal statement. Many neohereditarians, including German-born, British psychologist Hans Eysenck, attempted to redirect the conversation away from the onslaught of accusations of racism toward the failure of social programs. In his article in

630 Ibid.

631 Ibid, 176.

the *New Society*, Eysenck endeavored to distinguish between the “*scientific problem*” and the “*social and ethical problems*” of group inequalities.⁶³² In his effort to “review briefly and objectively the evidence which various groups of scientists have gathered over the years,” Eysenck assured the public that acceptance of claims of genetic inequality did not translate into discriminatory policies.⁶³³ Rather, he presented an optimistic view of the improvement of the conditions of all once society relinquished its unscientific endorsement of the belief that education could serve as society’s equalizer. Indeed, he assured, “my own answer, like Jensen’s and Shockley’s, would be emphatically against segregation and in favor of reparation”⁶³⁴ Education and state welfare would prove ineffective and insufficient to achieve this goal. Eysenck reasoned, “if we want to help blacks achieve equality of *opportunity* (their entitlement to which I consider to be axiomatic), then we can do so only on a basis of factual knowledge. Pretence, however well-intentioned, must lead to failure and further frustration.” Such pretenses had led the the construction, and failure, of numerous state-led programs based on the belief in the equality of the innate potential of all groups. For instance, “the acknowledged failure of Headstart and other similar compensatory education programmes in the United States is a good example of hopes raised, only to be dashed to the ground.”⁶³⁵ Eysenck thus portrayed the liberal scientific and political establishment as guilty of the wastage of public resources and the perpetuation of inequalities through scientific ignorance. Moreover, he demonstrated the forceful and enduring claim of neohereditarians that they were not in any way racist, or classist.

632 Hans J. Eysenck, “Race, Intelligence and Education,” *New Society* (17) (June 1971), 1045.

633 Ibid.

634 Ibid, 1046.

635 Ibid, 1047.

Eysenck was joined by others in his logic. In his article in the *American Psychologist*, Stanford professor of education Lee Cronbach described the assumption that no differences exist between racial groups as “an assumption [formed] in the 1940s [that] had crystallized into a combative assertion in the 1960s.”⁶³⁶ He went on further to criticize the role of the media in misrepresenting the true positions of Jensen and others to the public. Cronbach accused the media of distorting Jensen’s true claims, citing the *Newsweek* article, “Born Dumb,” which described Jensen’s views as: “most blacks are born with less ‘intelligence’ than whites.”⁶³⁷ He protested the validity of this summation, which had sparked undue public controversy. While Jensen’s views had been unfairly represented, and while Herrnstein had “offended some sensitive souls,” the media was largely responsible for miring neohereditarian views in controversy by portraying them as racist.⁶³⁸ He described the neohereditarian opposition as “polemicists” who “continue to seek and occasionally find space in print, some of them decrying attention to human differences as inhumane” while neohereditarians responded by “accusing the equalitarians of Lysenkoism.”⁶³⁹ The I.Q. controversy continued throughout the 1970s, subsiding somewhat by the end of the decade, following the further discrediting of neohereditarianism in Stephen Jay Gould’s 1981 expose, *The Mismeasure of Man*, which denounced the intelligence testing movement as made up of cranks, racists, and eugenicists. Hereditarian arguments, though they receded for a time from the mainstream media and public attention, did not ebb for long. They returned forcefully in the 1990s, initiating a subsequent culture war, following the 1994 publication of *The Bell Curve*.

636 Lee J. Cronbach, “Five Decades of Public Controversy Over Mental Testing,” *American Psychologist* (January 1975), 2.

637 Ibid, 4.

638 Ibid, 5.

639 Ibid.

The publication of Herrnstein and Charles Murray's *The Bell Curve* revived the I.Q. controversy. Viewed by much of the public at the time of its publication as backwards and racist science, this reception obscures the longer history and trajectory of race science and eugenics in the United States. Though at times race science and eugenics receded from public view, their discrediting did not result in their disappearance, but rather their transformation or strategic retreat from the mainstream contingent upon changing political and social climates. As in the 1970s, the 1990s was rocked by a culture war set off by activism, the rise of multiculturalism, the expansion of the carceral state, and other challenges to the status quo. These culture wars, served as the backdrop for Herrnstein and Murray's publication, spoke to widening societal divisions. This context proved ripe for the revival of race science. *The Bell Curve* and its reception demonstrates both the intractability and malleability of race science in reinventing itself time after time in concert with changing political and social contexts.

Herrnstein and Murray resuscitated many of the Jensenist arguments of the 1970s, principally that black students were less intelligent than white students, white students were less intelligent than Asian students, and that the roots of these differences were genetic. Recognizing the controversial nature of their research, they explained, "to try to come to grips with the nation's problems without understanding the role of intelligence is to see through a glass darkly indeed, to grope with symptoms instead of causes, to stumble into supposed remedies that have no chance of working."⁶⁴⁰ Reviving arguments against the efficacy of policy interventions designed to decrease social inequality,

640 Richard J. Herrnstein and Charles Murray. *The Bell Curve: Intelligence and Class Structure in American Life* (New York: The Free Press, 1994,) xxii-xxiii.

Herrnstein and Murray prefaced the book with the acknowledgment, “we are not indifferent to the ways in which this book, wrongly construed, might do harm. We have worried about them from the day we set to work.” However, they maintained, “there can be no real progress in solving America's social problems when they are as misperceived as they are today. What good can come of understanding the relationship of intelligence to social structure and social policy? Little good can come without it.”⁶⁴¹ They dismissed the notion that intelligence tests themselves were unsound instruments of measurement, rationalizing, “if the tests had been fatally flawed or merely uninformative, they would have vanished.” Instead of vanishing, “the use of tests endured and grew because society's largest institutions – schools, military forces, industries, governments – depend significantly on measurable differences.” The tests met the “need to assess differences between people as objectively, fairly, and efficiently as possible, and even the early mental tests often did a better job of it than any of the alternatives.”⁶⁴² In Herrnstein and Murray’s representation, the question of the relative importance of genetics and environment in determining differences in human capital, resources, and potential, which the tests were designed to measure, was the source of conflict, rather than the question of the tests’ ultimate legitimacy.

Herrnstein and Murray argued that Americans had experienced a “fundamental shift ... in the received wisdom regarding equality” in the prior decades that continued to obscure scientific realities. They gestured to the Civil Rights Movement and the War on Poverty, which had “raised Americans' consciousness about the nature of the inequalities in American society.”⁶⁴³ This shift held important historic implications for the field of

641 Ibid, xxiii.

642 Ibid, 6.

643 Ibid, 7-8.

psychology in general, and intelligence testing in particular. Whereas the “psychometricians of the 1930s had debated whether intelligence was almost entirely produced by genes or whether the environment” was as significant a factor, “by the 1960s and 1970s the point of contention had shifted dramatically.” In the wake of social and political reforms and upheavals, Herrnstein and Murray said, “it had somehow become controversial to claim, especially in public, that genes had any effect at all on intelligence.” This transpired, “ironically,” in spite of the fact that “the evidence for genetic factors in intelligence had greatly strengthened during the very period when the terms of the debate were moving in the other direction.”⁶⁴⁴ In this glossing of the history of the evolution of understandings of development of individual intelligence, Herrnstein and Murray wove a narrative of the malice wrought on scientific practice by what they perceived to be the emergence of liberal political correctness that precluded scientific progress toward the resolution of societal ills by perpetuating scientific falsehoods. Moving beyond the Lysenkoist claims of their predecessors, Herrnstein and Murray brought the I.Q. controversy firmly into the present, deploying a new rhetoric against what they now identified as the political correctness of the liberal establishment.

Although it had largely receded from public attention in the 1980s, Herrnstein and Murray informed readers, “the debate about whether and how much genes and environment have to do with ethnic differences remains unresolved.”⁶⁴⁵ They described their environmentalist-leaning opposition as inherently hostile to objective scientific engagement, going so far as to suggest that experts claiming a genetic basis for intelligence had been forced underground to safeguard their personal and professional

644 Ibid, 8.

645 Ibid, 270.

reputations.⁶⁴⁶ In an effort to paint their opposition as unscientific and antagonistic to differing viewpoints, Herrnstein and Murray echoed their 1970s counterparts. They observed, “nothing seems more fearsome to many commentators than the possibility that ethnic and race differences have any genetic component at all. This belief is a fundamental error. Even if the differences between races were entirely genetic (which they surely are not), it should make no practical difference in how individuals deal with each other.” Rather, they posed, “the real danger is that the elite wisdom on ethnic differences - that such differences cannot exist - will shift to opposite and equally unjustified extremes.” They advocated “open and informed discussion” as “the one certain way to protect society from the dangers of one extreme view or the other.”⁶⁴⁷ Echoing Eysenck, they assured that the most humane and egalitarian method would be to accept scientific facts, no matter how at odds with society’s love of belief in innate equality, in order to more ably ensure social and political equality. In an ironic rhetorical twist, Herrnstein and Murray invoked the refrain first iterated in the UNESCO statements on race and the Genetics Society of America’s statement on Jensen: “the differences among individuals are far greater than the difference between groups.”⁶⁴⁸ This truism, which had once served as the moderate, liberal stance of groups endeavoring to disprove the existence of genetic racial inequality, became the banner of hereditarianism in the 1990s. The longevity of race science is thus owed in part to its ability to adopt the language of its opposition, as well as its proponents’ abilities to construct new narratives and reconstruct historical memory. Although it was formally discredited and rejected from the majority of the scientific community at its time of publication, *The Bell Curve*

646 Ibid, 13.

647 Ibid, 270.

648 Ibid, 270-271.

showed the tenacity and elasticity of race science. Long after the discrediting of the notion of unequal racial endowments of innate intelligence by decades of scientists, the narrative again resurfaced amid the favorable context of the 1990s. Herrnstein and Murray's publication initiated a public standoff between their supporters and detractors.

The Bell Curve mired Murray in public controversy, Herrnstein having passed away just two weeks prior to the book's release.⁶⁴⁹ It immediately attracted the widespread attention of the media and press. Yet not all of this attention was negative; in addition to attracting numerous detractors, the book also attracted considerable support. The book's press drew subsequent attention to the organizations connected with it, which engaged additional parties in the conflict. Among the book's numerous critics, Charles Lane of the *New York Review of Books* published an expose on the book's research material and funding, which included contributors to the *Mankind Quarterly*, "a notorious journal of 'racial history' founded, and funded, by men who believe in the genetic superiority of the white race." Lane identified the Pioneer Fund as the journal's source of funding.⁶⁵⁰ Herrnstein and Murray's connection to the Pioneer Fund drew it into the center of the controversy, leading the organization to mount a prolonged and public defense of its reputation.⁶⁵¹ In spite of these efforts, the *New York Times* had already drawn the Pioneer Fund into the I.Q. controversy once before when a reporter identified it as a source of funding for the work of both Arthur Jensen and William Shockley in 1977.⁶⁵² Such connections only amplified the controversy and prompted further digging into Herrnstein and Murray's sources and connections. Media reactions were overall

649 William H. Tucker, *The Funding of Scientific Racism: Wickliffe Draper and the Pioneer Fund* (Urbana and Chicago: University of Illinois Press, 2002), 1.

650 Ibid, 1-2.

651 Ibid, 3-9.

652 Ibid, 2.

mixed. *Time Magazine* ran an article describing the book as “845 pages of provocation with footnotes” based on “dubious premises” and presenting “toxic conclusions.”⁶⁵³ *Newsweek* described it as “frightening stuff” that was “based on a deeply pessimistic -- and deeply angry -- view of American society.”⁶⁵⁴ The *New York Times* wrote, “though ‘The Bell Curve’ contains serious scholarship, it is also laced with tendentious interpretation.... At its best, the Herrnstein-Murray story is an unconvincing reading of murky evidence. At its worst, it is perniciously and purposely incendiary.”⁶⁵⁵ The *National Review* declared that “it confirms ordinary citizens’ reasonable intuition that trying to engineer racial equality ... runs against not racist prejudice but nature, which shows no such egalitarian distribution of talents.”⁶⁵⁶ Certain media outlets, including the *Wall Street Journal*, accused others of liberal bias, a claim leveraged regularly by neohereditarian experts.⁶⁵⁷ Some, like *Forbes*, praised the book, while others, like *New York Magazine*, described it as “grist for racism of every variety.”⁶⁵⁸ These varied reactions served to prolong the controversy and debate surrounding the book’s release.

Professional organizations joined in the debate as well. In response to *The Bell Curve* and the controversy it renewed, the American Psychological Association established a committee to offer a statement on the book and its public reception. The committee’s statement, “Intelligence: It’s Knowns and Unknowns” set out to clarify the association’s stance on the issues. The statement erred on not overstating the available knowledge. As for the differences in test scores identified by Herrnstein and Murray, the

653 Steven Fraser, ed., *The Bell Curve Wars* (New York: Basic Books, 1995), 1.

654 “IQ” *Newsweek*, October 23, 1994.

655 “The ‘Bell Curve’ Agenda,” *New York Times*, October 24, 1994.

656 Fraser, *The Bell Curve Wars*, 1.

657 George Melloan, “The ‘Bell Curve’ Sells Genetic Science Short,” *Wall Street Journal*, October 31, 1994, A15.

658 Fraser, *The Bell Curve Wars*, 1.

committee asked, “what is responsible for them? The fact is that we do not know.” Thus it rejected Herrnstein and Murray’s claim for the genetic basis of differences in test scores. Moreover, the statement continued, “it is clear, however, that these differences – whatever their origin – are well within the range of effect sizes that can be produced by environmental factors.”⁶⁵⁹ The committee represented the underlying issue as a misrepresentation of population statistics. In addition to professional societies’ formal statements, a series of books co-authored by experts in the field attacking the neohereditarian position followed the book’s release, including *The Bell Curve Debate*, which featured voices from all perspectives of the I.Q. controversy, including some hereditarian views, and *Inequality by Design: Cracking the Bell Curve Myth*, which confronted the claims of *The Bell Curve* through a reanalysis of Herrnstein and Murray’s own evidence.⁶⁶⁰ Yet another book, *Race and Intelligence: Separating Science from Myth*, compiled the collective effort of psychologists, sociologists, and anthropologists. This cohort presented their own reanalysis of the research for *The Bell Curve*. They determined that the evidence demonstrated social rather than genetic origins of inequalities between groups, arguing further that race could only serve as a constructive category of analysis as a part of efforts to understand and eradicate inequalities between groups.⁶⁶¹

In response to the publication of numerous treatises against Herrnstein and Murray, hereditarians unleashed a volley of articles and books in defense of their research

659 Ulric Neisser, et. al., “Intelligence: Knowns and Unknowns” *American Psychologist* 51 (2) (February 1996), 94.

660 Russell Jacoby and Naomi Glauberman, ed., *The Bell Curve Debate: History, Documents, Opinions* (New York: Books, 1995); Claude S. Fisher, et al, *Inequality by Design: Cracking the Bell Curve Myth* (Princeton: Princeton University Press, 1996.)

661 Jefferson M. Fish, ed., *Race and Intelligence: Separating Science from Myth* (Mahwah, NJ: Erlbaum, 2002.)

and claims. In the year of the book's release, a group of hereditarians published a defense of their position in the *Wall Street Journal* with an article authored by Linda Gottfredson and signed by fifty-two experts in the field.⁶⁶² Gottfredson, a professor of educational studies at the University of Delaware, mounted a further attack on the liberal establishment in a follow-up article published in *Society*. She argued that "social science today condones and perpetuates a great falsehood – one that undergirds much of social policy. This falsehood, or 'egalitarian fiction,' holds that racial-ethnic groups never differ in average developed intelligence (or, in technical terms, g, the general mental ability factor.)"⁶⁶³ According to Gottfredson, "the existence of sometimes large group differences in intelligence is as well-established as any fact in the social sciences," yet social scientists participated in what she termed a "collective fraud" of the public by concealing this information, either willfully or under the pressure of the establishment.⁶⁶⁴ Gottfredson claimed moreover that, at least privately, the opinions of the majority of scientists in America in fact "mirrored the conclusions of psychologist Arthur Jensen, whom the media have consistently painted as extreme and marginal." However, "while the private consensus among IQ experts has shifted to meet Jensen's 'controversial' views, the public impression of their views has not moved at all."⁶⁶⁵ As a consequence of this collective fraud, achieved through methods of censorship, "IQ experts today feel enormous pressure to 'live within a lie.'"⁶⁶⁶ Gottfredson compared this pressure to that of communist rule, a comparison favored of the neohereditarians of the 1970s. As a result

662 Linda S. Gottfredson, "Mainstream Science on Intelligence: An Editorial with 52 Signatories, History, and Bibliography," *Wall Street Journal*, December 13, 1994.

663 Linda S. Gottfredson, "Egalitarian Fiction and Collective Fraud," *Society* 31(3) (March/April 1994), 53.

664 Ibid.

665 Ibid, 54.

666 Ibid, 55-6.

of this pressure, “social science and social policy are now dominated by the theory that discrimination accounts for all racial disparities in achievements and well-being.”⁶⁶⁷ The consequences for society were considerable. In Gottfredson’s view, “the fiction is aiding and abetting bigots to a far greater degree than any truth ever could, because its specific side-effects – racial preferences, official mendacity, free-wielding accusations of racism, and falling standards – are creating deep cynicism and broad resentment against minorities, blacks in particular, among the citizenry.”⁶⁶⁸ Gottfredson’s tactics, particularly her suggestion that the liberal establishment was actually worsening inequality, mirrored those of the Jensenists of the 1970s.

Other hereditarian proponents modeled additional 1970s neohereditarian tactics. Among those tactics favored included the accusation of liberal bias in the form of attacks on political correctness. Canadian psychologist J. Philippe Rushton argued that political correctness had muddled experts’ views on intelligence. He held firm to his position that “if all people were treated the same, most average race differences would not disappear.”⁶⁶⁹ Moreover, “the international IQ gradient runs parallel to the one in the United States,” which meant that observed innate inequalities between groups was thus a universal rather than a national reality.⁶⁷⁰ The political correctness that Rushton argued obscured this reality derived from historical influences. He observed, “as a result of the revulsion to Hitler's racial policies and the aftermath of World War II the genetic study of race has become as taboo a topic as sexuality was for the Victorians.” Anyone who did not espouse environmentalist views was silenced for fear of association with these

667 Ibid, 55.

668 Ibid, 58.

669 J. Philippe Rushton, “Political Correctness and the Study of Racial Differences,” *Journal of Social Distress and the Homeless* 5(2) (1996), 214.

670 Ibid,15

historic abuses, however, “those who believed in the biological equality of people were free to write what they liked without fear of contradiction.” Moreover, this environmentalist perspective was “politically fueled also by European decolonization and the U.S. civil rights movement,” while “the idea of a genetically-based core to human nature on which racial groups might differ has been consistently derogated.”⁶⁷¹ This derogation was thus historical in origin and ideologically-motivated, and helped to create an oppressive consensus. As a result of this consensus, Rushton declared that “a climate of fear has descended upon researchers in connection with race.”⁶⁷² In a personal anecdote, he described his harassment by the media and his academic institution following a speech. “Newspapers caricatured me wearing a Ku Klux Klan hood or talking on the telephone to a delighted Adolf Hitler. One newspaper began a campaign to get me fired from my position, chastising my university and stating ‘This protection of a charlatan on grounds of academic freedom is preposterous.’ Later, the same paper again linked me to the Holocaust.”⁶⁷³ Following this public embarrassment, Rushton reported being questioned by the police, prosecuted, and protested by students at his home institution.⁶⁷⁴ Rushton and others maintained their stance that they were not racist and did not espouse racist ideas; rather, they were the victims of political correctness and the oppressiveness of a stifling consensus constructed around political rather than scientific beliefs.

In the years following the publication of *The Bell Curve*, several other hereditarian treatises debuted. In 1997, Michael Levin published *Why Race Matters*:

671 Ibid, 219.

672 Ibid.

673 Ibid, 220.

674 Ibid, 220-221.

Race Differences and What they Mean. A year later, Jensen put forth a book entitled, *The G Factor: The Science of Mental Ability*, and Hans Eysenck released his *Intelligence: A New Look*, published posthumously in the same year.⁶⁷⁵ The exchanges between hereditarians and their opponents, as was characteristic of the controversy surrounding Jensen's article, were reflective of broader social and political issues. As during the 1970s, the socio-political context of the 1990s was instrumental in the sudden reemergence of hereditarian claims. According to contemporary Henry Louis Gates, Jr., it was "not surprising" that *The Bell Curve* emerged "at *this* point in our history – a point at which emphasis on the *behavioral causes* of poverty are increasingly called upon to account for the repeating structures of black impoverishment, and second, when the costs of expanding the size of the black middle class would seem to have dampened the enthusiasm of liberals in Congress for the equivalent of a Marshall Plan for our cities, a commitment of our resources sufficient to shift of black bell curve of class so that it conforms to that of society as a whole." Herrnstein and Murray offered an alternative approach, for "if differences of intelligence and therefore, attainment, are *natural*, are genetic, are ordained by God, then why bother? It won't matter anyway." Gates described this as "the most pernicious aspect of Murray and Herrnstein's dismissal of the role of environment."⁶⁷⁶ As in the 1970s, the I.Q. controversy following *The Bell Curve* was influenced by and reflected the culture wars that set the context for its reception, underscoring the opportunistic ability of race science and eugenics to persist and resurface in favorable contexts.

675 Michael Levin, *Why Race Matters: Race Differences and What they Mean* (Westport, Conn.: Praeger, 1997); Arthur Jensen, *The G. Factor: The Science of Mental Ability* (Westport, Conn.: Praeger, 1998); Hans Eysenck, *Intelligence: A New Look* (New Brunswick: Transaction, 1998).

676 Henry Louis Gates, Jr., "Why Now?" in Steven Fraser, ed., *The Bell Curve Wars* (New York: Basic Books, 1995), 95.

The modern I.Q. controversy offers just a glimpse of the many ways in which race science and eugenics proved highly malleable and resilient throughout the twentieth century. The perpetuation of race science and eugenics can be attributed first to their adaptability, and second to conditions in the immediate postwar years that allowed for their unintended survival. Although it appeared to retreat following its discrediting in the wake of revelations of their role in the Holocaust, race science and eugenics did not dissipate, but reinvented themselves again and again over the decades. Only at a time of racial division and dissatisfaction with government programs designed to promote equality among all groups did race science and eugenics reemerge in recognizable form. This explains the apparent reemergence of race science in the neohereditarian work of the 1970s and in the 1990s publication of Charles Murray and Richard Herrnstein's *The Bell Curve*, which resuscitated Jensen's argument in modern times.

This research gestures to the importance of understanding race science as an enduring phenomenon with the capability of molding its rhetoric and narrative to changing climes. So long as racism persists, race science will coexist. Similarly, so long as discriminatory impulses persist along lines of class, gender, age, sexual orientation, eugenic arguments for the biological betterment of the race will likewise continue. The transnational history of mass intelligence testing reveals that racist and eugenic impulses have remained constant throughout the twentieth century in spite of their refutation by mainstream science, even when they appeared to retreat into obscurity and ignominy. Thus so long as discriminatory impulses exist within society, experts, government, the press, and the public must remain vigilant against essentialist science that targets groups.

This history also demonstrates that there is a danger as well in expecting caricatures of race science. While there exist particularly egregious examples, there are many more instances in which racist or eugenic notions were dressed with the trappings of objective science. Race science in recent history has often been more obscure and discreet than outrageously racist or eugenic claims. Historically it has presented in multiple forms and numerous ways, and often purports to be benevolent and have the best interests of those it targets at heart. It would equally be a mistake to assume that race science and eugenics in the future will necessarily be attached to certain political impulses. Although from the 1970s, race science and eugenics became associated with neoconservatism, this primarily reflects the adaptability of race science to rising opportunities and changing climates. Indeed, in the first half of the century, eugenics and race science aligned with liberal sentiments just as they did with conservative ones.⁶⁷⁷ During the second half of the century, they aligned with varied and numerous political strands over time.

The reception of and resulting controversy around the work of Jensen, Herrnstein, Murray, and others provides a cautionary tale against assuming the disappearance of race science, eugenics, and their tropes. Although the work of these experts appeared to materialize suddenly and unexpectedly, examining their work as developments within a narrative of continuity not only forces a reconsideration of the time line of the history of race science and eugenics, but also a reconsideration of the tolerance of segments of society, under certain conditions, to race science and eugenics. Although they faced many more critics and detractors, it would be a grave error to underestimate the support they received from various sectors of society, government, the press, experts, and the

677 P. J. Bowler, "E.W. MacBride's Lamarckian Eugenics and Its Implications for the Social Construction of Scientific Knowledge," *Annals of Science* 41(3) (1984): 245–260.

public, or to expect that the next *Bell Curve* will not receive support from these or other sectors of society in the years to come.

CONCLUSION

The I.Q. controversy continues to this day. Although race science and eugenics were discredited over half a century ago, their influence is demonstrated again and again in modern times. In spite of the scientific establishment's relentless and abject (though at times equivocal) refutation of racist and eugenic claims, research purporting that the poorest classes and minority groups are the least innately intelligent continues to surface even now.⁶⁷⁸ The consequences of such research become more alarming in light of advances in the field of genetics and efforts to isolate genes that allegedly promote high I.Q.⁶⁷⁹ The foremost contribution of this transnational history of mass intelligence testing is the explanation of the perpetuation of race science and eugenics through their continuous adaptation and creative reinvention over time, the persistence of their tropes, their influence on rhetoric in debates about the nature of intelligence, and their ability to exist latently at times of their greatest unpopularity. The modern I.Q. controversy and the construct of I.Q. are inseparable from the history of the perpetuation of race science and eugenics in the Western world.

The long history of mass intelligence testing demonstrates that both race science and eugenics survived their discrediting during the last century. Even when they entered into inactive states as a result of ebbs and flows in their popularity and acceptance, their tropes persisted in their seeming absence. This is evident in the proceedings of the UNESCO committee on the relationship between differential fertility and race. In spite

678 Brink Lindsey, "Why People Keep Misunderstanding the 'Connection' Between Race and IQ," *The Atlantic Monthly* (May 15, 2013): <https://www.theatlantic.com/national/archive/2013/05/why-people-keep-misunderstanding-the-connection-between-race-and-iq/275876/>.

679 John Bohannon, "Why Are Some People So Smart? The Answer Could Span A Generation of Superbabies," *Wired Magazine* (July 17, 2013): <https://www.wired.com/2013/07/genetics-of-iq/>.

of UNESCO's public refutation of race science and eugenics, its experts were animated by the same questions and anxieties that had fueled race science and eugenic research on intelligence in decades prior, even though the evidence before them ostensibly refuted such concerns. This is apparent as well in public fears, such as those outlined in letters to editors of newspapers, that the least intelligent among them were reproducing at higher rates, leading to an overall dumbing down of the United States. The incredible reach of these tropes extended well beyond expert domains to influence governments and publics, and continued to bear influence even after their sources had been discredited. Even in the absence of obvious instances of race science or eugenics, the tropes of race science and eugenics have proved to have tremendous staying power throughout the I.Q. controversies of the twentieth century.

The adaptability of race science and eugenics has ensured their longevity. For this reason it would be an error to assume that because their most recent proponents might be variously described as have a neoliberal or libertarian bent, they will necessarily appear in a similar guise in the future. Indeed, the logics of race science and eugenics appealed to experts in Western geopolitical contexts as diverse as the United States, France, England, Sweden, and Scotland over the course of the twentieth century. The demonstrated opportunism of race science and eugenics in the history of mass intelligence testing suggests that they will continue to adapt to political and social climates, national and international contexts. The ability of race scientists and eugenicists to reinvent themselves contributed to their ability to persist as well. Narrative and historical memory played a critical role in the perpetuation of race science and eugenics. The practice of reclaiming historical memory to construct a new narrative about the

benevolence and promise of eugenics enabled eugenics to regroup after its discrediting. This powerful tool of reclamation, often backed by claims that the science of genetics was finally ripe for eugenic intervention, surfaced repeatedly in the history of mass intelligence testing. The rebranding and restyling of the American Eugenics Society under Frederick Osborn in the postwar era demonstrates the effectiveness of this tactic in prolonging the life of eugenics. Indeed, this tool continues to surface to this day.⁶⁸⁰ Likewise, the ability of eugenicists and race scientists to draw on the rhetoric of resources and human capital to amplify their concerns. In adopting this language they played into concerns about national preparedness during war as well as anxieties about stagnating or falling levels of national intelligence as a result of differential fertility. These numerous tactics contributed to the survival of race science and eugenics long past their discrediting.

The I.Q. controversy continues to evolve and adapt to changing national and global contexts, as do race science and eugenic impulses. The ramifications of this controversy are both domestic and international. Because much of the research conducted since the 1990s has been premised on comparisons not only of the differential intelligence of racial groups within countries, but between continents as well, the policy implications of this controversial research extend to the international sphere. Herrnstein, Murray, and their contemporaries' comparisons of Asians, Europeans, and Africans sparked a corresponding conversation about adjustments to foreign as well as domestic policies. In their 2002 edited volume, *IQ and the Wealth of Nations*, Richard Lynn and Tatu Vanhanen argued that disparities in I.Q. between nations correlated with national

680 Jan A. Witkowski, J. R. Inglis, and Charles Benedict Davenport, *Davenport's Dream: 21st Century Reflections on Heredity and Eugenics* (Cold Spring Harbor, N.Y.: Cold Spring Harbor Laboratory Press, 2008.)

growth and prosperity.⁶⁸¹ The Nobel Laureate in biology, James D. Watson, who helped discover DNA's double helix, came under severe scrutiny in 2007 when he openly declared in an interview with the *Sunday Times* of London that he worried about the "inherently gloomy about the prospect of Africa" as "all our social policies are based on the fact that their intelligence is the same as ours — whereas all the testing says not really." Shortly after the interview he "apologized 'unreservedly' ... for comments reported this week suggesting that black people, over all, are not as intelligent as whites."⁶⁸² Others accused the field of development economics of falling prey to racist scientific theories purporting the genetic or innate inferiority of the peoples of the developing world. Charles Kenny, himself a development economist, accused Lynn and Vanhanen of presenting "made up" facts and misrepresenting evidence to inform essentially racist policy decisions in his article in *Foreign Policy*, "Dumb and Dumber: Are Development Experts becoming Racists?" For example, he explained, "of the 185 countries in their study, actual IQ estimates are available for only 81. The rest are 'estimated' from neighboring countries."

Investigation has shown studies such as Lynn and Vanhanen's to be rife with informational errors and statistical shortcomings. Citing a study conducted by a psychologist at the University of Amsterdam, Kenney pointed out that Lynn and Vanhanen's "data set excluded a number of studies that pointed to higher average IQs, and that some studies included dated as far back as 1948 and involved as few as 17 people."⁶⁸³ Accusations of this nature, however, have not been restricted to those whose

681 Richard Lynn and Tatu Vanhanen, ed., *IQ and the Wealth of Nations* (Westport, Conn.: Praeger, 2002.)

682 Cornelia Dean, "Nobel Winner Issues Apology for Comments about Blacks," *New York Times*, October 19, 2007.

683 Charles Kenny, "Dumb and Dumber: Are Development Experts becoming Racists?" *Foreign Policy*, April 30, 2012, <http://foreignpolicy.com/2012/04/30/dumb-and-dumber-3/>.

work has been derided as racist. In his widely influential book, first published in 1981, Gould argued that physical anthropologist Samuel G. Morton mismeasured his human skull collection on which he based his racist conclusions as a consequence of his subconscious bias.⁶⁸⁴ In 2011, however, Gould's research came under scrutiny when a group of physical anthropologists undertook the measurement of Morton's skull collection, reaching the conclusion that Morton did not in fact mismeasure his specimens. Their findings cast Gould's conclusions as *a priori*.⁶⁸⁵ "Ironically," the team concluded, "Gould's own analysis of Morton is likely the stronger example of a bias influencing results."⁶⁸⁶ This was in fact the second contestation of Gould's results. In the 1990s, an undergraduate at Macalester College conducted a study on Morton's research that argued his results were "reasonably accurate." Gould's 1996 revision of the book did not include a mention of this study, which led one member of the Philadelphia team to say of him, "I just didn't trust Gould. I had the feeling that his ideological stance was supreme. When the 1996 version of 'The Mismeasure of Man' came and he never even bothered to mention Michael's study, I just felt he was a charlatan." Other experts in the field were more inclined to give the then-deceased Gould the benefit of the doubt, suggesting he reached his conclusions in error rather than in intentional oversight.⁶⁸⁷ Revelations of the flaws in the research of Lynn, Vanhanen, and Gould demonstrate the persistence as well of the problem of ideology in the production of human scientific knowledge. Ideology continues to inflect the findings and publications of human scientists invested in the

684 Stephen Jay Gould, *The Mismeasure of Man* (New York: W.W. Norton, 1991).

685 Jason E. Lewis, et al, "The Mismeasure of Science: Stephen Jay Gould versus Samuel George Morton on Skulls and Bias" *PLOS Biology* 9(7) (June 7, 2011): <http://dx.doi.org/10.1371/journal.pbio.1001071>.

686 Ibid.

687 Nicholas Wade, "Scientists Measure the Accuracy of a Racism Claim," *New York Times* (June 13, 2011.)

problem of I.Q., and therefore continues to feature as a favored tool of critique to brand one's opposition as false prophets of science in the context of the I.Q. controversy.

As the science of genetics progresses, and racist and classist impulses persist, the history of the I.Q. controversy told from the perspective of transnational history of mass intelligence testing in the twentieth century suggests the importance of vigilance in considering the social, cultural, and political ramifications of scientific research in human heredity. Precisely because the impulses of race science and eugenics have historically proven so transportable and adaptable, it is unlikely that they will appear again in old guises. The adaptability of their tropes suggest that they may newly appeal to different sectors of society, and different areas of the globe, than before. This history furthermore demonstrates the need for reflection on the role of ideology in the production of scientific knowledge. Both sides of the I.Q. debate have at times been guilty of ideologically-motivated science, yet the fear of appearing to produce ideological science led to the reticence of the mid-century liberal scientific establishment, which ultimately helped to create the conditions for the survival of race science and eugenics. Ideology has thus acted as a double-edged sword in the I.Q. controversy. Humanists and human scientists alike therefore must continually analyze and assess the influence of ideology on scientific practice in regard to I.Q., in terms of both its historic role and its role in the present. This history equally indicates the prescience of openness to hearing the opposition.

Historically, claims of the oppressiveness of the establishment served as effective tools in the hands of race scientists and eugenicists; instances of their silencing became their proof of the intolerance and corruption of the establishment. Such openness to debate of freely exchanged ideas becomes even more critical at times of great social division when

there is greater risk of the spread and entrenchment of discriminatory race science and eugenic beliefs. This will become ever more critical as the science and technology of genetics advances and the field of epigenetic research expands. In light of this history, the work of Jensen, Herrnstein, and Murray appear less as aberrations and more as points along a continuum. The longer history of the modern I.Q. controversy demonstrates the universal reach of these discriminatory impulses and impresses the importance of vigilance against their revival in the years to come.

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Division of Foreign Relations, 1919-1939 Collection

Rockefeller Archive Center, Tarrytown, NY:

General Education Board Collection

Population Council Records, Accession 1

Population Council Records, Accession 2

Laura Spelman Rockefeller Memorial Collection
Social Science Research Council, Accession 2

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Social Science Department Collection

Wellcome Library, London:

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