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# Guidance counseling in the mid-twentieth century United States: Measurement, grouping, and the making of the intelligent self

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**Abstract**

This article investigates National Defense Education Act and National Defense Education Act-related calls in the late 1950s for the training of guidance counselors, an emergent profession that was to play an instrumental role in both the measuring and placement of students in schools by "intelligence" or academic "ability". In analyzing this mid-century push for more guidance counseling in schools, this article will first explore a foundational argument for the fairness of intelligence testing made by Educational Testing Service psychometrician William Turnbull in 1951, and then later taken up and employed by other National Defense Education Act-era advocates of testing and grouping. Secondly, this analysis will proceed to National Defense Education Act expert testimony, examining here assertions of the necessity of guidance counseling in schools, and an emergent and shared vision articulating the role guidance counseling was supposed to play in school life. A pattern or structure to this vision emerges here. According to its advocates, guidance counseling would not only inform the self-understanding of the measured individual, but it would also work to condition the ideology of individual intelligence across numerous layers of social life around the student: through peer group, through teachers and school administrators, and finally through home, family, and the wider community.

**Keywords**

National Defense Education Act, *Brown versus Board of Education*, guidance counseling, ability grouping, psychometrics, intelligence, educational testing

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## Introduction

In 1958, mere months before the passage of the National Defense Education Act (NDEA), Henry Chauncey, president of the Educational Testing Service (ETS), made what was surely a galvanizing claim for readers of the ETS annual report: "Testing and guidance as we know it does not exist in Russia. I think that American testing and guidance techniques could be our own 'secret weapon' in education, if we develop and use them properly."[1]

Indeed, the time for such a call to arms was ripe. Among its other various initiatives, the NDEA, new landmark educational legislation enacted in September of 1958, released federal monies for "intelligence" or "ability" testing in public schools across the country on an unprecedented scope and scale.[2] The act also funded the training and hiring of guidance counselors to conduct this testing and to enforce test-based placement of individual students in various tracks or ability-levels of school curricula.[3] The moment of guidance counseling, until then a fledgling and diffuse profession, had arrived. This article takes up NDEA and NDEA-related calls for the training of guidance counselors, an emergent profession that was to play an instrumental role in both the measuring and placement of students by 'intelligence' or academic 'ability' in the post-NDEA era.

As can be seen in Chauncey's excited prognosis above, guidance was positioned as a key educational strategy in U.S. Cold War competition with the Soviets. This was how to find our "best and brightest" and direct them toward curricula that would prepare them for careers in math, science, and engineering. Following World War II (WWII), an ominous new flight of potential crises had condensed and piled atop one another, shifting and occluding like layers of cloud in atomic light. The fate of the nation appeared to be linked in large measure to our scientific, technological, and military development, at what again appeared to be this mid-century global tipping point between American-style liberal democracy and international communism.

Yet Chauncey's exhortation and related educational policy developments must, I argue, also be understood in the context of "race" and the racial politics of educational opportunity in the years following *Brown versus Board of Education*.[4] Decided just four years prior, *Brown*

1. Educational Testing Service, "Report of the President, " *Annual Report to the Board of Trustees – Educational Testing Service: 1957–58* (Princeton: Educational Testing Service, 1958), p.28.
2. For discussion of the significance of the NDEA as a precedent for federal funding of public education, see: Wayne J. Urban, *More Than Science and Sputnik: The National Defense Education Act of 1958* (Tuscaloosa: University of Alabama Press, 2010), pp.20–34; or Carl Kaestle and Marshall Smith, "The Federal Role in Elementary and Secondary Education, 1940–1980," *Harvard Educational Review* 52 (1982): 384–408, 387–9; or Barbara Barksdale Clowse, *Brainpower for the Cold War: The Sputnik Crisis and National Defense Education Act of 1958* (Westport: Greenwood Press, 1981).
3. The National Defense Education Act, P.L. 85-864; 72 Stat. 1580, p.1588. Enforcement of ability grouping was not *mandated* in the clauses of the NDEA bill per se, but strenuous advocacy for such test and guidance-based ability grouping – using NDEA monies – abound in NDEA Congressional Hearings and other contemporary policy recommendations. See for example, James Bryant Conant, *The American High School Today: A First Report to Interested Citizens* (New York: McGraw-Hill Book Company, 1959), pp.91–4.
4. The contexts and circumstances supporting this line of analysis are developed in Jim Wynter Porter, "Constructing the 'Gifted' and 'Academically Talented' Student: 'Intelligence,' Intelligence Testing, and Educational Opportunity in the era of *Brown v. Board* and the

confronted the nation with a major shift in the norms and ethics of educational grouping – just how students could, should or should not be grouped in the nation's public schools. The old kind of grouping by race under Jim Crow segregation – demarcated by school and school system itself, white or black – had been ruled unconstitutional by *Brown* and decried as racist by an array of international and domestic observers. The new kind of grouping heralded by the NDEA then would be more minutely and precisely conducted – *within schools*, individual by individual – according to measured intelligence and under the supervision of the guidance counselor. In this process, the guidance counselor was a mediator whose professional roles overlapped with those of the teacher and administrator while at the same time importing into the school the expertise of the psychometrician. Notably, most of the state-level cases comprised by Brown were initiated by parents challenging the educational segregation of their children. That guidance counselors in the wake of the NDEA were meant to hold some degree of authority over parents regarding the ability-placement of their children (see p. 8–9, 21–22) thus becomes especially striking in this light.

Such a focus for historical study is relevant and useful because tracing these NDEA and NDEA-related calls for guidance counseling in the public schools shows us a great deal about the implementation of intelligence as an ideology at this moment. It demonstrates the various layers of social life through which intelligence could and (according to its advocates) *should* be threaded, and shows as well the potential power intelligence had to differentiate and individualize students and contribute to the internal and external processes of self-making that shaped their identities in school, at home, and in their communities.

Specifically, intelligence was operationalized at this moment and in this institutional context as performance on particular kinds of standardized tests. The new school-place ability tests recommended by NDEA-era policy makers and developed by companies like ETS – such as their SCAT (School and College Ability Test), or its flagship college entrance exam the Scholastic Aptitude Test (SAT) – had largely dropped the term "IQ" in an attempt to leave behind the controversies over race and eugenics that had marked interwar intelligence testing.[5] Nonetheless these post-WWII standardized tests were IQ tests in all but name.[6] They comprised the same batteries of culturally loaded verbal,

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National Defense Education Act" (PhD Dissertation, Michigan State University, 2017); and Jim Wynter Porter, "A 'Precious Minority': Constructing the 'Gifted' and 'Academically Talented' Student in the era of *Brown v. Board of Education* and the National Defense Education Act," *Isis* 108 (September 1, 2017): 581–605.

5. For discussion and endorsement of ETS tests see Conant, *The American High School Today*, pp.33–4, 62 (note 3).
6. Nicholas Lemann, *The Big Test: The Secret History of the American Meritocracy* (New York: Farrar, Straus, and Giroux, 2000), pp.64–5. While the new generation of school place tests avoided the term 'IQ', or 'intelligence quotient', contemporary influential educators and testing advocates still readily relied on IQ as an organizing conceptualization and moreover referred to IQ explicitly in non-public planning documents and expert literature. See for example James Bryant Conant. Papers of James Bryant Conant, 1862–1987, "Proposed Study of Certain Problems Connected with The American Comprehensive High School: Confidential Memorandum Prepared by James B. Conant for Mr. John Gardner," 21 December 1956, UAI 15.898, High School March–June 1957, Box 42, Harvard University Archives; or A. Harry Passow, "Education for Gifted Children and Youth," March 1960, pp.1, 2, in Papers of James Bryant Conant, UAI 15.898, Gifted Child (Program B), Box 113, Harvard University Archives.

mathematical, and analytical reasoning-type questions, now revised and normed by age against a new generation of test-takers. While accompanied by renewed operationalist arguments for their fairness and objectivity (see section: Fairness in testing and measurement) these tests preserved the same or similar biases by ethnicity, class, and gender as their interwar counterparts. Furthermore, NDEA-related calls for their more systematic and sustained use in public schools were predicated on neo-hereditarian assumptions regarding the natural origins and relative fixity of individual difference.

This article relies, to begin with, on a historiography of post-WWII education that has examined the effect of Cold War contexts on the curriculum and funding debates of the 1950s, and on the heated civil rights politics of desegregation following *Brown versus Board*.[7] This literature charts general trends favoring positivistic modalities and ways of knowing in educational philosophy, and on intensive NDEA- and National Science Foundation-related efforts to develop math and science curricula in the public schools. This article also draws on a historiography of psychometrics – centered largely on the interwar United States – that has taken up intelligence testing's connections with the science and politics of the 1920s and 1930s: notably its methodological tendency toward hereditarianism, and its eugenical concerns about "subnormality," "degeneration," immigration and national intelligence.[8] This history of intelligence testing also examines interwar psychometrics' rehabilitation of eighteenth and nineteenth century race-sciences. As such, this body of literature has provided a much-needed historiographical bedrock for the critique of assertions – recurrent throughout the later twentieth and early twenty-first centuries – of race-group intelligence, or differential racial IQ. Indeed, with notable exceptions (Cravens, 1993, and Carson, 2007), this literature has predominantly focused its critical and scholarly energy on the historicization of intelligence by race group, leaving

7. Clowse, *Brainpower for the Cold War* (note 2); Andrew Hartman, *Education and the Cold War: The Battle for the American School* (New York: Palgrave Macmillan, 2011); Richard Kluger, *Simple Justice: The History of Brown v. Board of Education and Black America's Struggle for Equality* (New York: Vintage Books, 2004); John L. Rudolph, *Scientists in the Classroom: The Cold War Reconstruction of American Science Education* (New York: Palgrave Macmillan, 2002); Urban, *More Than Science and Sputnik* (note 2).
8. John Carson, *The Measure of Merit: Talents, Intelligence, and Inequality in the French and American Republics, 1750–1940* (Princeton: Princeton University Press, 2007); Paul Davis Chapman, *Schools As Sorters: Lewis M. Terman, Applied Psychology, and the Intelligence Testing Movement, 1890–1930* (New York: New York University Press, 1990); Hamilton Cravens, *Before Head Start: The Iowa Station & America's Children* (Chapel Hill: University of North Carolina Press, 1993); Carl N. Degler, *In Search of Human Nature: The Decline and Revival of Darwinism in American Social Thought* (New York: Oxford University Press, 1992); Stephen Jay Gould, *The Mismeasure of Man* (New York: W. W. Norton & Company, 2006); Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (New York: Alfred A. Knopf, 1985); Diane B. Paul, *Controlling Human Heredity* (Atlantic Highlands: Humanities Press, 1995); Michael M. Sokal, "Approaches to the History of Psychological Testing," *History of Education Quarterly* 24 (1984): 419–30; Michael M. Sokal (ed.), *Psychological Testing and American Society: 1890–1930* (New Brunswick: Rutgers University Press, 1990); Leila Zenderland, *Measuring Minds: Henry Herbert Goddard and the Origins of American Intelligence Testing* (Cambridge: Cambridge University Press, 2001).

the individualization of intelligence or related claims of hereditary individual difference relatively unhistoricized. I argue it is important to study the relational and historical exchanges between these two levels of social analysis – group and individual – as sorting by individual difference could nonetheless still accomplish the work of race and racism, and moreover manage to do so without explicit recourse to the language of race.[9]

Thus this examination of the proposed role of guidance counselors in implementing a particular theorization of intelligence in schools represents the continuation of an effort to extend historical criticism of intelligence (or ability) not just across the WWII divide but also more consistently from the level of race group to the level of the individual, or here specifically, individual students.[10] This article thus seeks a critical examination of intelligence itself as a category of analysis, one which serves a political interest, and one which overlaps and interacts with other socially produced categories like race, class and gender. How and why do we define and redefine what "smart" is? How do these definitions serve the interests of certain constituencies and disserve others? How have beliefs about and applications of intelligence worked to differentially structure both educational opportunity and the broader social order for which education is intended to prepare the individual? How does this making of intelligence then facilitate the differential self-making and subject formation of individuals who exercise their agency within this ideological framework? It is thus useful in taking up this set of questions to also recall Bowles and Gintis' *Schooling in Capitalist America*, noting the correspondence they illuminate here between the worlds of school and work, the attention they pay to socialization processes that education directs, and to the affective and belief-driven domains of experience and behavior.[11]

This present study of guidance counseling then is connected to a much larger project in the histories and sociologies of science and education that explores how "solutions to the problem of knowledge are embedded within practical solutions to the problem of the social order."[12] This article advances that there *is* no knowledge – about ourselves or the world – independent of social relation, and moreover, *how* we form and institutionalize social relations – with their complex politics of inclusion and exclusion – inextricably shapes the character, quality, and utility of the knowledge that emerges. Here I examine this fundamental condition of knowledge making – the social fabric of scientific knowledge – specifically where the domains of psychology, educational testing, and governmentality intersect with the self-making of measured individuals.[13]

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9. Jim Wynter Porter, "The Entanglement of Racism and Individualism: The U.S. National Defense Education Act of 1958 and the Individualization of 'Intelligence' and Educational Policy," *Multiethnica* 38 (2018): 3–17.
10. Ibid.
11. Samuel Bowles and Herbert Gintis, *Schooling in Capitalist America: Educational Reform and the Contradictions of Economic Life*, Reprint edition (Chicago: Haymarket Books, 2011).
12. Steven Shapin and Simon Schaffer, *Leviathan and the Air Pump: Hobbes, Boyle, and the Experimental Life* (Princeton: Princeton University Press, 1989), p.15.
13. For foundational work in this area, see also Carson, *The Measure of Merit*; Michel Foucault, *Discipline & Punish* (New York: Random House, 1995); Ellen Herman, *The Romance of American Psychology: Political Culture in the Age of Experts* (Berkeley: University of California Press, 1996); and Nikolas S. Rose, *Governing the Soul: The Shaping of the Private Self* (London: Free Association Books, 1999).

Historian John Carson has found that thinking about differential talent and merit between the 1780s and 1940s grew from the interrelation of the "sciences of human nature with theories of republican governance."[14] It appears likewise in my period of study – the mid to late 1950s – that conceptions of talent or intelligence were closely linked with statecraft, indeed even with particular policy agendas, specifically through the careful deployment of both lay and scientific conceptions of intelligence in argumentation for the NDEA.[15] Importantly, this meshing of psychometric theory with national educational policy was facilitated by a network of institutions comprising the National Education Association (NEA), the Carnegie Corporation, the Eisenhower Administration, ETS, and leading educational opinion-former James Bryant Conant. This alignment of actors was the result of a larger but carefully orchestrated effort on the part of educational policy makers and affiliated institutions at this moment to navigate the thorny educational politics of this mid-1950s moment that included the Sputnik Crisis, surging enrollments, and perhaps most importantly *Brown versus Board*'s mandate to racially desegregate public schools.[16] The efforts of this network are covered in more detail elsewhere, but the evidence presented here further extends this general argument, demonstrating the proposed role of guidance counselors in implementing this policy agenda. It appeared that educational testing and placement by ability – helping all these individuals find their right place in relation to one another—could resolve all these dilemmas at once.[17]

And while historians Chapman and Zenderland have located the interwar debut of mass school-place testing on a district-scale in California and New York, this article identifies a moment when the reach of mass testing was expanded more consistently and comprehensively to the national level, propelled here by federal funding (the NDEA), a sympathetic mass media campaign, and through the cooperation of interested organizations like the ETS and the NEA.[18]

Finally, this argument also makes use of a growing history of Cold War social sciences that has explored the alignment of state and scientific agendas, the patronage structure of Cold War social science funding, and, furthermore, documented the related popularity of rationalistic models of human learning and behavior in the decades after WWII.[19] This is a body of work that often further seeks to deconstruct the

14. Carson, *The Measure of Merit*, p.14 (note 13).
15. Porter, "A 'Precious Minority'" (note 4); Porter, "The Entanglement of Racism and Individualism" (note 9).
16. Porter, "Constructing the 'Gifted' and 'Academically Talented' Student" (note 4); Porter, "A 'Precious Minority'" (note 4).
17. Ibid.
18. Chapman, *Schools As Sorters*, pp.107–27 (note 8); Porter, "Constructing the 'Gifted' and 'Academically Talented' Student," pp.290–334 (note 4).
19. Herman, *The Romance of American Psychology* (note 13); Ellen Condliffe Lagemann, *The Politics of Knowledge: The Carnegie Corporation, Philanthropy, and Public Policy* (Middletown, CT: Wesleyan University Press, 1989); Jim Wynter Porter, "Experimental Psychology," in Georgina Montgomery and Mark Largent (eds.) *A Companion to the History of American Science* (Chichester, UK; Malden, MA: Wiley-Blackwell, 2015), pp.95–109; M. Solovey and H. Cravens, *Cold War Social Science: Knowledge Production, Liberal Democracy, and Human Nature* (New York: Palgrave Macmillan, 2012); Professor Mark Solovey, *Shaky Foundations: The Politics-Patronage-Social Science Nexus in Cold War America* (New Brunswick, NJ: Rutgers University Press, 2013).

solidity and coherence of the Cold War itself as a thematically isolated set of cultural and political forces. Indeed these historians have attempted to show how Cold War concerns could elide with other political agendas. Historian Ellen Herman has demonstrated for example that domestic interventions in civil rights-related racial conflicts often drew on a set of assumptions about human psychology that had also been applied in U.S. Cold War counterinsurgency strategies in Latin America.[20] Thus, the same sets of ideas were being used in an attempt to solve problems on both domestic and international fronts. Similarly, I am interested here in part in how educational objectives ostensibly stemming from the Sputnik Crisis could nonetheless be intertwined with, shaped by – and at the same time *mask or occlude* – anxieties and discourses about race, and racism itself.

In analyzing these mid-century calls for more guidance counseling in the schools, this article will first establish central NDEA-related background and context for these developments (section: Background). This analysis will then explore a foundational argument for the alleged fairness of intelligence testing itself – across all social and racial groups – made by ETS psychometrician William Turnbull in 1951 (section: Fairness in testing and measurement). Turnbull's argument was taken up by expert witnesses like Henry Chauncey of ETS during NDEA deliberations and by psychometricians, like Anne Anastasi, who were involved with the early training and instruction of a new cohort of guidance counselors. Finally, this article will proceed to NDEA expert testimony and consider a range of arguments for the importance of guidance counseling in schools (section: NDEA visions). A pattern or structure to the shared vision of counseling emerges here. Guidance counseling would not only shape the subjectivity and self-understanding of the measured individual, but it would also work to condition the ideology of individual intelligence across numerous layers of social life around the student: through peer group, teachers and school administrators, and home, family, and the wider community.

## Background: The NDEA, Conant, grouping, and guidance

The call for testing, guidance counseling, and ability grouping or tracking was taken up by many voices across the nation at this moment. In early 1959, for example, just months after the passage of the NDEA, renowned scientist and leading educational spokesperson James Bryant Conant released a report, *The American High School Today*, that harmonized closely with the groundbreaking legislation on matters of testing, guidance counseling, and ability grouping.[21] It has been argued in fact that production of *The American High School Today* was closely coordinated to complement NDEA funding mandates and that its publication was timed with the passage of the act.[22] If the NDEA legislation itself left the practical logistics of testing, ability grouping, and curricular stratification to state and local school systems, Conant spelled out in his highly accessible report for the American public (and American schools) just how testing, counseling and grouping ought to work.

20. Herman, *The Romance of American Psychology*, p.174 (note 13).
21. Conant, *The American High School Today* (note 3).
22. Porter, "A 'Precious Minority,' " pp.586–7 (note 4).

Consonant with NDEA funding, Conant advised that all schools hire guidance counseling staff and sort students by measured individual ability or intelligence into a stratified curriculum – bright, medium, and slow – for academic subjects.[23] More specifically, Conant recommended the selection – via ETS-developed tests to be administered in the seventh and eighth grades – of the top 15–20 percent of the student body (which he termed the "academically talented" and "gifted") for advanced high school curricula in math, science, and foreign languages.[24]

Test scores did not speak for themselves, Conant allowed, but had to be interpreted by someone specifically trained to do so. It was, importantly, the guidance counselor, with expertise in psychometric methods, who would be best qualified to administer the tests, interpret their results and then make placement decisions based on these measurements.[25] The counselor's prime directive in this regard was to rescue the bright underachiever. Conant noted, "The counselor should be on the lookout for the bright boy or girl whose high ability has been demonstrated by the results of aptitude tests given from time to time but whose achievement, as measured by grades in courses, has been low."[26] These students should be strongly urged to enroll in advanced courses in science, math, and foreign language. But of course this process of positive selection of the "able" minority meant also keeping out the less-than-able majority. Accomplishing and maintaining this ability-gradient would require close coordination between counselors, teachers, and parents.

Conant indicated, for example, just how the efforts of teachers should mesh with the agenda and judgments of counselors.

> In order to assist the counselors in their work of guiding students into programs which the students can handle effectively, the teachers of the advanced academic *elective* courses – foreign languages, mathematics, and science – should be urged to maintain high standards. They should not hesitate to fail a student who does not meet the minimum level of performance. . . [this would help ensure that] students who do not have the ability to handle the subjects are discouraged from electing these courses and prevented from continuing the sequence.[27]

Of course, "ability to handle the subjects" had already been determined by the counselor in consultation with test scores.

In tandem, Conant intended for counselors to actively engage with parents concerning the capabilities of their children. Conant noted, "the function of the counselor is not to supplant the parents but supplement parental advice to a youngster. To this end the counselor should be in close touch with the parent as well as the pupil."[28] Here again the counselor was impelled to persuade the parents of the bright underachiever that their children should be enrolled in advanced courses. At the same time, conversely, "overambitious

23. "Crisis in Education, Pt IV: Famous Educator's Plan for a School That Will Advance Students According to Ability," *LIFE Magazine, Time Inc.*, 14 April 1958, pp.120–1.
24. Conant, *The American High School Today*, pp.20, 22, 63, 78 (note 3).
25. Ibid., pp. 44–9, 58.
26. Ibid., p.45.
27. Ibid., p.48.
28. Ibid., pp.44–5.

parents [of less-than-able students]. . . must be made to realize as soon as possible the limits nature has placed upon their ambitions."[29] Nature was stern. Not everyone – in fact only a few – had what it took to join the ranks of the academically talented.

Most educators and policy makers at this moment strenuously avoided the locutions of interwar hereditarianism. Nonetheless talent was conceptualized in the collective common sense of the period as a differential inherent individual essence. Even the most philosophically cautious or those who most assiduously adopted the new post-WWII language of 'nature-and-nurture' saw talent as a fixed or developed trait that was both measurable through intelligence testing and that reliably predicted future success.[30] Given the apparent common sense of these 'natural limits' inside the learner, Conant and many others argued that clear and corresponding boundaries needed to be drawn in the school place. If guidance staff and school administrators together forged a consistent policy based on psychometric knowledge, and then stood shoulder to shoulder, the line could be drawn and held.[31] Conant's recommendations were widely disseminated and consumed by a broad audience of both lay readers and professional educators. *The American High School Today* had sold 200,000 copies within two months of its release and over 90,000 additional free copies had been circulated to schools, school boards, school administrators, and politicians across the country.[32]

These NDEA-era calls for testing and grouping were accompanied by other arguments asserting that efforts to test and group in schools had waned during the years of the Great Depression and that renewed efforts were now particularly necessary given the demographic surge of baby boomer enrollments and the Cold War science and technology race with the Soviet Union.[33] Such arguments for identifying the academically talented – the nation's "best and brightest" – for future careers in the sciences and engineering became particularly vocal and compelling in the wake of the Sputnik launches in the fall of 1957.[34] The motive force of race – of racial animus and anxiety post-*Brown versus Board* – could be effectively occluded by or masked behind these other compelling, urgent arguments.[35]

Yet, reassurances that these proposals for testing and grouping within schools had nothing to do with race abounded. Instead, advocates argued that such decisions would

29. Ibid., p.92. For a very similar statement in NDEA testimony see John A. Perkins, Under Secretary U.S. Department of Health Education and Welfare, "Hearings before the Committee on Education and Labor, U.S. House of Representatives 85th Congress, 1st Session on Scholarship and Loan Program" (12 August 1957), p.14.
30. Porter, "A 'Precious Minority,'" pp.591–2 (note 4).
31. Conant, *The American High School Today*, pp.91–4 (note 3).
32. Jeanne Ellen Amster, "Meritocracy Ascendant: James Bryant Conant and the Cultivation of Talent" (Unpublished Dissertation, Harvard, 1990), p.229; Lagemann, *The Politics of Knowledge*, p.200 (note 19).
33. See, for example, Henry Chauncey, "Hearings before the Committee on Education and Labor, U.S. House of Representatives 85th Congress, 2nd Session on Scholarship and Loan Program," § Committee on Education and Labor (26 February 1958), p.1102.
34. Clowse, *Brainpower for the Cold War* (note 2).
35. Porter, "A 'Precious Minority,'" pp.588–9 (note 4).

be made on a solely *individual* basis, without regard to the group membership of any individual. Thus, this new, politically acceptable kind of grouping would depend – at its most fundamental, technical, and logistical levels – on *measurement*: specifically the measurement of what was alleged to be intelligence or in the particular parlance of the moment, academic talent or ability. The old, outmoded kind of grouping – extramural segregation by race – was increasingly seen in national conversations as irrational, and based on subjective and prejudicial emotions directed toward a race group. Advocates for the new kind of grouping argued individual ability, on the other hand, was an objective, scientific criterion, valid and equally predictive across all cultures or racial groups. The old kind of grouping had been enforced extramurally through Jim Crow segregation of perceived racial difference: white schools, black schools. The new kind of grouping would be enforced intramurally by test-based placement of individuals within curricula stratified according to intellectual ability.

Indeed it was specifically through measurement and measurement of individuals – via intelligence testing – that it could be argued that the new kind of grouping in schools would transcend the subjective, potentially biased impressions of teachers, or the prejudicial thinking of one ethnic group directed toward another. Thus, as segregation by race was increasingly denounced on a national and international stage as a racist practice, advocates of the newly refurbished technologies of intelligence testing and ability grouping in the post-*Brown* post-NDEA era could insist that race was not their criterion. In fact they argued that high intelligence – as measured by intelligence tests – could be found with equal probability among individuals from within any social or racial group.[36]

Finally, it should be noted that ability grouping in schools based on intelligence testing predated this mid-1950s moment, and can be traced to the rise of mass IQ testing in the United States in the early years after World War I (WWI), and efforts on behalf of people like Lewis Terman to introduce testing into public schools.[37] Likewise a relatively small number of what could be considered the first guidance counselors began work in schools in the late nineteenth and early twentieth centuries.[38] Yet, these early examples of pre-WWII testing and counseling in schools were comparatively localized and unsystematic efforts, confined to particular schools or school systems and supported by relatively limited amounts of funding. These late 1950s calls for intelligence testing and counseling were entirely more systematic in means, scale, and scope. These mid-century efforts were hitched to and funded by federal legislation, the NDEA, and thus were meant to be implemented as comprehensively as possible throughout the nation's schools. U.S. Commissioner of Education Lawrence G. Derthick reported, for instance, that as of 1958, there were approximately eleven thousand guidance counselors (or full-time equivalents) employed in public schools across the country. Yet Derthick urged on the basis of recent estimates that at least fifteen

36. See, for example, Willard Abraham, "Is There a Gifted Child in Your Family?: 12 Signs of a Gifted Child," *Los Angeles Times*, 1 January 1961, (section: *This Week* Magazine).
37. Chapman, *Schools As Sorters* (note 8); Zenderland, *Measuring Minds*, pp.105–41 (note 8).
38. Mark Pope, "Jesse Buttrick Davis (1871–1955): Pioneer of Vocational Guidance in the Schools," *Career Development Quarterly* 57 (2009): 248–58.

thousand more, over a 100 percent increase, were presently needed – in high schools alone – to meet current demand.[39]

In retrospect, public schools would meet and exceed this demand in the span of about five years thanks to NDEA monies. Within the first year of funding alone, close to sixty counseling and guidance training institutes had been established at universities and other educational institutes across the country.[40] By 1964, there were thirty thousand guidance counselors working in the nation's public schools. The expansion of NDEA mandates in 1965 brought guidance counselors into elementary schools and two-year colleges, and by 1968, a total of forty-four thousand new counselors had been trained with NDEA funds since the law's passage in 1958.[41] Thus, thanks in large part to this NDEA stimulus, the profession would quintuple in ten years.

## Fairness in testing and measurement: From William Turnbull to Henry Chauncey

What historical work has been done on intelligence testing in schools in the late 1940s and 1950s is in agreement that the practice accelerated yet again over its interwar levels, but now was dogged by little or none of the critical objections that had been raised in the twenties and thirties.[42] But those who would usher testing back into schools in the wake of the NDEA first had to argue that methodological safeguards could be put in place to ensure educational testing was fair and no longer hampered by bias toward any particular group. Indeed such arguments were, at this moment, ascendant. In 1951, William Turnbull, psychometrician, ETS statistician and later a consultant to Conant's *The American High School Today* study, conducted a review of the current literature and advanced a pragmatic solution to the group bias problem.[43]

Turnbull first dispensed with what he allowed were the hasty and intemperate claims of group difference of WWI testers like Carl Brigham, noting that current practice had followed from "more sober reflection." Turnbull then also rejected more recent and painstaking attempts, like those of Allison Davis, to develop "culture-free" tests to address the concern that standard intelligence tests were "underestimating the scholastic ability of underprivileged children." There was a better solution and one closer to hand.

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39. Lawrence Derthick, "Hearings before the Committee on Labor and Public Welfare, U.S. Senate, 85th Congress, 2nd Session on Science and Education for National Defense" (5 February 1958), p.770.
40. Elliot L. Richardson, "The NDEA Idea," *The Reporter* 21 (1959): p.6
41. Clowse, *Brainpower for the Cold War*, pp.155–6, 159 (note 2).
42. Nicholas Lemann, *The Big Test: The Secret History of the American Meritocracy* (New York: Macmillan, 2000), pp.70–108. For lack of objection see Michael Ackerman, "Mental Testing and the Expansion of Educational Opportunity," *History of Education Quarterly* 35 (1995): pp.279–300, 280.
43. William W. Turnbull, "Socio-economic Status and Predictive Test Scores," *Canadian Journal of Psychology* 5 (1951): pp.145–9. For Turnbull's involvement with Conant's study see James Bryant Conant. Papers of James Bryant Conant, 1862–1987, "Memorandum for Mr. Hollister – Subject: Conant Project," 25 March 1957, UAI 15.898, High School March–June 1957, Box 42, Harvard University Archives.

We merely had to "test" existing tests by seeing how well their scores aligned with other external functional correlates like scholastic achievement. Or as Turnbull reassured, "the appropriate or fair test is the one that yields a high correlation with the [external, functional] criterion and that provides for each group an ability estimate corresponding to its performance on the criterion." This simply amounted to applying a validity measure to any given test, over and above an assessment of its reliability. While WWI testers had also used validity measures – indeed it was a kind of standard protocol – Turnbull intimated that the practice was "oft-neglected," and that its systematic resumption could readily resolve current debate over fairness in testing.[44]

He then turned to evidence drawn from several large-scale studies that compared the school performance and IQ of different social groups (with different degrees of educational advantage) while holding measured intelligence constant across groups (e.g., low SES–*high IQ* compared with high SES–*high IQ*, and low SES–*low IQ* with high SES–*low IQ*). Drawing together the findings of these studies, Turnbull concluded that intelligence tests might sometimes "overestimate . . . the scholastic success of the underprivileged children . . . [but] in no case did the intelligence measure underestimate the achievement of the underprivileged group." By this turn of reasoning and these sets of experimental data, Turnbull determined that testing – when carefully validated – was revealed to accurately predict school success, and thus was fair. Renewed attention to these aspects of psychometric methodology would bring the neutrality and incontrovertibility of science to what otherwise might be a squabble. "Fairness," Turnbull intoned, "like its amoral brother, validity, resides not in tests or test scores but in the relation of test scores to criteria."[45]

This mode of reasoning assumed, oddly enough, that a test score was somehow a stable measure of who someone was, not a mere snapshot of their performance on that test on that day. It also assumed that whatever unfairness was in need of addressing, it could not be both in the test, *and* in school life and the world outside of the test. If test scores matched school performance then fairness was mutually and methodologically conferred upon both: testing and schooling. From a historical vantage, this conception of validity clearly relied on a tight circularity that did not escape the field(s) of bias it intended. But Turnbull's confidence, and that of much of the rest of the testing community, was impressive, nonetheless.

Indeed, Turnbull's methods-piece became something of a touchstone in the field of educational testing in subsequent years. Armed with (and actually citing) Turnbull's article, Henry Chauncey, president of ETS, took to the House floor in 1958 during hearings for the NDEA to press that testing was fair – despite past controversy or suggestions to the contrary – and that plans to expand testing with NDEA funding were not only prudent but necessary in the current educational climate.[46] Chauncey explained current best-practice thinking to assembled Congressmen thus:

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44. Turnbull, "Socio-economic Status and Predictive Test Scores," pp.145–7 (note 43). For interwar conceptions and applications of validity criteria see Carl Campbell Brigham, *A Study of American Intelligence* (Princeton, NJ: Princeton University Press, 1923), p.62.
45. Turnbull, "Socio-economic Status and Predictive Test Scores," pp.148–9 (note 43).
46. Citing Turnbull, see Henry Chauncey, "Hearings before the Committee on Education and Labor," p.1111 (note 33). Rebutting charge of bias, Ibid., (26 March 1958), pp.1638–40.

> that if at the eighth or ninth-grade level or at college admission level you test students, some of whom come from underprivileged environments, and some of whom have come from favored environments, you might expect that those from underprivileged environments would do better than the test scores would indicate when they get to college. We have made a great many studies of this factor, and the situation is that they do not.[47]

This was Turnbull's validity argument merely rephrased. If tests were biased toward a group, they would underestimate that group's predicted performance in the world of school outside of or after the test. And yet according to Chauncey, tests did *not* underestimate the current or future ability of students; instead they fairly predicted it. Tests were valid and accurate, and moreover by implication, they tapped into something – a differential capacity – inherent in individuals. Notably, race, racism, or perhaps especially disparity in educational opportunity by race, are not mentioned by Chauncey, Turnbull, or any of the other NDEA advocates of testing. Rather, in these NDEA-era conversations, category descriptors like "socioeconomic group," "class," "disadvantaged," "privileged/underprivileged" became nonspecific catchall categories in which race could sit unnamed, if nonetheless presumed. Chauncey continued: "So, from a point of view of fairness, the tests are fair if what you are concerned about is predicting how well people are going to do in future days. They, therefore, can be fair in the sense they make up for the neglect that has taken place."[48]

Chauncey's additional flourish here, that not only were tests fair, they were also somehow corrective or compensatory – "they make up for neglect" – was not an uncommon assertion at this moment.[49] On the one hand, it takes on a powerful and highly specific resonance post-*Brown*, when a ruling of inequality and neglect by race (and in an educational context) had been impressed on the national consciousness. It also captured an unvoiced assumption common among testers in the 1940s and 1950s: that one's intelligence simply was what it was – a kind of personal essence or core individuality – distinct from one's particular cultural, socioenvironmental, life-historical context. "Neglect" in this sense amounted to ignoring this natural individual difference. One's personal essence could for example be hidden, obscured, overlooked (i.e., neglected) as a result of stigmas associated with a person's group. A 'naturally' bright person might, in other words, go unnoticed in an underprivileged background. Testing then was a way of freeing the individual from the anonymity or even stigma of their group. Notably, this conforms closely with the way historian Hamilton Cravens has come to interpret the shifting relation in the interwar years between group and individual in a psychometric context: "group membership was no fatalistic identity . . . if for no other reason than the individual's perceived idiosyncrasy."[50] And it was just in this sense that Chauncey averred before Congress that tests were corrective. They could made up for neglect, if only we would apply them more systematically. They showed you for what you were.

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47. Ibid., p.1641.
48. Ibid., p.1642.
49. Roger Russell and Lee Cronbach, "Hearings before the Committee on Labor and Public Welfare, U.S. Senate, 85th Congress, 2nd Session on Science and Education for National Defense" (27 February 1958), p.759.
50. Cravens, *Before Head Start*, p.257 (note 8).

And more systematic testing was the near-unanimous call at this NDEA moment. There was a sense, widely communicated within educational policy circles, that testing practice had atrophied during the Great Depression and intervening years. Relatedly, critics held that pedagogy had been trending progressively for decades toward fuzzy "social adjustment", "life adjustment", and a "one-size-fits-all" curriculum rather than rigorous orthodox academic subject matter or a curriculum differentiated by ability.[51] Chauncey painted the following picture:

> During the past 25 years, or maybe a little longer than that, there has been an emphasis on having all students carried through high school, and those who had the problem of teaching all students who range in ability from barely being able to understand the things that are taught in high school to the genius at the other extreme, have had to be taught together and it has naturally resulted in many cases, not in all cases, in a modification of the curriculum to suit the average.[52]

According to Chauncey's continued analysis, only half the states currently had any kind of consistent testing programs in place and these programs were predominantly end-of-school, college placement exams, such as the SAT. This was, Chauncey allowed, "closing the barn door after the horse has gotten out."[53] More testing was needed nationwide and it had to happen earlier in a student's schooling. Many others agreed about the importance and yet the general insufficiency of ability testing and grouping at this moment. Indeed this was a central organizing theme running through much of the NDEA expert testimonies, and this was precisely the problem that the NDEA was meant to rectify.[54] Even William Carr – executive secretary of the NEA and longtime proponent both of increased noncategorical federal funding of public schools and of the progressive life adjustment educational movement – allowed times had changed, and that a curriculum differentiated by individual ability was now needed.[55]

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51. Rudolph, *Scientists in the Classroom*, pp.17–26 (note 7); Hartman, *Education and the Cold War*, pp.135–6 (note 7).
52. Chauncey, "Hearings before Committee on Education and Labor," pp.1101–2 (note 33).
53. Ibid., p.1677.
54. Paul Elicker, "Hearings before the Committee on Labor and Public Welfare, U.S. Senate, 85th Congress, 2nd Session on Science and Education for National Defense," § Committee on Labor and Public Welfare (1958), p.783. Morris Meister, "Hearings before the Committee on Labor and Public Welfare, U.S. Senate, 85th Congress, 2nd Session on Science and Education for National Defense," § Committee on Labor and Public Welfare (1958), p.115. Russell and Cronbach, "Hearings before the Committee on Labor and Public Welfare," pp.756–70 (note 49).
55. William Carr, "Hearings before the Committee on Labor and Public Welfare, U.S. Senate, 85th Congress, 2nd Session on Science and Education for National Defense" (20 February 1958), pp.477, 489, 492. On the NEA (and Carr's) affiliation with life-adjustment philosophy and prior reluctance to ability group, see Amster, "Meritocracy Ascendant, " pp.204–11 (note 32). It should be noted that Carr, along with Henry Chauncey, was, from 1956–1958, a behind-the-scenes collaborator on Conant's *The American High School Today* study, which unequivocally called for more testing and grouping in the interest of the "academically talented." It seems Carr had read the writing on the wall as early as 1955 or 1956: joining the cause of testing and grouping looked to be the most promising way in the coming years to secure federal funding for education.

Henry Chauncey was certainly optimistic about what this legislative moment presaged for testing, grouping and curricular differentiation. He noted, "now the pendulum is swinging very rapidly, I am happy to say, at the present time, toward giving a suitable education to the academically talented who are so important in our society and being sure that they are not being neglected in favor of the average or the below average."[56] NDEA advocates of testing, moreover, at this moment had remarkably similar and specific ideas about when in a student's schooling additional testing should take place. Conant would soon argue in *The American High School Today* (1959) that new testing and guidance would be most effective if implemented just before and/or at the beginning of high school.[57] As if singing from the same hymnal, Chauncey, Carr, and other independent experts at NDEA hearings suggested more or less precisely the same timing, with some variation: new testing should be implemented between the seventh and ninth grades.[58]

All this harmonizing on testing – how much and when, and above all its fairness – amounted to a shared act of consensus formation, a choral procession of policy making that tripped along above a deeper hereditarian *basso ostinato*. If it could be agreed that individual differences were rooted in a priori individual *natures* and not in fact *produced* longitudinally by an inequality and ongoing process of sorting and stratifying, then measuring differences (and tailoring educational opportunities to them) transcended the social, the political, even the educational domains to which fairness could be said to apply. Testing and counseling would, NDEA experts insisted, achieve results that could be justified as fitting, predictive, and valid: amoral in relation to the technical maneuvers on which they relied, transcendently moral – simply and incontestably right – in relation to the educational realignments they brought about.

## NDEA visions: Guidance and the conditioning of intelligence from individual across peer group, school, and community

In the winter and spring of 1958, while Conant was completing and writing up the results of his school study, experts gathered in Washington D.C. to testify before Congress during hearings for the emergent NDEA. Just like Conant in *The American High School Today*, these NDEA testifiers envisioned the guidance counselor as a new kind of educational professional who imported psychometric training into the matrix of schooling, whose roles and functions intersected with students, teachers, and parents, and whose judgments and determinations mediated across these same social domains. In near unanimity, NDEA expert witnesses expressed the need not just for more testing but also for

56. Chauncey, Scholarship and Loan Program, p.1102 (note 33).
57. Conant, *The American High School Today*, pp.20, 113 (note 3).
58. Carr, "Hearings before the Committee on Labor and Public Welfare," p.509 (note 55); Russell and Cronbach, "Hearings before the Committee on Labor and Public Welfare," p.761 (note 49); Chauncey, Scholarship and Loan Program, pp.1104, 1646, 1677 (note 33); Lawrence Derthick, "Hearings before the Committee on Labor and Public Welfare, U.S. Senate, 85th Congress, 2nd Session on Science and Education for National Defense" (7 February 1958), p.243.

more guidance counselors and more systematic guidance counseling in schools across the country. Indeed a central title mandate of the proposed legislation was slated to fund such an effort. Title V of the NDEA bill would extend $60 million over four years to support "State educational agencies . . . to establish and maintain programs of testing and guidance counseling."[59]

Roger Russell, executive secretary of the American Psychological Association, stood before the Senate Committee and argued that testing had to be accompanied by guidance counseling in order to accomplish the goals of the NDEA. He went on to describe the current shortage of guidance counselors in schools across the country:

> A testing program will have only a fraction of its potential value unless it is accompanied by support for school counseling services and for the training of an adequate supply of counselors . . . At present only slightly over half the Nation's high schools even have a counselor devoting as much as half time to the guidance of all the students in the school . . . New services will require the training of new personnel in considerable numbers and in a relatively short amount of time.[60]

This extreme guidance counselor shortage was a critical need that NDEA funding should have been tailored to meet. Likewise, Russell's conviction that testing alone, without counseling, was inadequate, is noteworthy. It suggests, in harmony with Conant's argument, that guidance counseling was needed to confer authority onto test results and to enforce placement decisions based on testing.

William Carr likewise held to this fundamental relationship between guidance and testing during NDEA hearings. He noted that it was:

> very desirable that we should have in our schools a program of testing for aptitude and ability, for the early identification, roughly at the eighth or ninth grade of persons of outstanding ability, and that there should be wise and experienced vocational counselors in our secondary schools who can talk with these young people and, equally important, talk with their parents, point out to them the need of the Nation for scientific skills.[61]

In Carr's view, ability testing under the auspices of a comprehensive guidance program was a lynchpin that connected and coordinated individual talent with curriculum, all in the interest of the nation. In fact, the effectiveness of the larger NDEA project itself – or the "scholarship and loan program" as it was sometimes referred to – appeared to hinge on the institutionalization of systematic guidance and testing. Frank Thompson Jr., Congressman from New Jersey, intimated this fundamental relationship between guidance counseling and the NDEA mission when he asked expert witness Henry Chauncey: "Doctor, is it your opinion that without early identification and guidance any scholarship and loan program which this committee might approve could not be as effective as with it?" Chauncey, answered in emphatic affirmative: "Absolutely. I think it is completely

59. The National Defense Education Act, P.L. 85-864; 72 Stat. 1580–1605, p.1592
60. Russell and Cronbach, "Hearings before the Committee on Labor and Public Welfare," p.765 (note 49).
61. Carr, "Hearings before the Committee on Labor and Public Welfare," p.509 (note 55).

clear that the place where the critical decisions are made at the present time is at about the eighth or ninth-grade level." [62]

But would this coordinated, federally funded effort at talent identification amount to privileges for just a few at the expense of the majority? Was it an unfair distribution of educational opportunity? Addressing this possible perception, most expert witnesses studded their testimony with roseate circumlocutions that, if abstracted from the larger context of NDEA implementation, could reassure both speaker and audience that the proposed policy would be, in both means and ends, thoroughly democratic and egalitarian. Carr for example envisioned the NDEA as policy that would "recognize the worth and dignity of each individual and . . . provide an education which will lead to his fullest development."[63] Similar statements abound through these hearings. In the reflected light of this glossy shellac that has hardened across the surface of much of this NDEA testimony, it is important to remember that near-unanimous opinion among the assembled experts was in line with Conant's upcoming study recommendations: nature was stern. Despite the "worth and dignity of each individual," we were born unequal. Raw talent, prepotential, was fixed and different from individual to individual. The heart of the effort here was to find the best and brightest, the top 15 percent, the cream of the normal IQ distribution, and ensure they had access to the best curriculum public schools could offer. This durable grain in these discourses is apparent nearly everywhere beneath the varnish.

Frederick Hovde, Rhodes Scholar, chemical engineer, and President of Purdue University, expressed this point of view succinctly in his statement:

> It would be most unwise to attempt to give all American high-school students 4 years of training in mathematics, chemistry, and physics, and the sciences in general . . . What should be done at the present time in all the secondary schools of the nation is to select, identify, motivate, and counsel those students of greatest intellectual ability and provide for them special high quality educational instruction in the fields of their interest.[64]

If for Carr and others the testing and guidance effort was a decisive structural component that connected individual, curriculum, and nation, it was necessarily *first* a program that enabled and depended on "analysis of the individual" through measurement of ability. Importantly, in this conception, such analysis not only helped guidance counselors in their placement decisions, but also – if properly internalized by the student – would promote their own "self-understanding and self-direction" in relation to their measured ability.[65]

A great deal of the other expert testimony established this very same relation between testing, analysis of the individual, and self-understanding. For example, psychologist

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62. Chauncey, "Hearings before the Committee on Education and Labor," p.1646 (note 33).
63. Carr, "Hearings before the Committee on Labor and Public Welfare," p.538 (note 55).
64. Frederick Hovde, "Hearings before the Committee on Labor and Public Welfare, U.S. Senate, 85th Congress, 2nd Session on Science and Education for National Defense" (20 February 1958), p.89.
65. See f.n. 68 and 55.

Roger Russell, testifying before the Senate on behalf of the NDEA, drew forward the case study of Robert Fenchley, a young man confused – even somewhat disaffected – about his natural abilities in light of his prior school performance. Russel reported that Robert had:

> Entered high school with a long record of below average grades. He developed a dislike for reading and written work, and avoided preparing written assignments which would reveal his inadequacies. He . . . was becoming certain that mentally he was below average. A testing program showed that his reading ability was in the lowest third of the class, but it also showed that in 4 different types of reasoning . . . he was in the highest 5 percent. This test report delighted him. His teachers could now see new self-confidence and a changed attitude toward his work. With this new view of himself, he began serious preparation for a career in engineering.[66]

Traditional grading and subjective teacher judgments had kept Robert from important knowledge about himself, had led in fact to self-isolation or withdrawal. Conversely, objective, scientific measurement of his potential – via intelligence or ability testing – resulted in self-understanding. This self-understanding then begot what could best be described as a kind of transformation – not only in his view of himself, but in how his teachers saw him and how he related to and engaged with his work. It amounted in short to a kind of incipient self-making. Importantly, this process of analysis of the individual could initiate self-making in at least a couple of senses. It was self-making in the first as a kind of transformative reevaluation of one's personal essence as not base, but precious material. *I, Robert Fenchley, am not a dummy. I am intelligent. I have special abilities*. It could also facilitate and structure self-making in a much more directed sense, toward a specific vocational end with a particular professional identity, skill set and commensurate status and authority. *I, Robert Fenchley, might one day be an engineer.* Russell announced there were countless other case studies like Robert's: "if you were to see the files and files and files of cases where the testing programs have discovered talent, you would be convinced that they can unearth a resource that must be found for us."[67]

Other experts contributing to NDEA hearings attested to the same potential for self-making exemplified by the case of Robert Fenchley. In fact, purposeful transformation of the student was, for many, the essence of testing and guidance. As Commissioner of Education James E. Allen Jr. noted, "in counseling, as in all other guidance activities, the emphasis and the goal should be pupil self-understanding and self-direction."[68] In this regard, the idea of motivation frequently served as a kind of psychological shorthand to describe or indicate a pupil's relative agency or sense of purpose, specifically in relation to their self-knowledge of their true natural capacity for schoolwork. Discussion of motivation in this specific sense then was most often applied, selectively, to the hypothetical pool of "talented" or "superior" students. And if it was applied selectively, it was often applied solicitously as well, commonly evoking an almost automatic concern for an alleged *lack* of motivation among talented students.

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66. Russell and Cronbach, "Hearings before the Committee on Labor and Public Welfare," pp.760–1 (note 49).
67. Ibid., p.769.
68. Quote in Carr, "Hearings before the Committee on Labor and Public Welfare," p.538 (note 55).

For example, based on a recent large-scale student survey, Lawrence G. Derthick, National Commissioner of Education under President Dwight Eisenhower, succinctly concluded that: "Lack of understanding of potentialities, lack of motivation to continue education beyond high school, and financial reasons account for the loss of most of the superior students who drop out of school before completing their education."[69]

A student's "understanding of [their] potentialities" and their motivation were tightly fused in these conceptions and functioned together as a part of a causal chain that played a large role in determining academic success or failure. Confounding the matter of motivation and self-knowledge was the problem of unscientific, unstandardizable assessments of student performance like grades, along with other subjective judgments and impressions of teachers. To illustrate, Derthick offered this hypothetical example: "Getting high grades in a given course is not a reliable indicator of ability. Conscientious Mary may appear to be brighter than she is, owing to her diligence. But lazy John, with unusual intellectual ability, may mistakenly be thought to be less than average because he has never been motivated to work to his capacity."[70]

Hard work or laziness could result in over- or underestimation of someone's natural abilities, but truly one was only as bright as one was. Indeed, because of this, course grades and teacher opinions might very well muddy the waters, further obscuring underlying natural difference. And in Derthick's syllogism, it was the individual "with unusual intellectual ability," here John, who needed to be identified as such. This was the real end and the proper locus of our attention. Once John and others better understood just who they were, then proper motivation – motivation commensurate with their ability – could be cultivated in them. The method for properly harmonizing both "understanding of potentialities" and motivation together with underlying natural ability was of course intelligence testing and guidance counseling. "To identify effectively the talents of these young people and thousands like them, scientific testing procedure must be used. Only after such reliable identification do the counselors and teachers have the tools necessary for proper guidance and counseling."[71]

But, as the unfolding of Derthick's argument implies, a student's self-knowledge alone was not sufficient. If this kind of self-making could be initiated by a student's own awareness and assessment of her or his test scores, *in order to be sustained* the process would and should necessarily be carried across other layers of social life related to the student both within and beyond school. This would occur as peer groups, teachers, school administration, and even a student's home and community life were encouraged to align themselves with the advice of guidance counselors and along the field lines of psychometric percentiles and standard deviations. Henry Chauncey explained for example that, even if there was initially an immediate and pressing guidance counselor shortage, classes could nonetheless, for the time being, be equipped with specially prepared guidance handbooks that would allow teachers and students to review and interpret a student's own individual information *together with others* in a classroom setting. ETS[72]

69. Derthick, "Hearings before the Committee on Labor and Public Welfare," pp. 239–0, quote on 240 (note 58).
70. Ibid., p.241.
71. Ibid.
72. Chauncey uses "We" here. I presume this to refer to ETS as a collective, the organization of which he is president and which he represents at these hearings.

had, in cooperation with the American Professional Guidance Association, just developed such a handbook:

> that a student would have that would lead him in his thinking to bring to bear all the kinds of information about himself that should go into his decision, and, furthermore, that this could be worked out so that it would be done as part of a course, perhaps 6 weeks at the eighth or ninth-grade level, that critical period, and in which the homeroom teacher, with the aid of a manual, would direct discussion and there would be a good deal of discussion with regard to the future and their plans.[73]

This had already been tried, Chauncey noted, with "amazingly effective" results. Clearly as well, "all the kinds of information" that would help a student in making decisions about his or her future would pivotally include test scores at that "critical period" of eighth or ninth grade. Otherwise, Chauncey believed, "decisions [would] be made willy-nilly by the students, and we'd better try and have them develop an understanding of all the facts that should go into a consideration of this matter."[74] On this point, he stressed that:

> One of the most significant parts of the enterprise is the group discussion. As I was mentioning this morning the fact that students in the same grade begin to discuss what the future is going to be like and what they need to be thinking about with regard to the future has a tremendously stimulating effect on them.[75]

Thus here we see the powerful potential for subject formation in the crucible of the group: the jostling of individuals together, the comparing, self-sorting, the reckoning of one's place in relation to each other, all in regard to measured ability or intelligence. This appears to have been "stimulating" from Chauncey's perspective. It may indeed have been quite stimulating for the top 15 percent of test scorers.

Of course not only one's peer group, but teachers too, were another essential part of this circuitry of social power that helped fuse individuals and test scores together. It is clear as well, from the previous example, that the hope and intention was that teachers would work in close sympathy with the methods of modern testing and counseling. Roger Russell noted that: "Teachers, too, need information on the potentialities of students. When they have this information they must be properly prepared to make full use of it."[76] In Russell's opinion, ability or intelligence test data were of use to teachers precisely because their subjective judgments about student potential were prone to error. Citing a recent study, Russell explained:

> Teachers recognize many of the able individuals, but they overlook the very ones who have not developed scholarly interests and ambitions. Indeed when a psychologist asked 6,000 teachers

73. Clifford W. Williams, Hearings before the Committee on Education and Labor, U.S. House of Representatives 85th Congress, 2nd Session on Scholarship and Loan Program," (4 November 1957), p.1645.
74. Ibid., pp.1682–3.
75. Ibid., p.1682.
76. Russell and Cronbach, "Hearings before the Committee on Labor and Public Welfare," p.761 (note 49).

> to name the "most intelligent" child in each of their classes, only 15% of them were correct in their choice, as judged by other evidence. Unless teachers recognize superior potential, they will not demand that the pupil do better than average work, and will not offer him those special challenges which quicken an interest all too readily dulled by routine classwork.[77]

Russell cast the same doubt on teacher assessments that Derthick had. Testing was thus essential in helping teachers train their decision making above their own personal impressions and prejudices. Once talent had been properly located, then teachers would be able to much more efficiently and accurately differentiate expectations and access to curriculum among their talented and not-so-talented students.

But to be truly effective, this common sense of inherent difference in intelligence or academic talent had to be extended, yet again, beyond the bounds of school into a student's home and community life. Again here, guidance could play a crucial role. On this matter Roger Russell held:

> I think this is a very important point, and I would hope that counseling and guidance programs in the local schools would be carried beyond the school environment and the student life into the home and to the parents . . . The parents should be brought into the guidance situation if we are going to get these talented youngsters trained. If they could be brought into the guidance situation and see that information can be provided to them which is to the advantage of their child and their relations with their child, I think the greatest conviction would come. A few cases in a community would do a world of good in getting other parents and families interested.[78]

Aligning the sensibilities of parents and family with the stipulations of guidance could bring about the "greatest conviction" in regard to beliefs about natural difference and the need for curricular stratification. Moreover, seeding the community with a few enthusiastic families could do a great deal to persuade others.

Clifford Williams, Supervisor of the Gifted Child Program for Portland, Oregon schools, similarly addressed the importance of entraining parent sympathies with the advice of counselors. He further combined this perspective with an argument for the potential cost-effectiveness of motivating families to selectively nurture their own talent:

> Identifying capable students as early in their school years as is possible, with the idea that, once we know who these most capable children are, we cannot only provide more appropriate instructional programs for them through the public schools, but we can also counsel with families, with parents of these children, as to the likelihood that here is a child who is going to benefit by a college education, and therefore, over a period of years, we can make it perhaps more likely that a family will take onto its own shoulders the share of the financial responsibility of a child's education.[79]

Here too what becomes apparent, from yet another angle, is that much of this argumentation is addressed to a protean question that could take numerous forms across a variety of registers: in who do we invest our belief and our resources? Perhaps a family

77. Ibid.
78. Ibid., p.769.
79. Williams, "Hearings before the Committee on Education and Labor," p.573 (note 73).

might learn that one of their children was clearly more 'capable', and better suited to pursue a college education, than another. Then it was possible this family could be persuaded – in their own emotional and economic interest – to invest disproportionately in one over another. There is, likewise, an order implied in this process. Firstly select: winnow the field down. Then second: motivate, nurture, manage and attend to the expectations of this select group. This sense of ordering and priority is expressed numerous times across witness testimony. As Williams put it: "Any plan which is considered for increasing the proportion of young people to go to college must first recognize the fact that there is this need to identify capable students early so that social expectations and motivation can be effected [*sic*] from an early age on."[80]

For his part, Henry Chauncey found a great deal of enthusiasm among parents for the advice and input of guidance programming. Referring to the results of his teacher-led pilot guidance course, he recounted: "A large number of parents wrote in and said, 'This is wonderful. This is the first time my boy has understood why he is in school, what the whole purpose of it is.'"[81]

This whole process of talent identification and cultivation envisioned by these NDEA policy makers and experts in psychology and education thus ideally transected and drew together numerous strata of social life around students. It amounted to a circuitry of self-making that conditioned student subjectivities in relation to test scores and across and within the domains of self, peer group, school, family, and community. Importantly then, while it drew certain individuals into the foreground, it did not shape individuals in isolation. Instead, ideally, everyone together all at once worked to circulate this individuating ideology of intelligence or academic talent, and to negotiate who belonged where in the curriculum based on its measured differentials. Guidance counseling, an emergent profession, to be staffed increasingly – thanks to NDEA funding – with ranks of young graduates, had a critical role to play.

In fact guidance counseling was perhaps the most important link and structuring component in this rapidly systematizing method for distributing of social power. Guidance counselors would help align the judgments of parents, teachers, students, and school administrators with modern psychometric knowledge of natural individual difference, and help in turn to align all these components, as Carr noted earlier, with the interests of the nation. All this can be understood as a more systematic attempt – based on the measurement of intelligence – to manage a constellation of attitudes, expectations, and beliefs around and within the academically talented child. Again, academic talent was held to be a largely *natural* – or at least fixed – individual cognitive difference. You either had it or you did not. But the realm of the *social*, the affective, became incredibly important for these academically talented individuals *once they were identified as such*. In fact this social-emotional matrix had to be restructured – formally and informally, institutionally and interpersonally – in the interest of these academically talented individuals. Hovde put it bluntly: "I believe ways and means must be found to select, motivate and educate

80. Ibid., p.573; See also Derthick, "Hearings before the Committee on Labor and Public Welfare," p.242 (note 58).
81. Chauncey, "Hearings before the Committee on Education and Labor," p. 1646 (note 33).

every individual who possesses the natural inborne talent to contribute to the advancement of knowledge."[82]

## Conclusion

Hovde's unapologetic credo recalls that familiar ordering principle – the protocol – implicit here as it was in so many others' testimony: first select, then motivate and educate. Only once you had identified the "naturally bright" or inherently "able" learner was it then important to address his or her socioaffective needs as a learner. This very protocol or ordering principle has an important embedded assumption: that despite all avowals of and genuflections to nature–nurture interactionism, nature was more important than nurture, and all the cultural, historical, and environmental processes, such as education, that nurture comprised. In this model, the social, affective, and subjective aspects of learning and the learner would be taken into account, valued or attended to only (or primarily) in cases of supranormal intelligence. Thus the realm of the social assumed contingent, second order status, causally downstream from nature, from a priori fixed, native ability. In other words, social factors were important to consider in order to motivate the naturally bright toward fulfillment of their potential, but attention to such factors could not augment someone's potential. They could not make someone who was not "bright," "bright." At the end of the day, you either had what it took or you did not. And why waste all these social and educational resources on so many who just did not have it?

Returning to Roger Russell's earlier testimony, it was precisely because young Robert Fenchley was found to have very high measured intelligence in "4 different types of reasoning" that his feelings about himself and his abilities mattered to his educational development. His frustrations, his faltering confidence, his new self-understanding (thanks to testing), his renewed motivation, his transformation: these were all noteworthy and important to attend to, both as they marked and also further enabled his progress. And of course this was not just about Robert and his test scores in isolation. His scores communicated relative worth and position in relation to his group. He was redeemed in his own eyes and the eyes of others when he discovered his right place in relation to them. Robert and countless other individuals like him were thus plucked from out of the masses – by testing and counseling – and protagonized, rendered more fully individual. Their individuality becomes the center of the story. The spotlight falls on them. We are encouraged – in these policy narratives – to be concerned with their hopes and fears, their feelings about themselves in relation to others, their need, their *right*, for educational opportunity commensurate with their abilities. Of course the spotlight in all these NDEA expert testimonies here was trained only on the talented, the positive selection of what Conant and others would demarcate as the highest scoring 15 percent of test-takers. What was intended for everyone else, the 85 percent in the shadows?

Moreover, it was precisely through the *measurement* of individuals that experts could maintain that NDEA policy would vault politics and prejudice. The old way of educational grouping by race – white school, black school – could be publically condemned by a majority of Americans as a spiteful and atavistic practice, and one clearly motivated by

82. Hovde, "Hearings before the Committee on Labor and Public Welfare," p.88 (note 64).

a racism to which the more backward regions of our country perhaps still clung. But that was the past and those days and those ways were numbered. The writing was blazing on the wall, lit there by the nine Warren Court justices presiding over *Brown versus Board*. It was clear what the way forward would be. Conant, Chauncey, Turnbull, and many other influential educators at this NDEA moment argued that this new way of grouping, intramurally by measured ability, was scientific, objective, and not only fair and free of prejudice, but actually a means of *overcoming* prejudice. Through ability grouping, and with the expert technical assistance of guidance counselors embedded in schools, educational opportunity could be fairly and judiciously tailored, individual by individual, to intelligence.

Yet as has been suggested here and elsewhere, individual intelligence instead could overlap, substitute, and perform ideological labor in place of race in this post-*Brown versus Board* moment and in these particular educational contexts.[83] Despite this substitution or transference in discourse and conception, race and individual intelligence remained entangled. Policy makers who thought they were acting on the basis of scientifically objective measurable individual intelligence were nonetheless still following and acting out the deeper contours of race. And if this argument has stressed the relevance of racism and race-making here, it is because of the proximity of *Brown versus Board* to NDEA legislation, and the long history in the United States of stark educational inequality by race that *Brown* sought to end. Nonetheless, this self-making in regard to measured intelligence was of course entangled with more than race, and could also transect and draw together other social categories like class or gender. Consider again Derthick's allegory of Lazy John and Conscientious Mary, and the kinds of behavior Derthick attributed to "real smarts" and those that signaled overachieving. Here we sense how readily in this context gendered norms and expectations might elide with assumptions about intelligence.

All of this depended on, was anchored to, acts of measurement that both localized and reified intelligence as a more or less fixed personal essence inhering in the body of the learner. Drawing on the work of Norton Wise and Crosbie Smith, historian John Carson notes that "the act of measuring imparts value to the object measured."[84] "Measurement" of non-objects or non-things like mind or intelligence then conceivably accomplishes a "thing-making" or reification of a "non-thing." Intelligence might have been understood instead at this moment as dynamic systems of social transaction resulting in different kinds of knowledge making – specific to task, discipline, and learning context – to which different individuals enjoyed, were allowed, or sought out different kinds and degrees of access based on their position and sense of agency in a complex, uneven, and inequitable social topography. Instead, through individualized measurement, intelligence was re-stabilized and re-localized as an inherent and differential property of selves. Not only did this conception of intelligence – as a measurable fixed personal essence – justify and feed the process of identification and selection, but the process of identification and selection in

83. Porter, "A 'Precious Minority,'" pp.585–6 (note 4).

84. Carson, *The Measure of Merit*, p. 225 (note 13). M. Norton Wise and Crosbie Smith, "Measurement, Work and Industry in Lord Kelvin's Britain," *Historical Studies in the Physical and Biological Sciences* 17 (1986): 147–73, 172.

turn fed and strengthened the conception. How talented the protagonized seemed, indeed became, once we invested our belief in them.

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