

Personalities at Work: Psychological Testing and the Work Ethic in America, 1940-1980

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Abstract

I conducted research at the Rockefeller Archive Center for my dissertation and current book project on the history of psychological testing in American business. My work has examined the network of psychologists and management experts who developed and implemented personality tests, such as the popular Myers-Briggs Type Indicator. The Rockefeller Archive Center was a crucial site to understand the origins, spread, and influence of personality tests. As a historian of science and business, I sought to understand the translations and circulations of research between psychologists and business. I focused particularly on the way that research into personality and work refracted existing social inequalities and biases of race and gender, at the same time that researchers sought to counter inequality through psychological testing. Both the Rockefeller and Ford Foundations funded research in personality psychology and in management that studied the psychological capacities associated with creative and managerial work. In particular, these two foundations both provided direct grants to four key organizations discussed in this report: Berkeley's Institute for Personality Assessment and Research (IPAR), Educational Testing Service (ETS), the Opportunities Industrialization Commission (OIC), and the Public Agenda Foundation (PAF). IPAR and ETS were especially important as early sites for research and publications on the Myers-Briggs Type Indicator, a personality test whose history I examine in my project. OIC and PAF both conducted research and implemented training programs that linked motivational psychology to the work ethic. All four organizations were important sites for studying the personality traits associated with work in 20th-century America.

Introduction

I conducted research at the Rockefeller Archive Center for my dissertation and current book project on the history of psychological testing in American business. My work has examined the network of psychologists and management experts who developed and implemented personality tests, such as the popular Myers-Briggs Type Indicator. They claimed that measuring and cultivating the psychological capacities of corporate workers—their capacity to motivate themselves, think intuitively, and work in teams—would garner economic returns for the corporations, and emotional fulfillment for the worker. As a historian of science and business, I sought to understand the translations and circulations of research between psychologists and business. I focused particularly on the way that research into personality and work refracted existing social inequalities and biases of race and gender, at the same time that researchers sought to counter inequality through psychological testing.

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Studying the Creative Personality: Berkeley's Institute for Personality Assessment and Research, 1949-1955

The Institute for Personality Assessment and Research, based at the University of California, Berkeley, was a hub for research into the creative personality, from its formation in 1949. Like much of later twentieth-century psychology, IPAR's roots lay in World War II, when the Office of Strategic Services commissioned psychologists Donald MacKinnon and Henry Murray to develop methods for officer selection.¹ The "assessment center" methodology they developed for military officer selection shaped IPAR's research agenda. Rockefeller funding was crucial to IPAR's founding and early activities. Between 1949 and 1953, IPAR received \$100 000 in grants from the Rockefeller Foundation (RF). In the initial proposal to the RF, IPAR described the main purpose of its fledgling institute as the "development of techniques for identifying personality characteristics which make for successful and happy adjustments to modern industrial society²" through studying the "determinants...of creativity and superior performance in work."³

The assessment center methodology used to study personality at IPAR drew on a diverse set of methods to understand the qualities associated with creative personalities. In the initial proposal to the Rockefeller Foundation, IPAR asked for a "comfortable furnished house" that included outdoor space, a kitchen, and sleeping quarters, in order to assess research subjects in the holistic fashion⁴ required by the assessment center methodology. IPAR ended up converting a fraternity house at Berkeley into a facility where researchers conducted weekend-long intensive assessments of candidates. Candidates represented various professions across the arts and sciences, from poets to mathematicians, sharing a common trait of creativity. Researchers subjected them to a barrage of interviews, simulations, games, and psychological tests from the first morning to the final evening. After a day of testing, interviews, and games, the subjects came together for dinner and cocktails, still under the watchful eye of participant-observer

psychologists who later turned these test scores and scribbled notes into candidate profiles to understand the characteristics of the creative personality.

One IPAR experiment with the perception of visual lines became well-known as a study of independence of judgment.⁵ In his early 1950s doctoral work with psychologist Solomon Asch, IPAR researcher Richard Crutchfield found that the naïve experimental subject, under (false) social pressure, would err in judging the length of lines; if the rest of the participants in the experiment voted one line to be longer, despite visually appearing to be longer, researchers found that the naïve experimental subject would generally side with the majority, against the evidence of their own perception.⁶ In another variant of studies on perception, researchers placed subjects into the small dark attic in the IPAR research house and asked them to judge, by touch alone, if a line was vertical or horizontal, based on the claim that perceptual processes of touch were associated with cognitive processes associated with creativity.⁷

Asch and Crutchfield's research served as one inspiration for the dramatic Stanford Prison experiments conducted by Stanley Milgram in 1963, which moved from studying conformity to studying obedience to authority, purporting to show that ordinary individuals were willing to inflict pain on strangers under pressure from an authority figure.⁸ Creativity took on ideological significance in 1950s and 1960s America, yoked to anti-conformist attributes like independence and originality of thought that were valued in American psychology, politics, and business. Politically, fostering the capacity to decide independently—and hence capacities of creativity—was treated as a crucial protection against conformist thinking, associated in Cold War political discourse and psychological research with the authoritarianism of Nazi Germany and Soviet Russia.⁹

By the 1950s, creativity research at IPAR had moved into the business world. IPAR researcher Frank Barron defined creativity as a “perceptual system which is geared to allow into itself the widest variety of phenomena, even though the immediate consequence is apparent disorder, or even chaos.”¹⁰ In order to measure a perceptual preference for complexity, Barron administered anagram and word association tests to subjects and assessed the novelty and rarity of their responses.

Based on his research at IPAR, Barron became a consultant for businesses, part of this broader wave of “creativity consultants” who appeared in American corporations in the 1950s and 1960s.¹¹

In focusing on the “creative personality” by bringing in high-achieving people already deemed to embody creativity, IPAR researchers ended up studying largely white, middle and upper-class males—even as their research demonstrated connections between androgyny and creativity. One notable exception to the male subjects came in the longitudinal study of creative female mathematicians, spearheaded by female IPAR psychologist Ravenna Helson.¹² At the first conference dedicated to the Myers-Briggs Type Indicator in 1975, Helson presented results that showed a correlation between high scores on the intuition scale of the Myers-Briggs and measures of androgyny—as measured by childhood interests in “tomboy activities” and psychological measures of masculinity/femininity that had been developed at IPAR as part of its battery of personality tests. This masculinity/femininity scale was also adopted by Donald MacKinnon to conclude that creative men displayed similarly high measures of androgyny.¹³ The capacity to transcend traditional gendered characteristics—as another instance of “originality”—became wedded to understandings of the creative personality at IPAR.

IPAR was important because it was one of the first research centers to adopt an early version of the Myers-Briggs Type Indicator. MacKinnon had met the test developer, Isabel Myers, while teaching at Bryn Mawr in the late 1940s, and brought the test to IPAR. As one of the earliest psychological research centers to correlate scores on the Myers-Briggs with other psychological tests and experiments, IPAR data was particularly valuable for researchers as evidence for its validity and utility as a psychometric instrument. In the next section, I turn to the first publisher of the Myers-Briggs, Educational Testing Service.

Publishing and Evaluating Tests: Educational Testing Services, 1956-1980

A key organization in the history of psychological testing is Educational Testing Service, a nonprofit organization based in Princeton, New Jersey, which received several grants from the Rockefeller Foundation to fund research into testing and education. The Rockefeller Foundation archives contain several project files, grant applications, and reports from ETS, which shed light on the development of standardized tests in business and in education and reveal how ETS sought to respond to public criticisms of tests.

ETS and the Myers-Briggs Type Indicator, 1956-1962

Although today it is best-known for publishing standardized aptitude tests—the SAT and GRE—Educational Testing Service was also the first publisher of the Myers-Briggs Type Indicator, beginning in 1956. Incorporating a psychological test fit with ETS’s interest in developing standardized personality tests, as expressed in proposals to the Rockefeller Foundation for the establishment of a personality research center.¹⁴ Yet the MBTI faced skepticism from ETS staff psychologists.¹⁵ One point of contention between ETS psychologists and Myers was that the MBTI was based on a personality theory (derived from psychoanalyst Carl Jung), rather than on an empirically-derived trait-based approach to personality psychology. Many of the ETS staff psychologists had been trained in factor analysis, a methodology that treated personality as reducible to a number of discrete traits, discovered through quantitative statistical methodologies. In contrast, the Myers-Briggs was explicitly rooted in the theoretical assumptions of Carl Jung and a qualitative approach to personality. Some ETS staff members were disdainful of Myers and her lack of psychological credentials, referring to her with distinctly gendered terms like “that little old lady” or “that housewife.”¹⁶ Reciprocally, Myers

maintained a rocky relationship with ETS psychologists, and ended up taking the Myers-Briggs to a new publisher in 1975.

What was valuable to see in the archives is how *few* references to the Myers-Briggs were contained in ETS materials, a reflection of the company's general disinterest in promoting it. The MBTI was never a priority for ETS, which instead focused on the development of standardized academic and job-related tests.

Job Testing and Racial Discrimination, 1966-1972

Between 1966 and 1972, the Ford Foundation gave over \$430 000 to ETS for a joint research project, in conjunction with the US Civil Service, on the validity of job testing for minority applicants.¹⁷ ETS published several cognitive and aptitude tests, including tests of perception, vocabulary, and arithmetic, which employers used to screen job candidates for hiring or promotion decisions. As described in the initial 1966 proposal to the Ford Foundation, the project sought to “examine relationships between test performance, education, experience, and job performance for identifiable cultural subgroups.” More specifically, ETS's goal was to create tests for job abilities that would yield scores that could predict job performance from different subgroups. It did so by focusing on one category of job—medical technicians who worked in Veteran Affairs' hospitals—and analyzing whether the predictive power of tests was consistent for ethnic subgroups.

In the wake of equal employment legislation stemming from the 1964 Civil Rights Act, these job tests came under renewed scrutiny for their potential to perpetuate discrimination against racial minorities.¹⁸ In response to the criticisms of tests engendered by civil rights activists, who argued that tests were biased against minorities and unrelated to job requirements, the Office of Federal Contract Compliance drafted an order that would require any tests used for hiring in the federal civil service to be validated by ethnic group and for each particular job. In addition, widespread public criticism had led to suspicion among personnel managers and in policy about the use of testing.¹⁹ Yet, ETS cautioned that

eliminating tests might open up employment to more discrimination, as it would lead employers to place more value on more “subjective” measures, like interviews or personal networks. Thus, this project sought not only to research the validity of psychological tests, but also to provide evidence for non-discriminatory uses of test.

ETS psychologists debated the meaning of bias and fairness in testing: did fairness mean that the test would predict the same performance for any given test score? Or that different ethnic groups would have the same cutoff points for consideration for jobs?²⁰ As the initial 1966 proposal noted, the fact that a test differentiated between “culturally disadvantaged and advantaged groups does not necessarily mean that the test is invalid,” because differences in scores might reflect the social inequalities that led to disparate educational outcomes. Remedying bias, then, was not necessarily a psychometric question, but a question of “social policy.”²¹

The main results that ETS researchers found, as reported to their funders and in their published materials, were that aptitude tests were valid for minority groups; more specifically, they found no major differences in predictive power by ethnic group for tests that are predictive of job performance. The study proceeded, as many attempts to validate job tests did, by correlating tests with ratings of supervisors in an attempt to ascertain the predictive power of tests. ETS found that supervisor ratings correlated with the sex and race of both the rater and the ratee—Black managers were more likely to score their Black employees higher, and white managers were more likely to rate white employees higher. Yet rather than follow up on this finding, ETS focused on the claim about the predictive power of tests.

Archival materials reveal how facts and results are constructed out of the messiness of research, including difficulties in acquiring consent from research subjects. Although ETS went through unions to secure agreement to research on workers, researchers found that subjects were uninformed about the purposes of the studies. More significantly, many of the tasks demanded of workers “proved to be new, unrepresentative, and too difficult for the majority of subjects.”²² As reported in internal trade literature from the US Civil Service, *Civil Service Journal*, even though cooperation of agencies and employees had been apparently

secured, they faced reluctant subjects: “Despite thorough briefings, employees were sometimes suspicious. In one installation, a number of minority and non-minority employees refused to cooperate and walked out.”²³ Other than these brief allusions to subjects’ reluctance and refusal, there is little detailed discussion of the subjects of research or the challenges this reluctance may pose to findings. Silences and absences in the archive are equally revealing.

Evaluations of the initial project proposal from industrial psychologists provide a valuable window onto the conflicting way ETS research was assessed by peers.²⁴ Although conceding that ETS had a good reputation for solid research in psychological measurement, psychologists highlighted concerns about the narrow focus of the study and its misguided attempts to understand racial differences in testing. One more overt criticism of ETS’s approach came from psychologist Elliot Mishler, who accused ETS of ignoring the “larger social and psychological contexts in which work motivations and job performance are embedded.”²⁵ ETS was too concerned with “defending the ‘fairness’ of personnel testing procedures” than helping to reduce economic inequalities that affected minority employment, Mishler charged. Given that the ETS — a publisher and promotor of standardized tests—was conducting the study, it was unlikely they would conclude that tests should not be used.

Yet researchers involved in the project noted the limitations of focusing on cognitive and aptitude tests in evaluating capacities for work. Maslow, one of the researchers involved in the ETS project on psychological testing for minorities, had described how barriers to black employment lay not just in discrimination, but in the lack of a work ethic—because of historical and present exclusion from the rewards of work, Black Americans did not “learn the ‘intrinsic value of work’ and thus had “less faith in the systems of rewards.”²⁶ Maslow argued that cognitive and aptitude tests alone would not help match people to jobs; instead, selection criteria should emphasize non-cognitive capacities like motivation and the trainability of workers.

In 1972, ETS hosted a conference that brought together individuals from academia, business, and government to reflect on the implications of this study for job testing

programs.²⁷ One of the lone voices of criticism at the conference was Edward Casvantes, a self-identified Chicano social scientist, who criticized the narrow methodology of the ETS for ignoring the broader social context in which testing and employment took place. He argued that the construction of the ETS study ignored the social context in which testing was embedded and neglected the background and social circumstances of the test-takers. As Casvantes noted, the core question that went unasked was “whether the numbers that were so extremely well gathered and then extremely well manipulated are values that represent...the real life circumstances with which the incumbents have had to deal.”²⁸ ETS did not lack access to data on social context; however, it chose not to incorporate this data into the construction of the study. Casvantes suggested that ETS hire more minority researchers to design research; and most importantly, that researchers pay attention to the “attributes, the history, and the social circumstances surrounding the individuals who are taking the tests.”²⁹

Despite these methodological flaws, Casvantes projected that the results of this study would circulate in ways that confirmed ETS’s existing support of psychological tests. “I can predict right now,” he noted, “that it is the ETS figures and conclusions—and not the criticisms of them, such as are being presented in this paper—that are going to be bandied about in academic circles, in Congressional hearings on the validity of tests for minorities, and in educational circles where massive student group testing goes on with only mildly increased concern.”³⁰ For example, in the study of medical technicians, ETS researchers claimed that there were not enough Hispanic medical technicians to provide an adequate sample; and yet they still reported that tests predicted performance equally well among ethnic groups. Even though they gave the disclaimer about limited sample sizes, they still published figures—a publication that gave these figures legitimacy.

Public criticisms of ETS, 1980

Criticisms of standardized testing would continue to dog the ETS in the next few decades, as archival materials reflect. In 1980, consumer advocate Ralph Nader commissioned Anthony Nairn to write a report on ETS, which received widespread

attention. The report eviscerated standardized tests for displaying class and race biases and for failing to predict college performance; it cautioned the American public that ETS had undue influence over American education. ETS responded in a series of reports of its own, contained in the Rockefeller Archive Center, which highlight the strategies ETS used to rebut public criticism of its testing programs. ETS sent its two reports to the president of the Rockefeller Brothers Fund, enclosed with a letter charging Nairn and Nader with making false allegations, “the result of distortion, statistical manipulation, and misrepresentation.”³¹

ETS took issue with Nairn and Nader’s main critique, picked up in popular press, that the SAT was no more valuable than rolling dice in predicting college performance. As ETS responded, Nairn took an erroneous value for the SAT’s validity and used the wrong statistical methodology to arrive at that claim.³² Nairn and Nader’s report claimed the ETS suppressed information on the relationship of test scores to family income; further, they charged standardized tests with perpetuating educational inequalities because of the correlation between test scores and family income. ETS responded by pointing to the decade’s worth of statistics it had published on the relation between test scores and income. More significantly, the ETS argued that admissions tests, although reflecting income, were no more biased than other measures, like grades; the fault was not in the tests, but in the inequalities in schools and society, reflected in all measures of educational attainment. “The fact that we are not now all equal on educational development and achievement,” the ETS charged, “should not be obscured by heated charges of test bias and discrimination.”³³ Moreover, ETS defended standardized tests as *increasing* access to education, because lower income students with good test scores were able to get into selective schools: “history indicates that selective admissions to high education was far more a matter of class and economic status prior to the use of national admissions tests than it has been since.”³⁴ Lastly, ETS rebutted the claim that it ignored more subjective personal qualities, such as judgment or creativity, by pointing to the research they had funded on assessment of personal qualities.

Training Work Motivation: Opportunities Industrialization Commission, 1964-1970

The Rockefeller Foundation funded several vocational training interventions that sought to counter the disproportionate un- and under-employment faced by Black Americans. One job training program funded by the RF was the Opportunities Industrialization Commission, founded by Reverend Leon Sullivan in Philadelphia in 1964. The Rockefeller Foundation gave \$115 000 to OIC for the 1969-1970 year. Sullivan's lifelong project promoted economic participation of Black Americans as the route towards political and social inclusion, including boycotts of businesses that refused to hire African-Americans, and job training at OIC. Such economic participation began, according to OIC's principles, by cultivating motivation— a psychological capacity encompassing self-esteem, pride, and confidence.

Interviews and correspondence with foundation staff show that OIC appealed to government as part of their emphasis on development of black business as solution to racialized urban poverty. Foundation officers visited the Philadelphia OIC and were impressed by the leadership and trainees, praising Sullivan's leadership. In addition to Rockefeller Foundation funding, the Opportunities Industrialization Commission received large amounts of federal funding due to Sullivan's lobbying and to the program's emphasis on self-help. OIC leadership presented the program as an alternative to the protest and militancy associated with the civil rights movement, incorporating the slogan "build, brother, build" as a contrast to "burn, baby, burn," the rhetoric associated with the 1965 Watts protests. President Johnson visited the OIC in 1967, and then committed money from the Office of Economic Opportunity. In 1971, OIC received a large grant—over 30 million dollars—from the Department of Labor under Nixon's administration.³⁵

Participants in vocational training were required to begin with the 'Feeder' course, intended to foster "psychological, emotional and motivational preparation" for the remainder of job training.³⁶ The initial course took place in a former jailhouse in Philadelphia, converted into a classroom plastered with motivational posters trumpeting phrases like "75% Attitude, 25% Skill." OIC participants all lived under

the poverty line, in states of under- or unemployment; few held high school diplomas; some had criminal records, which reflected how the encroaching carceral state disproportionately affected African-Americans.³⁷ Modules in the Feeder program covered personal grooming and hygiene, job-searching and work conventions; other modules taught Black history, focusing on the exclusions and successes of Black Americans in economic life. Gendered expectations about the role of men and women in the workforce also influenced the format of OIC's vocational training. Although both men and women participated in OIC training programs and attended the same initial Feeder course, as they moved into specific vocational training, they were tracked into gendered streams that reflected available employment opportunities and gendered divisions of labor. Men were tracked into air conditioning repair, while women were tracked into punch-card operating, a form of feminized labor. This gendered vocational tracking reflected wider societal norms about the roles of men and women in the workforce.

Although recognizing the economic and cultural disadvantages of participants as well as the necessity of government investment and social opportunities, OIC's Feeder program emphasized self-help. As promotional materials declared, even "realizing the many frustrations and road blocks faced by the deprived individual, it is imperative that the trainee be motivated to develop a sense of self-pride and self-reliance to enable him to work and walk with human dignity."³⁸ Sullivan cautioned that material resources alone had limited effects on economic development: "no amount of money poured into a community can help...unless the people who live there are inspired and motivated to first help themselves."³⁹ Material resources would not suffice without "inner resources—motivation, discipline, and the will to succeed."⁴⁰ Sullivan evocatively described the Feeder program as motivating students like "wind filling the sails of a sailboat" or like "a stream pushing the wheels of a water wheel."⁴¹ A form of "psychological conditioning," Opportunities Industrialization Commission sought to "unwash the brainwashed minds" damaged by entrenched racism in America.⁴² This claim that Black Americans had been psychically damaged by slavery and segregation shaped social science research and policy interventions in postwar America, among both white and Black social scientists and policy makers.⁴³

The Feeder program's explicit goal was to turn people seen as unemployable into desirable employees, and this was defined as an internalization of the work ethic: "By good employees we mean men and women who know, appreciate, and even enjoy their jobs."⁴⁴ Through "motivating the person who is difficult to reach," OIC sought to convert economic disadvantage into a suitable work ethic.⁴⁵ In the next section, I turn to examine how psychological understandings of the work ethic framed social surveys and public debate over American work.

Surveying the Work Ethic: Public Agenda Foundation, 1982

The final organization of particular relevance to my project was the Public Agenda Foundation, a nonprofit research organization founded by public pollster and marketing researcher Daniel Yankelovich. In 1982, the Public Agenda Foundation published a study on the state of the American work ethic, *Work Ethic and Economic Vitality*, that was funded by the Ford Foundation as well as corporations, including AT&T, Exxon, and McDonalds.⁴⁶ The report responded to widespread concern among American business and political leaders that America's declining productivity and global competitiveness were connected to a problem of work ethic: the concern that workers had lost their "motivation and pride in their work."⁴⁷ As a source, *Work Ethic and Economic Vitality* provided important evidence of the way that psychology, and specifically motivational psychology, framed understandings of the work ethic.

The definition of the work ethic embedded in the social survey, drew on the psychological theories of Abraham Maslow and Frederick Herzberg to distinguish between individuals motivated by intrinsic psychological drives and those motivated by external rewards. The survey asked respondents to answer "yes" to the "strong" version of the work ethic by agreeing with the statement: "I have an inner need to do the very best job I can, regardless of pay." The weak version of the work ethic suggested that work could be meaningful, but only in a limited fashion: "I find work interesting, but I don't let it interfere with the rest of my life." On the other hand, "money-motivated" respondents were asked to agree to the following

statement, reflecting a view of work as merely an economic transaction: “Working for a living is one of life’s unpleasant necessities. I would not work if I did not have to.” Perhaps unsurprisingly, responses to the two questions differed depending on the nature of work: educated knowledge workers were more likely to respond “yes” to the first question, whereas poorer blue-collar or service workers tended to respond affirmatively to the second question.⁴⁸

In contrast to the fears about the loss of the work ethic, *The Work Ethic and Economic Vitality* found that most people subscribed to the notion that work had intrinsic meaning beyond money.⁴⁹ The problem, as the report concluded, was not a weak work ethic, but too few rewards for a strong work ethic.⁵⁰ Even if Americans tended to believe in an inner drive towards meaningful work, too few Americans believed that any benefits from increased productivity would accrue to them. This gap created a large “residual of human investment.”⁵¹ The task for policy-makers, psychologists, and corporate leaders was to tap into these “enormous reserves of withheld effort” and so harness the reservoir of latent energy towards productivity gains —just as Niagara Falls could be harnessed for electricity.⁵²

Conclusion

This report has discussed four organizations for which important parts of their histories are documented at the Rockefeller Archive Center: the Institute for Personality Assessment and Research, Educational Testing Service, Opportunities Industrialization Commission, and the Public Agenda Foundation. The research methods and techniques developed by these four organizations shaped business practices and psychological research into personality and work in twentieth-century America.

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