

Intelligence Under Racial Capitalism

From Eugenics to Standardized Testing and Online Learning

YARDEN KATZ

In 1914, Howard Knox, an assistant surgeon with the U.S. Public Health Service, explained how intelligence testing was helping to prevent the “contamination of our racial stock by turning back feeble-minded immigrants.” At Ellis Island, Knox classified migrants according to a scale that included terms like *idiot*, *imbecile*, *feeble-minded*, and *moron*, based on the examined person’s “mental age” and calculated using tests made by the French psychologist Alfred Binet (precursors to IQ testing). Those who scored too low were deported. Knox reported that a seventeen-year-old girl was expelled for failing to say the date and recite the days of the week backwards. According to Knox, such cruel gatekeeping was necessary: the United States “is as it is simply because it has been improved by men from prosperous northern European countries, which countries were prosperous simply because of the type of men who inhabited them.”¹

The quest to pin down intelligence has always served imperial and capitalist institutions by producing such hierarchies of human worth. Appeals to “intelligence” have sanctioned the sterilization, murder, and incarceration of those society deems disposable, notably the poor and non-white.² But disposability was also shaped by the need for labor. Knox, for example, included “performance” tasks in his testing – such as stacking cubes in specific arrangements – which he emphasized could indicate qualities like “motor finesse” and flag those who were “incapable of consistent efficient work.”

These notions of intelligence rest on *racialism*: a way of seeing the world through difference, along axes such as religion, nation, race, and reproductive and physical abilities. Racism, as Cedric Robinson has argued, “ran deep in the bowels of Western culture,” and capitalism thus developed in an already racialized world.³ Capitalism exploits difference

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This article was accepted in fall 2021, and therefore may not reflect all recent changes in the area of online learning. The author would like to thank Ruth Perry and Marco Roth for their insightful comments and suggestions on earlier drafts of this article.

to generate profits and in the process violently produces more difference. “Intelligence” provides another axis of difference, another way to sustain the loop of racial capitalism.

Regimes of racial intelligence change over time. The overtly eugenic regime was superseded by a regime of standardized testing, which used a more sanitized language of *aptitude* or *ability*, and later, *merit*. Today’s standardized testing regime is presented as a tool for reducing social bias and increasing the diversity of institutions. The COVID-19 pandemic has brought to light a reconfigured regime of racial intelligence, appearing under the banner of online learning. Amid global misery and death, the leading company in this space, Coursera, launched its initial public offering in March 2021 with a market cap of \$5.9 billion.⁴ This comes at a time when the liberal idea that standardized testing reflects merit and that systematic oppression can be ignored has lost steam, thanks to decades of work by activists, parents, teachers, and students.

But online learning provided a fresh framing: this time, the promise is not to protect the nation’s racial purity from the so-called feeble-minded, or even to deliver a meritocracy, but to democratize education. The architects of Coursera are practitioners from the field of artificial intelligence (AI) who recycle earlier racist theories of intelligence, but scaled up. On this platform, tests presented during courses to millions of users are used to define exploitable populations, while the computing medium is used to shape the contents of the new curriculum. Such platforms help to maintain the hegemony of U.S. institutions, which determine the measuring stick against which everyone is ranked and try to teach the world to better serve capital.

Each of these intelligence regimes upholds white supremacy by capitalizing on difference and using it to define populations to exploit and marginalize. This practice depends on statistics. The field of statistics provides the means for manufacturing differences between individuals and across groups. It has made racialism quantitative and profitable, while obscuring white supremacy with mathematical abstractions. The tools and ways of thinking offered by this discipline were designed to produce hierarchies of human worth.

Statistics as a Framework for Producing Racial Hierarchies

The efforts to measure intelligence gained momentum with the eugenics movement that emerged in the late nineteenth century. Francis Galton defined the term *eugenics* in 1883 to mean well-born or “good in stock.” This was a new label for an old Euro-American practice of cultivating the worthy and eliminating the unworthy. The field of statistics largely developed to support this practice. Its core tools were designed to

produce racial difference from scientists' obsessive measurements, captured by Galton's motto: "Whatever you can, count."⁵

Galton quantified everything from height to attractiveness to so-called genius, hoping to understand how such qualities are inherited to make worthy and unworthy populations. His designations of "worthy" and "unworthy" mapped to the usual racial identities produced by colonialism, as Galton made clear in his degrading comments on African women and meditations on the superiority of Anglo-Saxon men.

But Galton's work exemplifies a deeper commitment to racialism, which manifested itself in statistics. For Galton, even different professions – judges, commanders, poets, scientists – constituted different "races"; for example, he noted the "breed" strength of commanders.⁶ His very concept of race was statistical: "The essential notion of a race," Galton wrote, requires "some ideal form from which the individuals may deviate in all directions...and toward which their descendants will continue to cluster."⁷ To produce racial differences, Galton employed technologies from photography – which he used to construct essential types, such as the "Jewish Type" – to fingerprinting.

To analyze all this racial data, Galton developed concepts and procedures that still lie at the heart of statistics. For instance, Galton defined *correlation* ("co-relation," in his words) between a pair of variables to study the heritability of traits such as height, and the common practice of rescaling variables by their average value and visualizing their relationship in a scatterplot. When he introduced the term *regression*, it came with a warning about the difficulty of practicing eugenics, since "a breed of exceptional animals" with the desirable traits will "become shattered by even a brief period of opportunity to marry freely."⁸ Galton also coined the statistical terms *rank* and *median* in order to place an individual's qualities relative to the middle person of a population or "race."⁹ These concepts would play central roles in later regimes of racial intelligence.

Yet Galton did not have a method of measuring intelligence that went beyond ableist indicators such as punching ability or reaction times; he counted the so-called genius in his "races" by intuition. "Intelligence" seemed to be an elusive concept, which scientists struggled to define. They evaded the issue in two ways: more testing and more statistics.

A test was developed by psychologist Alfred Binet to assign students a "mental age" in order to identify allegedly defective students for the French school system. Binet and his colleagues established a foundational principle of intelligence testing: use many tests of increasing supposed difficulty, because even if each test is flawed individually, together they will reveal rankings among the examined.

Galton's disciple Karl Pearson further developed statistical frameworks that could guide a national eugenics program, which Pearson saw as necessary for cultivating the English "imperial race."¹⁰ "All things which make for strength and weakness of character must be studied," Pearson said, "under the statistical microscope." The assumption was that this statistical microscope would point the way towards a "cure" for "any community which is making for degeneracy" (it is easy to imagine who Pearson's "degenerates" were). Naturally, Pearson placed intelligence under his scope. He desperately tried to show by correlation analysis that "intelligence," as measured by Binet's tests is governed by innate, heritable factors, and reported a positive correlation between intelligence and head size.

Other venerated figures of statistics also extended the field's frameworks to serve eugenics. Charles Spearman built on Galton's notion of rank to define the still commonly used Spearman rank correlation metric, developed in order to rank students' "intelligence" and relate it to things such as musical ability. Spearman also built on the principle that the more tests, the better. He thought that multiple tests could support his theory that intelligence can be broken into two factors: the infamous "general intelligence ability," *g*, and the task-specific intelligence, *s*.¹¹ To tease apart these factors, Spearman needed to analyze correlations across different sets of tests, for which he developed the now widely used framework of factor analysis.

Ronald Fisher, who helped create the contemporary field of statistics, with its significance tests and *p*-values, was also interested in mathematical frameworks that could help select the supposedly worthy. The goal of statistics, according to Fisher, was to understand populations and their variation so that different methods of selection could be evaluated. For instance, Fisher computed the feasibility of eradicating society's "feeble-minded" (such as the "criminalistic," "alcoholic," and "epileptic") and concluded that "the segregation or sterilization of the feeble-minded" would bring "immediate progress."¹² He made quantitative predictions, such as "the load of public expenditure and personal misery caused by feeble-mindedness...would be reduced by over 17 percent." The statistical canon was largely built to support such eugenic calculations.

A recent article in the *New Statesman* about Fisher, Pearson, and Galton concludes that objections to these men's eugenic views should not "denigrate their achievements," noting that they "established a range of statistical methods that...are still in use today." But why not disparage the use of these methods if they were designed to enable eugenics? Indeed, these methods have been instruments of social control for capitalist institutions and destructive to alternative ways of life, exactly as intended.

Social Control through Racial Intelligence

In the early twentieth century, Binet's tests were adapted and extended to enact eugenic policies through an alliance between scientists, the state, and capital. The large-scale testing that resulted formed the basis for the next iteration of racial intelligence, with its profitable industry of standardized testing.

Schools and state institutions were major sites for this "innovation." Henry Goddard, a psychologist who helped develop the testing at Ellis Island, was awed by the bell curve-like distribution of test scores that could apparently identify the "feeble-minded," and helped push testing into U.S. public schools.¹³ The Stanford University psychologist Lewis Terman also played a major role in promoting testing. Terman adapted Binet's tests to make the U.S. edition of the IQ test, creating the Stanford-Binet scale in 1916. He applied this scale to everyone from school children to prisoners to try to show that "feeble-mindedness is hereditary."

Terman's vision was to establish a minimal IQ set for every profession, with testing used to assign jobs to people. Capitalism already seemed to be on the right path: Terman reported a "positive correlation" (using Pearson's formula) between incomes and IQ scores. But the state could be more efficient by using testing to identify and impede "the reproduction of feeble-mindedness" and thereby eliminate "an enormous amount of crime, pauperism, and industrial inefficiency."¹⁴ Indeed, Terman worked with the state of California to experiment with these ideas in San Quentin State Prison. Terman and his colleagues collected data on the prisoners, including prior occupation and medical and family history. Among the incarcerated were an "Indian" (occupation: "laborer"), a "Mexican" (occupation: "rancher"), and a "Russian Jew" (occupation: "junk peddler") with "a pleasant personality which leads one to overestimate his intelligence." These were some of the people who intelligence testers saw as a menace to society.¹⁵

Terman's team concluded that so-called feeble-mindedness was rampant in the prison, especially among non-whites and foreigners, and that these people were costing the state too much money. This argument accompanied the forced sterilization and murder of many held in state institutions, both by the United States and Nazi Germany. But it also turned out that what made someone undesirable to capitalism was shaped by labor needs. Terman emphasized that the "subnormals" in the intelligence hierarchy could "do semiskilled or sometimes even skilled labor" if they had the right physical abilities. His very notion of "normal" intelligence was defined by capitalism: the prisoners' scores were compared to those of "unskilled employed men," as well to the desirables in capitalist society, such as employees of Wells Fargo and other "business men." Terman wanted to characterize those desirables statistically while consigning the

“subnormals” to low-wage labor (or worse). Terman recognized that realizing this regime of racial intelligence would require major work. “The whole question of racial differences in mental traits,” he wrote, “will have to be taken up anew and by experimental methods” – methods that would supposedly reveal “significant racial differences in general intelligence...which cannot be wiped out by any scheme of mental culture.”¹⁶

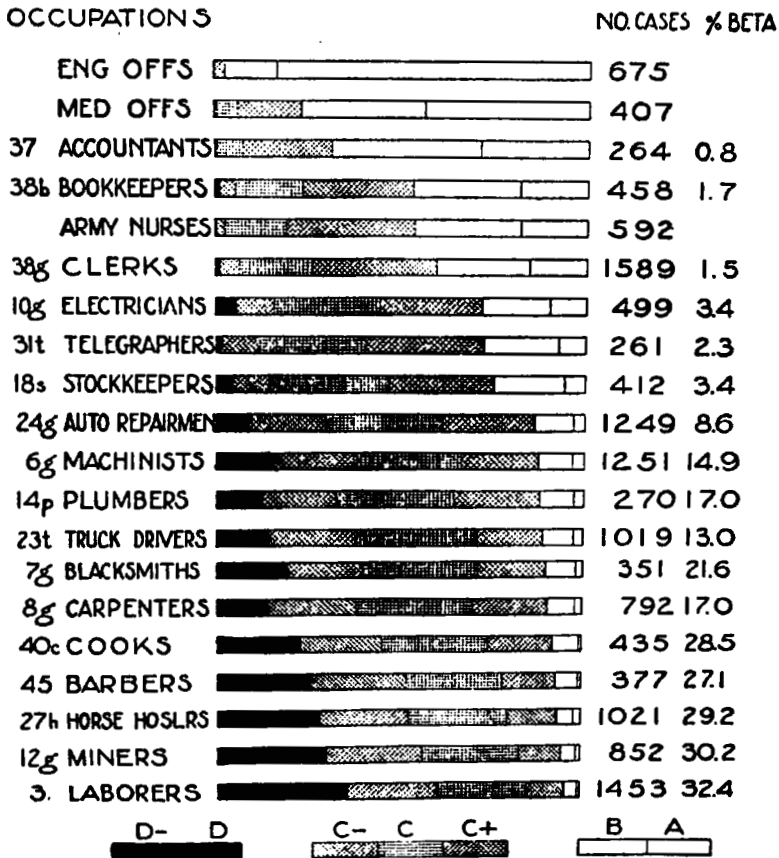
The First World War provided the opportunity to develop these experimental methods. In 1917, the prominent men of North American psychology met to discuss how to help the United States in the war. That group included Terman, Goddard, American Psychological Association president Robert Yerkes, and the young psychologist Carl Brigham. Building on Terman’s IQ test, the group developed the Alpha and Beta army intelligence tests (Army Alpha for “literates,” Army Beta for “illiterates”). Alpha included multiple choice questions such as “Why are criminals locked up?” (The choices: “to protect society,” “to get even with them,” or “to make them work,” with the “correct” answer being the first), while Beta had tasks such as tracing a maze. The tests were given to 1.7 million soldiers during the First World War. Based on the scores, soldiers were assigned army jobs or discharged.

The scientists used these scores to create racist hierarchies shaped by the army’s labor needs. Engineering officers, medical officers, and accountants were at the top; barbers, miners, and laborers at the bottom (Chart 1).¹⁷ Another intelligence hierarchy was organized around race, with Black draftees at the bottom. It was even argued that skin tone and intelligence are correlated (the darker the skin, the lower the score).¹⁸ Similarly, intelligence scores were broken down by European nationality to suggest that the darker migrants were less intelligent.

This racist logic was extended by Princeton University professor Brigham in his 1923 book *A Study of American Intelligence*. Brigham used the army data to produce a racial ranking that had England at the top, Ireland in the middle, places like Italy near the bottom, and, at the very bottom, “Negro” (to use Brigham’s label) draftees (Chart 2).¹⁹ He also analyzed the scores by country of origin and decided that migrants with Nordic “blood” were most intelligent. Since the proportion of Nordic people coming into the United States had apparently decreased, and this drop correlated with the lower scores of recent migrants, Brigham concluded that “American intelligence” was in decline. (He added that mixing between whites and Blacks was a contributing factor.) Brigham called for more racist restrictions on immigration, and his statistical analyses were referenced by those already lobbying for such laws.²⁰

The developments that followed support Robinson’s claim that racialism was not an inert ideology but a “material force” that would

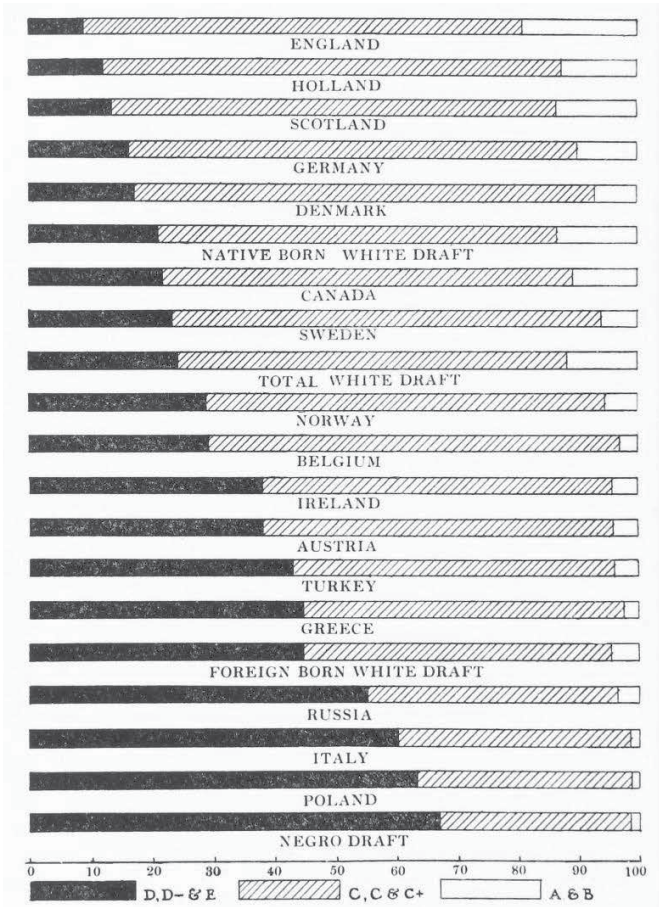
Chart 1. "Intelligence" Hierarchy Based on Army Job



Note and source: Reproduced from U.S. Army test during the First World War. A denotes top of intelligence hierarchy; D denotes the bottom. Robert M. Yerkes and Clarence S. Yoakum, "Figure 25. Relation of Occupation to Intelligence in the Army," *Army Mental Tests* (New York: Henry Holt and Company, 1920).

"permeate the social structures emergent from capitalism."²¹ The statistical racialism permeating through the army, the school, and the prison has certainly created material wealth. Following their studies of the army, Yerkes, Terman, and Brigham began developing commercial intelligence tests. Brigham went on to create the Scholastic Aptitude Test (SAT), which was taken by 2.2 million students in 2020. Intelligence testing was also adopted by employers.²² Testing became big business: test sales increased from less than \$7 million in 1955 to over \$296 million in 1997 (in 1998 U.S. dollars).²³ A booming test preparation industry has emerged, led by companies such as Kaplan, Inc. and The Princeton Review. This standardized testing regime serves essentially the same

Chart 2. Carl Brigham’s Racist Hierarchy



Note and source: Based on the U.S. Army’s Alpha and Beta intelligence tests from the First World War. *A* denotes the top of the intelligence hierarchy; *E* the bottom. From Carl C. Brigham, *A Study of American Intelligence* (Princeton: Princeton University Press, 1923), 146.

functions as prior regimes of racial intelligence – assigning differential worth to human life and funneling people into jobs by a racist logic – but its rhetoric and tools have changed.

After the German Nazi regime embraced U.S. eugenics and attendant programs of murdering or sterilizing the “feeble-minded,” cruder notions of racial intelligence became less politically viable.²⁴ The appeals to racial purity were replaced by discourses about efficiency, and testing was again presented as a tool for assigning jobs to workers. During the Cold War, the testing apparatus was sold as a means of cultivating the brainpower needed to maintain U.S. hegemony against the Soviets.²⁵

New rhetoric was also needed to contend with the civil rights movement. Black workers in a variety of industries understood that employers were using intelligence tests to keep them in more exploited positions compared to white workers, and some filed discrimination lawsuits. Yet the 1964 Civil Rights Act specifically protected employers' right to make decisions based on workers' "developed ability" to do a job, giving employers a rationale for using testing to keep workplaces segregated and profit from racial difference.²⁶ Testing was also presented as a way to allocate resources – through scholarships funded by corporations, private foundations, and agencies such as the National Science Foundation – by so-called merit, which generally rewards the privileged. In courts, the merit argument was used to stifle even the mildest forms of reparative justice, such as affirmative action in university admissions, thereby protecting the rights of white people to dominate institutions.²⁷

Revamping Eugenics

Eugenics, however, has hardly disappeared. It remains an accurate label for modern state, educational, and health institutions that decide who will profit and from whom profit will be extracted; who will live and who will die.²⁸

The idea that IQ testing has been thoroughly discredited in the scientific profession – an idea that appears in most commentary on Richard Herrnstein and Charles Murray's *The Bell Curve* (1994) – is also incorrect. In 2014, Stephen Hsu, a Michigan State University physics professor, argued in the mainstream science magazine *Nautilus* that Spearman's *g* can be quantified with standardized tests and has a genetic basis. Hsu called for editing the genomes of human embryos to produce "super-intelligent humans" with "more than 1,000 IQ points;" failure to do so would apparently produce "inequality of a kind never before experienced in human history."²⁹ In 2021, George Church, an influential Harvard Medical School professor known for working on genome sequencing and editing, told the *Wall Street Journal*: "I don't see why eliminating a disability or giving a kid blue eyes or adding 15 IQ points is truly a threat to public health or to morality."³⁰

But as an open embrace of eugenics became less tenable outside the scientific profession, the regime of racial intelligence had to adapt, and institutions have turned to a less overtly racist language. Programs such as George W. Bush's No Child Left Behind and Barack Obama's aptly named Race to the Top avoided the term *intelligence*. Race to the Top, for example, was introduced as an attempt to foster "college and career readiness" and create "better data systems" for teachers and parents. Yet these policies exemplify how racial difference continues to be created and exploited under capitalism.

For one, these policies secure a market for the industry by coupling school funding to test performance and forcing schools to test. Testing is then used to flag the predominantly working-class, non-white communities suffering from organized abandonment, criminalization, and state violence. Those communities' schools are then closed for having "failed" the tests. Between 2001 and 2012, for example, over 85 percent of the students affected by school closures and related interventions in Chicago were Black, even though only about 40 percent of Chicago public school students are Black. Entire worlds are disrupted as the teachers and staff are left jobless, and the communities no longer have schools.³¹

Shuttered schools are sometimes replaced by new, selective enrollment schools meant to appeal to affluent white families in gentrifying areas.³² School closures also pave the way for charter schools that generate private wealth, in part by contracting out services to for-profit corporations. Charters can then use testing to cut operating costs by selecting against students who need free lunches or accommodations for disabilities. Moreover, in cities such as New Orleans, public schools in communities of color have been replaced by charters staffed by less experienced, whiter, and non-unionized teachers. This agenda is driven by the state, which follows the self-interested counsels of corporations and foundations of billionaires such as Bill Gates, Eli Broad, and the Walton family (owners of Walmart).³³

Because of these disastrous effects, regimes of racial intelligence need continual rebranding. Nowadays, we are told that intelligence tests, carefully revised by progressive social scientists, are truly "unbiased" tools that could increase the diversity of institutions.

Yet testing remains a proxy for wealth, obedience, and acculturation to white, ableist, bourgeois society. Parents, teachers, and students have recognized this truth. They have experienced how testing is used to exert control over schools and extract wealth from communities – and they have resisted.

In 2014, civil rights groups filed lawsuits against the U.S. Department of Education on the grounds that school closures in Newark, Chicago, and New Orleans – justified on the basis of test scores – are racist, following similar suits filed against the Chicago Board of Education in 2009.³⁴ In 2015, twelve parents went on a thirty-four-day hunger strike, successfully preventing the closing of Chicago's Dyett High School, which the authorities had deemed failing. (Dyett is in the predominantly Black neighborhood of Bronzeville, and sits on prime real estate coveted by developers.)³⁵ The striking parents did not demand less biased testing for judging schools. Rather, the community called for making Dyett into a school focused on green technology – a request that was ultimately denied. But the immediate aim was, as organizer and hunger striker Jeanette Taylor-Ramann put it, to save the school since

it is a “foundation of the community”; the “hunger strike sent the message that there are people willing to die for young people to be educated.”³⁶

Corporate profiteers have also drawn heat from communities. In 2012, students, parents, and teachers protested outside the New York City headquarters of Pearson—a company that administers and lobbies for standardized tests—chanting: “One, two, three, four, kids are not a test score.”³⁷ Children held signs with “I am not free labor” and “Where is my pay?,” referring to the corporation’s practice of field-testing the questions that go into the lucrative exams. This rage has been bad news for the testing industry. Colleges have been dropping the SAT requirement for admissions in recent decades, and in 2019, the number of colleges without a standardized testing requirement reached a record high.³⁸

With the main apparatus of intelligence testing under attack, a reconfigured regime of racial intelligence has emerged under the banner of online learning, taking advantage of the pandemic to gain power.

The Eugenics in Artificial Intelligence and Online Learning

Like the architects of intelligence testing, practitioners in the field of AI have often taken abstract puzzle-solving or tasks that are profitable to corporations as indicators of intelligence. However, their notion of intelligence is frequently left implicit. As I have argued elsewhere, the concept of AI is nebulous and malleable to power; any project involving a computer can be considered AI if it can be shown to serve empire and capital. This flexibility has made AI a useful vehicle for oppression.³⁹

When AI practitioners do make explicit their notion of intelligence, the eugenic premises of old emerge. This eugenicist notion of intelligence is put into practice through statistical tools and computing platforms that readily serve capitalist and imperial interests, as in the booming industry of online learning.

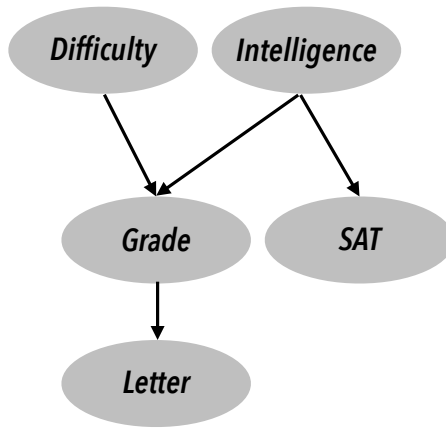
The dominant player in this space is Coursera, a for-profit company founded in 2012 by AI practitioners Daphne Koller and Andrew Ng, both computer science professors at Stanford University—Terman’s old stomping ground.⁴⁰ Their project has a colonial, missionary framing: these hyper-intelligent Stanford professors are willing to share their desirable knowledge with the world for free (in reality, for a fee) in order to “democratize education.”⁴¹ The platform hosts courses developed by universities as well as by corporations such as Google and Amazon, which train individuals to use those companies’ products. The most valorized courses are from elite U.S. universities, such as Stanford University and Johns Hopkins University, and tend to be about the kind of statistical thinking on which platforms such as Coursera are built.

To see how the assumptions of the older regime manifest themselves in this statistical thinking, consider a widely used 2009 textbook, co-authored by Coursera co-founder Daphne Koller, titled *Probabilistic Graphical Models*. The book's running example is of a professor who seeks to infer a student's intelligence from data such as SAT scores, grades, and letters of recommendation. The scenario is modeled using a *Bayesian network*, a model that summarizes statistical relationships between multiple variables. A Bayesian network can be visualized as a graph where, according to the textbook, "the edges encode our intuition about the way the world works."⁴² When it comes to intelligence, this is how the world works: "The student's SAT score depends only on his intelligence"; intelligence is either "low" or "high," and the grade depends on both this supposed intelligence and the course's apparent difficulty, which is designated either "easy" or "hard" (Chart 3).⁴³

To make inferences using this model, the authors need to assign probabilities to these assumptions. These numbers make the ideology even clearer. In their model, 70 percent of people are *a priori* of low intelligence, 60 percent of the courses are considered "easy," and SAT scores reliably indicate intelligence level: there is an 80 percent chance that a person of "high" intelligence will get a high SAT score, but only 5 percent chance if the person is of "low" intelligence. Grades are likewise taken as trustworthy indicators of a student's intelligence and course difficulty: it is assumed that "low" intelligence students are highly unlikely to get a high grade on a "difficult" course. For instance, if many students with high SAT scores (the supposedly intelligent ones) receive a medium or low grade in a particular course, the model will assign higher probability to this course being difficult. This logic is repeated in other AI books, which present models in which grades depend on "the student's IQ and the difficulty of the course."⁴⁴

The old eugenicist assumptions are familiar: that the population is overall stupid and undeserving; that there is a worthy minority defined against this stupid majority; that the methods for discriminating the worthy from the unworthy are objective and quantitative, despite the racist and ableist nature of the tests and grading system; and that there is no need to consider systematic oppression, ongoing or historical. Since these assumptions are framed in abstract, statistical terms, race, class, and other contested categories do not need to be invoked explicitly. Instead, statistical inference can be counted on to rank individuals in ways that reflect existing racial hierarchies. And this simple model merely illustrates a logic that can be scaled up to incorporate far more data than SAT scores or grades – data that can be collected on online learning platforms.

Chart 3. “Intelligence” Flow Chart



Note and source: Running example adapted from a 2009 textbook on probabilistic reasoning co-authored by Coursera co-founder Daphne Koller. Daphne Koller and Nir Friedman, *Probabilistic Graphical Models: Principles and Techniques* (Cambridge, MA: MIT Press, 2009).

Profiting from Difference: Online Learning as a Massive Intelligence Test

The online learning platform Coursera scales up this abstract IQ model to rank people by their supposed intelligence and places by their concentration of “intelligent” people – and to generate profits from these rankings.

Coursera does this by snooping on its more than 58 million accounts, in yet another example of the surveillance imperative of capitalism.⁴⁵ The platform collects the answers to tests (called *assessments*) presented during courses, as well as other data including nationality, gender, and time spent on each page. Coursera analyzes this data to “estimate how proficient a learner is in a skill and how challenging an assessment is.”⁴⁶ This echoes the textbook example: to know whether an individual is intelligent or not, one should consider the difficulty of the course in addition to the test score. The old eugenics terms have been updated: “intelligence” was replaced by having “long shelf-life skills” that boost GDP, “intelligence testing” became “skill assessment,” and the person being used to expand the company’s data was reframed as a “learner.”

The rankings of individuals and their skills are then aggregated to produce an extensive intelligence hierarchy, presented in Coursera’s 2021 *Global Skills Report*. The report is framed from the perspective of U.S. empire, scouring the globe for workers (or “learners”) with the necessary skills to serve U.S. corporations while trying to ensure no other state threatens its hegemony. The report ranks more than one hundred countries by their performance in the valorized areas of data science and business. These

rankings are justified by a circular logic familiar from intelligence testing. Just as Terman justified IQ scores by claiming that they positively correlate with incomes, Coursera justifies its rankings by suggesting they positively correlate with indicators such as the World Bank's "Human Capital Index" (the latter being yet another crude metric that incorporates GDP, international standardized tests, and other indicators to rank countries' worth).⁴⁷ Coursera then uses the rankings to categorize countries and regions as "cutting edge," "competitive," "emerging," or "lagging."^{48*}

The results resemble the racist hierarchies that were concocted using the U.S. army intelligence tests of the First World War. Wealthy European countries such as Germany, Sweden, and Austria are classified as "cutting edge," while those places still suffering the weight of colonialism, such as Algeria, Brazil, and Puerto Rico, are classified as "lagging." The "Cutting Edge" places excel in the areas valorized by U.S. technocratic elites, such as Bayesian statistics, and have "stand-out industries" such as information technology and the arts. By contrast, the "lagging" nations are reported to excel in so-called soft skills such as "adaptability" and "sales"; their noteworthy industries are "household activities," mining, and hospitality and food. Like Brigham's hierarchy, Coursera's rankings reaffirm white supremacy and imperialist attitudes. But while Brigham and his peers determined that the less white countries are less intelligent, Coursera determines that mostly non-white countries lack the most desirable skills.

Coursera aims to profit from the differences it produces in two main ways: first, by claiming that the platform can retrain lagging workers in the necessary skills (which is why governments and companies should partner with Coursera), and second, by using its data to guide the search for cheap labor. Coursera therefore estimates things like the potential earnings of workers with certain skills and the number of hours it would take to retrain individuals on the platform to acquire those skills.⁴⁹ These individual-level estimates are then compiled to make a portrait of a region's "trending skills" and exploitable industries.

In its analysis of Latin America and the Caribbean, for example, Coursera claims that the region is overall lacking in the desirable skills, but reports the benefit of "nearshore outsourcing," which "has allowed U.S.-based companies to outsource analytical programming to Latin America" in a convenient time zone. Coursera similarly notes the "pockets of data talent" in Venezuela, Uruguay, Argentina, and Costa Rica, where one can find cheap labor for the computing sector. But some regions are apparently

* Please see Chart 4 at the following DOI: doi.org/10.6084/m9.figshare.20422152

too backward to meet the digital needs of capital: “Africa,” says Coursera, should focus on “capturing part of the 100 million labor-intensive manufacturing jobs” that China will reportedly lose by 2030. The conclusions Coursera draws from its massive intelligence test are thus racist and imperialist, even if “race” is not made explicit.

The Pandemic as an Opportunity

Coursera has used the pandemic to expand its reach. Through partnerships with governments formed as part of Coursera’s 2020 Workforce Recovery Initiative, the company is exerting greater control over the labor force. Meanwhile, governments use Coursera as a pretext for slashing welfare programs. For example, those who registered as unemployed with the Costa Rican government – rather than receiving financial support – were directed to Coursera.⁵⁰ Coursera also partnered at the state and local level with the governments of New York, South Carolina, and Minnesota to automatically send unemployed workers to the platform. The premise is that individuals can save themselves simply by acquiring relevant skills online. Coursera steers such individuals to “learning paths reviewed by employers,” such as Google and Amazon, which apparently “ensure training mapped to high-demand digital, strategic, and technical skills.” The corporate media regurgitates this narrative of individual uplift, praising Coursera for offering courses that are “workforce-ready by design,” like Google’s “Information Technology Support” course. According to *Business Insider*, this course is beneficial not only for teaching both “technical skills” and “soft skills like customer service,” but also for inculcating “difficult but essential traits like grit and resilience.”⁵¹ This is how Coursera and the state collude to steer people in vulnerable positions into doing the precarious work that capital needs.

Just as in earlier periods, this regime of racial intelligence offers a separate track for the privileged when it comes to assigning jobs. It is well-documented that poorer students from communities of color are subjected to the harshest testing regime in hopes of instilling obedience and acceptance of low-wage jobs, while the privileged are given Montessori and magnet schools.⁵² Similarly, though Coursera flaunts the brand of elite universities, it still directs the unemployed to learn how to do Google’s customer service, while the privileged attend places like Stanford University in person to gain the credentials that are truly valorized by capitalist society.

Entrepreneurial Imperialism and the Ideological Constraints of Online Learning

Unlike previous regimes, online learning platforms do not appeal to hereditary notions of intelligence. Coursera’s framing is entrepreneurial imperial-

ism: individuals and countries must constantly re-skill to cater to the needs of capital, as dictated by the U.S. technocratic elites. No biological determinism is needed; on the contrary, Coursera's propaganda is all about the platform increasing workforce "diversity" and helping to close the gender pay gap.

The architects of these platforms also have arguably greater ambitions than earlier intelligence testers. Coursera not only ranks the worth of individuals and places, it also seeks to rank the worth of knowledge in general, a task that the computing medium lends itself to. Coursera taxonomizes knowledge with what it calls a skill graph, which describes the sub-skills needed for a learner to perform a task that is deemed valuable.* Coursera then tries to break down the valorized fields, such as data science, into the tasks and skills they require. At this stage, the computing medium serves an important ideological function by constraining the kind of knowledge that can appear on the platform. Coursera requires the materials to be reduced into short chunks and presented in such a way that an individual's progress can be measured quickly and quantitatively (as one would expect from a large-scale intelligence test). Clearly, the skills that Coursera's founders had in mind fit this medium best, which is why so many topics, or even courses developed outside elite Euro-American institutions, are largely absent from the platform.⁵³

These ideological constraints become apparent when we look for topics that are outside the realm of Stanford University's technocratic elites. As of May 2021, when the Israeli state waged another brutal war on Gaza and other parts of Palestine, a search for "Palestine" on Coursera's website yielded only two relevant courses: "The History of Modern Israel – Part II: Challenges of Israel as a Sovereign State" from Tel Aviv University, and "The Cosmopolitan Medieval Arabic World" from Leiden University. Palestine and its struggles for liberation are erased; the platform is meant only for materials that are approved by U.S. empire.

Coursera's social sciences curriculum also reproduces the elite academy's racist approach to knowledge. For example, Coursera hosted a Princeton University course titled "Real Bones: Adventures in Forensic Anthropology" that used the bones of a Black teenage girl killed by the police in Philadelphia in 1985.⁵⁴ The girl was among eleven killed when the police bombed the house of MOVE, a Black liberation group. Thousands of Coursera's "learners" were shown a video of an Ivy League anthropologist handling one of the bones, describing it as "juicy" and noting its scent. To this news, MOVE member Michael Africa Jr. responded: "Nobody said you can do that, holding up their bones for the camera. That's not how we process our dead. The anthropology

*Please see Chart 5 at the following DOI: doi.org/10.6084/m9.figshare.20422152

professor is holding the bones of a fourteen-year-old girl whose mother is still alive and grieving.” Coursera contributes to this academic norm of turning the violence of racial capitalism into scholarly expertise.⁵⁵

Other platforms are competing to deliver similar services. Following Coursera’s successful IPO, Harvard and the Massachusetts Institute of Technology (MIT) sold their platform, edX, for \$800 million to 2U, Inc., a company created by the co-founder of test preparation giant The Princeton Review. In explaining the sale, MIT president Rafael Reif claimed that the COVID pandemic led to an online learning “arms race” in which the edX non-profit could no longer compete, which was unfortunate since “remote learning became the dominant avenue for delivering education everywhere.” Selling edX was the solution. The sale will allow 2U to capitalize on the data amassed by edX, while MIT will continue to develop tools for the regime of racial intelligence—or, in Reif’s words, “invest in the potential of AI and other tools to make online learning more responsive and personalized to the individual learner.”⁵⁶ Notably, in 2018, MIT chose to name its major AI initiative the Intelligence Quest, or in short, IQ.⁵⁷

Scientific Reformism Versus Breaking with Racialism

Where can we find the break with racial intelligence and the statistical apparatus that supports it? We can look to dissenting voices from the scientific sphere—but rather than a break, we often find a scientific reformism that tries to save the statistical apparatus that grew out of eugenics, and even rehabilitate the intelligence testers.

The psychologist Leon Kamin, widely cited as a scientific critic of the IQ regime, nonetheless claims that there is a “theoretical possibility that the genetic theorists are correct”; that “perhaps I.Q. is highly heritable”; and that “differences between races, as well as among individuals, are in large measure due to heredity.” For Kamin, there are “serious scholars” advancing such claims and engaging with them is “a scientific necessity.”⁵⁸

The biologist Stephen Jay Gould offered a more inspiring, science-focused attack on racial intelligence in *The Mismeasure of Man*. Gould criticized the premises of intelligence testing and refuted the argument that intelligence, whatever it may be, is hereditary. He also deconstructed the misguided “nature versus nurture” framing in which such discussions often get stuck. Gould took the position, still rare among scientists, that “the whole enterprise of setting a biological value upon groups” is “irrelevant, intellectually unsound, and highly injurious.”⁵⁹

But such science-focused critiques still fall short of negating racialism and its statistical apparatus. Instead, these critiques confront racial science on its own terms. Gould, for example, focused on how intelli-

gence testers often “fudged” and “finagled” their data, or administered the tests unevenly. He tried to show that with a more careful statistical analysis, the conclusions of these scientists collapse.⁶⁰ But “race” – and by extension, racialism – persists, as Dorothy Roberts argues, neither “because it is scientifically valid nor because its invalidity remains to be proven,” but rather because it is “*politically useful*.”⁶¹ Attacking racial science with “more accurate and less prejudiced scientific methods” is pointless, especially when those methods were designed, as in the case of statistics, to produce racial difference.

This point is lost on science-focused critics for whom testing is simply a tool that can have good or bad applications, and believe that the statistical frameworks developed to serve eugenics are nonetheless sound and should be judged by their use.⁶² We frequently hear how Binet’s work, which was foundational for the intelligence-testing regime, was co-opted and misused; or that he had benevolent intentions and lacked the nefarious vision of the likes of Terman or Goddard, despite the fact that Binet and his colleagues emphasized that their science was of “practical importance...for the teacher, the doctor, the anthropologist and even the judge” and pontificated about the intelligence of different “types,” such as “criminals.”⁶³ Science-focused critics, including Gould, also highlight the *mea culpas* of intelligence testers such as Brigham and Goddard, who apparently recanted some of their more extreme racist conclusions given better data analysis. Yet the quest for intelligence has attained its force and meaning from imperial and capitalist institutions, regardless of individual testers’ beliefs.⁶⁴

A rejection of racialism would threaten the scientific enterprise’s appeal to imperial and capitalist institutions. After all, why insist on the label *science* if not to claim the privileged epistemic status and tools on which these institutions depend? Rather than breaking with racialism, then, scientific reformism simply assumes that scientific tools and frameworks are valuable and seeks to apply these differently. This same scientific reformism is being packaged under fashionable labels, from “science for liberation” to “decolonial AI.” These labels dodge the arduous collective tasks of sifting through scientific practices and frameworks, reckoning with their records of devastation, and asking what – if anything – can be salvaged or repurposed, and under what conditions, given a commitment to breaking with racialism.

Breaking with Racialism

So where is the break with racialism? Robinson found it in the Black radical tradition, in the enslaved Haitians or “dissident American Blacks”

who showed a “persistent denunciation of racialism as a basis of civilized conduct” and for whom “disengagement was the ideological currency.”⁶⁵

Following a similar line, we should look to those who have felt the boot of intelligence under racial capitalism and interrupted its operation. These figures sometimes appear in the archives of intelligence testers.

One tester who applied Binet’s tests in a psychiatric hospital complained of a boy, “somewhat in advance of his mental age,” who was “unmanageable, bad-tempered and profane.”⁶⁶ In administering IQ tests in San Quentin State Prison, Terman complained of an incarcerated Black man who “stole goods from his employer” and “has a clever way of avoiding a direct answer to a question.”⁶⁷ Another tester, working in an orphanage, was irritated by a boy of “Mexican-Indian descent” who “speaks English fluently,” and yet told the tester that “justice” means “just as you have done.”⁶⁸ The same tester made multiple mentions of unnamed girls and women, labeled *hysteric* and *immoral*, who did not cooperate. We also have those who terrified organizations such as the Immigration Restriction League. In 1921, the League warned the U.S. Congress about foreigners working in New York’s garment industry, mostly “of the Hebrew elements,” who were “largely of a very low degree of intelligence” and whose “labor unions are among the most radical in the whole country.”⁶⁹ And then there are the parents, teachers, and students who have identified testing as a tool of racist oppression and organized to block some of its disastrous effects.

These unruly people, scrutinized by the statistical microscope of intelligence under racial capitalism, point the way to the break. They offer the possibility of interrupting the racist practices of ranking, sorting, and correlating—freeing us from those statistical modes of thought that are designed to serve eugenics.

Notes

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Critics of biological determinism are like the members of a fire brigade, constantly being called out in the middle of the night to put out the latest conflagration, always responding to immediate emergencies, but never with the leisure to draw up plans for a truly fireproof building. Now it is IQ and race, now criminal genes, now the biological inferiority of women, now the genetic fixity of human nature. All of these deterministic fires need to be doused with the cold water of reason before the entire intellectual neighborhood is in flames.... Unlike the biological determinists who have simple, even simplistic, views of the bases and forms of human existence...our view is that the relation between gene, environment, organism and society is complex in a way not encompassed by simple reductionist argument. But we do not stop our analysis by simply throwing up our hands and saying that it is all too complicated for analysis. Instead, we want to propose an alternative [more dialectical] world view.

—R. C. LEWONTIN, STEVEN ROSE, AND LEON J. KAMIN,
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