

TERMAN, LEWIS MADISON

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Lewis Madison Terman

Born: 1877 | **Died:** 1956

Nationality: American

Primary Field(s): Psychology, Educational Psychology, Intelligence Testing

1. Summary

Lewis Madison Terman was a pivotal American psychologist whose career spanned the critical early decades of the twentieth century, during which psychological measurement and standardization gained immense traction in the United States. Born in 1877, Terman is overwhelmingly recognized for two monumental contributions to the field of psychology: the development of the widely influential Stanford-Binet Intelligence Scales, and the initiation of the groundbreaking, multi-generational Genetic Studies of Genius, commonly referred to as the "Termite Study." His work fundamentally reshaped American education, military screening, and industrial hiring practices by popularizing the concept of the Intelligence Quotient (IQ) as a standardized measure of cognitive ability.

Terman's professional life was predominantly committed to the rigorous measurement and empirical investigation of individual differences, particularly focusing on the identification and cultivation of intellectual giftedness. After earning his doctorate from Clark University in 1905, Terman transitioned through several academic posts, eventually settling at Stanford University, where he remained for the duration of his working years. His tenure at Stanford, marked by persistent research and voluminous publication, established him as the leading authority in psychometrics and educational psychology in America. While his methodologies were influential, his integration of psychological findings with contemporary social assumptions regarding heredity and intelligence also placed his legacy at the center of ongoing ethical and scientific debates concerning the nature versus nurture of cognitive potential.

Throughout his fifty-year career, Terman dedicated himself not merely to testing intelligence, but to advocating for the use of psychological assumptions and data to optimize societal structures, specifically targeting educational placement and vocational guidance. His fervent belief in the efficacy of quantifying intellectual differences led to both revolutionary advancements in testing technology and significant controversy regarding the societal applications of those measurements, particularly in the context of early 20th-century eugenics and debates over cultural bias in standardized assessments.

2. Early Career and Academic Affiliations

Terman's foundational psychological training occurred at Clark University, where he studied under the pioneering psychologist G. Stanley Hall, one of the foremost proponents of evolutionary psychology and child study in America. This academic environment instilled in Terman a deep commitment to empirical research and the study of developmental stages. His doctoral dissertation, completed in 1905, focused on the differences in mental abilities between "bright" and "dull" boys, setting the stage for his lifelong interest in distinguishing intellectual variation. This early work was crucial in providing Terman with the conceptual framework he would later employ in adapting European intelligence metrics for American use.

Following his graduation, Terman spent four formative years working at the Los Angeles Normal School (a predecessor to the University of California, Los Angeles). During this period, Terman refined his understanding of practical educational needs and the challenges inherent in classifying students effectively. This hands-on experience in training future teachers and dealing directly with educational administration provided him with the necessary context to appreciate the immediate utility of a standardized, reliable intelligence measure, moving psychological theory out of the laboratory and into the public school system. This pragmatic grounding strongly influenced the structure and accessibility of the testing tools he would later develop.

In 1910, Terman accepted a position at Stanford University, marking the beginning of his most productive and influential period. His association with Stanford was permanent, and it was here that he gained access to the institutional resources and graduate students necessary to undertake large-scale standardization projects. His move to Stanford coincided perfectly with the progressive era's push for efficiency and meritocracy, allowing Terman to position psychometrics as an essential tool for social engineering and educational reform. Stanford became the institutional home for the revised Binet scales, cementing its reputation as the birthplace of modern American IQ testing.

3. The Stanford-Binet Intelligence Scales

Terman's most enduring single contribution was the American revision and popularization of the Binet-Simon Scale, transforming it into the Stanford-Binet Intelligence Scales. The original scale, developed by Alfred Binet and Theodore Simon in France, focused on measuring mental age relative to chronological age, primarily to identify children needing special educational assistance. Terman recognized the untapped potential of this instrument for broader population classification and enhancement. His 1916 revision was meticulously standardized using a large, representative sample of American schoolchildren, a methodological innovation that lent the test unprecedented reliability in the United States.

Crucially, Terman adopted and popularized the term "Intelligence Quotient" (IQ), which had been

coined previously by William Stern. Terman operationalized IQ as the ratio of mental age (MA) to chronological age (CA), multiplied by 100 ($IQ = MA/CA \times 100$). This formula provided a single, easily interpretable score that allowed individuals to be ranked relative to their peers. The clarity and numerical simplicity of the IQ score proved immensely appealing to educators, administrators, and the public, facilitating the rapid adoption of the test in schools and eventually, in institutions ranging from the U.S. Army during World War I to various industrial settings.

The success of the Stanford-Binet was immediate and profound. Its use during WWI, though not designed by Terman but heavily influenced by his associates, demonstrated the potential for large-scale psychological assessment. Post-war, the scale became the gold standard for classifying children, determining educational track placement (such as gifted programs or remedial classes), and informing immigration policy debates. Terman's achievement was not just the revision of a test, but the successful institutionalization of the idea that intelligence could be objectively measured and that these measurements should dictate life outcomes.

4. The Genetic Studies of Genius (The Terman Study)

Beyond the Stanford-Binet, Terman devoted over three decades to the monumental longitudinal research known as the Genetic Studies of Genius. Initiated in 1921, this study aimed to track the life trajectories of approximately 1,500 children identified as intellectually gifted (those with IQs generally above 140). Terman hoped to empirically dismantle the prevailing stereotype that highly intelligent children were often sickly, socially inept, or prone to early burnout.

The study methodically collected data across numerous domains, including physical health, social adjustment, educational attainment, vocational success, and psychological well-being. The initial findings, published primarily in the series *Genetic Studies of Genius*, strongly supported Terman's hypothesis: the gifted subjects (dubbed "termites" by the media) were generally healthier, better adjusted socially, and more successful professionally than the general population. This massive undertaking demonstrated Terman's commitment to the long-term empirical study of human potential and became a landmark in developmental psychology research.

The Terman study is significant not only for its findings but also for its methodology. It represented one of the earliest and longest-running longitudinal studies in psychology, continuing through follow-up studies conducted by Terman and his successors even after his death. The data collected provided rich insights into the complexity of intelligence and success, suggesting that while high IQ was a necessary precursor for exceptional achievement, other factors, such as personality traits, drive, and social opportunities, were essential mediators of adult success.

5. Intellectual Context: Psychometrics and Eugenics

Terman's work must be understood within the intellectual zeitgeist of the early 20th century, which

embraced **psychometrics**--the science of measuring mental capacities--as a powerful tool for social organization. He was a staunch advocate for the notion that intelligence was largely inherited and fixed, a perspective consonant with the then-dominant but scientifically flawed **eugenics** movement in the United States. Terman's publications, particularly *The Measurement of Intelligence* (1916), often included interpretations that suggested ethnic and racial differences in intelligence scores were inherent, fueling debates over immigration restriction and discriminatory educational policies.

The application of the Stanford-Binet during this era reinforced the idea of a measurable, hierarchical scale of human worth, which Terman believed justified differential treatment and segregation in educational settings. For instance, he advocated strongly for tracking systems that would place gifted students in accelerated programs while placing those with lower scores in vocational or remedial tracks. This approach, while intending to optimize educational resources, institutionalized a system that often exacerbated existing social inequalities based on cultural background and socio-economic status.

Despite his significant scientific contributions to measurement standardization, Terman's explicit acceptance of eugenic principles and his use of test scores to support controversial social policies remain the most contentious aspect of his legacy. He believed that the identification and encouragement of the intellectually superior were vital to the progress of civilization, a view that highlighted the sometimes problematic intersection of scientific measurement and social ideology in early 20th-century American psychology.

6. Key Contributions and Major Works

Terman's contributions extend across measurement science, educational policy, and developmental research. His legacy rests on the successful creation and deployment of robust psychological tools that allowed for the systematic categorization of millions of individuals, thereby profoundly influencing educational and military infrastructure globally.

Standardization of IQ Testing: Terman engineered the first successful large-scale standardization of an intelligence test in America, creating a metric (the IQ score) that became universally recognizable and quantifiable.

Longitudinal Research Methodology: The initiation and maintenance of the Genetic Studies of Genius set a global precedent for comprehensive, multi-decade longitudinal research design in the social sciences.

Advocacy for Gifted Education: Terman's findings provided the primary empirical justification for the establishment of specialized educational programs aimed at nurturing high-potential children, fundamentally changing the approach to giftedness in US schools.

His written output, both academic and popular, was extensive, providing detailed instructions for

test administration and synthesizing the findings of his major research projects. These works served as canonical texts for generations of psychologists and educators seeking to understand and measure intelligence.

The Measurement of Intelligence (1916)

The Intelligence of School Children (1919)

Genetic Studies of Genius (Five Volumes, starting 1925, edited and authored with colleagues)

Measuring Intelligence: A Guide to the Administration of the New Revised Stanford-Binet Tests of Intelligence (1937, with Maud Merrill)

7. Criticisms and Historical Reassessment

Terman's work has faced extensive criticism, particularly regarding the inherent biases and fixed views of intelligence embedded in the Stanford-Binet and his philosophical leanings. One primary criticism focuses on the test's **cultural bias**; critics argued that the scale relied heavily on language, information, and cultural norms specific to middle-class, white Americans, thereby unfairly penalizing individuals from different socio-economic or ethnic backgrounds. This bias fueled concerns that the test was measuring acculturation and educational opportunity rather than pure, innate ability.

Furthermore, Terman's advocacy for the **hereditarian** view of intelligence--the belief that IQ is primarily fixed by genetics and immutable by environment--has been significantly challenged by modern cognitive science. Subsequent research has demonstrated that environmental factors, including education, nutrition, and early childhood stimulation, play a far greater role in cognitive development than Terman acknowledged, leading to a rejection of the strict determinism underlying his initial interpretations.

The most severe historical critique stems from the application of his findings to the **eugenics movement**. Terman's early work was used by influential figures to argue for policies aimed at restricting immigration and promoting sterilization based on assumed intellectual inferiority, particularly among non-European immigrants and minority groups. Although Terman himself was a scientist focused on measurement, his willingness to integrate his findings into prevailing eugenic ideologies casts a long shadow over the ethical dimensions of his legacy, prompting continuous reassessment of the social responsibility of psychometricians.

Further Reading

[Lewis Terman \(Wikipedia\)](#)

[Stanford-Binet Intelligence Scales \(Wikipedia\)](#)

[Genetic Studies of Genius \(Wikipedia\)](#)

Stanford University Official Site

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