It All Began with Leta Hollingworth: The Story of Giftedness in Women

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Leta Stetter Hollingworth was the first champion of the cause of gifted girls and women. She was also one of the founders of gifted education, if not the founder, since she instituted the first course in the nature and needs of the gifted, wrote the first major textbook in the field, conducted over 30 original studies of gifted children, developed one of the first and most celebrated experimental education programs, designed curricula and counseling techniques still in use today, and contributed the first extensive study of children above 180 IQ. In addition, she single-handedly launched a battle to refute the pervasive beliefs of her time that females were innately inferior in intelligence to males. Through her own scholarship, ingenuity, courage and tenacity, Hollingworth won the battle and provided the foundation upon which we can build to understand and nurture giftedness in females.

Once upon a time everybody knew that males were smarter than females. This was a given fact of life. Girls were not sent to school because it was assumed that they were incapable of grasping abstract concepts. In some eras, girls and women who demonstrated unusual capabilities were feared as witches and put to death. In 584 A.D., it was even debated whether women were human: 63 clergymen debated the question at great length before it was put to a vote. The results were as follows: 32 voted yes, and 31 voted no. Women were declared human by one vote (Bowman, 1983)! Obviously, in light of such views, the question of "giftedness" among women did not arise.

The study of giftedness began with Sir Francis Galton, whose Hereditary Genius (1869) inaugurated this field, along with the study of individual differences, mental measurements, the nature/nurture controversy, and the field of eugenics. Galton furnished "scientific proof" of the prejudices of his time. He invented a mental test, assessed 9,337 subjects, and reported that males outperformed females on every dimension (Pearson, 1924). In 1879, LeBon, the founder of social psychology, had this to say about women's intelligence:

In the most intelligent races...there are a large number of women whose brains are closer in size to those of gorillas than to the most developed male brains. This inferiority is so obvious that no one can contest it for a moment; only its degree is worth discussion. All psychologists who have studied the intelligence of women, as well as poets and novelists, recognize today that they represent the most inferior forms of human evolution and that they are closer to children and savages than to an adult, civilized male. They excel in fickleness, inconstancy, absence of thought and logic; and incapacity to reason. Without doubt there exist some distinguished women, very superior to the average man, but they are as exceptional as the birth of any monstrosity, as for example, a gorilla with two heads; consequently, we may neglect them entirely... (1879, as quoted in Gould, 1981, pp. 104-104)

Into this milieu was born a poor Nebraska farmgirl who would challenge them all...and win the battle. One young American woman was responsible for women gaining intellectual equity in the eyes of science. One woman took it as her mission to prove that women were as gifted as men and that the differences in their achievement were due to differences in opportunity rather than in ability or character. But the plight of women was not her only concern; she was even more moved by the plight of gifted children. She was a pioneer in the education and emotional development of the gifted, instituting the first course on the nature and needs of the gifted, writing the first major textbook in the field, conducting many of the first studies, developing experimental programs, curricula, and counseling methods that are still in use today, and initiating the first studies of giftedness in girls and women. The heroine of our story is Leta Stetter Hollingworth (1886–1939), and no issue devoted to the special problems of gifted girls would be complete without a discussion of her work.

If Terman is considered the "founding father" of our field, surely Hollingworth is its "mother." Yet, while Terman's name has become a household word in gifted education, over the last five decades Hollingworth's name has all but vanished, and where it has

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been remembered, it has been religiously misspelled and mispronounced—people seem compelled to place an unwanted “s” in the middle of it! Hollingworth’s prodigious contributions to the field have been neglected for far too long. This year, 1989, marks the 50th anniversary of Leta Hollingworth’s death, and it provides a golden opportunity for us to rediscover her. She was the first champion of the cause of gifted females, and the entire discipline of gifted education is deeply in her debt.

Who Was Leta Stetter Hollingworth?

Leta Anna Stetter was born on May 25, 1886, to a pioneer family on a homestead near Chadron, Nebraska. Her mother, Margaret Elmer Danley, died giving birth to her third daughter when Leta was only 3 years old. Margaret kept a diary of Leta’s first year of life which gives testimony to the precocity of her development: she smiled on her second day, laughed at 7 weeks, sat up unaided at 21 weeks, began imitating before 3 months, and said “Papa” and “Mama” by 7 months [H. Hollingworth, 1943]. Leta’s early memories included “Texas longhorns, Sioux Indians, blizzards, sod-houses, our log-house, and the one-room schoolhouse” which she judged excellent in every respect. “We had small classes [twelve pupils, in all], all nature for a laboratory, and individualized instruction” [Hollingworth, 1940a, p. 32]. She graduated from Valentine High School at the age of 15 and entered the University of Nebraska to study literature and writing. There she met Harry Hollingworth and completed her B.A. at the age of 19, Phi Beta Kappa. After she graduated, she taught high school in Nebraska for two years and then joined Harry who had become an assistant to Professor James McKeen Cattell at Columbia University. They were married in New York City December 31, 1908, and settled there.

Leta planned to teach in the public schools of New York, only to find those doors firmly closed to her because she was a married woman. A talented writer, she tried writing stories but they were rejected by publishers. She sought a fellowship to study at Columbia University, but again her plans were thwarted. Bewildered, she attempted to adjust to household duties, filling her days dressmaking, mending, cooking, washing, ironing, and cleaning, until the frustration of not being able to contribute overwhelmed her. One morning in autumn, 1910, she railed at Harry about the unfairness of her situation, burst into tears, and then determined to do some-thing about it—not just for herself but for all women who were caught in her predicament. She went to the university library and devourd everything she could get her hands on about why women were denied access to work and educational opportunities. Armed with the theories and “research” of the day she set about to discredit all claims of the natural inferiority of women.

A year later, Leta began graduate work at Columbia University. She took her M.A. degree in Education in 1913 with a thesis on “Functional Periodicity,” in which she demonstrated through an original study that at any point in their menstrual cycles women are as productive as men [refuting one of the main reasons women were denied work]. She immediately found a part-time position giving mental tests at the Clearing-House for Mental Defectives in New York where she continued her research on women. She began publishing her findings in 1914, and in that same year she was appointed to the first position of psychologist established by the City of New York. In 1916 she took her Ph.D. degree in Education at Columbia and was offered the position of instructor of Educational Psychology. This year marks the beginning of her contributions to gifted education.

Hollingworth had many professional interests, and she made contributions in several areas. She was the “scientific bulwark” of the women’s movement [H. Hollingworth, 1943, p. 184], one of the first clinical psychologists and professors of clinical psychology, a researcher in mental retardation and learning disabilities, one of the first investigators of the gifted, the author of one of the first texts on adolescent development, one of the first to recognize the possible coexistence of giftedness and handicapping conditions, and a poet. In addition to her 82 published articles, she wrote some of the first and most influential textbooks on giftedness, adolescence, mental retardation, learning disabilities, and special education, and managed to find time to write at least 1,000 letters each year [H. Hollingworth, 1943]. It is ironic that she is most frequently remembered in the field by a book she never finished—Children Above 180 IQ Stanford-Binet—compiled from her notes after her death by her husband, Harry Hollingworth, a noted psychologist in his own right.

A woman of remarkable courage, talent, and wit, Hollingworth challenged many of the beliefs of her times: that the only proper role of women was motherhood, that women were less capable workers than men because of their menstrual cycles, that females were innately inferior to males in intelligence, that eminence was
an appropriate measure of capability, that giftedness was akin to insanity, that gifted children needed no special provisions ("the cream always rises to the top"), and so forth. Though a compelling speaker and writer, she found experimental research a more effective way to combat the prejudices that existed in her era, and she devised clever experiments to test her hypotheses. In her autobiographical sketch for Women of Achievement, she wrote:

I was intellectually curious, I worked hard, was honest except for those benign chicaneries which are occasionally necessary when authority is stupid, disliked waste, and was never afraid to undertake an experiment or to change my mind. My family motto, translated from the Latin, reads,—I love to test.

[Hollingworth, 1940a, p. 35]

Hollingworth's professional writings began with an investigation of women's intelligence, so this is where our story continues.

The Intellectual Capacities of Females

Many biographers have characterized Hollingworth as having had two distinct periods in her career: one that focused on the psychology of women and another that concentrated on the gifted [Benjamin, 1975; Shields, 1975], but there is more continuity to her career than has been previously recognized. The area of greatest overlap between these two interests was her one-person battle against the "variability hypothesis," a little piece of history that has major implications today. Scientists in the latter part of the 19th century and early part of the 20th firmly believed that females had a more restricted range of abilities than males, and that this is why there were fewer of them among the retarded population and fewer who achieved eminence. Hollingworth [1926] traced the history of these attitudes as far back as the first century.

Girls were assumed to be mentally inferior to boys, as a sex, and to resemble each other closely in intellectual caliber. In illustration of this theory of female homogeneity we find in a panegyric on Murdia, dating from the second half of the first century, the sentiment expressed that the gravestones of women must all be alike, "Because their virtues admit of no heterogeneity, and it is enough that all have shown themselves worthy of the same good report." [p. 347]

This contention was afforded scientific credibility through the variability hypothesis, a legacy of Charles Darwin [1871]. Darwin had observed that males of many species had greater differentiation of secondary sex characteristics than females. He believed that variation from the average was the primary means of evolution, and therefore proposed that males were more advanced than females on the evolutionary scale.

Darwin's interpretation met with little resistance, since it had been accepted for centuries that women were intellectually inferior to men and that women were all pretty much alike. Hollingworth's major advisor, the eminent E. L. Thorndike [1910], proclaimed the prevailing view regarding women's intellectual capacity in one of the most popular texts in psychology:

[In] the great achievements of the world in science, art, invention, and management, women have been far excelled by men...

In particular, if men differ in intelligence and energy by wider degrees than do women, eminence in and leadership of the world's affairs of whatever sort will inevitably belong oftener to men. They will oftener deserve it. [p. 35]

Undaunted by the widespread acceptance of these views, Hollingworth determined to establish the intellectual equality of women. She dismantled the variability hypothesis bit by bit by challenging the evidence upon which it rested: the lack of representation of females among the retarded and eminent populations. She attacked the first part through her own experimentation, and for the second part she employed Terman's research and the arguments of the relatively new field of sociology.

In 1913, she was hired to administer Binet tests to charity cases at the Clearing-House for Mental Defectives in New York City. During the next two years, she assessed 1,000 individuals and discovered that in the younger age groups, the males far outnumbered the females, but in the older age groups, the females outnumbered the males [Benjamin, 1975]. From this observation, she was able to make the argument that there are as many retarded females as males, but that more males are recognized because of social concerns. Mentally retarded boys were sent to the Clearing-House at an early age because relatives feared that they could not support themselves. By comparison, girls were kept in the home to take care of children and help with household chores until they were no longer useful; then they were referred to the Clearing-House [Hollingworth, 1914]. She concluded that social circumstances played a
far greater role in the recognition of retardation than anyone had previously realized. One-half of the evidence upon which the variability hypothesis was based was shown to be inaccurate.

Next Hollingworth set about to demonstrate that there were as many intellectually superior females as males, despite the fact that few of them had had illustrious careers. Here she was fighting an entrenched belief that equated high intelligence with eminence, a conviction that had been set firmly in place by Galton. In *Hereditary Genius*, Galton (1869) ranked men as 1 in 4,000 in intelligence according to the prestige they had attained, and then sought to demonstrate that genius runs in families [particularly in his family—his cousin was Darwin]. His belief that men of genius inevitably rise to eminence established *eminence* as the quintessential evidence of giftedness.

Hollingworth challenged Galton throughout her career. She argued that “eminence and superior mental ability are not identical” [Hollingworth, 1926, p. 14], that the paltry number of eminent women was due to sociological rather than biological limitations of women, and that these factors also affected the achievements of other less advantaged groups in society.

Those who investigate eminence agree . . . upon the following facts. An overwhelming majority of illustrious persons have had fathers who were far above the average in social-economic conditions—nobles, professional men, or men successfully engaged in commerce. Very few children of manual workers become eminent in high degree . . . Very few women can be included among those who in the world’s history have achieved first rank for mental work . . .

. . . One possible interpretation is that education and opportunity are the prime determinants of achievement, since nearly all the great men have been born in comfortable homes, of parents in superior circumstances. If opportunity were indeed the prime determinant of eminence, then we should expect those who belong to socially inferior categories to be virtually excluded from it. This is just what we do find, since the uncultured, the poor servants, and women are very seldom found to have achieved eminence. [Hollingworth, 1926, p. 11]

Earlier in her career, while still a graduate student, Hollingworth began to challenge publicly the notion that women are less intelligent than men because fewer numbers of them attain eminence. I

would like to share with you some more of her impassioned prose on this subject:

It is undesirable to seek for the cause of sex differences in eminence in ultimate and obscure affective and intellectual differences until we have exhausted as a cause the known, obvious and inescapable fact that women bear and rear the children, and that this has had as an inevitable sequel the occupation of housekeeping, a field where eminence is not possible. [Hollingworth, 1914, p. 529]

In another article, Hollingworth described how the interaction of ability and environmental stimulation serve to enhance variability in males and inhibit it in females. She suggested that variability had comparatively little survival value for women:

A woman of natural Herculean strength does not wash dishes, cook meals, or rear children much more successfully than a woman of ordinary muscle. But a man of natural Herculean strength is free to abandon carpentry or agriculture and become a prize-fighter or a blacksmith, thus exercising and enhancing his native endowment. [Montague & Hollingworth, 1914, p. 343]

Hollingworth [1926] also publicized some overlooked findings in Terman’s research that indicated that in childhood there were equal numbers of gifted males and females. First, in the standardization of the Stanford-Binet, girls scored two to three points higher than boys for all age groups up to the age of 14—a remarkable fact, given that test constructors in that era were recommending different sets of norms for boys and girls to prevent “serious injustice” to the girls [Terman, 1916, p. 70]. Second, the highest scorers in Terman’s longitudinal study of gifted children were girls with IQs above 190.

If in childhood females equaled or surpassed their male counterparts in measures of ability, then the underrepresentation of women among the eminent must be attributable to environmental, rather than innate, factors. The importance of Hollingworth’s crusade has not been fully appreciated, since we are still relying upon eminence as the *sine qua non* of giftedness a half-century later.
Hollingworth and the Gifted

At the same time that Terman was "turning the first furrows in the field" on the West Coast, Hollingworth "was preparing to cultivate the field from the other direction" on the East Coast. "It was in these simple agrarian terms that Professor Hollingworth thought and often spoke of her task as similar to that of her colleague across the country" [Pritchard, 1941, p. 47]. Terman was basically interested in the study and description of giftedness, while Hollingworth sought to determine how properly to educate children with superior abilities.

Pritchard [1951] found many similarities between Hollingworth and Terman. They both were pioneers in differential psychology; they exemplified the highest standards of educational research; they relied heavily upon quantitative and objective instruments of measurement; they planned and executed extensive studies of the gifted; they were skilled counselors with the children they studied; they were master teachers; and they made important and lasting contributions to the field.

There was, however, one major philosophical difference between these two key leaders. Hollingworth was much more concerned than Terman with the relationship of education and opportunity to giftedness. She did not feel that inherited ability was the prime determinant of achievement. What a person can do may depend on congenital equipment, but what he or she actually does do probably depends on the environment [Hollingworth, 1926, p. 14]. She noted that most eminent men came from well-to-do families and their sisters, who shared their heredity, were not provided with education and support for developing their abilities. Furthermore, equal opportunities in the society for women to develop their intellectual strengths were not provided.

Hollingworth began her research with the gifted in 1916, the same year that Terman published the Stanford-Binet. One day in her class on the psychology of subnormal children, she administered an intelligence test to a superior student to demonstrate the differences between bright and retarded children, and the student scored an IQ of 187 [Pritchard, 1951]. This event commenced Hollingworth's passionate concern with the highly gifted. She followed "Child E" for the rest of her career.

A strong advocate of early identification of the gifted, Hollingworth [1931, 1939a, 1942] repeatedly emphasized that the most critical period in the lives of the gifted was the first 12 years. She claimed that children "above 140 IQ waste half their time" in school, while children "above 170 waste practically all of their time" [Hollingworth, 1939b, p. 585]. This statement is particularly revealing, given the fact that bright children were typically advanced in school one or two years during this era [Witty, 1930].

Hollingworth did not favor radical acceleration (three or more years advancement) due to the adjustment problems faced by the children. She was opposed to enrichment in the regular classroom on the grounds that too often it simply involved busy work to keep the child occupied. Instead, she advocated homogenous grouping of the highly gifted in special classes which focused on enrichment rather than acceleration, and she developed exemplary programs of this type in New York City. She was not in favor of tracking of all ability levels, since she felt that only children at the extremes required special grouping in order to meet their needs [Hollingworth, 1926]. Perhaps this will help resolve the recent controversy about Hollingworth's views on acceleration and enrollment (cf., Letters by Borland, 1988 and White & Renzulli, 1988).

Combining research and service, she initiated, in 1922, two Special Opportunity classes at Public School 165. She followed the children for the rest of her life—over 15 years, offering guidance and even financial assistance so that these young people could continue their studies. She introduced biography into the curriculum for the gifted and taught a class in this subject herself at P.S. 165 and later at the Speyer School.

Hollingworth's most notable achievement in the education of the gifted was the design of an experimental school to study both slow learners (the "Binet" group) and rapid learners (the "Terman" group). Upon the urging of one of her colleagues at Teachers' College, a mysterious "Dr. Mort" [Hollingworth, 1940b], Hollingworth convinced the New York City Board of Education to establish the Speyer School in Manhattan as a laboratory school for exceptional children.

With no curricular materials available for the Terman group, it was necessary for Hollingworth to invent the course of study for this special population. Assiduously avoiding subject matter the students would encounter later, Hollingworth conceived of a curriculum emerging from student interests. Her model may have been an early prototype of the guided discovery methods later employed by Bruner, Taba and others. Believing that the "best thinkers" should be educated for "initiative and originality" [Hollingworth, 1938], and building upon the interests of gifted children in
this age group (7–13), she designed the program around a central theme, “The Evolution of Common Things.” Students were free to choose among units selected for their significance to the broader problems of culture which they would encounter throughout their lives (e.g., food, shelter, transportation, government, education, warfare, trade, etc.). With guidance from their teachers, students determined the questions to be studied, found the resources themselves, and compiled their results into a series of teacher handbooks which were later disseminated throughout the country. Hollingworth’s emphases on independent study, creativity, teaching major principles, and biographical studies have become the backbone of modern curriculum for the gifted.

Leta Hollingworth was dearly loved by her students and by the children she studied throughout her lifetime. Though she was a zealous scientific researcher, she never lost sight of people as individuals, and she devoted her life to helping people. In her autobiographical sketch, Hollingworth [1940a] summarized her life’s work as follows:

I have published four textbooks and parts of others, but the bulk of my writing is in original studies, published in educational and psychological periodicals. There are about eighty of these and they deal for the most part with the psychology and education of highly intelligent and gifted children. I consider this one of the most important of all problems for the development of social science—the problem of how to recognize, how to educate, how to foster and how to utilize the gifted young. [p. 34]

Her husband, Harry Hollingworth [1943] added these words in a biographical sketch written after her untimely death.

Although tangible support was often petitioned for, no research funds from any source were ever granted for any of the projects directly initiated by Leta S. Hollingworth.

The difficulties, objections, and discouragements she encountered in endeavoring to carry forward educational experiments with gifted children, and the sacrifices she had finally to make of her own energy and resources in order to accomplish what she did, constitute an eloquent testimonial . . . to the social apathy toward and jealousy of the gifted, against which she always had to struggle. [p. 187]


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**Gifted Females: They’ve Come a Long Way—Or Have They?**

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Current research and practice as well as media attention seem to indicate that opportunities for gifted females have increased while barriers to their achievement have decreased. However, before we become enthusiastic about these developments, a closer review of the implications and potential dangers of this attention must be conducted. This article will review recent research studies and analysis regarding gender and sex differences, point out promising research directions, and suggest future research needed to answer relevant questions. Sex bias in both programs and curriculum used in programs for the gifted will also be discussed.

Headlines in a recent weekly news magazine proclaim that the gender gap on test scores is shrinking. “The notion that boys best their sisters in mathematics and that girls excel in language skills is a powerful stereotype and one that has seemingly been confirmed by results on standardized tests. But like so much of conventional wisdom, those notions may soon have to be abandoned” [Begley, 1988, p. 73]. *Education Week* [1988] reported on the research of Linn and Hyde who concluded that sex differences in verbal ability were substantional. Yet still, the *Detroit Free Press* [Flanigan, 1988] and other periodicals [Zigli, 1985] have focused on the successes and barriers to success faced by professional women.

More attention has been given to the issues relating to the potential and achievements of gifted females in the last five years than in the previous four or five decades. This attention has not been limited to the education of the gifted. Articles on this specific topic and many related issues have appeared in popular daily newspapers, monthly magazines and professional journals in other areas of edu-