



Baby Science in Fin-de-Siècle America

By Christine von Oertzen

As the nineteenth century drew to a close, the physiological and mental development of infants and toddlers generated considerable scholarly enthusiasm, with men of science discovering in their own and others' offspring, to borrow Charles Darwin's phrase, "objects of natural history." Darwin's and his colleagues' interest was shared by a small number of American college-educated women, one of whom would establish an unprecedented network of at-home scientific observation that spanned North America. At its core was arguably the most intimate element of late-nineteenth century domesticity, the baby in the cradle.

Young fathers such as Darwin and French sociologist Hyppolite Taine were among the first learned men to direct their attention to newborns. On the basis of their observations, they and others produced detailed accounts of their children's physical and psychological development. Published in 1882 by William Preyer, *The Soul of a Child* recorded the mental and intellectual development of Preyer's son during the first three years of his life. Strongly influenced by Darwin's theory of evolution, early empirical work in infant physiology and

psychology charted a developmental trajectory in which language and purposeful action gradually replaced instinct and reflex. By the 1880s, investigators had stepped forward to claim that processes of physiological maturation determined psychological development in infants. A small but vocal group of male scientists were responding to Preyer's, and Darwin's, call to bring the nursery into the domain of academic science.

Empiricism of this kind presented science with uncommon obstacles. The intimate space of

the nursery, widely regarded by contemporaries as a quintessentially female domain, restricted men's access to human offspring.

Despite misgivings about whether women were capable of overcoming "female baby worship" to grasp an infant's development with the requisite degree of objectivity, leading male physiologists and psychologists engaged in early childhood development research came to encourage new mothers to take notes on their infants' physical and mental growth.

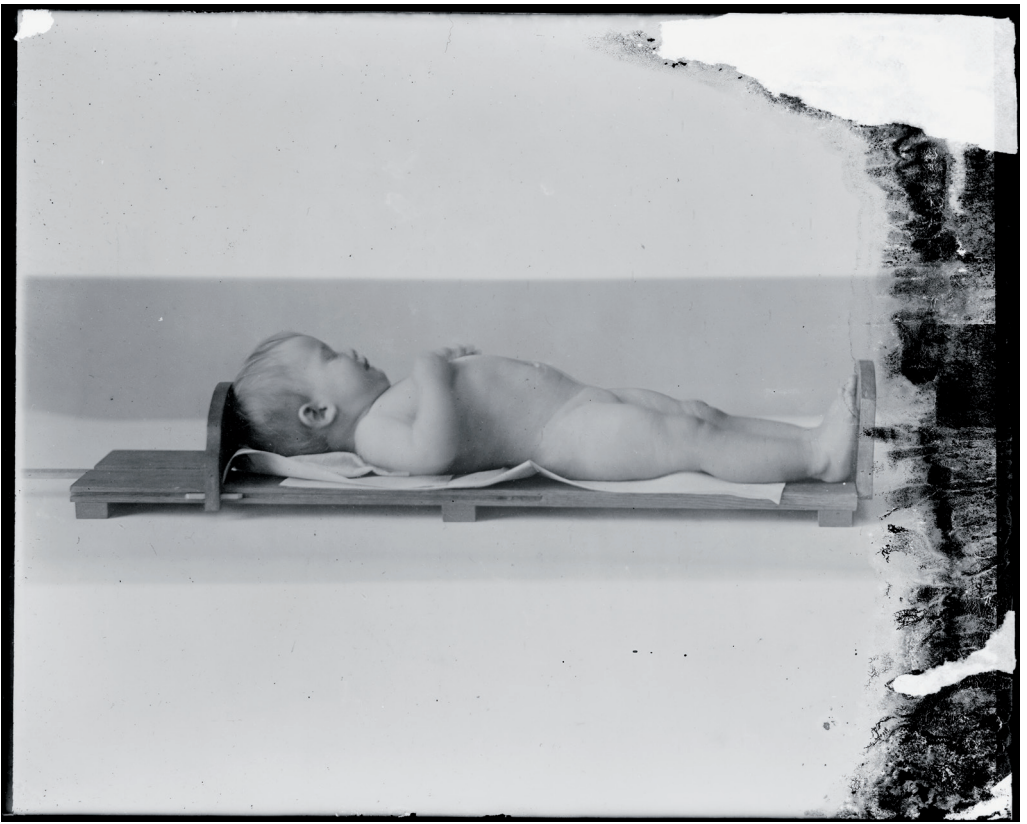
In the United States, enthusiasm for scientific approaches to childhood yielded what learned contemporaries were soon describing as the Child Study Movement. Their shared objective was to map the mind of the child. The study of newborns and infants, in contrast to small children, remains a relatively unexplored dimension of this movement. Drawing on unpublished sources, my project explains why members of the Association of Collegiate Alumnae (ACA) came to focus on the early development of infants and toddlers. Founded in 1881 to encourage female graduates of America's most prestigious women's colleges and coeducational universities to engage in what they described as "practical educational work," the ACA championed baby science from 1891 until the eve of the First World War. Placing science in the cradle evolved into one of the ACA's most ambitious projects, as ACA members seized the opportunity to widen their radius beyond the confines of late-nineteenth century domesticity.

Baby Science and the Educated Woman

In 1893, Milicent Shinn, a member of the ACA's California Branch, joined the ACA's committee on child study; within two years, Shinn would

take charge of it altogether. Shinn began observing her niece six days after her birth and continued daily observations during the next seven years. That same year, Shinn presented her initial findings at the annual meeting of the National Educational Association in Chicago. If Sarah Wiltse, correspondent to the main journal of the Child Study Movement, *The Pedagogical Seminary*, is to be believed, "no section [of the meeting] attracted greater interest than that devoted to the study of children." Through her publications, Shinn emerged – in stark contrast to her female collaborators scattered across the North American continent – as a full-fledged scholarly contributor to the academic science of her era. William Preyer, professor of physiology in the German university city of Jena, welcomed Shinn's observations, thanking her "for having drawn my attention to some important facts in mental development which I have not specially studied." Unstinting in his praise, Preyer concluded that "the whole series of your notes everywhere shows the stamp of reliability so manifestly that it will be a pleasure for me to make use of them for a future edition of my book on the *Soul of the Child* or sooner." In a memorable turn of phrase, Shinn contested that babies developed "first the senses and then the reason; first the object, and then the word; first handcraft and then head craft."

Shinn's immodest goal was to account for "how the human faculties came to be what they are." To reach these Olympian heights, Shinn instructed ACA members across North America that their observations must be undertaken with the utmost care. Aware of the multitudinous demands young mothers faced, Shinn nonetheless insisted upon strict adherence to



Founded in 1912, the U.S. Children's Bureau established programs to expand and standardize the observation of early childhood development done by women in nurseries. Photo: Measuring board for the Children's Bureau, ca. 1920, Library of Congress, Prints and Photographs.

the highest standards of field observation. Under Shinn's leadership, the ACA Committee on Early Childhood Development matured into a network of twenty-five at-home observers. Shinn assumed the role of *primus inter pares*, penning letters to women in different parts of the United States filled with interpretative advice and suggestions for further reading. Shinn collected notes that ACA members forwarded to her from across the country, using their material in her own publications to question prominent scholars' observations. The most visible outcome of their

shared enterprise was Shinn's *The Development of the Senses in the First Three Years of Childhood*. In contrast to the biographical studies on infants available at that time, Shinn's 1907 publication represented the first attempt to survey all of the published and unpublished literature in her field. "The result of this carefully collated material," as observed in a review published in the *American Journal of Psychology* in 1909, "is the most systematic and complete record of the development of the senses that has yet been contributed to psychology."



Milicent Shinn with her object of study, Ruth, at the age of seven. From: M. Shinn, *Körperliche und geistige Entwicklung eines Kindes in biografischer Darstellung*. Transl. and ed. by W. Glabbach and G. Weber, Langensalza 1905.

Recalling Science Beyond the Academy

The success of Shinn's *Notes on the Development of the Senses* bears witness to the productivity of the ACA's far-flung network. From the perspective of the literature that has been passed down to us in scholarly monographs and journals, Shinn's emerges as the sole voice in what was in fact a much larger choir of home-bound, college educated women.

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My analysis of unpublished archival material reveals that collaborative science, as practiced by ACA members, blurred distinctions between university and home, between expert and amateur. For decades after the ACA's remarkable experiment, publication in specialized literatures continued to mark clear-cut boundaries between salaried labors undertaken primarily by men in university labs and offices and unpaid observation carried out mostly by women at home. This history of infant scholarship encourages us to consider what else lies beyond the formal professional networks that have come to define our understanding of science itself.

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