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# Integrating Women Pioneers into the History of Psychology Course: The Case of Florence Mateer

Kenneth S. Bordens

*Indiana University - Purdue University Fort Wayne*, bordens@ipfw.edu

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Integrating Women Pioneers into the History of Psychology Course:  
The Case of Florence Mateer  
Kenneth S. Bordens  
Indiana University – Purdue University Fort Wayne  
bordens@ipfw.edu  
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## **Introduction**

In the history of psychology a great number of early psychologists are widely known. Names such as Wilhelm Wundt, John Watson, Mary Calkins, Margaret Floy Washburn, and Edward Tolman are more than familiar.. Their names and works appear in textbooks on the history of psychology as well as Web sites cataloguing their works. There are, however, legions of lesser-known individuals who worked in psychology during its early days. These individuals, in their own ways, made significant contributions in a number of emerging areas in the early days of the emergence of psychology.

One such individual is Florence Mateer. Having earned her doctoral degree in 1918, Florence Mateer represents one of a small number of women to earn this degree at that time. Mateer contributed to the early history of psychology in two areas: experimental psychology and clinical psychology. In the area of experimental psychology, Mateer conducted what has been characterized as the pioneering experiment on classical conditioning in the United States (Hilgard & Marquis, 1940). The second area was clinical psychology where she focused on diagnosing and treating mentally retarded children. She held a number of positions at schools and institutes focusing on the problems of mental retardation. Mateer was a pioneer in the use of intelligence tests and an early critic of using intelligence tests (intelligence ratios) to diagnose mental retardation and psychopathology (Mateer, 1918a). Mateer was one of only a handful of clinical psychologists who had a Doctoral Degree, most had either Bachelors or Masters Degrees (Watson, 1953). She was also one of a small number of private practice clinical psychologists in the pre-World War II era (Cummings & Cummings, 2000).

## **The Early Life and Education of Florence Mateer**

Florence Edna Mateer was born to a Quaker family on December 6, 1887 in Paoli, Pennsylvania a small town near Lancaster. Mateer's earliest known education was at the State Normal School in West Chester, Pennsylvania, graduating in 1906 (Clark University Archives, 2009). She was a student at the University of Pennsylvania from 1912 to 1913 but did not earn a degree. When she applied to Clark for graduate training she did not have a Bachelor's Degree in psychology. After meeting with G. Stanley Hall, Mateer was admitted to Clark University in 1913. In exchange for fee remission, Mateer performed for the psychology department. In subsequent years Mateer was awarded Fellowships in psychology from Clark University.

Mateer earned her Master's Degree in 1914 submitting a Master's Thesis entitled "The psycho-clinician personality and training" under the direction of G. Stanley Hall. In her thesis Mateer (1914) discussed the role of the "psycho-clinician" (an individual who administers and interprets psychological tests) and stressed the importance of thorough training for anyone who

administered psychological tests (such as the Binet intelligence test), a view at odds with many of her contemporaries. Mateer applied for candidacy for her Doctoral Degree on October 7, 1915 under the direction of William H. Burnham. Mateer's dissertation investigated the conditioned reflex in normal and retarded children. Her dissertation research was eventually published in her book *Child behavior: A critical and experimental study of young children by the method of conditioned reflexes* (Mateer, 1918b).

### **Pioneering Work on Classical Conditioning**

Mateer conducted one of the earliest experiments on classical conditioning in the United States using a sample of "mentally deficient" and "normal" children. In her conditioning procedure, Mateer applied a bandage over the participant's eyes with firm pressure and left it in place for 20 seconds (used for all normal and some retarded participants). After 11 seconds, Mateer presented the participant a small piece of sweet chocolate for the normal children and either chocolate or sweetened water for three of the seven retarded children (used because these children were used to liquid food and refused the chocolate). At the end of the 20-second interval, the bandage was removed. For some retarded infants, Mateer used a camel hair brush to deliver a tactile stimulus to the upper arm along with the bandage over the eyes for a brief period. For other retarded infants, only the tactile stimulus was used. These variations for the retarded infants were necessary to accommodate the special needs and reactions of these participants. Mateer measured the swallowing response by carefully observing the participants and using a mechanical recording device (Marey tambour).

Mateer's results showed that conditioning took 3 to 9 trials in the normal children. The number of trials required for learning decreased up to 60 months of age and then leveled off. Mateer also noted some gender differences. For children under age two years, boys conditioned faster than girls, a result reversed for children older than two years. Mateer found a significant relationship between a child's intelligence speed of conditioning. More intelligent children conditioned faster than less intelligent children. Mateer reported that unlearning required between 3 and 12 trials and that relearning (reacquisition of the response after unlearning) required fewer trials than initial learning. Mateer found that the greater the number of trials required for learning, the fewer required for unlearning. She also found a relationship between age and unlearning with older children requiring fewer trials to unlearn the conditioned response than younger children. Generally, unlearning was more difficult (requiring more trials) for girls than for boys.

### **Pioneering Work in Clinical Psychology**

While working on her dissertation, Mateer worked extensively in clinical psychology by administering mental tests and handling all of the clinical cases directed to Clark University. Mateer requested that her work in clinical psychology be formally recognized in the form of the Fellowship (1915) and that her specialty be listed as clinical psychology so that it would be easier to find a clinical position after receiving her doctorate.

After receiving her Ph.D., Mateer worked at the Massachusetts School for the Feeble-Minded until 1918 when she moved to Columbus, OH to work for the Ohio Bureau of Juvenile Research with Henry Goddard. She developed a classification system for juvenile delinquents and evaluated adolescents remanded to the courts to determine their level of mental functioning.

She also designed a treatment program in which desired behavior was positively reinforced with an “OK slip” (precursor to the “token economy”). From 1921 to 1927 Mateer had two positions: A private practice psychologist and as a psychologist at the Laboratory School in Columbus, OH. From 1927-1946 Mateer was the founder, director and consulting psycho-clinician at the Merryheart Schools in Columbus which had a school for “bright” and a school for “backward” children.

By 1930 Mateer was referring to herself as a “psychologist” She also published three books in which she applied the science of psychology to the understanding of normal and maladaptive behavior in children and in adults (*The unstable child* (1924), *Just normal children* (1929), and *Glands and efficient behavior* (1935)). In 1938 she had a visiting faculty position at the University of British Columbia. She was one of a number of lecturers brought to the university for the summer session of 1938 (Winslow, 1938), and she worked to gain recognition for clinical psychology in Canada. Starting around 1928, Mateer served as an expert witness in court cases involving children at a time when clinical psychology and clinical psychologists had a relatively low standing. In 1947 Mateer closed the Merryheart Schools (most likely due to ill health) and took a position at Claremont College in California where she trained the next generation of clinical psychologists.

During her years in clinical practice and teaching, Mateer championed two positions that are part of modern clinical psychology. First, she strongly believed that diagnosis of mental deficiency should not be based on the results of a single intelligence test (Mateer, 1918a). This position was at odds with common practice during her day. Second, she maintained that diagnosis and classification of individuals with mental disorders should be made by a team. She wrote that clinical psychologists “need the aid of the physician, the lawyer, the nurse, the teacher, parents, guardians, and institutions” (Mateer, 1924, p. 35).

For most of Mateer’s career as a practitioner, psychotherapy was largely the province of psychiatry and clinical practice and theory were dominated by the Freudian model. Mateer rejected the Freudian model in the diagnosis and treatment of mental disorders, favoring a more scientific, research-driven approach; a position that eventually became part of the Boulder Model.

### **Integrating Mateer into the History Course**

Women who earned Doctoral Degrees in the early years of psychology followed one of three career paths (Furumoto & Scarborough, 1986). First, some women had no career in psychology after receiving their Doctoral Degrees. Second, other women had continuous careers, most teaching in women’s colleges or normal schools. Women in this second category tended to eschew family and remained unmarried. Third were women who had disjointed careers in which they worked in the field but had interruptions and forays into a number of different careers. Women in this category tended to be married and had families.

Florence Mateer fits best into Furumoto and Scarborough’s second category. She devoted her life to her work and never married. However, she differed from Furumoto and Scarborough’s characterization in one important way: Mateer did not pursue a career teaching in a women’s college or a normal school. Instead, she made her career in the clinical practice of psychology in a number of venues and eventually taught in a clinical psychology graduate program. Mateer’s work and contributions can be integrated into the History of Psychology course in a number of ways.

1. Her early work on classical conditioning can be integrated into a unit on behaviorism. As noted, she did the pioneering work in this area in the U.S. before others saw the importance of classical conditioning.
2. Mateer's work and career path can be incorporated into coverage of the role of women in the history of psychology. Mateer's career path adhered to and deviated from the typical career paths taken by many early women pioneers in psychology. Although she went into a "clinical area," which many women did, she also avoided the career path of teaching in normal schools. At times, Mateer was very difficult to work with. However, the same characteristics that rubbed some the wrong way allowed Mateer to follow her career path regardless of social and gender-role expectations. Her strength and perseverance could also be integrated into the discussion of the difficulties and challenges faced by many early women pioneers.
3. In 1924 Mateer wrote a book called *Glands and efficient behavior*. In this book, Mateer applied the relatively young science of "gland therapy" to understanding behavioral efficiency and inefficiency. Mateer saw the potential for applying what was known about the activity of the thyroid and other glands to understanding the causes and treatments for behavioral disorders. This work could be integrated into a unit on the history of physiological psychology or a discussion of early ideas about the relationship between physiology and behavior.
4. Much of Mateer's work and career were devoted to the application of psychological principles to the diagnosis and treatment of psychological disorders. Her work while at the Massachusetts School for the Feeble Minded, Ohio Bureau of Juvenile Research, Merryheart Schools, and early expert testimony, could be integrated into discussions of the early aspects of clinical psychology and applied psychology.
5. Mateer's early work on classical conditioning used children as participants and her later clinical work focused on children and adolescents. The resulting book discussed many aspects of child development as well as classical conditioning. Her research also investigated the relationship between various cognitive abilities and the conditioning process. Consequently, her work fits nicely with the history of developmental psychology.
6. Mateer's main area of emphasis was in clinical practice. Her positions on using intelligence testing to diagnose mental retardation, the importance of a "team" effort when diagnosing mental disorders, and her advocacy for the acceptance of clinical psychology as separate from psychiatry (in the U.S. and Canada) could be discussed in a unit on the history of clinical psychology and clinical practice.
7. Mateer took strong exception to the Freudian model and to the use of projective tests. She often referred to Freud's theory as "sophistry." She also questioned the validity of projective tests, calling the Rorschach a "fraud." Mateer advocated for and taught graduate students a more scientific approach to diagnosing and treating mental disorders. Her work could be integrated into a discussion of psychoanalysis.

The above suggestions are but a few ways that Florence Mateer's life, career and work can be integrated into a history of psychology course. Her work and career were widely diverse, making her work relevant to many aspects of the history of psychology. Her life and work deserves a more prominent place in the history of psychology.

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Selected Correlation Coefficients With Modern Significance Tests From Mateer's (1918b)

Conditioning Study

	Learning	Memorial functioning	Unlearning	Binet	Yerkes- Bridges	Best time on form board
Age	.571***	-.065	-.316*	.949***	.893***	-.806***
Learning		.22	.45***	-.588***	-.589***	.228*
Memorial functioning			-.306*	-.004	.014	-.186
Unlearning				-.251	-.224	.199

\* $p < .05$ , \*\*\*  $p < .001$