MAKING PLACE FOR A COMPARATIVE SCIENTIST: ROBERT MEARNS YERKES AT HARVARD, 1902-1917

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ABSTRACT: During the first decade of this century, Robert Mearns Yerkes struggled to make a place for himself within Harvard University’s Division of Philosophy as a comparative scientist. From the perspective of a young assistant professor, Yerkes’ diary and letters permit a glimpse into the all-too familiar struggle of establishing career and family.

Comparative psychology at the turn of the twentieth century was a relatively new discipline in the United States. The idea of combining psychology and biology into a single domain of study was foreign to many and few such researchers existed. Robert Mearns Yerkes. Yerkes, who preferred being called a "psychobiologist" rather than a "psychologist" (e.g., Yerkes, 1932), focused his talent on advancing the comparative, psychological study of animals, on bridging the chasm between psychological and biological science, and on developing and promoting objective methodology (Yerkes, 1950).

When Yerkes entered Harvard in the fall of 1887, he entered as a special undergraduate. He applied to Harvard to study medicine but was denied admission because Harvard did not then recognize the bachelor of arts degree Yerkes had earned the previous spring from Ursinus College in Pennsylvania. This temporary setback would lead Yerkes to psychology. Yerkes’ Harvard advisor, and one of his favorite teachers, was Josiah Royce. Royce recognized Yerkes’ abilities and interests. As Yerkes’ undergraduate days grew to a close, Royce suggested Yerkes combine his biological, psychological, and...
philosophical interests in to the emerging area of comparative psychology. Royce offered to introduce Yerkes to Hugo Münsterberg, then charged with the direction of the Harvard psychology laboratory. At that time, and well into this century, psychology at Harvard was a component of the Division of Philosophy. Yerkes, as he relates in his unpublished autobiography, was charmed. Münsterberg received him warmly and encouraged him to give serious consideration to Royce’s suggestion. Although not fully committed to this shift in plan, Yerkes entered the Harvard Graduate School in 1898.

Because no one in the Division of Philosophy was well-versed in animal psychology, Yerkes conducted most of his graduate research with Harvard’s comparative zoologists—under Münsterberg’s watchful eye. In March of 1902, Yerkes recorded in his diary that William James personally conducted the oral examination in comparative psychology, an exam more resembling a conversation than a test. Although Yerkes passed, James suggested Yerkes attend less to "facts" and more to the theoretical side of comparative endeavors (Yerkes, 1902). James’ words would prove prophetic.

When Yerkes completed his PhD in the spring of 1902, Harvard offered him a job as a teaching fellow. Yerkes balked, and asked Münsterberg, by then Division Chair, why Harvard President Charles W. Eliot had not offered an instructorship. Unknown to Yerkes, Eliot questioned the usefulness of the appointment; he questioned a biologist among the philosophers, a goat among the philosophical sheep (see O’Donnell, 1985). Eliot’s concern was well founded for at the time Yerkes usually characterized himself more a physiologist than a psychologist (e.g., Yerkes, 1930b). Münsterberg intervened, convincing Eliot that Yerkes’ appointment was needed for the Division’s growth, particularly if Harvard wished to stay abreast of the psychological work at other schools. Yerkes joined the Harvard faculty in 1902 as an instructor who understood his responsibilities to be research and teaching, in that order (Yerkes, 1950).

The reality of life in the academy dawned rudely on Yerkes. In May of his first academic year, while sitting on a PhD examination committee, he became disturbed when he perceived Münsterberg passing candidates though the proceedings that Yerkes thought unworthy. He commented in his diary that "it is great grief to me to feel that I cannot ful[ly] honor and love my ‘Chief.’ But [it]’s inevitable...sooner or later if I say, the crack must come, our principles will conflict" (Yerkes, 1903a). Despite this hint of caution, Yerkes continued to derive inspiration from Münsterberg (Yerkes, 1904b;
Yerkes' early academic endeavors found him working to prepare lectures, a task he found arduous (Yerkes, 1950), and struggling to bring his work to the attention of biologists, a task he relished and found consuming (Yerkes, 1930b). Yerkes' experimental work flourished during those early years at Harvard and ranged across a wide variety of species, including water fleas, crabs, turtles, crawfish, frogs, earthworms, and mice. Anecdotal evidence of success is suggested in an April 1904 diary entry where he mentions only two Harvard faculty members, himself and psychologist Walter Cannon, attending a private dinner at Yale in honor of Charles Sherrington (Yerkes, 1904d). Sherrington was in New Haven to give that year's Silliman Lectures, the same Silliman Lectures that spawned Sherrington's classic *The Integrative Action of the Nervous System* (Sherrington, 1906).

Throughout the summer of 1904, Yerkes became increasingly dissatisfied with his Harvard position (e.g., Yerkes, 1904h). Although he disclosed in his diary that he found Münsterberg's administrative methods unadmirable (Yerkes, 1904f), Yerkes could not conceive Münsterberg as "insincere and unreliable" (Yerkes, 1904g; see also Yerkes 1904e). Indeed, Yerkes believed their interactions suggested he was gaining respect in Münsterberg's eyes (Yerkes1904j). That perceived respect did not translate into self-confidence. During the summer, Yerkes experienced nagging doubts about his ability to rival the intellectual work of Münsterberg or the colleague with whom Yerkes worked most closely, Edwin Holt (Yerkes, 1904i). Summer's end found Yerkes at an emotional low tide. That August, Münsterberg asked Yerkes if he would serve as a recording secretary for the International Congress of Arts and Sciences to be held the next month in St. Louis (H. Münsterberg, 1904). A vice-president of the organization, Münsterberg needed, in addition to a secretary, a liaison to negotiate the arrival and comfort of the international guests. He choose Yerkes; Yerkes accepted.

During that Congress, Yerkes committed a political error that apparently cost him Münsterberg's good will—at least momentarily. Yerkes confided in his diary that he circulated among the Congress's participants asking their opinion of Münsterberg. The two words that most frequently appeared, he recorded, were "notoriety" and "ambition" (Yerkes, 1904k). Upon returning to Cambridge, Yerkes believed that his interpersonal interaction with Münsterberg had drastically cooled (Yerkes, 1904l;1904m). Yerkes, who was feeling uncomfortable and somewhat paranoid, thought Münsterberg unresponsive and indifferent.
unresponsive and indifferent. To Münsterberg’s credit, after a period of postconference aloofness, Yerkes’ diary entries suggest Münsterberg again adopted the sheltering stance one might expect a good division chair to take toward an inexperienced, unmarried, somewhat naive faculty member; the Münsterbergs even invited Yerkes to share Thanksgiving dinner that year (Yerkes, 1904n, 1904o, 1904q). Frau Münsterberg, however, was not as gracious in overlooking Yerkes’ social indiscretions. Late that year, Yerkes reported she severely castigated him for his “snobbishness” (Yerkes, 1904p; 1904r).

If Münsterberg’s personal support of Yerkes seemed strong, his professional support was dubious. Münsterberg’s conception of psychology did not include a prominent place for animal research. To Münsterberg’s way of thinking, Yerkes’ work was more correctly conceived as the work of a biologist (Kuklick, 1977; H. Münsterberg, 1911; O’Donnell, 1985). Three factors forced Münsterberg to tolerate frogs and turtles in the Division: the influence of James and Royce, competition from other psychological laboratories, and Yerkes’ increasing stature among psychologists and comparative scientists alike. Despite these factors, Münsterberg’s professional opinions boded ill for Yerkes’ Harvard career.

Any expectations Yerkes may have harbored of a rosy Harvard future appear unrealistic in light of two incidents. First, late in 1904, Münsterberg evidently told Yerkes he would be expected to supplement his salary with work outside the University—teaching summer school at Radcliffe was a possibility (Yerkes, 1904s). The money needed to marry and the money associated with career advancement were constant themes in Yerkes’ diary.

Second, in the spring of 1905, when Holt, not Holt and Yerkes, received promotion to assistant professor, Yerkes was noticeably shaken (Yerkes, 1905c). The two had spent a good deal of the spring term grousing over Münsterberg (e.g., Yerkes, 1905a; 1905b). Yerkes immediately pleaded his case to Münsterberg who made two seemingly incredulous rejoinders: One, he did not think Yerkes had a chance for promotion (Yerkes, 1905c). Two, he did not believe Yerkes desired promotion (Yerkes, 1905d). After a time, Münsterberg offered to show Yerkes’ work to Eliot, warning nevertheless to expect nothing to come of it (Yerkes, 1905e). Nothing did.

The entire episode plunged Yerkes into a period of self-doubt. He lamented his lack of originality and new ideas, in his words “the deadlevel common placeness of my work.” (Yerkes, 1905e, see also Yerkes, 1905f; 1905g). The depression
seemed to lift when he made a July-1905 sojourn to Woods Hole where biologists heralded him as a leading investigator of animal behavior (Yerkes, 1905h).

No doubt his marriage to Ada Watterson in September gave him new vistas of concern as well. The financial responsibility of marriage weighed heavily on Yerkes. Münsterberg had informed Yerkes that the writing scientific papers did not pay well and suggested Yerkes produce pieces of popular writing in order to supplement his income. Yerkes recorded in his diary that he found the prospect of writing for dollars "degrading" (Yerkes, 1904a).

Since even as biologists Ada and I could discover no way in which I could fairly share the labor of having babies, it was agreed between us facetiously that whenever we reproduced ourselves I should produce a book. Not that we expected book royalties to provide the necessary funds for child-rearing but in token of my willingness to support additions to the family. So far as our will sufficed we lived up to our contract; when Roberta Watterson arrived, my first book was published, and David Norton’s birth coincided with the appearance of the only textbook I [wrote]. (Yerkes, 1950, p. 137)

Yerkes’ diary entries explicitly reveal that he associated books and articles with career advancement. He writes, "it seems almost necessary for me to publish an important book if I wish to advance in my department." (Yerkes, 1904c). In 1907, while Roberta was arriving, Yerkes did publish a classic in behavior genetics, The Dancing Mouse. His Introduction to Psychology was published in 1911.

Marriage seems to have compromised the sanctity of Yerkes’ diary. Ada begins writing little notes; Robert’s entries become less frequent. By April of 1907, Ada’s entries are prevalent; by the end of 1907, the diary’s pages are blank and forgotten. Yerkes and John B. Watson exchanged a copious correspondence as they hashed out editorial matters, both were then associated with the Journal of Comparative Neurology and Psychology (see Wight, 1991) and endeavored via correspondence to produce procedures designed to study animal vision. Yerkes also struck up a correspondence with Edward B. Titchener in which they discussed professional politics and paradigms.

In 1908, Yerkes was again disappointed when a prominent Bostonian and Harvard insider—whose family financially supported the University and who had taught philosophy in the Division without pay since 1903—received the promotion Yerkes believed should have been his. Yerkes was incensed and embarrassed (O’Donnell, 1985). He told
Münsterberg that Harvard’s *modus operandi* was to pay its people only what circumstances dictated and that the Corporation had only another year to adjust Yerkes’ salary to a living wage (Yerkes, 1908). Titchener wrote Münsterberg that Yerkes’ work was the most impressive thing in Harvard’s Emerson Hall (Titchener, 1908). In April of 1908, Münsterberg again brought Yerkes’ petition to Eliot’s attention: Eliot relented. The news, however, was not all good. A component of the argument Münsterberg apparently used to secure Yerkes’ promotion was that the University should now insist that Yerkes adjust his lectures to emphasize the educational aspects of psychology (O’Donnell, 1985). Within a month, Yerkes was encouraging Watson to "get busy on the human side" (Watson, 1908). Yerkes got busy on the human side and sometime between this letter and October of the next year successfully approached the Henry Holt publishing company about writing an introductory psychology textbook (Bristol, 1909a). A contract to that effect was signed in November of 1909 (Bristol, 1909b).

Harvard’s attitude toward Yerkes began to deteriorate in 1909 with the resignation of President Eliot. Although Eliot’s support of comparative psychology may have been less than overwhelming, Yerkes’ diary, letters, and autobiography suggest Eliot’s support of Yerkes himself was warm and cordial. Yerkes contrasts his experience with Eliot, a chemist, to that with Eliot’s successor, A. Lawrence Lowell, a lawyer (Yerkes, 1950). Lowell does not receive a favorable evaluation. In fact, if Eliot had remained at Harvard an additional decade, Yerkes might have stayed for the duration of his career. Yerkes believed that Lowell considered his research a financial extravagance, peripheral to the University’s interests, and recalled that Lowell communicated the notion that if Yerkes wished to advance, educational psychology was the way to travel. Yerkes’ account implicitly exonerates Münsterberg of any negative influence on Lowell, painting a respectful picture of "the Chief" throughout this episode.

The archival correspondence, however, suggests a different interpretation. When Yerkes balked at permitting his work to be acknowledged in Harvard’s public announcements under the heading of "Philosophy," Münsterberg accused him of insubordination, declaring, if we may paraphrase and only slightly embellish, psychology would separate from philosophy over his dead body (Münsterberg, 1909). With James’s death in 1910, a pillar of support for animal psychology at Harvard was removed. Münsterberg was then attempting to mold the Harvard laboratory more to his liking. Royce offered little opposition.
Writing to Lowell, Münsterberg asserted, "I have the greatest sympathy with Yerkes' successful efforts to give importance and independence to his specialty, which however I confess has so far not opened any wide perspective of knowledge but offers many interesting little facts" (our emphasis, H. Münsterberg, 1911a; also quoted in H. Münsterberg, 1911b).

The comparative researchers of Yerkes' day were striving to generate professional respect for their enterprise. John O'Donnell (1985), in his masterful book *The Origins of Behaviorism*, observes that these individuals could have adopted one of two strategies: argue (a) psychology's focus is behavior, or (b) animal psychology contributed to the study of consciousness. John Watson chose the first option; Robert Yerkes chose the second.

In a 1910 paper entitled "Psychology in its Relation to Biology," Yerkes appeared to come over to the human side by professing consciousness the object of psychological research. His argument revolved around the assessment of psychology's scientific status by twenty biological researchers. About one-half of the sample asserted that psychology is not a science. A smaller, second group asserted that if psychology utilizes introspection as its primary method, then psychology is metaphysics. A third group countered that if psychology attends to the experimental study of consciousness as it relates to the nervous system, psychology is indeed a science. Yerkes completed the article by suggesting that if psychology were to rightly aspire to the coveted status of a science, embracing objective methodology was mandatory. Comparative psychology, Yerkes concluded, had the method the rest of psychology lacked and thus the procedural foundation of science the rest of the discipline needed. The article received mixed reviews. Physiologists applauded (e.g., Herrick, 1910). Titchener (1909b), commenting on a draft of the paper, wrote that the manuscript exhibited "freshness" and "peculiar values." Watson wrote that the only common ground he observed with Yerkes was that psychology students were "rottenly trained" (Watson, 1910). Münsterberg's pen appears to have been silent.

Yerkes composed a second apology for comparative psychology: His introductory textbook. An early mention of this text appears in a November-1909 letter from Titchener shortly after Lowell conveyed the message that pedagogical work was Harvard's criterion for advancement (Yerkes, 1950) and after Münsterberg accused Yerkes of insubordination (H. Münsterberg, 1909). Tichener wrote "I look on the text-book [sic] project with mixed feelings. If the impulse is
overpoweringly strong in you, you must let it out... [however] it is thankless work, and we pay too much attention to teaching anyhow" (Titchener, 1909a). The impulse did prove overpowering; the textbook was published in less than two years.

The book’s focus is introspection but its theme is a psychological system—a system ranging from plant to animal, through ontogeny and phylogeny—in which methodological considerations are paramount. With one salvo, Yerkes answered the criticisms of pedagogical and disciplinary irrelevance for the comparative approach. Harvard, however, remained unmoved. During the remaining five years of his tenure, Yerkes exercised less influence on his own campus than he did in the discipline at large. In 1916, his last year at Harvard, 14 years after beginning his academic career, Yerkes was the first and only assistant professor ever elected president of the American Psychological Association.

Yerkes’ friends, the same friends who applauded the 1910 paper, were appalled at the 1911 textbook. They believed Yerkes had made introspection primary to psychology and that what was once a difference in emphasis among them was actually a foundational abyss (e.g., Herrick, 1911). Yerkes’ rejoinder is interesting. In his letters, he habitually states he wrote the book for "pedagogical" reasons and that if he and his friends could briefly vacation together, each friend would find no real difference existed (e.g., Yerkes, 1911b). Indeed, the complexion of Yerkes’ lifetime interests and the archival record suggest the textbook was not a student-oriented endeavor. Perhaps Yerkes had another meaning of pedagogy in mind.

The word pedagogy may refer to the act of teaching, the method of teaching, or the profession of teaching. We submit the latter was paramount in Yerkes’ mind. During the early years of his career, Yerkes repeatedly attempted to sell comparative psychology and himself, struggling as an assistant professor pursuing comparative science in Harvard’s Division of Philosophy: Some of his Division colleagues were not sure he should be working alongside psychologists or philosophers; he was constantly overlooked for promotion; and he worried over supporting his family. To address these difficulties, Yerkes resorted to means outside his areas of interest and research, jeopardizing his career in the eyes of some. Remuneration can take many forms. The payoff Yerkes desired most was not money but professional standing at Harvard—standing and place he was never able to earn.
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NOTES

1 Except where noted, all letters and documents are from the Robert M. Yerkes Papers, Yale University Library, New Haven.

2 The biographical information that follows is drawn from Yerkes’ "Testament" (Yerkes, 1950).

3 Having recently rediscovered Mendelian genetics, this was a heady time for comparative scientists in Cambridge.

4 Of the three candidates, Yerkes considered only Roswell P. Angier worthy. Later that evening Angier took Yerkes to dinner during which they had a "good heart-to-heart" (Yerkes, 1903a).

5 In time, Frau Selma Münsterberg’s opinion of Yerkes improved (see M. Münsterberg, 1922).

6 The bibliography, purportedly complete, that Ms. Roberta Yerkes Blanshard, Yerkes’ daughter, supplied the first author lists only three popular articles during that decade. We are indebted to her gracious willingness to discuss her father. Interestingly, she still possesses the cuckoo clock the Münsterbergs gave her parents as a wedding present.

7 The Yerkes-Watson correspondence is housed at Yale. The Yerkes-Titchener correspondence can be found at both Yale and Cornell University.