BRIEF REPORT

WHAT EVER HAPPENED TO JOHN DODSON?

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John Dillingham Dodson was the enigmatic, less well-known contributor to the research study that resulted in the creation of the famous Yerkes-Dodson Law. This law is still described in introductory psychology textbooks and entering "Yerkes-Dodson" as a search term in an Internet search engine produces many thousands of hits. This article reveals what became of the junior partner in that classic research.

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Early in the 20th century, Robert Mearns Yerkes and a masters degree student of his at Harvard University published the results of an experiment (Yerkes & Dodson, 1908) that has provided both of them a lasting legacy-the Yerkes-Dodson Law. Cofer & Appley (1964, p. 523) describe this law as referring to "a lesser motive strength" producing the best learning scores for difficult tasks whereas "a stronger motive" does so for easier tasks. The law has survived for more than a century. It is commonly discussed in introductory psychology textbooks (cf., Lilienfeld, Lynn, Namy, Woolf, 2011, p. 429) and entering "Yerkes-Dodson" into an Internet search engine yields more than 125,000 hits.

Many know Yerkes as one of the foremost figures in the history of comparative psychology (Dewsbury, 1992) but Dodson largely disappeared from view in the history of psychology. On May 10, 2001, nearly a century after the seminal Yerkes-Dodson research, Andrew Colman, in connection with his work on a psychological dictionary (Colman, 2001a), submitted a posting on "LUSENET: History & Theory of Psychology" asking whether anyone had in-

Thomas Brothen, Department of Psychology, University of Minnesota, Twin-Cities, Minnesota. formation on Dodson (Colman, 2001b). Responses from several individuals, including Donald Dewsbury, indicated ignorance about what had happened to him. Almost exactly 80 years before, Yerkes wrote R. M. Elliott, chair of the Department of Psychology at Minnesota to ask: "The office of the Harvard Alumni Directory desires the address of J. D. Dodson. . .I am making a new appeal to you with the thought that the University of Minnesota should certainly be able to locate without any great trouble so recent a doctor of philosophy! Please do your best for us" (Yerkes, 1917-1932, Yerkes to R. M. Elliott, May 9, 1921). The alumni office apparently turned to Yerkes because their own efforts to locate Dodson were unsuccessful; in 1917, the Secretary's Fourth Report of Dodson's, 1907 class at Harvard (Internet Archive, n.d.) listed him as one of the two graduates it couldn't find. Shortly afterward, Elliott wrote back to Yerkes saying that they had tried every means to find Dodson with no success and that Karl S. Lashley, Dodson's dissertation advisor, explained that "he left the University in pique, and will have no further correspondence with it" (Elliott, 1921, Elliott to R. M. Yerkes, June 4, 1921). Elliott suggested that Yerkes try to contact Dodson through his parents in Kentucky. Perhaps Yerkes was successful because the next Harvard report-the Secretary's Fifth Report in 1922 (Internet Archive, n.d.)carried an update on Dodson. That Yerkes might have been concerned about what had happened to Dodson is testified to by a sporadic 24-year exchange of letters between the two

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men, 27 of which now reside in the Robert Mearns Yerkes Archives at Yale University.

In addition to filling a gap in the historical record, information about Dodson is important to the Department of Psychology at the University of Minnesota as research into its history proceeds in preparation for its centenary. Dodson was the first PhD awarded by the new department after its separation from philosophy and establishment as a separate department on May 19, 1917. This article describes how he made his way to and from Minnesota and what ultimately happened to him.

According to his entry in the 1922 Secretary's Fifth Report of his 1907 class at Harvard (Internet Archive, n.d.) and, according to the Central College, Iowa Archivist, his biographical entry in the Central College yearbook (Lynne Petty, personal communication, Aug. 10, 2010), John Dillingham Dodson was born near the small town of Halfway in Allen County Kentucky, on July 26, 1879. The 1880 Census (available on AncestryLibrary.com) recorded him as the youngest of seven children living on the family farm there. In 1901, he received bachelor's degrees in business and liberal arts from Southern Normal School, an institution that was soon thereafter renamed Bowling Green Business University and eventually merged into Western Kentucky University (WKU Archives, n.d. a). The 1900 Census records Dodson in two places-at the farm of his brother-in-law along with his widowed mother but listed "at school," and also as a boarder in Bowling Green, Kentucky. From 1901-1903, he served as principal at Jena Seminary, Louisiana, and then attended Harvard University from 1903 to 1906 as an undergraduate-leaving after his junior year to serve as superintendent of Ripley, Tennessee Public Schools for the 1906–1907 school year. He returned to Harvard in 1907, and in 1908 he was awarded the A.B. and A.M. degrees. It was during this time that he worked with R. M. Yerkes to do the research that has given him a lasting legacy.

From 1908–1910, Dodson was a teacher of mathematics at Washington College in Tennessee, and from 1910–1916, professor of psychology, head of the department of education and psychology, and then, dean of the college at Central College in Pella Iowa (Lynne Petty, personal communication, Aug. 10, 2010).

But, neither of these two academic appointments satisfied Dodson. Soon after receiving his degrees from Harvard, he wrote from Halfway, Kentucky to Yerkes that he had not yet found "an opening that is satisfactory to me" and said there was "nothing which I should enjoy so much as being in the laboratory with you this coming term but can't" (Dodson, 1908-1932, Dodson to R. M. Yerkes, Sept. 22, 1908). Although not particularly over praising him, Yerkes wrote letters to help Dodson secure employment. The dean at Washington College wrote to Yerkes shortly thereafter, asking for more information than what Yerkes had provided earlier (Patterson, E. M., 1908, Patterson to R. M. Yerkes, Nov. 6, 1908). He wrote that "You state that he is not brilliant or clever" (a characterization Yerkes would use again later) but explained that they needed someone who was "efficient in the classroom" and not necessarily "a man of deep scholarship." Yerkes was perhaps more convincing in a subsequent letter (no copies of either of his letters to Patterson exist in the archives) because Dodson wrote to Yerkes four months later thanking him for the "letter of recommendation to this place" (Dodson, 1908-1932, Dodson to R. M. Yerkes, Jan. 19, 1909). However, almost immediately, Dodson wrote again to Yerkes that he disliked the job because he was teaching mathematics instead of psychology and that the school was "completely in the hands of the church" and "narrow in its views" (Dodson, 1908-1932, Dodson to R. M. Yerkes, Jan. 31, 1909).

Later that year, Dodson reported to Yerkes that he was teaching psychology at "Central University of Iowa" (that institution was then and is still called Central College) and asked if there had "been anything done on our experiment. . .since I left Harvard?" (Dodson, 1908-1932, Dodson to R. M. Yerkes, Oct. 17, 1910). He also reported that he was applying techniques used in the Yerkes-Dodson Law research to experiments with cats. Indeed, he published results from that research a few years later (Dodson, 1915). Less than two weeks after first writing to Yerkes, Dodson replied to Yerkes that "Your kind missive [no copy of that exists in the archives] was received with much pleasure and it recalled pleasant days spent in the Psychological department of dear old Harvard" (Dodson, 1908-1932, Dodson to R. M. Yerkes, Oct. 30, 1910). He also included a drawing of the apparatus used with cats and that he was eventually to employ with white rats in his doctoral dissertation study.

Beginning in 1914, Dodson wrote several letters to Yerkes reporting on his research and indicating a desire to pursue a Ph.D. Early in 1916, he wrote that he had been "Dean of Central College for the last two years and I feel that I have made a fair success of my work but I should like to have my Doctor's Degree" and asked if there were "some kind of work which will help pay my way" or a fellowship he could "secure" (Dodson, 1908-1932, Dodson to R. M. Yerkes, Jan. 24, 1916). He wrote again a month later saying he had submitted an application "for an Austin Scholarship" and thanked Yerkes for arranging it (Dodson, 1908–1932, Dodson to R. M. Yerkes, Feb. 26, 1916). The June 12 issue of the Harvard student newspaper listed Dodson as among the recipients of fellowships and scholarships (Harvard Crimson, 1916). He arrived at Harvard for the beginning of the 1916–1917 academic year but didn't stay long.

In the spring of 1917, Yerkes accepted an offer from the University of Minnesota to head the newly formed Department of Psychology (Yerkes, 1932). However, his army commission as a major to supervise the development of intelligence testing during World War I disrupted that plan and he never actually served as chair in residence. Instead, until he officially resigned in the spring of 1919, he managed the department mostly by mail through the dean and acting chairs. This included directing the career of John Dodson. Shortly after his appointment as chair, Yerkes wrote to Minnesota's graduate school dean, asking that Dodson ("one of my students here, who has just passed his preliminary examinations for the Doctorate. . .married with one child") be appointed his assistant at Minnesota while Dodson completed "his work for the Doctorate" (Yerkes, 1917-1932, Yerkes to G. S. Ford, May 21, 1917). Three weeks later, Yerkes wrote to the arts college dean at Minnesota asking that Dodson be appointed to a teaching fellowship saying that "although he is not a man of brilliant intellectual ability, I consider him so extraordinarily strong in directed experimental work" that he would like him to spend a year at Minnesota and "become a candidate for the Doctorate there" (Yerkes, 1917-1932, Yerkes to J. B. Johnston,

June 11, 1917). He subsequently reported to Dodson that he had been appointed a teaching fellow at \$600 for the coming year (Yerkes, 1917-1932, Yerkes to J. D. Dodson, June 22, 1917). In the same letter, he also made specific suggestions on a manuscript Dodson had forwarded to him and suggested that "because of the uncertainty concerning your thesis work" instead of submitting it for publication, he could expand it and "publish it as a thesis from the University of Minnesota." Dodson did both. The work, an extension of the original Yerkes-Dodson study, was published (Dodson, 1917) as an article virtually identical to his April, 1918 dissertation that is located in the University of Minnesota Archives and which led in June to the award of a PhD degree in psychology with an education minor (Bulletin, 1918).

War work not only kept Yerkes from taking up residence at Minnesota, it took Minnesota faculty away as well-resulting in a need for instruction that Dodson helped to fill (Lashley, 1918, Lashley to R. M. Yerkes, November 7, 1918). In 1918, Dodson was promoted from teaching fellow to instructor of psychology at \$1200/year (\$17,587 in 2011 dollars; US Inflation Calculator, 2011) and appointed as summer session instructor at \$175 (Minutes, 1918a; b). But Yerkes apparently didn't consider this instructional contribution a reason to keep Dodson on after the war-writing about potential faculty hires to the Minnesota dean that his "knowledge of Mr. Dodson would lead me to question seriously the desirability of keeping him on the ground after he has secured his degree" (Yerkes, 1917-1932, Yerkes to J. B. Johnston, Feb. 4, 1919). But Yerkes remained willing to help. Dodson wrote about hearing of a job opening and that instead of his simply applying, could Yerkes recommend him to the University of Tennessee at Knoxville (Dodson, 1908–1932, Dodson to R. M. Yerkes, March 10, 1919)? Yerkes reported that "I have offered to send information concerning you if the President desires it" and also wrote that "Doubtless it is wise for you to find a new position" (Yerkes, 1917–1932, Yerkes to J. D. Dodson, Mar. 19, 1919). He addressed a letter to the Tennessee "President" on the same day, writing that Dodson had solicited a recommendation and asked the president "whether you desire information concerning this gentleman. If so, I shall very gladly tell you what I know of him" (Yerkes, 1917–1932, Yerkes to President, Mar. 19, 1919).

But Dodson did not find another academic position and he did not remain at Minnesota. There is no record of his teaching at Minnesota beyond spring 1919. His eventual biographical entry in the 1922 Harvard class of 1907 Secretary's Fifth Report (Internet Archive, n.d.) listed his address as Bowling Green, Kentucky, and his occupation as "contractor"—a pursuit he might have had an aptitude for as he had constructed a version of Yerkes' multiple choice apparatus while at Minnesota (Yerkes, 1914; Elliott, 1921-1923, Elliott to R. M. Yerkes, Nov. 5, 1923). He reported in his biographical entry that he had "prepared myself for teaching" at Minnesota "but the remuneration of that profession is so great that I became frightened lest my income tax would be too great, so I have side-tracked for a time to enter the oil business." Apparently, Dodson actually did enter the oil "business" soon after leaving Minnesota. The 1920 Census recorded him as living again on his brother-in-law's farm in Allen County Kentucky along with his mother, wife, and threeyear-old daughter. His occupation is listed as "laborer" in the oil field-likely the one discovered in Allen County in 1919 according to a University of Kentucky sponsored website (Nuttall, 2004).

Dodson's further comments about himself in the 1922 Secretary's Fifth Report (Internet Archive, n.d.) provide a glimpse of someone who employed sarcasm for his former classmates and posterity. He wrote that his "hobbies are constant opposition to traditionalism, eternal dislike for the acceptation of the social, religious, and political orders just because they have certain traditions and have existed for a certain period of time." Dodson appears to have been a principled individual but he chose an inopportune time to go into business as the severe 1920 recession was looming (Wikipedia, 2011).

Dodson next surfaces in the Yerkes archives in a 1931 letter he sent to Yerkes from the Illinois Military School, a junior college in Abingdon, Illinois (Dodson, 1908–1932, Dodson to R. M. Yerkes, July 23, 1931; A short history, n.d.). He inquired if Yerkes would be "interested in the results of an experiment" that he had done at Minnesota in 1919 that extended the Yerkes-Dodson research paradigm to hu-

mans (i.e., students in his psychology class). He also explained that he had been out of "the teaching profession" for eight years before joining a school in 1927 that because of the depression had a "gloomy" future. Yerkes replied that he was glad to hear from him after so long and that Dodson should send him the paper (Yerkes, 1917–1932, Yerkes to J. D. Dodson, Aug. 4, 1931). Dodson replied almost immediately, saying he was enclosing the manuscript for possible publication in the Journal of Comparative Psychology (Dodson, 1908-1932, Dodson to R. M. Yerkes, Aug. 19, 1931). Dodson next wrote to Yerkes from Abingdon on the following New Years Day reporting that the school had gone bankrupt and that he was out of a job and had lost his savings as well (Dodson, 1908-1932, Dodson to R. M. Yerkes, Jan. 1, 1932). He apologized for not having made the changes Yerkes had suggested because he had no access to a library. Yerkes wrote to Dodson a week later sympathizing with Dodson's financial plight and reporting that he had made changes in the manuscript and sent it on to the journal's managing editor (Yerkes, 1917–1932, Yerkes to J. D. Dodson, Jan. 7, 1932). On the same day, Yerkes forwarded the paper to Knight Dunlap, managing editor of the journal, saying that he was "not yet satisfied with it" but since it was short, he would recommend it for publication (Yerkes, 1917–1932, Yerkes to K. Dunlap, Jan. 7, 1932). He identified Dodson as a former student and reported his dire financial situation. His last paragraph indicated that he hoped Dunlap would agree that the paper was "worthy of publication" but added as a last sentence: "If I felt free to rewrite it and were willing to take the time, I could very greatly improve its form and historical perspective." The paper, which also included a report of recent results with Dodson's academy students, was published (Dodson, 1932) and this exchange of letters with Dodson is the last in the Yerkes archive.

During the time Dodson was teaching at the Military School, he apparently maintained a house in Bowling Green, Kentucky and perhaps spent time there. The 1930 Census for Illinois records him, his wife, and two daughters as renting in Abdington, Illinois, with his occupation listed as "academy teacher" and business as "military." The 1930 Kentucky census records list him as the single, head of household owner of a house at 323 7th Street and the house value is given as \$500. Also occupying the house are renters—a house painter, his wife, and school age son (one can see the small, plain, fire damaged house on Google Earth.com Street View, but recent city records reveal it was torn down and pending violation fines were waived; Code Enforcement Board, 2009).

Shortly after Dodson's setback in Illinois, he returned to his first alma mater, then known as Bowling Green Business University, specifically to that organization's division called the Bowling Green College of Commerce. He is listed in the college catalogues as beginning there in 1932 and, according to the Western Kentucky University archivist, the 1955-57 catalogue identifies him as head of the Education and Psychology Department (Suellyn Lathrop, personal communication, March 2, 2011). The curriculum in his department consisted of education courses preparatory for secondary school business teaching and a variety of psychology courses from general to educational to applied. The yearbooks in the Western Kentucky University Archives during Dodson's years there reveal a small faculty varying from 18 to 21 members with only Dodson or one other person having the Ph.D. degree (WKU Archives, n.d. b). Each year, Dodson's yearbook entry listed his bachelors and masters degrees from Harvard and his PhD from Minnesota but not his earlier degrees from Southern Normal.

Dodson spent the remainder of his career at Bowling Green College of Commerce-the last listing of him in the yearbooks is for 1955. In fact, Dodson spent the rest of his life there, dying, according to the 50th anniversary report of his class, on August 3, 1955 (Harvard University, 1957). Little evidence remains of his time at that institution, except that which is noted in the yearbooks (WKU Archives, n.d. b). In the 1942 yearbook, short, humorous quotations that apparently characterize faculty members appear next to their pictures. Dodson is shown sitting in a straight backed chair in a shared office at a desk piled high with books and the quote reads "The next question the author brings up. . ." One can surmise that he remained close to the psychological research that he wanted to pursue in life but was unable to fulfill to his satisfaction. Another indication of how he was perceived by his students appears in the 1938 yearbook that was dedicated to Dodson. It is not a bad valedictory:

To Dr. John D. Dodson: Professor of psychology, whose interest in the literary attempts of college students has supplied untold inspiration and encouragement, whose untiring patience has gained the lasting respect and admiration of every student, whose opinion we have placed high in our scale of values, and whose respect we honestly wish to deserve.

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