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# On Evidence: Proving *Frye* as a Matter of Law, Science, and History

**ABSTRACT.** This Essay is a cautionary tale about what the law does to history. It uses a landmark ruling about whether scientific evidence is admissible in court to illustrate how the law renders historical evidence invisible. *Frye v. United States* established one of the most influential rules of evidence in the history of American law. On the matter of expert testimony, few cases are more cited than *Frye*. In a 669-word opinion, the D.C. Circuit Court of Appeals established the *Frye* test, which held sway for seven decades, remains the standard in many states, and continues to influence federal law. "Frye," like "Miranda," has the rare distinction of being a case name that has become a verb. To be "Frye'd" is to have your expert's testimony deemed inadmissible. In *Frye*, the expert in question was a Harvard-trained lawyer and psychologist named William Moulton Marston. Marston's name is not mentioned in the court's opinion, nor does it generally appear in textbook discussions of *Frye*, in the case law that has followed in its wake, or in the considerable legal scholarship on the subject. Marston is missing from *Frye* because the law of evidence, case law, the case method, and the conventions of legal scholarship—together, and relentlessly—hide facts. It might be said that to be Marston'd is to have your name stripped from the record. Relying on extensive archival research and on the narrative conventions of biography, this Essay reconstructs Marston's crucial role in *Frye* to establish facts that have been left out of the record and to argue that their absence is responsible for the many ways in which *Frye* has been both narrowly and broadly misunderstood.

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## ESSAY CONTENTS

## PROLOGUE: DR. JEKYLL

The lecture had only just begun when there came a rap at the door. The professor, who wore owl's-eye spectacles, walked across the room and opened the door.[1] A young man entered.[2] He wore leather gloves.[3] In his right hand, he carried an envelope.[4] Tucked under his left arm were three books: one red, one green, one blue.[5] He said he had a message to deliver; he spoke with a Texas twang.[6] He handed the professor the envelope.[7] While the professor opened the envelope, pulled out a yellow paper, and read its contents, the messenger slid a second envelope into the professor's pocket.[8] Then, using only his right hand, he drew from another pocket a long, green-handled pocketknife.[9] Deftly, he opened the knife and began scraping his gloved left thumb with the edge of the blade, sharpening it on the leather like a barber stropping a razor.[10]

The class was a graduate course called Legal Psychology, held at American University, in Washington, D.C. It met twice a week, in the evening, in 1922.[11] There were eighteen students, all of them lawyers.[12] They had come to the lecture hall, a building at 1901 F Street, two blocks from the White House, after either a day at the office or a day in court; many of them worked for the federal government.[13] In the course catalog, the professor—a twenty-eight-year-old graduate of Harvard Law School who had earned his Ph.D. in Harvard's psychology department only the year before—listed a prerequisite: "Students must

1. The childhood eyeglass prescription of William Moulton Marston can be found among the papers in the collection of his son, Moulton Marston. William Marston's owl's-eye spectacles can be seen in photographs in family photo albums, also in the possession of Moulton Marston. The experiment in William Marston's lecture hall, including each of its deliberately planted details, is recounted in William M. Marston, *Studies in Testimony*, 15 J. CRIM. L & CRIMINOLOGY 5, 8-9 (1924).
2. *Id.*
3. *Id.*
4. *Id.*
5. *Id.*
6. *Id.*
7. *Id.*
8. *Id.*
9. *Id.*
10. *Id.*
11. Legal Psychology was offered in the spring term, which began on March 20 and ended on June 3. AM. UNIV., AMERICAN UNIVERSITY: ANNOUNCEMENT FOR 1921-1922, GRADUATE SCHOOL OF ARTS AND SCIENCES 4 (1921) [hereinafter AM. UNIV., AMERICAN UNIVERSITY: ANNOUNCEMENT FOR 1921-1922].
12. Marston, *supra* note 1, at 7.
13. *Id.*

have a working knowledge of the principles of Common Law to qualify for this course, which is especially designed for practicing attorneys and lawyers having a genuine and active interest in raising the standards of justice in the actual administration of the law."[14] He was possessed of a certain ambivalent idealism.

The professor finished reading whatever was written on that sheet of yellow paper, said something to the Texan, and sent him on his way.[15] Then, turning to his class, the professor informed his students that the man who had just left the room was not, in fact, a messenger at all; he was, instead, an actor, following a script written by the professor as part of an elaborate experiment. Imagine, the professor likely went on to say, that the man who was here a moment ago has since been arrested and charged with murder.[16] Please write down everything you saw.[17] Eighteen lawyers picked up their pencils.[18]

In preparing the experiment, the professor had identified 147 facts that the students could have observed: the number and color of the books the messenger held, for instance, and the fact that he held them under one arm, his left.[19] After the students had written down everything they'd seen, the professor examined them, one by one; then he cross-examined them.[20] After class, he scored their answers, grading them for completeness, accuracy, and caution (you'd get a point for "caution" if, upon either direct or cross-examination, you said, "I don't know").[21] Out of 147 observable facts, the students, on average,

14. AM. UNIV., AMERICAN UNIVERSITY: ANNOUNCEMENT FOR 1922-1923, *supra* note 11, at 12-13. No description of Legal Psychology appears in the catalog for 1921-1922, since Marston was hired after the catalog was printed. I have taken the course description from the following year's catalog, describing courses offered in the academic year 1922-1923, when Marston was scheduled to re-offer Legal Psychology. *Id.*

15. Marston, *supra* note 1, at 8-9.

16. I infer that this is what Marston told his students from his account of his testimonial experiment, in which he states that the "predetermined plot was trial of the strange youth for the knifing of a person of his acquaintance" and that the second envelope held by the messenger "might have contained a taunting letter, just received from the murdered acquaintance." *Id.* at 9.

17. *Id.*

18. Marston referred to this element of the experiment as "Free Narration"; it was followed by "Direct Examination" and then by "Cross Examination." *Id.* at 11.

19. *Id.* at 9-11.

20. *Id.*

21. *Id.*

noticed only thirty-four.[22] Everyone flunked.[23] And no one, not a single student, noticed the knife.[24]

The professor, William Moulton Marston, had designed this experiment in order to demonstrate to a room full of practicing attorneys that eyewitness testimony is unreliable. The demonstration was not without effect. Days later, two of Marston's students became involved in a murder trial whose appeal, in *Frye v. United States*,[25] established one of the most influential rules of evidence in the history of American law. On the matter of expert testimony, few cases are more cited than *Frye*.[26] The 669-word opinion of the D.C. Circuit Court of Appeals established a new rule of evidence: the *Frye* test. This rule held sway for seven decades, remains the standard in several states, and continues to influence federal law.[27] "Frye," like "Miranda," has the rare distinction of being a case name that has become a verb. To be "Frye'd" is to have your expert's testimony deemed inadmissible.[28]

22. *Id.* at 10.

23. *Id.*

24. *Id.* at 12.

25. 293 F. 1013 (D.C. Cir. 1923).

26. Robert Schriek, *Most-Cited U.S. Courts of Appeals Cases from 1932 Until the Late 1980s*, 83 LAW LIBR. J. 317, 330 (1991). Schriek, whose discussion of *Frye* does not include Marston's name, counted more than six hundred citations to *Frye* in *Shepard's Federal Citations* between 1932 and 1988, making it only one of two pre-1932 cases to rank in his study. *Id.* For a recent discussion of the legal and judicial commentary on the case, see Seán Tath O'Donnell, Courting Science, Binding Truth: A Social History of *Frye v. United States* (Sept. 30, 2007) (unpublished Ph.D. dissertation, Harvard University) (on file with author). And on the history of scientific testimony more generally, see TAL GOLAN, LAWS OF MEN AND LAWS OF NATURE: THE HISTORY OF SCIENTIFIC AND EXPERT TESTIMONY IN ENGLAND AND AMERICA (2004); and SHEILA JASANOFF, SCIENCE AT THE BAR: LAW, SCIENCE AND TECHNOLOGY IN AMERICA (1995).

27. Representative discussions of *Frye*'s influence include David E. Bernstein, Frye, Frye*, Again: The Past, Present and Future of the General Acceptance Test*, 41 JURIMETRICS 385 (2001); Paul C. Giannelli, *The Admissibility of Novel Scientific Evidence:* Frye v. United States*, a Half-Century Later*, 80 COLUM. L. REV. 1197 (1980); and Kristie Kline, Comment, Frye *Remains the Standard for Determining the Admissibility of Expert Testimony in Pennsylvania Courts:* Blum v. Merrell Dow Pharmaceuticals, Inc., 40 DUQ. L. REV. 429 (2001).

28. For recent usages of the term, see Michael J. Molder, *Getting* Frye*'d Without Getting Burned*, NAT'L LITIG. CONSULTANTS' REV., 2013, at 1, 5; and Emily C. Baker & Mary E. Desmond, Frye*'d by Admissibility Standards*, JONES DAY 18 (2011), http://www.jonesday.com/files/Publication/e96efffd-f982-45e3-a3dd-c69aa9f67f89/Presentation/PublicationAttachment/b60f0f90-47e0-4d9b-9d62-cb13b651f0bf/Fryed.pdf [http://perma.cc/HHB8-RTQK].

**Figure 1.**

*Marston, in eyeglasses, conducting a test on Frye, in shirtsleeves, 1922. Courtesy of Corbis Images.*

Frye was an alleged murderer named James Alphonso Frye. People who cite the case usually know no more about him than his last name. They know even less about the expert called by his defense. That expert was Marston. Marston's name is not mentioned in the opinions of either the trial or the appellate court. Nor, generally, does his name appear in textbook discussions of *Frye*, in the case law that has followed in its wake, or in the considerable legal scholarship on the subject of expert testimony.[29] Marston is missing from *Frye* because the law of evidence, case law, the case method, and the conventions of legal scholarship—together, and relentlessly—hide facts. This Essay Marston-izes *Frye*, finding facts long hidden to cast light not only on this particular case but also on the standards of evidence used by lawyers, scientists, and historians. It uses

29. Examples of recent discussions of *Frye* that do not mention Marston include GEORGE FISHER, EVIDENCE 807-10 (3d ed. 2013); Scott Soloway & Bryan C. Shelby, *Expert Testimony*, *in* LANDMARK CASES IN FORENSIC PSYCHIATRY 20 (Elizabeth Ford & Merrill Rotter eds., 2014).

a landmark ruling about whether scientific evidence is admissible in court to illustrate how the law renders historical evidence invisible.

The law of evidence began in earnest in the early modern era; the history of evidence remains largely unwritten. Before the eighteenth century, the written rules of evidence were few. In 1794, Edmund Burke said that they were "comprised in so small a compass that a parrot he had known might get them by rote in one half-hour and repeat them in five minutes."[30] But even as Burke was writing, treatises at once examining and codifying exclusionary rules had already begun to proliferate.[31] This sort of work reached a new height at the beginning of the twentieth century with the publication of John Henry Wigmore's magisterial, four-volume *A Treatise on the System of Evidence in Trials at Common Law*.[32] Wigmore's study of the law of evidence remains a towering influence in the "New Evidence Scholarship," which emerged in the 1980s, following the adoption of the Federal Rules of Evidence in 1975.[33] The law of evidence is vast; the history of evidence is scant.[34] This is to some degree surprising, because in the last decades of the twentieth century, literary scholars, intellectual historians, and historians of the law and of science became fascinated by epistemological questions about the means by which ideas about evidence police the boundaries between disciplines—a fascination that produced invaluable interdisciplinary work on subjects like the history of truth, the rise of empiricism, and the fall of objectivity.[35] But this line of inquiry has a natural

30. *See* 1 JOHN HENRY WIGMORE, A TREATISE ON THE SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW § 8, at 24 (1904).

31. *See generally* T.P. Gallanis, *The Rise of Modern Evidence Law*, 84 IOWA L. REV. 499 (1999).

32. JOHN HENRY WIGMORE, A TREATISE ON THE SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW (1904-1905).

33. *E.g.*, Richard Lempert, *The New Evidence Scholarship: Analyzing the Process of Proof*, 66 B.U. L. REV. 439 (1986). For an excellent guide, see EVIDENCE, PROOF, AND FACTS: A BOOK OF SOURCES (Peter Murphy ed., 2003). "Ironically, orthodox study of the Law of Evidence has been one of the least empirically-oriented branches of legal scholarship." WILLIAM TWINING, THEORIES OF EVIDENCE: BENTHAM AND WIGMORE viii (1985) [hereinafter TWINING, THEORIES OF EVIDENCE]. Twining's contributions are collected in WILLIAM TWINING, RETHINKING EVIDENCE: EXPLORATORY ESSAYS (2006).

34. While the history of evidence is limited, the history of the law of evidence is considerable. Key works include JOHN H. LANGBEIN, THE ORIGINS OF ADVERSARY CRIMINAL TRIAL (2003); JOHN H. LANGBEIN, TORTURE AND THE LAW OF PROOF (2006); LEONARD W. LEVY, THE PALLADIUM OF JUSTICE: ORIGINS OF TRIAL BY JURY (1999); and BARBARA J. SHAPIRO, "BEYOND REASONABLE DOUBT" AND "PROBABLE CAUSE": HISTORICAL PERSPECTIVES ON THE ANGLO-AMERICAN LAW OF EVIDENCE (1991).

35. That body of work includes, for instance, an especially illuminating collection of essays solicited by the editors of *Critical Inquiry*: QUESTIONS OF EVIDENCE: PROOF, PRACTICE, AND PERSUASION ACROSS THE DISCIPLINES (James Chandler et al. eds., 1994). It also includes LORRAINE DASTON & PETER GALISON, OBJECTIVITY (2007); PETER NOVICK, THAT NOBLE DREAM: THE "OBJECTIVITY QUESTION" AND THE HISTORICAL PROFESSION (1988); PROOF

limit: scholars who are engaged in a debate about whether facts exist tend not to be especially interested in digging them up.[36] For all the fascination with questions of evidence, very few scholars have investigated the nitty-gritty, stigmata-to-DNA history of the means by which, at different points in time, and across realms of knowledge, some things count as proof and others don't.[37]

This Essay chronicles a turning point in the history of evidence. During the last decades of the nineteenth century and the first decades of the twentieth, I argue, standards of evidence in law, science, and history underwent transformations that were at once related and, to a considerable degree, at odds: the case method became standard; modern, government-funded scientific research began; and history, as an academic discipline, attempted to ally itself with the emerging social sciences by establishing a historical method. Curiously enough, the queer career of an obscure Harvard-trained lawyer and scientist who wore owl's-eye spectacles lies, if not at the heart of this shift, deep in its gut, well stuck.

When that messenger with a Texas twang came to Marston's lecture hall, he did everything he was told. He spoke his lines. He shifted his books. He reached into his pocket. He sharpened a blade. Marston's law students, watching, observed almost none of this: they missed three out of every four facts. Case law is like that, too, except that it doesn't only fail to notice details; it conceals them. This Essay, then, is a cautionary tale about what the law does to history: it hides the knives.

AND PERSUASION: ESSAYS ON AUTHORITY, OBJECTIVITY, AND EVIDENCE (Suzanne Marchand & Elizabeth Lunbeck eds., 1996); and STEVEN SHAPIN, A SOCIAL HISTORY OF TRUTH: CIVILITY AND SCIENCE IN SEVENTEENTH-CENTURY ENGLAND (1994).

**36.** For a reflection on what damage may have been done to the public sphere by the academic fascination with the question of whether facts exist, see Bruno Latour, *Why Has Critique Run Out of Steam? From Matters of Fact to Matters of Concern*, 30 CRITICAL INQUIRY 225 (2004).

**37.** Dazzling exceptions include Carlo Ginzburg's history of the clue and Barbara Shapiro's history of the fact. CARLO GINZBURG, *Spie: Radici Di Un Paradigma Indiziario* [*Clues: Roots of an Evidential Paradigm*], *translated in* CLUES, MYTHS, AND THE HISTORICAL METHOD 96 (John Tedeschi & Anne Tedeschi trans., 1989); BARBARA J. SHAPIRO, A CULTURE OF FACT: ENGLAND 1550-1720 (2000); Barbara Shapiro, *The Concept "Fact": Legal Origins and Cultural Diffusion*, 26 ALBION 227 (1994); *see also* Lorraine Daston, *Strange Facts, Plain Facts, and the Texture of Scientific Experience in the Enlightenment*, *in* PROOF AND PERSUASION: ESSAYS ON AUTHORITY, OBJECTIVITY, AND EVIDENCE, *supra* note 35, at 60; Carlo Ginzburg, *Checking the Evidence: The Judge and the Historian*, *in* QUESTIONS OF EVIDENCE: PROOF, PRACTICE, AND PERSUASION ACROSS THE DISCIPLINES, *supra* note 35, at 290.

## I. A VIAL OF HYDRO-CYANIC ACID

William Moulton Marston was born in 1893 in Cliftondale, Massachusetts.[38] He was an only child.[39] His father was a fabric wholesaler.[40] In grammar school, Marston met Sadie Elizabeth Holloway, the girl he would one day marry; in ninth grade, he was elected class president; she was elected class secretary.[41] On his application to Harvard, to the question "Intended Occupation?" he answered "Law."[42] In September 1911, he moved to Cambridge where he landed in the middle of a debate about evidence.[43] In the fall of his freshman year, he took History 1 with Charles Homer Haskins.[44] "The historian's knowledge is indirect, whereas the knowledge of the scientist is direct," Haskins told his students.[45] "The biologist observes plants and animals; the chemist or physicist conducts experiments in his laboratory under conditions which he can control. The historian, on the contrary, cannot experiment and

38. Bare biographical details can be found in two obituaries: *Dr. W.M. Marston, Psychologist, 53*, N.Y TIMES, May 3, 1947, at 17; *Dr. Wm. M. Marston Developed 'Lie Detector,' Taught, Lectured Widely*, BOS. GLOBE, May 3, 1947, at 9. A fuller biographical treatment is JILL LEPORE, THE SECRET HISTORY OF WONDER WOMAN (2014).

39. Byrne Marston, Memories of an Unusual Father (2002) (unpublished manuscript) (on file with author).

40. Marston's father's occupation and annual family income ($2000) can be found in a filled-out form titled *Scholarships and Other Aids*, *in* Marston, Undergraduate Record File (on file with Harvard University Archives, USIII, 15.88.10) [hereinafter Undergraduate Record File].

41. (Sadie) Elizabeth Holloway Marston, Tiddly Bits: The Tale of a Manx Cat (unpublished typescript) (on file with Moulton Marston) [hereinafter Holloway, Tiddly Bits]. Elizabeth Holloway took Marston's name when they married in 1915, but I will refer to her as "Holloway" in the text and notes throughout so as not to confuse her with her husband, and because Holloway herself seems to have had rather strong views on this subject. "As for names, we are stuck with either our father's name or our husband's," she once wrote to a friend. "There's no such thing in this civilization as 'your own name.'" Letter from (Sadie) Elizabeth Holloway Marston to Joanne Edgar (Jan. 20, 1974) (on file with Joanne Edgar). With thanks to Joanne Edgar for sharing her correspondence with me.

42. Undergraduate Record File, *supra* note 40.

43. William Moulton Marston, Record Card, Class of 1915 (on file with Harvard University Archives, UAIII, Box 14, 15.75.12).

44. HARVARD UNIV., HARVARD UNIVERSITY CATALOGUE, 1911-1912, at 328, 401 (1911).

45. Charles H. Haskins, *History: One of a Series of Lectures Given to the Freshman Class in Harvard College*, *in* THE HISTORICAL OUTLOOK 16, 195-97 (1925).

can rarely observe."[46] He must instead collect his own evidence, knowing, all the while, that his evidence is paltry, second-hand, and partial.[47]

What thrilled Haskins—pawing through the cluttered junk-drawer of the past—reduced Marston to despair. That drawer, he thought, contained nothing but boring, meaningless facts. "I'm not saying such facts are unimportant, only that they didn't interest me and that I had to learn them," he explained. "I decided that the time had come to die."[48] He knew just how to do it. "I made arrangements to procure some hydro-cyanic acid from a chemist friend."[49] (Hydro-cyanic acid kills in less than a minute. It smells of almonds. It is also the poison that Henry Jekyll uses to kill himself in *Dr. Jekyll and Mr. Hyde*, a story published in 1886.)[50]

History drove Marston to suicide. Philosophy saved his life. He fell in love with Greek hedonism during a class on Ancient Philosophy, taught by George Herbert Palmer.[51] Palmer gave Marston an *A*, a grade that was, at the time, altogether rare.[52] Marston decided not to kill himself.[53] He became a pragmatist.

Palmer was the chair of what was known as "the Great Department," Harvard's storied Department of Philosophy; its faculty included William James, Josiah Royce, and George Santayana.[54] Marston, after acing Ancient Philoso-

46. *Id.*

47. *Id.* For similar contemporary efforts, see H.B. GEORGE, HISTORICAL EVIDENCE (1909), https://archive.org/details/historicalevidenoogeoruoft [http://perma.cc/RKP3-EB9B]; and ALLEN JOHNSON, THE HISTORIAN AND HISTORICAL EVIDENCE (1926).

48. WILLIAM MOULTON MARSTON, TRY LIVING 2-3 (1937).

49. *Id.* at 3.

50. *See* ROBERT LOUIS STEVENSON, STRANGE CASE OF DR. JEKYLL AND MR. HYDE 48 (Richard Dury ed., 2006). The chemical itself is not mentioned, but the men who find the body smell kernels, that is, nuts, or almonds: "[B]y the crushed phial in the hand and the strong smell of kernels that hung upon the air, Utterson knew that he was looking on the body of a self-destroyer." *Id.*

51. MARSTON, *supra* note 48, at 3.

52. Marston was one of a tiny handful of students to earn an *A* in Ancient Philosophy. The course average appears to have been a *C*-. Final Return of Grades in 1911-1912, Philosophy A (Professor George Herbert Palmer), Faculty of Arts and Sciences, Final Return Records, 1848-1997 (on file with Harvard University Archives, UAIII, Box 85, 15.28).

53. MARSTON, *supra* note 48, at 3.

54. Palmer offers some recollections of the department in GEORGE HERBERT PALMER, THE AUTOBIOGRAPHY OF A PHILOSOPHER 133 (1930). The key to teaching, Palmer believed, was moral imagination, "the ability to put [one]self in another's place, think his thoughts, and state strongly his convictions even when they are not [one's] own." *Id.* The recollections of his younger colleagues can be found in GEORGE HERBERT PALMER, 1842-1933: MEMORIAL ADDRESSES (1935). *See* BRUCE KUKLICK, THE RISE OF AMERICAN PHILOSOPHY, CAMBRIDGE, MASSACHUSETTS, 1860-1930, at 186-89, 196-214 (1977).

phy, signed up for more: Ethics with Palmer and Metaphysics with Royce.[55] This led him to the study of the mind, and a new science, psychology.[56] In Experimental Psychology, Marston's professor, Herbert Langfeld, told his students, "It is the aim of experimental psychology, as it is of every other science, to be exact."[57] Unlike the evidence of the historian, the evidence of the experimental psychologist was neither inexact, nor partial, nor second-hand. It was discoverable. The experimental psychologist—a scientist—didn't have to dive for his evidence in a dustbin. He could create his own evidence, in a laboratory.

## II. X. PERRY MENT AND R.E. SEARCH, ESQUIRES

In his junior year, Marston began working in Harvard's Psychological Laboratory—the first in the United States—with a German psychologist named Hugo Münsterberg.[58] Haskins defined the historical method as the discrimination between trustworthy and untrustworthy evidence; Münsterberg attempted to determine the trustworthiness of testimony by conducting experiments on his students: "Last winter I made, quite by the way, a little experiment with the students of my regular psychology course in Harvard," he once wrote.

> I asked them simply, without any theoretical introduction, at the beginning of an ordinary lecture, to write down careful answers to a

55. In these courses, too, Marston distinguished himself. For instance, he took Philosophy B with Royce in the second semester of freshman year and got a *B-* (according to the Final Returns but recorded on the transcript as a *B*). Final Return of Grades in 1911-1912, Philosophy B (Professor Josiah Royce), Faculty of Arts and Sciences, Final Return Records, 1848-1997 (on file with Harvard University Archives, UAIII, Box 85, 15.28). The course average appears to have been a *D*. *Id.*

56. KUKLICK, *supra* note 54, at 242.

57. HERBERT SIDNEY LANGFELD & FLOYD HENRY ALLPORT, AN ELEMENTARY LABORATORY COURSE IN PSYCHOLOGY vii (1916).

58. On Münsterberg, see MATTHEW HALE JR., HUMAN SCIENCE AND SOCIAL ORDER: HUGO MÜNSTERBERG AND THE ORIGINS OF APPLIED PSYCHOLOGY (1980); and Jutta Spillmann & Lothar Spillmann, *The Rise and Fall of Hugo Münsterberg*, 29 J. HIST. BEHAV. SCI. 322 (1993). On the courses offered by the Department of Philosophy and Psychology, see HARVARD UNIV., *supra* note 44, at 427-33. On when Marston began his research with Münsterberg, he writes in his doctoral dissertation: "This thesis reports researches by the writer upon the problem of psycho-physiological symptoms of deception, which we began in the Harvard Psychological Laboratory in 1913 under Professors Munsterberg and Langfeld, and which have been carried on practically without interruption to date." William Marston, Systolic Blood Pressure and Reaction Time Symptoms of Deception and Constituent Mental States (1921) (unpublished Ph.D. dissertation, Harvard University) (on file with Harvard University Archives) [hereinafter Marston, Systolic Blood Pressure]. Langfeld cited Marston's undergraduate research in Herbert Sidney Langfeld, *Psychophysical Symptoms of Deception*, 15 J. ABNORMAL PSYCHOL. 319 (1921).

> number of questions referring to that which they would see or hear. I urged them to do it as conscientiously and carefully as possible, and the hundreds of answers which I received showed clearly that everyone had done his best.[59]

Other psychologists conducted similar experiments: at Kansas University, a professor staged a holdup in the middle of his psychology class.[60] In a lecture hall in Berlin, a professor arranged for two of his students to enter into a heated argument over a book. Münsterberg reported what happened next:

> The first draws a revolver. The second rushes madly upon him. The Professor steps between them and, as he grasps the man's arm, the revolver goes off. General uproar. In that moment Professor Liszt secures order and asks a part of the students to write an exact account of all that has happened. The whole has been a comedy, carefully planned and rehearsed by the three actors for the purpose of studying the exactitude of observation and recollection. Those who did not write the report at once were, part of them, asked to write it the next day or a week later; and others had to depose their observations under cross-examination.[61]

Another fracas was staged during a meeting of psychologists and jurists in Gottingen:

> [I]n the midst of the scholarly meeting, the doors open, a clown in a highly coloured costume rushes in in mad excitement, and a negro with a revolver in one hand follows him. In the middle of the hall first the one, then the other, shouts wild phrases; then the one falls to the ground, the other jumps on him; then a shot, and suddenly both are out of the room.[62]

Science meets *commedia dell'arte*; psychology had gotten antic.

Psychology had also gotten slammed. Münsterberg had developed a series of tests to tell not only what a witness could recall but also whether a suspect was lying. He used machines to measure what he believed to be indicators of

59. HUGO MÜNSTERBERG, ON THE WITNESS STAND: ESSAYS ON PSYCHOLOGY AND CRIME 20-21 (1908).

60. This experiment was originally reported by William A. M'Keever, *Psychology as Related to Testimony*, B. ASS'N. ST. KAN., PROC.: TWENTY-EIGHTH ANN. MEETING 113, 114 (1911). An excerpt appears in JOHN HENRY WIGMORE, THE PRINCIPLES OF JUDICIAL PROOF: AS GIVEN BY LOGIC, PSYCHOLOGY, AND GENERAL EXPERIENCE AND ILLUSTRATED IN JUDICIAL TRIALS 581 (1913).

61. MÜNSTERBERG, *supra* note 59, at 49-50.

62. *Id.* at 51-52.

deception: the heat of the skin, the rate of the heart beat, the speed of speech.[63] He'd tried to put his theory into practice in 1907 when he accepted an assignment from *McClure's Magazine* to go to Idaho to report on the trial of Harry Orchard, who was charged with the assassination of the state's former Governor, an assassination allegedly ordered by Big Bill Haywood, head of the Industrial Workers of the World.[64] Orchard had confessed to that crime, and to eighteen other murders, too; he said he was a hit man for the union. Haywood was charged with murder on the strength of Orchard's confession.[65] He was defended by Clarence Darrow, the best-known lawyer in the country, in what promised to be one of the most widely reported trials in American history.[66] As Münsterberg himself wrote, "It has been said, and probably with truth, that more newspaper columns have been printed about the Haywood-Orchard trial than about any jury trial in the history of the United States."[67]

"I shivered when I touched his hand," Münsterberg wrote about meeting Orchard.[68] He was sure Orchard was guilty. But by the time he was done administering tests on Orchard, Münsterberg had changed his mind about him: "When I left him the last time, I pressed his hand as that of an honest reliable gentleman."[69]

Münsterberg's visit was closely followed by the press: "The entire reading world had its attention attracted by the visit of Professor Hugo Munsterberg of Harvard University to Boise, Idaho," as one newspaper reported, under the headline, "Machines That Tell When Witnesses Lie."[70] On a train ride home to his summer home in Clifton, Massachusetts, he told a reporter that "every word in Orchard's confession is true."[71] At the trial, Darrow suggested that a

63. GOLAN, *supra* note 26, at 233.

64. *See* MELVYN DUBOFSKY, 'BIG BILL' HAYWOOD (1987).

65. The fullest account of the trial is DAVID H. GROVER, DEBATERS AND DYNAMITERS: THE STORY OF THE HAYWOOD TRIAL (1964).

66. On Darrow, including his reputation and courtroom style, see JILL LEPORE, *Objection*, *in* THE STORY OF AMERICA: ESSAYS ON ORIGINS 254 (2012).

67. Hugo Münsterberg, Experiments with Harry Orchard 2 (1907) (unpublished manuscript) (on file with Boston Public Library, Hugo Münsterberg Papers, Folder 2450).

68. *Id.* at 7.

69. *Id.*

70. *Machines that Tell When Witnesses Lie*, S.F. SUNDAY CALL, Sept. 8, 1907.

71. GOLAN, *supra* note 26, at 232-33. The best account of Münsterberg's role in the Orchard case is *id.* at 232-35. Another account is Michael Pettit, *The Testifying Subject: Reliability in Marketing, Science, and Law at the End of the Age of Barnum*, *in* TESTIMONIAL ADVERTISING IN THE AMERICAN MARKETPLACE: EMULATION, IDENTITY, COMMUNITY 51-78 (Marlis Schweitzer & Marina Moskowitz eds., 2009).

Harvard psychologist had nothing to teach a juror;[72] Haywood was acquitted.[73] Meanwhile, Münsterberg, afraid he might be sued, decided not to publish *Experiments with Harry Orchard*, the essay he had written for *McClure's*, and instead published a piece touting the importance of psychological testimony in criminal court cases.[74] The next year, he published a collection of essays called *On the Witness Stand*.[75] It was prominently reviewed by John Henry Wigmore, the Dean of Northwestern University Law School, author of the most important treatise on the law of evidence ever written, and a far more dangerous intellectual adversary than Darrow. As a student, Wigmore had helped found the *Harvard Law Review* in 1886.[76] He was a man of such exhaustive energy and erudition that Louis Brandeis, not one to blanch at a stack of books, had been known to call on him for research assistance.[77] He was also capable of great ferocity. In 1927, after Felix Frankfurter criticized the trial of Sacco and Vanzetti, Wigmore raged at him in an article that Brandeis called "sad & unpleasant," which indeed it was.[78] As Frankfurter liked to tell it, Abbott Lawrence Lowell, then Harvard's President, cried out, on reading Wigmore on Frankfurter, "Wigmore is a fool! Wigmore is a fool!"[79] But Wigmore was no fool.

Wigmore's widely read and much-discussed review of *On the Witness Stand*, published in 1909, took the form of a farcical trial transcript, in which a plaintiff—the legal profession ("Edward Cokestone")—charged Münsterberg with libel for having declared "that there existed certain exact and precise experimental and psychological methods of ascertaining and measuring the testimonial certitude of witnesses and the guilty consciousness of accused per-

72. Clarence Darrow, *Darrow's Speech in the Haywood Case*, WAYLAND'S MONTHLY, Oct. 1907, at 31-32.

73. DUBOFSKY, *supra* note 64, at 49.

74. Wigmore may have been involved in convincing Münsterberg to suppress the original essay, *Experiments with Harry Orchard*. On August 20, 1907, Münsterberg wrote to Wigmore:

> On account of the acquittal of Haywood I have withdrawn my whole Orchard article which was already printed in many thousand copies. (This confidential.) I have substituted a harmless article in the September McClure and have in the October McClure a paper 'The First Degree' which introduces some experiments on Orchard.

Letter from Hugo Münsterberg to John H. Wigmore, Professor (Aug. 20, 1907) (on file with Northwestern University Archives, John H. Wigmore Papers, Box 92, Folder 16).

75. MÜNSTERBERG, *supra* note 59.

76. WILLIAM R. ROALFE, JOHN HENRY WIGMORE: SCHOLAR AND REFORMER 11 (1977).

77. See Wigmore's recollections as quoted in *id.* at 15.

78. Letter from Louis D. Brandeis to Felix Frankfurter (Apr. 27, 1927), *in* LETTERS OF LOUIS D. BRANDEIS (Melvin I. Urofsky & David W. Levy eds., 1978).

79. FELIX FRANKFURTER, FELIX FRANKFURTER REMINISCES 215, 217 (Harlan B. Phillips ed., 1960).

sons" and "that these methods were superior to those hitherto in use in American courts."[80] Münsterberg's defense is handled, or, really, fumbled, by attorneys named R.E. Search and X. Perry Ment.[81] In the fake trial, Wigmore places Münsterberg on the witness stand and browbeats him.[82]

> Q. Suppose that two honest witnesses were to testify, of a man found dead on Thursday morning, that they being together had seen him alive, but one placed it on a Wednesday and the other on Tuesday; do you say that this "experimental psychology" which in your words, "can furnish amply everything which the court demands," can tell the court which witness is correct in his memory?
>
> A. No.
>
> Q. But you admit that the physician's chemical science, which you say psychology equals in exactness, might by examining the deceased's stomach on Thursday, tell the court whether the man had been alive as late as Wednesday?
>
> A. Yes, it might.[83]

The defense having scarcely been given a chance to speak, the jury, of course, finds for the plaintiff.[84]

Wigmore's satire of Münsterberg is bizarre and bitter.[85] But it left a dent in Münsterberg's reputation, which was already battered; as early as 1901, Münsterberg had been suspected of being a Germany spy; calls for his deportation had begun in 1907.[86] Marston would be his last student.

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80. John H. Wigmore, *Professor Muensterberg and the Psychology of Testimony*, 3 ILL. L. REV. 399, 400-01 (1909).

81. *Id.* at 401.

82. *Id.* at 415.

83. *Id.* at 421.

84. *Id.* Twining cites the widely held belief that "this scathing attack discouraged a nascent interest in testimony among American psychologists with the result that progress was delayed for a generation," and, although he considers that to be "probably an exaggeration," I disagree; this assessment does not seem to have been an exaggeration. TWINING, THEORIES OF EVIDENCE, *supra* note 33, at 136.

85. Twining calls Wigmore on Münsterberg "uncharacteristically acerbic" and "an effective satire." TWINING, THEORIES OF EVIDENCE, *supra* note 33, at 136. I disagree with both characterizations; the satire, while acerbic, is not especially effective, but it is characteristic of Wigmore.

86. Spillmann & Spillmann, *supra* note 58, at 328-29, 332-33.

## III. THE PSYCHO-PHYSICS OF DECEPTION

For his undergraduate thesis, Marston, following Münsterberg, conducted a series of experiments aimed at determining whether systolic blood pressure, measured with a sphygmomanometer (a blood-pressure cuff), could be used to test deception.[87] The scholarship was a help: Marston was always scrambling for money; his father seems to have been just this side of solvent.[88] Marston worked his way through Harvard by writing for the movies.[89] In this, too, he followed an interest of Münsterberg, whose research into emotions had led him, quite naturally, into a study of motion pictures and the responses they elicited: in *The Photoplay: A Psychological Study*, Münsterberg offered a theory of cinema at a time when cinema had hardly begun.[90] The year Münsterberg was writing *The Photoplay*, Marston, who had earlier written a film directed by D.W. Griffith, won a nationwide competition run by the Edison Company, for the best screenplay.[91] Interviewed by a reporter from a Boston newspaper, Marston explained that he intended to go to law school to find a way to introduce his psychological experiments into courts of law: "This study of psychophysics of deception is going to prove a great help to me when I begin to prac-

87. *5 Bowdoin Prizes Awarded*, HARV. CRIMSON, May 20, 1914, http://www.thecrimson.com/article/1914/5/20/5-bowdoin-prizes-awarded-pbowdoin-prizes [http://perma.cc/SBR3-2GDJ]; Application for a Scholarship for William Marston (May 13, 1913) (on file with Harvard College). He received strong recommendations. *See* Letter from Harry C. Adams to Harvard College (June 2, 1913), *in* Undergraduate Record File, *supra* note 40. He won a "C.S. Jones scholarship for 1913-14" and gave as an explanation family circumstances: "Owing to business difficulties certain losses and debts must be met this year and next, reducing the amount of money available to the minimum requested for living expenses." Application for a Scholarship for William Marston, *supra*.

88. *See* Letter from William Marston to B.S. Hurlbut (Jan. 12, 1915), *in* Undergraduate Record File, *supra* note 40; Letter from B.S. Hurlbut to William Marston (Jan. 18, 1915), *in* Undergraduate Record File, *supra* note 40.

89. Epes Winthrop Sargent, *The Photoplaywright*, 24 MOVING PICTURE WORLD 387 (1915). For instance, Marston wrote the script for *Love in an Apartment Hotel*, a one-reel film directed by D.W. Griffith and released in 1913, two years before Griffith's *Birth of a Nation*. For the Internet Movie Database listing, see *Love in an Apartment Hotel*, IMDB, http://www.imdb.com/title/tt0003093 [http://perma.cc/6SWX-AE7P]. LOVE IN AN APARTMENT HOTEL (Biograph, 1913) is discussed in ROBERTA E. PEARSON, ELOQUENT GESTURES: THE TRANSFORMATION OF PERFORMANCE STYLE IN THE GRIFFITH BIOGRAPH FILMS 108-109 (1992). An unedited copy of *Love in an Apartment Building* is housed in the collections of the Museum of Modern Art, New York. E-mail from Josh Siegel, Dep't of Film, Museum of Modern Art, to author (Nov. 5, 2014, 14:10 EST) (on file with author).

90. HUGO MÜNSTERBERG, THE PHOTOPLAY: A PSYCHOLOGICAL STUDY 43 (1916). Portions of this work had appeared earlier in Hugo Münsterberg, *Why We Go to the Movies*, COSMOPOLITAN, Dec. 15, 1915, at 22-32.

91. *Scenario Prize Won by Senior*, HARV. CRIMSON, Feb. 25, 1915, http://www.thecrimson.com/article/1915/2/25/scenario-prize-won-by-senior-pwilliam [http://perma.cc/P965-RMEP].

tice law," he said. "I have tried 100 experiments and every one has come out right. You can see what a valuable thing it will be to me when I cross-examine a witness."[92]

Marston's undergraduate thesis, *Systolic Blood Pressure Symptoms of Deception*, was published in the *Journal of Experimental Psychology*.[93] He graduated *magna cum laude* in philosophy in June of 1915.[94] That September, he married Holloway.[95] After the honeymoon, he enrolled in Harvard Law School. Holloway went to Boston University's law school; Harvard did not admit women.[96]

In the fall of 1916, during Marston's second year of law school, he took Evidence with Arthur Dehon Hill.[97] For a textbook, Hill used the second edition of James Bradley Thayer's *Select Cases on Evidence at the Common Law*.[98] Marston made a poor law student: "I plugged along doggedly, doing every bit of the drudgery prescribed and getting exceptionally poor results."[99] He never earned higher than a *C*.[100] But, reading Thayer, he would have learned that the rules that govern evidence at trials were utterly unlike the rules that govern evidence in history and science.[101] Historians are supposed to be exhaustive in their search for facts, leaving no stone unturned. The evidence they find can never be complete, since so little of the past survives, but that only makes the exhaustiveness of the search more important. Scientists accumulate evidence through experiments whose findings other scientists have to be able to replicate; scientific evidence, too, has a kind of bottomlessness. If a scientist misses

92. *Exposes Harvard Gambling: Movie Scenario a Sizzler*, BOS. EVENING REC., Feb. 26, 1915.

93. William M. Marston, *Systolic Blood Pressure Symptoms of Deception*, 2 J. EXPERIMENTAL PSYCHOL. 117 (1917).

94. At the time, Marston's advisers considered him with the set of their graduate students. "All our men are placed with the exception of Feingold and Kellogg," Langfeld wrote to Yerkes, "Marston got his degree magna cum laude." Letter from Herbert Langfeld to Robert Yerkes (June 17, 1915) (on file with Yale University).

95. A marriage notice can be found on file with Harvard University Archives, Clippings File, Marston, Quinquennial File.

96. Holloway, Tiddly Bits, *supra* note 41.

97. Transcript of William M. Marston, Student at Harvard Law School (1918) (on file with Harvard Law School). Hill had been appointed Lecturer on Evidence in 1915 and promoted to Professor of Law in 1916. E-mail from Lesley Schoenfeld, Historical and Special Collections, Harvard Law Sch. Library, to author (Aug. 24, 2012, 16:59 EST) (on file with author).

98. According to the course catalog for Marston's second year, Hill assigned the second edition of Thayer's *Select Cases*. HARVARD LAW SCH., PROGRAMME OF INSTRUCTION 7 (1917).

99. MARSTON, *supra* note 48, at 8.

100. Transcript of William M. Marston, *supra* note 97.

101. On this point, see Peter Murphy, *Evidence, Proof, and Facts: An Introductory Essay*, *in* EVIDENCE, PROOF, AND FACTS: A BOOK OF SOURCES, *supra* note 33, at 12.

or hides a fact, that deception is supposed to be discovered by another scientist, on replicating the original experiment. But the law of evidence is, fundamentally, exclusionary.[102] As Thayer saw it, there weren't any rules of evidence, or, to be exact, there were two, and only two: "(1) that nothing is to be received which is not logically probative of some matter requiring to be proved; and (2) that everything which is thus probative should come in, unless a clear ground of policy of law excludes it."[103] There aren't exactly rules of evidence, Thayer thought, since every rule is really only an example of an instance of exclusion, but there *are* cases. Thayer's understanding of the law of evidence made this area of law particularly susceptible to study by the case method. For the cases to reveal the rules, and nothing but the rules, they have to be extracted from the records of the court—removed from their context—with all their details stripped out. Thayer's *Select Cases on Evidence* is a law of evidence made of cases, parts, dug out of the archives, torn out of the historical record, and stitched together, into a Frankenstein-like body of evidence about evidence.

Thayer began teaching Evidence at Harvard in 1874, when the law school's first dean, C.C. Langdell, urged the teaching of law by studying cases.[104] (Thayer was known to be an uninspiring lecturer, which may have been one reason he so avidly embraced the study of cases as a method of instruction.)[105] In the 1880s, when Wigmore was one of Thayer's students, he had learned the law of evidence from an early version of a twenty-one-page guide that Thayer had put together: *Cases on Evidence: For the Use of the Class in Evidence at the Harvard Law School*.[106] (When Wigmore published his *Treatise on Evidence*, he dedicated it to Thayer.)[107] By 1892, Thayer's little student guide had grown to

**102.** "[T]he law is essentially exclusionary in nature," as Peter Murphy has pointed out, in an essay in which he suggests that using the word "evidence" to describe probative facts in realms as different as history, science, and law is a problem. *Id.* at 2.

**103.** JAMES BRADLEY THAYER, A PRELIMINARY TREATISE ON EVIDENCE AT THE COMMON LAW 530 (Boston, Little, Brown & Co. 1898).

**104.** BRUCE A. KIMBALL, THE INCEPTION OF MODERN PROFESSIONAL EDUCATION: C.C. LANGDELL, 1826-1906, at 141-42 (2009); Bruce A. Kimball, *The Proliferation of Case Method Teaching in American Law Schools: Mr. Langdell's Emblematic "Abomination," 1890-1915*, 46 HIST. EDUC. Q. 192 (2006); Bruce A. Kimball, *"Warn Students That I Entertain Heretical Opinions, Which They Are Not To Take as Law": The Inception of Case Method Teaching in the Classrooms of the Early C.C. Langdell, 1870-1883*, 17 LAW & HIST. REV. 57, 58 (1999).

**105.** CHARLES PELHAM GREENOUGH, MEMOIR OF JAMES BRADLEY THAYER 134 (1919) (on file with Massachusetts Historical Society).

**106.** JAMES B. THAYER, CASES ON EVIDENCE: FOR THE USE OF THE CLASS IN EVIDENCE AT THE HARVARD LAW SCHOOL (1890).

**107.** As Twining explains, "Thayer provided the prevailing rationale for the *law* of Evidence; Wigmore adopted Thayer's theory as one part of a much broader inter-disciplinary 'Science' of Evidence and Proof." TWINING, THEORIES OF EVIDENCE, *supra* note 33, at 9; *see also* John

the twelve-hundred-page textbook that Marston read.[108] But Thayer's influence extended far beyond Harvard. Elected the first president of the Association of American Law Schools in 1900, Thayer was instrumental in making the case method the standard method of instruction in American law schools all over the country.[109]

Marston, then, was caught between two different theories of evidence: that of the Harvard Law School, where he read Thayer, who taught Wigmore, and that of Harvard's Psychological Laboratory, where he studied under Münsterberg, Wigmore's arch-nemesis. Münsterberg, meanwhile, was suffering under his own strains. A group of Harvard alumni, convinced that he was a German spy, tried to have him removed from the faculty.[110] On December 16, 1916, Marston might have been in Evidence, at the Law School, debating standards of judicial proof, or he might have been in Elementary Psychology,[111] at Radcliffe, assisting Münsterberg. That morning, Münsterberg walked from his home at 7 Ware Street[112] to Radcliffe Yard and entered a lecture hall. He did not feel well. After lecturing for about half an hour, he began to sway.[113] He tried to steady himself by reaching out for the edge of his desk, but then, in the middle of a sentence, he slumped to the floor. He had had a cerebral hemorrhage.[114] He died within the hour. He was fifty-two.[115] Marston was at a loss.

H. Mansfield, Jr., *Teaching Evidence at Harvard: An Introduction*, *in* TEACHING EVIDENCE AT HARVARD: A VENERABLE SUCCESSION 8 (Erika S. Chadbourn ed., 1996).

**108.** JAMES BRADLEY THAYER, SELECT CASES ON EVIDENCE AT THE COMMON LAW (1892); *see also* THAYER, *supra* note 103; James B. Thayer, *"Law and Fact" in Jury Trials*, 4 HARV. L. REV. 147 (1890). Thayer's teaching notes, along with drafts of much of his written work, may be found in the James Bradley Thayer Papers in the Historical and Special Collections of the Harvard Law School Library.

**109.** J. B. Ames, *James Bradley Thayer*, 15 HARV. L. REV. 599, 600 (1902).

**110.** Harvard's President refused to fire him, writing:

> It has fallen to the lot of this University to be among the foremost in maintaining the principle of academic freedom, which has been severely strained by the present war. That principle, we believe to be of the greatest importance, and not to be put in jeopardy without tangible proof of personal misconduct, apart from the unpopularity of the views expressed.

Letter from A. Lawrence Lowell, President, Harvard Univ., to Alfred C. Lane, Esquire (Nov. 2, 1916) (on file with Harvard University Archives, HUA 734.26).

**111.** *H. Munsterberg, Psychologist, Is Fatally Stricken*, S.F. CHRON., Dec. 17, 1916, at 29.

**112.** Münsterberg's address is given as 7 Ware Street in *Cosmopolitan Clubs To Convene During Recess*, HARV. CRIMSON, Dec. 22, 1915, http://www.thecrimson.com/article/1915/12/22/cosmopolitan-clubs-to-convene-during-recess [http://perma.cc/JWP9-C25A].

**113.** *Munsterberg Is Dead*, WASH. POST, Dec. 17, 1916, at 16.

**114.** *Id.*

**115.** *Hugo Munsterberg*, N.Y. TRIB., Dec. 17, 1916, at B2; *Munsterberg Is Dead*, *supra* note 113, at 16.

## IV. MACHINE DETECTS LIARS, TRAPS CROOKS

Marston once wrote about his life as a series of experiments: "First experiment, teaching psychology at Radcliffe while still a Harvard undergraduate; result, unfortunate for the girls, who may have learned psychology, but not love. Second experiment, studying law; result, unfortunate for the law, which gained a poor advocate. Third experiment, 1917-1918, War and Army."[116] On April 6, 1917, the United States declared war on Germany, and a group of experimental psychologists from across the country met in Emerson Hall to decide how they might aid the war effort; the meeting, which led to the formation of the Psychology Committee of the National Research Council, was run by Herbert Langfeld and Robert Yerkes, a Harvard psychologist who was also President of the American Psychological Association.[117] Yerkes's research was in the field of intelligence testing; he was a prominent eugenicist.[118] He became the Psychology Committee's chair.[119] The first task of the Committee, he determined, was "the [p]sychological [e]xamining of [r]ecruits to [e]liminate the [m]entally [u]nfit."[120] Marston wanted to contribute to the war effort, too. In June, he filled out a draft card.[121] He was not, however, immediately enlisted; instead, he continued his psychological research in Emerson Hall, at the re-

116. William Moulton Marston, *in* HARVARD COLLEGE CLASS OF 1915: DECENNIAL REPORT 179 (The Univ. Press ed., 1926).

117. The meeting and a list of those who attended appears in a visitor logbook kept by the Psychological Laboratory. Experimental Group, Visitors to the Psychological Laboratory (Apr. 5-7, 1917), at 11-12 (on file with Harvard University Archives, Department of Psychology, UA V 714.392).

118. A biographical sketch of Yerkes is included with the finding guide to his papers at Yale. *Guide to the Robert Mearns Yerkes Papers*, YALE UNIV. ARCHIVES (1983), http://drs.library.yale.edu/fedora/get/mssa:ms.0569/PDF [http://perma.cc/E7BP-2SGQ].

119. Robert M. Yerkes had earned his Ph.D. at Harvard in 1902; he studied in Münsterberg's laboratory. With Yerkes as chair, the Psychology Committee resolved "that whereas psychologists in common with other men of science may be able to do invaluable work for national service and in the conduct of the war, it is recommended by this committee that psychologists volunteer for and be assigned to the work in which their service will be of greatest use to the nation. In the case of students of psychology, this may involve the completion of the studies on which they are engaged." Robert M. Yerkes, *Psychology in Relation to the War*, 25 PSYCHOL. REV. 85, 93-94 (1918); *see also* THE NEW WORLD OF SCIENCE: ITS DEVELOPMENT DURING THE WAR (Robert M. Yerkes ed., 1920).

120. Yerkes, *supra* note 119, at 94; *see also* THE NEW WORLD OF SCIENCE: ITS DEVELOPMENT DURING THE WAR, *supra* note 119, at 354.

121. William Moulton Marston, Draft Card, World War I Draft Registration Cards, 1917-1918 (June 5, 1917) (on file with author). According to Marston's Harvard Law School transcript, Transcript of William M. Marston, *supra* note 97, his last day in residence during the academic year 1916-1917 was June 21.

quest of the Psychology Committee.[122] He began a correspondence with Yerkes regarding his deception tests.[123] Yerkes consulted with Columbia psychologist Edward L. Thorndike, who interviewed Marston and reported to Yerkes, "I am still a little shaky about his findings, but I think they deserve a real try-out with real cases."[124] Langfeld agreed. "He has much energy and push and is very resourceful," Langfeld wrote Yerkes.[125] Still, Langfeld seems to have worried about what was always Marston's problem: "I have a mere suspicion that he may be slightly overzealous in grasping opportunities, which causes him to take the corners a little too sharply."[126] Yerkes decided to establish a new subcommittee, the Committee on Tests for Deception.[127] Its purpose was "to make inquiry concerning the reliability and practicability of certain procedures proposed by William M. Marston for the detection of deception."[128]

Marston's research had obvious wartime applications: the interrogation of prisoners of war and suspected spies. The question was whether it worked outside the laboratory. The Committee told Marston "to make application of his methods to a number of cases of actual crime, and to report the results to the Committee."[129] Marston undertook this investigation in the fall of 1917, during

122. William M. Marston, *Psychological Possibilities in the Deception Tests*, 11 J. AM. INST. CRIM. L. & CRIMINOLOGY 551, 552–54 (1921) (reporting that, "[i]n October, 1917, at the request of the Psychological Committee of National Research Council, tests of this type [systolic blood pressure] were conducted in the Harvard Laboratory, with a view to determining their value in government service during the war").

123. Marston wrote to Yerkes, "Is there a chance to be commissioned as Chief Examiner in regular army service like the medics, or is the only opportunity open, in case the work is extended, a civil appointment as assistant examiner?" and "Is there any opportunity or need for research work, like Mr. Troland's etc., which can be done in the Harvard Lab.?" Letter from William Moulton Marston to Robert Yerkes (Sept. 11, 1917) (on file with National Academy of Sciences Archives, National Research Council Papers); *see* Letter from William Moulton Marston to Robert Yerkes (Sept. 20, 1917) (on file with National Academy of Sciences Archives, National Research Council Papers).

124. Letter from E.L. Thorndike to Robert Yerkes (Oct. 1917).

125. Letter from Herbert Langfeld to Robert Yerkes (Oct. 8, 1917).

126. *Id.*

127. Minutes of the Meeting of the Psychology Committee, National Research Council (Oct. 13, 1917) (on file with National Academy of Sciences Archives, National Research Council Papers); *see* Letter from William Moulton Marston to Robert Yerkes, President, Am. Psychological Ass'n (Oct. 9, 1917) (on file with National Academy of Sciences, National Research Council Papers) (including twelve-page typewritten enclosure entitled "Report on Deception Tests").

128. Robert M. Yerkes, *Report of the Psychology Committee of the National Research Council*, 26 PSYCHOL. REV. 83, 85, 134 (1919).

129. *Id.* at 134.

his third year of law school.[130] He conducted deception tests on twenty criminal defendants who had been recommended by the Municipal Criminal Court of Boston for medical and psychological evaluation, reporting his findings in the form of cases:

> CASE NO. 2. WOMAN (COLORED). AGE, 31 YEARS.
>
> *Record of Case Given to Examiner Previous to Deception Test.*
> Colored woman, 31 years of age. Arrested six months ago for larceny of a ring and placed on probation on the strength of the testimony of a colored man from whom a ring was alleged to have been stolen. Defendant during the six months had not made restitution, as she had been ordered to do, and was suspected by the probation officer of having avoided her calls. Examination was to determine whether or not she stole the ring in the first place.
>
> *B.P. Judgment.*
> Innocent. Woman telling the truth as to the ring, having been given to her.
>
> *Verification*
> The judge dismissed the case, although probation officer advised six months further probation. New evidence had turned up indicating that the colored man who first alleged that defendant stole ring was a disreputable character, etc.[131]

Remarkably—suspiciously—in each of twenty cases, Marston reported, the judgment of the blood pressure machine (as read by Marston to indicate either guilt or innocence) was subsequently verified by other evidence.[132]

By January of 1918, Marston had begun working for the Psychology Committee in Washington, where he was asked to investigate a petty crime, the theft of surgical instruments from the Mills Building, explaining, "I was asked to examine all the negro messengers in the Mills Building who could have had access to the room from which the instruments were taken."[133] He subjected

130. Letter from Herbert Langfeld, Assistant Professor, Harvard Univ., to Robert Yerkes, President, Am. Psychological Ass'n (Oct. 16, 1917) (on file with Sterling Memorial Library, Yale University).

131. Marston, *supra* note 122, at 556.

132. *Id.* at 553.

133. Marston, Systolic Blood Pressure, *supra* note 58, at 134-39.

the Mills Building's eighteen black messengers to his deception test; the test failed.[134]

Marston never published the results of his experiments on the Mills Building's black messengers. The investigation had rekindled his avidity for the law,[135] but he was unable to secure funding for further experiments. He strained Yerkes's patience when he complained about an offer to teach a course in Military Testimony and when it was revealed, by Roscoe Pound, the dean of the law school, that Marston was not in good academic standing.[136] Nevertheless, Marston graduated in June 1918 and took the bar exam, along with his wife.[137] Holloway got through it faster. "I finished the exam in nothing flat," Holloway said, "and had to go out and sit on the stairs waiting for Bill."[138]

In October 1918, Marston was commissioned as a second lieutenant in the U.S. Army and assigned to the Sanitary Corps.[139] Sent to Camp Greenleaf, Georgia, he became a professor at the U.S. Army School of Psychology, where he taught a course called "Military Problems of Testimony" to recruits in Psychology Company #1. For that class, he designed another experiment, involving a fictional theft.[140] He reported that officers, serving as interrogators, and using his deception test, were able to determine the guilt or innocence of the suspects in twenty-six out of thirty-five cases, or 74.3%.[141] Yet Marston, who did not conduct the interrogations but merely read graphs recording blood-pressure readings, was right thirty-four out of thirty-five times, achieving the astonishing success rate of 97.1%.[142] A "sufficient psychological background probably exists to qualify an expert upon deception in court," Marston con-

134. *Id.*

135. As Marston later wrote, "[W]hile engaged in deception testing of criminal and spy cases I became genuinely interested in the law." MARSTON, *supra* note 48 at 8-9.

136. Yerkes, *supra* note 128, at 135; Letter from Robert M. Yerkes, Chair, Psychology Comm., Nat'l Research Council, to William Moulton Marston (Mar. 5, 1918) (on file with National Academy of Sciences, National Research Council Papers). These arrangements would have required Marston to leave law school early, which was made difficult by his poor academic standing. Letter from Robert M. Yerkes to Roscoe Pound, Dean, Harvard Law Sch. (Apr. 2, 1918); Letter from Roscoe Pound to Robert M. Yerkes (Apr. 5, 1918) (on file with National Academy of Sciences, National Research Council Papers).

137. *Passed Bar Examinations*, CAMBRIDGE CHRON., Aug. 3, 1918, at 4.

138. Holloway, Tiddly Bits, *supra* note 41.

139. *William Moulton Marston A B*, *in* HARVARD'S MILITARY RECORD IN THE WORLD WAR 643 (Frederick S. Mead ed., 1921) ("Commissioned 2d lieutenant Sanitary Corps October 22, 1918; assigned to Psychological Division and stationed at Fort Oglethorpe, Ga.; transferred to Camp Upton, N.Y.; to Camp Lee, Va.; discharged May 9, 1919.").

140. Marston, *supra* note 122, at 567.

141. *Id.* at 568.

142. *Id.*

cluded.[143] Yerkes was enthusiastic, but, as Yerkes reported, Marston's work "did not command the confidence of all members of the Psychology Committee."[144]

Seemingly realizing that his findings had been deemed to fall short of the standards of evidence in experimental psychology, Marston turned once more to the law. He began a correspondence with Wigmore; he appears to have been courting his favor, and seeking an ally. At Wigmore's urging, Marston wrote up his findings from his research at Camp Greenleaf and submitted it to the *Journal of Criminal Law and Criminology*, a journal that Wigmore had founded, and that was published at Northwestern.[145] Marston's article was accepted.[146]

After his discharge, Marston enrolled in Harvard's Ph.D. program in psychology.[147] Holloway began studying psychology in an M.A. program at Radcliffe.[148] Meanwhile, Marston pursued other ventures. He became founder and treasurer of a fabrics firm in Boston called United Dress Goods.[149] He opened the Tait-Marston Engineering Company, with a machine shop and foundry in Boston, and offices at 60 State Street.[150] With two friends from Harvard Law School, he opened a law firm, Marston, Forte, and Fischer, whose offices were also at 60 State Street.[151] Felix Forte had helped Marston with his work on de-

**143.** *Id.* at 570.

**144.** Yerkes, *supra* note 128, at 135.

**145.** On March 15, 1921, Marston sent Wigmore a reprint of the article, "written at your suggestion for the Journal of Criminal Law and Criminology." Letter from William Moulton Marston, Marston, Forte & Fischer, to John Henry Wigmore, Dean, Northwestern Law Sch. (Mar. 15, 1921) (on file with Northwestern University Archives, John H. Wigmore Papers, Box 90, Folder 12).

**146.** *See* Marston, *supra* note 122, at 551.

**147.** William Moulton Marston, Graduate Record Card, The Graduate School of Arts and Sciences (on file with Harvard University Archives, HAIH63 UA1161.272.5).

**148.** Holloway, Tiddly Bits, *supra* note 41.

**149.** *New Incorporations*, N.Y. TIMES, Mar. 17, 1920. Marston's role in the firm is described in his subsequent indictment. Indictment for Using Mails in a Scheme to Defraud, United States v. Marston, No. Crim. 4269 (D. Mass. Dec. 1, 1922) (on file with National Archives, Boston); Indictment for Aiding and Abetting in the Concealment of Assets from the Trustee in Bankruptcy, United States v. Marston, No. 4269 (D. Mass. Dec. 1, 1922) (on file with National Archives, Boston).

**150.** *New Mass. Corporations*, CAMBRIDGE CHRON., Mar. 27, 1920. Marston is listed as the incorporator of The Tait-Marston Engineering Company, of Boston, foundry and machine shop. Its offices are given as 60 State Street, Boston, in *Display Advertisement, Tait-Marston Engineering Company*, 52 AM. MACHINIST 328 (1920). The company was dissolved in 1924, according to Act of 1924, ch. 230, 1924 Mass. Acts 213.

**151.** The address of Marston, Forte, and Fischer is indicated on letterhead Marston used at the time. *See, e.g.*, Letter from William Moulton Marston to John Henry Wigmore, *supra* note 145.

ception tests (and rented rooms at 17 Lowell Street, where the Marstons lived, too);[152] Edward Fischer, another friend of Marston's from law school, was a founder of the Boston Legal Aid Society.[153] Marston, Forte, and Fischer proved a failure; Marston wrote: "Fourth investigation, 1918-21, practicing law while continuing psychological work at Harvard; result, general dissatisfaction of all subjects concerned, especially clients."[154]

To promote his research, Marston staged a series of publicity photographs on his front porch: in each, he is administering a deception test.[155] In May of 1921, one of the photos appeared in the *Philadelphia Inquirer* beneath the headline, "MACHINE DETECTS LIARS, TRAPS CROOKS."[156] "Successful lying will soon be a lost art," the *Inquirer* reported, drawing on a press release written by Marston, "for science has perfected an instrument which is credited with being able to register instantly a falsehood."[157]

The next month, Holloway graduated from Radcliffe with an M.A. and Marston completed his Ph.D.[158] He had spent nearly ten years at Harvard. He had studied history, philosophy, psychology, and law. He had earned three degrees. He believed he knew how to tell who was telling the truth, and who was not.

"Fifth research, founding the great (potentially) subject of legal psychology at American University."[159] For his next experiment, Doctor Marston went to Washington.

152. Forte appears in labeled photographs in some of the Marston family's photo albums, in the possession of Moulton Marston.

153. 22 HARV. ALUMNI BULL. 719 (1920) ("Edward G. Fischer, formerly general counsel of the Boston Legal Aid Society, has become a member of the law firm of Marston, Forte, & Fischer, with offices at 60 State St. Boston."); *see also* BOSTON LEGAL AID SOCIETY, THE WORK OF THE BOSTON LEGAL AID SOCIETY: A STUDY OF THE PERIOD JAN. 1, 1921 TO JUNE 30, 1922, at 28 (1922) (stating that Marston, Forte and Fischer donated $50).

154. Marston, *supra* note 116, at 179.

155. The photographs can be found in albums in the possession of Moulton Marston.

156. *Machine Detects Liars, Traps Crooks*, PHILA. INQUIRER, May 14, 1921.

157. *Id.*

158. Holloway, in her memoir, explained that she had actually earned a Ph.D., but had then thwarted Harvard's attempt to award her one: "I was working with him but refused to take the PhD exam because Harvard required proficiency in German," she wrote. "I went to Radcliffe, signed some forms, criticized them from a legal point of view, wrote a thesis on Studies in Testimony, and was granted an M.A." Her memory is in error. Harvard did not, at the time, award Ph.Ds. to women, and Radcliffe did not require a thesis. And, curiously, "Studies in Testimony" is the title Marston gave to his account of the experiments he conducted with his students in Legal Psychology at American University in 1922. Holloway, Tiddly Bits, *supra* note 41.

159. Marston, *supra* note 116, at 179.

## V. THE FIFTH EXPERIMENT

Marston based Legal Psychology, a course he offered at American University in 1922, on Wigmore's eleven-hundred-page book, *The Principles of Judicial Proof as Given by Logic, Psychology, and General Experience*.[160] Wigmore defined judicial evidence as any "knowable fact or group of facts" and proof as "the persuasive effect of a mass of evidentiary facts."[161] *The Principles of Judicial Proof* is a compendium, Wigmore's answer to Thayer, consisting of case studies taken not only from the courts but also from the annals of both literature and science, apparently following the reasoning that all of human knowledge can be reduced to cases. (In a section on testimonial process, for example, Wigmore reprinted a courtroom scene from *The Pickwick Papers*.)[162] Above all, Wigmore drew from psychology. Explaining what constitutes proof of identity, for instance, he quoted William James's *Principles of Psychology*; on the relationship between age and mendacity, he cited *Children's Lies*, an essay by G. Stanley Hall; on perception, he relied on Josiah Royce's *Outlines of Psychology*.[163] In preparing *Principles of Judicial Proof*, Wigmore had even graciously written to Münsterberg, asking for permission to use some portion of his work. "You need not fear that I should attempt to take advantage of the occasion to continue the sarcastic controversy of three years ago," Wigmore reassured Münsterberg.[164] "I am anxious, in this book, to see your views expounded fully to law students."[165]

No science was more important to the law of evidence, Wigmore believed, than psychology, and no aspect of psychological research was more important to judicial proof than the study of testimony. In *Principles of Judicial Proof*, Wigmore's discussion of testimonial evidence runs more than four hundred pages.[166] Marston was most interested in Wigmore's discussion of testimonial fidelity. He read, in Wigmore, of a testimonial experiment conducted by Arno Gunther in 1905:

160. JOHN HENRY WIGMORE, THE SCIENCE OF JUDICIAL PROOF (3d ed. 1937). Marston wrote Wigmore that the course was "based to a considerable extent upon your 'Principles of Judicial Proof.'" Letter from William M. Marston, Law Office of William Moulton Marston, to John H. Wigmore, Dean, Northwestern Law Sch. (Mar. 30, 1922) (on file with Northwestern University Archives, John H. Wigmore Papers, Box 90, Folder 12).

161. WIGMORE, *supra* note 60, at 5.

162. *Id.* at 502-03.

163. *Id.* at 67, 337-40, 402-03.

164. Letter from John Henry Wigmore to Hugo Münsterberg (Jan. 3, 1913) (on file with Northwestern University Archives, John H. Wigmore Papers).

165. *Id.*

166. WIGMORE, *supra* note 60, at 312-743.

> The incident began with the entry of a man into the lecture room; and the various features of the incident were subdivided into points, as follows: (1) The time was 3.45 P.M. (2) The man was medium height, medium large. (3) His hair was brown. (4) He had a small brown mustache, no beard. (5) He wore glasses, *i.e.* spectacles. (6) He had on an overcoat, of black cloth, and buttoned. (7) He had on a dark suit. (8) A soft hat, dark brown. (9) No gloves. (10) In his hands he carried cane, hat, and a letter; the cane was brown, with a black handle. (11) His cravat was dark red. (12) The man was 21¾ years old. (13) On entering he did not knock. (14) After entering, he said: "Excuse me, Mr. G, may I speak with you a moment?" (15) Mr. G replied, "Certainly. Come in." (16) The visitor stepped forward and handed a letter, (17) saying, "I have here a letter to be handed to you."[167]

Marston also read, in Wigmore, of experiments conducted in 1905 and 1911 at Northwestern, by Wigmore himself.[168] And he read, too, Wigmore's restatement of a position that Wigmore had taken in his review of Münsterberg's *On the Witness Stand*: that testimonial error, as established and measured in his testimonial experiments, does not necessarily translate into errors in the courtroom, because juries can sort out the truth from lies.[169] Marston then designed his own experiment. He thought the scenes played in earlier experiments, using shams and "blood (or paint) smeared actors, shouting and gesticulating," skewed the results.[170] He therefore devised, instead, a scene of utmost ordinariness, closely modeled on Gunther's.[171]

In *Principles of Judicial Proof*, Wigmore had suggested a modification to the standard experimental design: "[I]nclude a jury (or judge of facts) in the experiment, and observe whether the findings of fact follow the testimonial errors or whether they succeed in avoiding them and in reaching the actual facts."[172] Following Wigmore's recommendation, Marston planned to submit that testimony to judge and jury. "I have arranged here for the entire testimony of my 18 witnesses to be submitted separately to two juries; one of 12 men and one of 12 women; the juries to consider the testimony at leisure individually, and finally to meet and make final findings of fact," Marston wrote to Wig-

**167.** *Id.* at 583.

**168.** *Id.* at 585-91.

**169.** *Id.* at 591.

**170.** Marston, *supra* note 1, at 7-8.

**171.** *Id.* at 8-9.

**172.** The Northwestern University Law School experiments are reported in WIGMORE, *supra* note 60, at 585-91; Wigmore's remarks, reprinted from his 1909 review of *On the Witness Stand*, are printed in *id.* at 591.

more. "I am still lacking a Judge, however."[173] For this role, Marston wished to cast Wigmore himself. He proposed to send him eighteen sets of testimony, neatly typed, for Wigmore to read at his leisure.[174] Wigmore agreed.[175] (Marston did not mention to Wigmore that, in a related and especially intriguing experiment, he had enlisted two other judges: Dr. Charles C. Tansill, an American historian at the Library of Congress; and Emily Davis, "newspaper woman and correspondent."[176] What Marston was trying to get after, curiously, was whether Wigmore, the nation's foremost authority on the law of evidence, would be any better at weighing testimony than Davis, a journalist, or Tansill, an historian.) Then, while Marston transcribed his eighteen sets of testimony and prepared to send them to Wigmore, he and his students had already begun to undertake another experiment, no less contrived, but more fateful. It involved a man named Frye.

In November 1920, on the Saturday after Thanksgiving, Robert Wade Brown, a doctor, had been shot point blank in the front hall of his house while friends were assembled to celebrate Howard University's football game victory.[177] Brown was the president of the National Life Insurance Company and the richest black man in Washington, the kind of man Booker T. Washington had dinner with when he visited the city.[178] Brown's murder had stunned Washington's black community and had been reported all over the country.[179] As a writer for the *Chicago Defender* put it, "Such was the news that met the ears of awed Race citizens of the nation's capital as they stood in little groups, here and there, and heard related with bated breath the tale of the tragedy on the gloomy Sunday morning after the night of destruction."[180] The case proved a mystery. Brown's family and his company together offered a thousand-dollar reward for information leading to the killer.[181] For months, nothing came of it. Then, on March 10, 1922, ten days before American Univer-

**173.** Letter from William Moulton Marston to John Henry Wigmore, *supra* note 160.

**174.** Marston wrote Wigmore that the course was "based to a considerable extent upon your 'Principles of Judicial Proof.'" *Id.*

**175.** Letter from JHW to William M. Marston, Esquire (May 11, 1922) (on file with Northwestern University Archives, John H. Wigmore Papers, Box 90, Folder 12).

**176.** Marston, *supra* note 1, at 16-17.

**177.** *Convict Slayer of Dr. Brown*, CHI. DEFENDER, July 29, 1922, at 1; *President of the National Benefit Life Insurance Company Cowardly Murdered*, PHILA. TRIB., Dec. 4, 1920, at 1.

**178.** *Hear Booker Washington: Prominent Men Gather at the Home of Sidney Pittman*, WASH. POST, Jan. 27, 1909, at 14.

**179.** *See, e.g.*, *President of the National Benefit Life Insurance Company Cowardly Murdered*, *supra* note 177, at 14.

**180.** *Convict Slayer of Dr. Brown*, *supra* note 177, at 1.

**181.** *Offer $1,000 Reward for Doctor's Slayer*, CHI. DEFENDER, Dec. 18, 1920, at 1.

sity's semester began, twenty-two-year-old James Alphonso Frye was charged with killing Brown and indicted for first-degree murder.[182]

Frye had been arrested, on unrelated charges, in the summer of 1921.[183] He'd been charged, along with his cousin, Benjamin Grice, and a newspaper reporter named William N. Bowie, with robbing a man named George Blake, taking his ring, watch, and wallet.[184] Grice agreed to testify against Frye and Bowie. So did a black dentist named John R. Francis, in whose office Frye sometimes worked.[185] During the investigation into the Blake robbery, Francis told the police that Frye had confessed to him to killing Brown.[186] A week after Frye was arrested, the police questioned him about the Brown murder; Frye then made a formal confession to the police.[187] He said he had gone to Brown's house to get medicine for gonorrhea and had accidentally shot him during a struggle that began when Brown refused to give him the medicine and Frye said he didn't have any money.[188] (The confession reads: "I tried to run to the door and he grabbed me again and knocked me down and I told him to put his hands up and he kept on hitting me, hitting me on the head, and in the struggle I think that my gun was fired.")[189] In August of 1921, the announcement that Brown's killer had been found, like the murder itself, made spectacularly splashy national news.[190]

In November 1921, Frye was tried for robbery alongside Bowie in a criminal court headed by Chief Justice Walter I. McCoy.[191] Bowie was tried separately

182. *Mystery Finally Solved as How Prominent Physician Was Murdered Last Year*, WASH. TRIB., Aug. 27, 1921.

183. Details regarding Frye's arrest for robbery are included in *Witness Dashes from Stand; Makes Escape*, WASH. POST, Dec. 13, 1921, at 5.

184. United States v. Bowie, Criminal #38380 (1921) (on file with National Archives, RG 21, Box 316, 16W3/08/21/06). Details of the crime itself are also reported in *Guarded Witness Breaks Away at Court and Flees*, WASH. HERALD, Dec. 13, 1921, at 2; and *Witness Dashes from Stand: Makes Escape*, *supra* note 183.

185. *Bowie*, Criminal #38380

186. For a useful account of the arrest and questioning and a faithful summary of the confession, see *id.*

187. Statement of James A. Frye to Inspector Clifford I. Grant (Aug. 22, 1921) (on file with National Archives, RG 21, Equity 40432, Box 3060, 16W3/06/27/03).

188. *Id.* These events are well recounted in a letter from Leslie Garnett to the Attorney General, and can be viewed alongside Frye's multiple applications for pardons and clemency. *See* Letter from Leslie C. Garnett to Attorney General (July 21, 1934) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386).

189. Statement of James A. Frye to Inspector Clifford I. Grant, *supra* note 187.

190. *Dr. Brown's Slayer in Law's Grip*, CHI. DEFENDER, Sept. 3, 1921, at 1 (national coverage); *Negro Held on Charge of Slaying Physician*, WASH. BEE, Aug. 27, 1921 (local coverage).

191. United States v. Bowie, Criminal #38380 (1921) (on file with National Archives, RG 21, Box 316, 16W3/08/21/06).

for housebreaking and larceny; a young lawyer named Lester Wood served as Bowie's attorney.[192] Both Frye and Bowie were found guilty and sentenced to four years in prison. It came out during the trial that Frye and Bowie had been thwarted in a plan to rob a doctor from Alexandria, Virginia.[193] Frye's attorney, James O'Shea, filed a motion for a new trial.[194] Wood, a zealous advocate, filed an appeal, and filed a motion to have Bowie, who, with Grice, was also charged with larceny and housebreaking, tried separately.[195] In December 1921, Chief Justice McCoy granted the motion for a new trial for both Frye and Bowie, agreeing that the jury had not been sufficiently instructed regarding the presumption of innocence.[196] The new trial, also in Chief Justice McCoy's court, produced the same verdict, and the same sentence: guilty, four years.[197]

Marston, who had only recently moved from Cambridge to Washington, appears to have heard about the Frye murder case in March of 1922, when Frye pled not guilty.[198] Shortly after that, Frye dispensed with O'Shea and placed himself in the hands of Lester Wood and another young lawyer named Richard V. Mattingly.[199] Not noted in any of the court documents is that Lester Wood and Richard V. Mattingly were both graduate students at American University. Mattingly, twenty-two, had graduated from Georgetown Law School but had not been able to find legal work.[200] He was taking classes at American University at night, working toward a graduate degree in Diplomacy and Jurisprudence; during the day, he worked as a salesman.[201] Wood, twenty-six

192. Bowie was tried separately for housebreaking and larceny, and found guilty. *Bowie*, Criminal #38380.

193. *William N. Bowie and James Frye Convicted*, WASH. TRIB., Nov. 12, 1921.

194. Motion for a New Trial, United States v. Bowie, Criminal #38380 (Nov. 16, 1921) (on file with National Archives, RG 21, Box 316, 16W3/08/21/06).

195. Motion for a New Trial, United States v. Bowie, Criminal #38380 (Jan. 6, 1922) (on file with National Archives, RG 21, Box 316, 16W3/08/21/06). Lester Wood's name is mistakenly rendered as "Foster Wood" in some of the court documents.

196. Again, for a concise recounting of the robbery case, verdict, and sentencing, see Letter from Leslie C. Garnett to Attorney General, *supra* note 188.

197. *Bowie and Frye Get Four Years in Penitentiary*, WASH. TRIB., Dec. 31, 1921 (on file with author); *New Trial Is Granted Bowie*, WASH. TRIB., Dec. 10, 1921.

198. Docket Entries, Frye v. United States, 293 F. 1013 (D.C. Cir. 1923) (on file with National Archives, RG 21, Box 316, 16W3/08/21/06). O'Shea is listed as his attorney during the indictment in the full appeal trial record. Transcript of Record, Frye v. United States, 293 F. 1013 (D.C. Cir. 1923) (on file with National Archives, RG 276, Briefs 3986, Box 380).

199. The transcript of the criminal trial record, filed with the appeal, lists James A. O'Shea as Frye's attorney up until March 11, 1922, after which his attorneys are listed as Mattingly and Wood. *Id.*

200. Richard Vinton Mattingly, Student Record (Oct. 4, 1921) (on file with American University Registrar's Office).

201. *Id.*

and also a Georgetown Law graduate, listed his job as an auditor for the U.S. Shipping Board in his application to American (dated October 8, 1921).[202]

In the fall of 1921 and the winter of 1922, Wood and Mattingly had taken all of the same courses, and both enrolled in Marston's class on Legal Psychology in the spring.[203] That term began on March 20, 1922, ten days after Frye's arraignment, at which point Frye was still being represented by O'Shea.[204] Court documents from the Frye case refer to the firm of Mattingly & Wood, with offices at 918 F Street, but the firm, and the partnership, seems to have been established for the sole purpose of the Frye murder case.[205] A messenger with a Texas twang must have knocked on the door of the lecture room during one of the very first class meetings, because on March 30, Marston wrote to Wigmore to tell him that he had "just concluded a very interesting experiment on testimonial evidence."[206]

He had also just begun another experiment. The Frye trial promised to be the sensation of the season. Marston could scarcely have hoped for a more perfect opportunity to publicize his research on the detection of deception. The idea, from the start, seems to have been to use Frye's trial as a test case (and a class project), with the hope that an appeal would eventually reach the U.S. Supreme Court.[207] The point wasn't really to defend Frye; the point was to bring into a court of law a new science of evidence.

## VI. A PSYCHO-LEGAL RESEARCH LABORATORY

In the experimental life of William Moulton Marston, James A. Frye was experiment number six. In preparing Frye's defense, in the spring of 1922, Mattingly and Wood appear to have relied on what they'd learned in their night course on Legal Psychology. And then, on June 10, they brought their

**202.** Lester Wood, Student Record (Oct. 8, 1921) (on file with American University Registrar's Office).

**203.** *Id.*; Richard Vinton Mattingly, Student Record, *supra* note 200.

**204.** AM. UNIV., AMERICAN UNIVERSITY: ANNOUNCEMENT FOR 1921-1922, *supra* note 11, at 2.

**205.** Pauper's Affidavit Requesting Leave to Pursue Appeal Without Prepayment of Costs and at Expense of United States, *Frye*, 293 F. 1013 (on file with National Archives, RG 276, Briefs 3936.) The filing date on the affidavit is illegible, but leave to proceed was granted on August 4, 1922. The affidavit is typewritten and identifies Frye's attorneys as "Mattingly & Wood, 918 F St. N.W."

**206.** Letter from William M. Marston to John H. Wigmore, *supra* note 160

**207.** "Counsel, of course, expected that result, but wanted to get it before the U.S. Supreme Court in proper form," Marston wrote to Wigmore, about Frye's lawyer's motives and intentions in preparing Frye's trial and appeal. Letter from William M. Marston to John H. Wigmore, Esquire, Northwestern Law Sch. (Dec. 31, 1923) (on file with Northwestern University Archives, John H. Wigmore Papers, Box 90, Folder 12).

professor to the D.C. jail to meet the defendant.[208] Marston asked Frye if he would submit to the use of the lie detector; Frye agreed.[209] (Frye at some point also submitted to an intelligence test, administered by a psychologist from the National Research Council, who determined that Frye's intelligence "was superior to that of the average draft negro.")[210] Frye himself later described Marston's method: "He asked me several questions, none pertaining to the case, then suddenly he launched upon several questions going into every detail of the case. Several days later, I read in the Washington News where he had said I had told the truth."[211] The case was tried by Chief Justice Walter McCoy, the same justice who'd tried Frye for robbery and sentenced him to four years in prison. McCoy, sixty-three, had studied at Harvard Law School in the 1880s, where he was one year ahead of John Henry Wigmore; like Wigmore, McCoy had studied Evidence with Thayer.[212]

A crucial defense for Frye, seemingly, would have been an alibi. Mattingly and Wood, however, appear to have made at best a half-hearted attempt to establish Frye's whereabouts on the night of the murder.[213] Frye maintained that he had been at the home of a woman named Essie Watson in the company of a

**208.** The date of June 10, 1922, for the testing, is given in Transcript of Record, *supra* note 198. This record was included in the Bill of Exceptions submitted to the court by Mattingly and Wood on September 26, 1922, recording court proceedings during the criminal trial, held July 17-20, 1922.

**209.** *Id.*

**210.** Memorandum of Scientific History and Authority of Systolic Blood Pressure Test for Deception at 4, Frye v. United States, 293 F. 1013 (D.C. Cir. 1923) (on file with National Archives, RG 276, Briefs #3968, Box 380, 14E2A/02/05/04) [hereinafter Memorandum of Scientific History].

**211.** James A. Frye, Application for Executive Clemency 12-13 (1945) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386).

**212.** Walter I. McCoy was born in Troy, N.Y., on December 8, 1859. He graduated from Harvard College in 1882 and from Harvard Law School in 1886. (Wigmore graduated from Harvard College in 1883 and from Harvard Law School in 1887.) "In 1904 and 1908 he sat as New Jersey delegate in the National Democratic Conventions, also in many State conventions, before being elected, in 1911, to the 62d Congress, from the Eighth New Jersey District. Service to the first Wilson Administration brought him into notice, and he was appointed, as Associate Justice, to the Supreme Court of the District of Columbia on October 5, 1914. When Chief Justice Covington resigned, on May 30, 1918, Associate Justice McCoy was promoted . . . ." 1 JOHN CLAGETT PROCTOR, WASHINGTON: PAST AND PRESENT 234 (1930). He retired in 1929 and died in Cambridge in 1933. *See McCoy, Walter Irving, (1859-1933)*, BIOGRAPHICAL DIRECTORY U.S. CONG., http://bioguide.congress.gov/scripts/biodisplay.pl?index=M000376 [http://perma.cc/W97G-NZG3].

**213.** *See* Transcript of Record, *supra* note 198 (noting the defense argued that "the defendant, in order to maintain the issues on his part joined produced various witnesses whose testimony tended to prove that at the time of the commission of the crime charged he was at the home of one Essie Watson, 417 Q St. N.W.").

woman he was dating, named Marion Cox.[214] On July 14, Mattingly and Wood requested a continuance, on the ground that Essie Watson was too ill to appear in court.[215] McCoy denied this request.[216] Instead, Frye's attorneys read a statement from her taken on her deathbed. For reasons never explained, Cox never testified. (Frye later said that she refused.)[217] Mattingly and Wood based their defense on establishing that Frye's confession was a lie, and that, in disavowing it, Frye was telling the truth.[218] The story went like this: Frye, having been arrested on the robbery charge, had been tricked into confessing to murder. He had been assured both by a police detective and by John R. Francis that, if he said he had killed Brown, the robbery charge would be dropped; the murder charge wouldn't stick (because Frye had an alibi); and Frye would receive a portion of the $1,000 reward.[219] The real murderer, Frye said, was Francis.[220]

Defending Frye by arguing that his confession was a lie transformed Frye's case into a case very much like that of Harry Orchard, with Marston as Frye's Münsterberg. Marston must have hoped the case would establish his reputation; he also wanted Wigmore to witness it. All this while, he had continued to

214. Frye describes Cox's role in the case in a letter to the President of the United States, requesting a presidential pardon. *See* Letter from James Alphonso Frye to the Honorable Harry S. Truman, President of the United States (Sept. 28, 1945) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386).

215. *See* Request for Continuance, Frye v. United States, 293 F. 1013 (D.C. Cir. 1923) (on file with National Archives, RG 21, Criminal #38325, Box 316, 16W3/08/21/06).

216. *See id.*

217. For Frye's recollection of Watson's illness and death, see Frye, *supra* note 211, at 2-3. On Cox, see *id*. at 12-13, where Frye writes, "My lawyers Messrs. R.V. Mattingly and Lester Wood attempted several times to have this woman to give them a statement such efforts met with no results. She was summoned to court as a witness, the Prosecuting Attorney stated that she was a defense witness and my attorneys said, she was a State's witness. I have never been able to learn the cause for her actions."

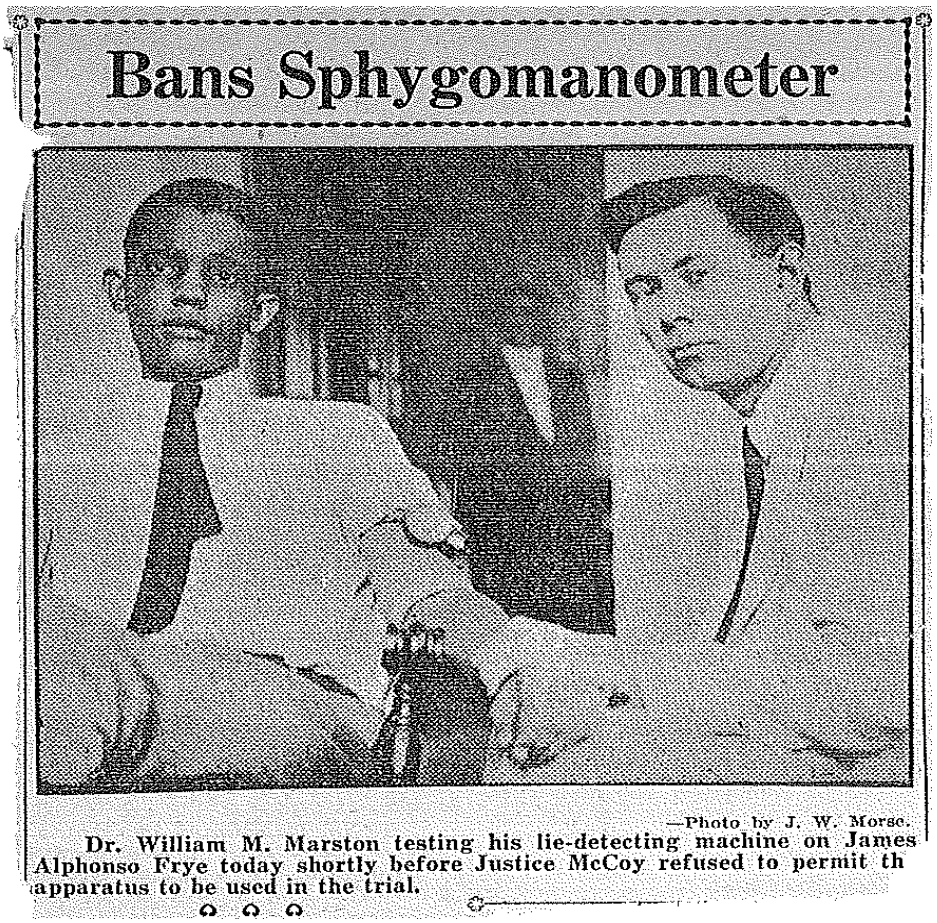
218. Immediately after raising the issue of an alibi, Mattingly cast that defense aside and began his attempt to introduce Marston's testimony regarding the confession having been a lie. *See* Transcript of Record, *supra* note 198.

219. Frye chronicles these details in Letter from James Alphonso Frye to the Honorable Robert H. Turner, Pardon Attorney (Dec. 10, 1940) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386). He writes, in this same letter, "Even though my attorneys did their best they were young and inexperienced." *Id.*

220. *Id.* In August 1922, immediately following Frye's conviction, Francis began pursuing the reward, filing suit with William H. Robinson against the National Benefit Life Insurance Company and N. Pearl Curtis and Robbie Lofton, Brown's daughters, for the recovery of the reward, which was also claimed by Julian Jackson. *See* Curtis v. Francis, No. 40432 (D.C. 1922) (on file with National Archives, RG 21, Equity 40432, Curtis, Lofton et al. v. Francis et al., Box 3060, 16W3/06/27/03). In the fall of 1922, Robinson was convicted of dealing in narcotics. *See* United States v. Robinson, No. 39682 (D.C. 1922) (on file with National Archives, RG 21, Criminal #39682, Box 329, 16W3/08/22/02).

correspond with Wigmore. On June 3, Marston sent Wigmore the testimony he had taken from his eighteen students as part of his testimonial experiment.[221] After Marston visited Frye in jail on June 10, strapped him up to a blood-pressure cuff, and asked him a series of questions, Marston sent Wigmore a clipping of the story in the *Washington Daily News*.[222]

**Figure 2.**


Bans Sphygomanometer

—Photo by J. W. Morse.

Dr. William M. Marston testing his lie-detecting machine on James Alphonso Frye today shortly before Justice McCoy refused to permit th apparatus to be used in the trial.

*On July 4, 1922, Marston sent Wigmore this clipping from the* Washington Daily News. *Courtesy of the Northwestern University Archives.*

221. *See* Letter from William Moulton Marston to John Henry Wigmore (June 3, 1922) (on file with Northwestern University Archives, John H. Wigmore Papers, Box 92, Folder 16).

222. *See* Letter from William Moulton Marston to John Henry Wigmore (July 4, 1922) (on file with Northwestern University Archives, John H. Wigmore Papers, Box 92, Folder 16).

Frye's trial began on July 17.[223] The prosecutor, assistant district attorney Joseph H. Bilbrey, brought to the stand the physicians who had examined the body; Paul Jones, the police detective who had witnessed Frye's confession; and two further witnesses, Julian Jackson and John Robinson, friends of the murder victim, who testified that they had seen Frye at Brown's house on the night of the murder.[224]

On behalf of the defense, Mattingly called Frye, who insisted that "not a word of the confession made . . . was true."[225] According to a newspaper report:

> After drinking a glass of water handed him by the bailiff, Frye made a statement in which he claimed that on the Wednesday following the murder of Dr. Brown, he and Dr. John R. Francis Jr. got into an automobile and went to Southwest Washington, where Francis purchased cocaine and gin and from whence they returned to Dr. Francis' office in the Southern Aid building, corner of Seventh and T streets Northwest. There, Frye said, he got to "feeling good drinking the gin," while Dr. Francis, after "getting high," confessed to him that he (Francis) had killed Dr. Brown, giving the details as to how the climax of murder came after a failure to extort money from the slain man through a blackmail threat.[226]

On July 19, the first day Frye testified, Marston went to court and tested his apparatus, apparently in the hallway (the test, which was photographed, was reported in the *Washington Post*).[227] Preparing to introduce Marston as a witness, Mattingly and Wood submitted Marston's publications, including his dissertation, to the judge.[228]

That night, Marston and some of his students held a meeting at American University.[229] They decided to found an American Psycho-Legal Society. Mars-

223. For the criminal trial record, at least that part that survived, see United States v. Frye, No. 38325 (D.C. 1922) (on file with National Archives, RG 21, Criminal #38325, Box 316, 16W3/08/21/06).

224. So far as I can discover, the transcript of the criminal trial does not survive, except for those parts excerpted for the appeal. For the rest of the trial, I have relied on newspaper accounts.

225. *Frye Convicted of Dr. Brown's Murder*, WASH. TRIB., July 22, 1922.

226. *Convict Slayer of Dr. Brown*, *supra* note 177.

227. "Dr. Marston made a test of Frye's blood pressure yesterday. Frye stoutly maintains that he is innocent of the crime. While not disclosing the result of the test, Dr. Marston will make a supplementary test if Chief Justice and the jury so request." *Lie-Detector Verdict Today*, WASH. POST, July 20, 1922, at 2.

228. Transcript of Record, *supra* note 198, at 15.

229. *See* Letter from William Moulton Marston to John Henry Wigmore (July 20, 1922) (on file with Northwestern University Archives, John H. Wigmore Papers, Box 92, Folder 16); Letter from John Henry Wigmore to George Curtis Peck (Nov. 16, 1922) (on file with North-

ton and Wigmore were to be honorary co-presidents.[230] (The society's aim was to burnish Marston's credentials, promote and publicize his research, and raise $15,000 to equip his laboratory. It lasted no more than a few months.)[231]

The next day, the courtroom was full to overflowing, in anticipation of Marston's testimony.[232] With Marston on the witness stand, but before he had a chance to speak, McCoy challenged Mattingly's evidence.

> Mr. MATTINGLY. If your honor please, at this time I had intended to offer in evidence the testimony of Dr. William M. Marston as an expert in deception.
>
> The COURT. His testimony on what[?]
>
> Mr. MATTINGLY. Testimony as to the truth or falsity of certain statements of the defendant which were made at a particular time.
>
> The COURT. Made at what time?
>
> Mr. MATTINGLY. The tenth of June of this year.
>
> The COURT. We are not concerned with the truth or falsity of any statements on the 10th of June. He has been testifying on the 19th and 20th of July, and that is the only thing we are interested in.
>
> Mr. MATTINGLY. There has been a great amount of testimony offered, your honor, as to what was said by Frye at various times, both

western University Archives, John H. Wigmore Papers, Box 92, Folder 16). The Society was involved in another murder case in the summer of 1922. *See Lie Detector Said to Clear Dudding in Killing of Uncle 12 Years Ago: Test Made Before Students at American University by Dr. William Marston*, WASH. POST, Aug. 2, 1922, at 9. The last mention of the Society that I have found is from that fall, and relates to efforts to raise $15,000 for a research fund, to outfit a laboratory, and to support "a series of lectures on the application of psychological methods to the adducing of judicial proof." *Far Eastern Club Formed in College*, WASH. POST, Nov. 5, 1922, at 44. The first lectures were to be delivered in Washington, and "Dr. William M. Marston, honorary president of the society . . . will probably take a leading part in the program." *Id.*

230. *See* Letter from William Moulton Marston to John Henry Wigmore (July 20, 1922) (on file with Northwestern University Archives, John H. Wigmore Papers, Box 92, Folder 16); Letter from John Henry Wigmore to George Curtis Peck (Nov. 16, 1922) (on file with Northwestern University Archives, John H. Wigmore Papers, Box 92, Folder 16).

231. *See* Letter from William Moulton Marston to John Henry Wigmore, *supra* note 230; Letter from John Henry Wigmore to George Curtis Peck, *supra* note 230.

232. That Marston took the stand, and that the courtroom was standing room only, is reported in *Holds Frye Guilty of Killing Doctor*, WASH. POST, July 21, 1922.

prior to and since his arrest. The testimony which is offered is not offered as evidence of what Frye did say; it is not offered for its effect upon the jury in that way, but it is offered as the opinion of an expert as to whether what he did say was the truth or not. I submit that that is competent.

Mr. BILBREY. If your Honor please —

The COURT. You do not need to argue it. If you object to it, I will sustain the objection.

Mr. BILBREY. I do not want to object, but I think that properly to make the offer the witness ought to be put on the stand and sworn and asked questions.

The COURT. No; I do not think they need to go through that. They offer to show that somebody, as an expert in veracity, has made up his mind that Frye on the tenth day of June either told the truth or did not tell it. Of course I do not know what the witness would say; but, as I say, the witness was here on the stand, and it is for the jury to determine whether or not on the nineteenth and twentieth of July he was telling the truth.

Mr. MATTINGLY. Very well, your honor. That is very true, your honor. But as expert testimony is not this proper as competent evidence to go before the jury to ascertain what the Doctor's opinion is at this time?

The COURT. It is not a question of opinion; it is a question of fact.

Mr. MATTINGLY. Subject to the opinion of an expert, though, your honor.

The COURT. Oh, well we get to be more or less experts ourselves, and so do the jury, upon the question of whether anybody is telling the truth or not. That is what the jury is for.

Mr. MATTINGLY. It depends, just as with a finger-print expert or an alienist, upon whether or not we have specialized in that particular field.

The COURT. The only question is whether the witness on the stand told the truth.

Mr. WOOD. I submit, your honor, that the opinion of the expert is still left up to the jury as a question of fact for their consideration in the case.

Mr. MATTINGLY. Take the instance of an alienist, your honor, when he is put on the stand. He testifies as to an examination at some time prior to the trial. He is permitted to state what the nature of the examination was, what he asked the subject, what the subject[']s replies were, the reasons upon which he bases his conclusion, and the conclusion. I can not see the distinction which you draw between that instance and the present one.

The COURT. Well, I will give you this distinction. Fifty years ago if anybody had said that the human voice spoken in Washington could be heard in Chicago he would have been thought crazy. Since that time we all know that such is the fact, and we do not bring experimental matters into court, but when it is established that scientific development has reached such a point as to become a matter of common knowledge as to its results we allow the results to be shown in court.

Mr. MATTINGLY. It seems to me that your Honor is undertaking to say, without hearing what we have to say on the subject, whether or not this is a matter of common knowledge.

The COURT. Well, if you want to take your analogy, when the expert goes on the stand he testifies whether or not at the time he is testifying the person under inquiry is of sound or unsound mind. What the jury is interested to determine in this case is not whether Frye told the truth last month but whether he told it here yesterday and to-day.

Mr. MATTINGLY. We have proof to offer on this point, that it is a scientifically proven fact that certain results will be accomplished under certain conditions. It seems to me that the very least your honor can do is to permit us to attempt to qualify the expert. I think we are entitled to it as a matter of law.

The COURT. To testify as to whether Frye told the truth last month?

Mr. MATTINGLY. That is the proffer, your Honor.

The COURT. You are making an offer to show that Frye told the truth last month.

Mr. MATTINGLY. That is only one of several offers we have to make, your Honor.

The COURT. Go ahead and make them all.

Mr. MATTINGLY. I say that, first, we have a right to attempt to qualify the expert.

The COURT. First, then, I say you have not, if what you are trying to do is to qualify him to prove that Frye told the truth last month.

Mr. MATTINGLY. We wish to note an exception to that ruling, sir.

The COURT. Very well.

Mr. MATTINGLY. The next offer which we wish to make is to offer to have the defendant submit to a deception test, under conditions to be prescribed by the court, based upon his direct and cross examination in this case.

The COURT. It is too late. You ought to have had the test made at the time he was testifying, if you wanted it at all.

Mr. MATTINGLY. I wish to note an exception to that ruling. The third offer which we have to make is that we will offer the blood-pressure record which was made contemporaneously with the examination at the jail on the tenth of June in evidence as a basis for hypothetical questions on that record.

The COURT. The offer will not be acted upon favorably.

Mr. MATTINGLY. I wish to note an exception to that ruling. The fourth offer is that we offer to put the expert on the stand for the purpose of testifying as to the deception or nondeception of the defendant during the examination, which was made at the jail on the tenth of June, as bearing on the issue of the crime, that is, the guilt or innocence of the defendant.

The COURT. The same ruling.

Mr. MATTINGLY. And an exception. Now, the fifth offer is an offer to qualify Dr. Marston as an expert in deception, for whatever purpose his testimony may be available.

The COURT. The same ruling.

Mr. MATTINGLY. You refuse to permit us to attempt to qualify him?

The COURT. Yes.

Mr. MATTINGLY. This offer to attempt to qualify, of course, is for the purpose of showing that this is not merely theory, that it is generally known among experts of this class, that it is not untried, that it has been in practical use, that it is not new, and that it is available.

The COURT. The same ruling.

Mr. MATTINGLY. I wish to note an exception to that ruling. With that the defense closes its case, if your Honor please.

Mr. BILBREY. Call Detective Jackson. [Detective John Jackson took the stand.]

Mr. MATTINGLY. If your Honor please, before this witness begins to testify, may I inquire whether your honor would permit a systolic blood-pressure test to be taken during an examination of the witness on the stand?

The COURT. Officer Jackson?

Mr. MATTINGLY. Or anyone?

The COURT. No, indeed.

Mr. MATTINGLY. Well, of Officer Jackson.

The COURT. If we are going to have a systolic test, you will have to test every witness who testifies in the case. If there is any science about it, we might as well apply the science to every witness. Mind you, I do not know anything about the test at all. I had certain pamphlets submitted to me yesterday to look at, of some Dr. Marston—I believe his

thesis when he got his Ph. D. degree. I am going to read them when I come back from my vacation. I see enough in them to know that so far the science has not sufficiently developed detection of deception by blood pressure to make it a useable instrument in a court of law. It would be entirely foreign to our practice to have such tests made out of court and not applied certainly to every witness who goes on the witness stand.

Mr. MATTINGLY. Your Honor, of course, in looking over those papers, did not assume that Dr. Marston was the only authority on the subject?

The COURT. Oh, no, indeed. I take his as an authority. You know how much I got out of them when I tell you that it did not take me five minutes to look at what I did look at. So my opinion about anything on that point is not worth the breath that utters it, except that I did see some tests. I happened to read one test that was made, and I believe it was stated—I could not make out whether it was when a man was on probation after conviction or on the witness stand before conviction. I could not tell that. He was on probation, and it was claimed that this test had been established either that the man—it must be that the man had lied about his case. The judge did something or other—I don't know what it was—but subsequent to the time the test was made it was found that the man had been guilty of some similar crime. Now, did the judge act upon the test, or did he act upon his additional information as to the perpetration of some other similar crime. As far as that test is concerned, Dr. Marston will admit that it was not scientific as far as his instrument was concerned, because, as he understands, as a scientist, he has to exclude everything except the constants before he can make a deduction. If there are a lot of variables, all he can say is that on the whole this is probably so. When it is developed to the perfection of the telephone and the telegraph and wireless and a few other things we will consider it. I shall be dead by that time, probably, and it will bother some other judge, not me.

Mr. MATTINGLY. Of course, your Honor understands that at no time in the history of the country has there ever been an offer of the introduction of this test into evidence during the course of the trial, and therefore it is not in the least surprising that you do not find anything which would completely parallel the offer which is made here. But that fact alone is no reason for excluding it.

The COURT. No, indeed. Somebody has to make the first experiment.

Mr. MATTINGLY. The first experiment, it happens, was made more than nine years ago.

The COURT. I mean in court; somebody has got to try it first.

Mr. MATTINGLY. Precisely. There has to be a beginning to everything. We had the same opposition that your honor is raising to this test in the instance of the finger-print system of identification. That was fought for years and years.

The COURT. But as soon as enough of them were developed photographically so that it could be seen that, like the leaves on the trees, the finger prints of no two different individuals were alike, then, of course, the court said, "All right; let us go ahead." And as soon as it is demonstrated that there is an infallible instrument for ascertaining whether a person is speaking the truth or not, and the instances are so multiplied that there can not be any mistake about the matter, then I presume that some court will begin by allowing the testimony. But I miss my guess if they ever allow it to be done out of court and in the absence of the jury which is to pass upon the matter.

Mr. MATTINGLY. That would be simply a question of the veracity of the expert, of course.

The COURT. No, indeed. The jurors will look at a witness when he is testifying. You will not find a case which passes upon the question whether a court of appeals will reverse a judge below in deciding the case but what refers to the fact that the judge has the opportunity to see the witness and observe his demeanor on the witness stand. It is the same thing with the jury, and that is the advantage of the jury. It sees the witness; it sizes him up.

Mr. MATTINGLY. Of course, the defect in that argument is that this test has proved and will continue to prove the fallibility of the visual perceptions in the matter of deception. They are absolutely fallible; there is no doubt about that. Your honor may be a fine judge as to whether a man is telling the truth or not, but there is absolutely no certainty about it. You may be certain, but whether, as a matter of fact, he is telling the truth or not your opinion means absolutely nothing, nor does mine.

The COURT. I never undertake to be certain, because I have been wrong so often; but I do say that we make use of that thing which God Almighty has implanted in us, the power of observation. Some people, for instance, say that God Almighty made all of man's features except the mouth, and a man makes his own mouth. Now, the jury sits here and watches it—and there is a good deal of truth in that statement. But there is no use taking time on that.

Mr. MATTINGLY. Just one moment more, if your Honor please. You seem to place a good deal of stress upon the fact that the finger-print expert's testimony was not admitted until a sufficient number of finger prints had been developed photographically and observed and tabulated and card indexed, and so on. But if you take the instance of the Bertillon measurements, there is absolutely nothing visual there; it is simply a recordation of the measurements of the human body. And in an even greater degree there is absolutely nothing visual as a basis for the decision of an alienist, which is the nearest parallel to this test which there is. Of course, alienists were also fought to the last ditch at the time they were first attempted to be introduced.

The COURT. Absolutely.

Mr. MATTINGLY. That is always the way with anything new.

The COURT. I suppose it depends upon whether you are before a conservative judge or a young one who is willing to take chances. I have gotten too old and too much inured to certain general principles in regard to the trial of cases to depart from them rashly. Of course anything may happen. It may be that cases will be tried in the absence of defendants with a mere record of whether he is telling the truth about certain things brought in by an expert; I do not know, but so far the jury looks at the witnesses, hears what they have to say, compares their statements with other statements, and so forth, and then does what human beings out of Court do when they determine whether or not a man is telling the truth.

Mr. MATTINGLY. Of course, this test is not offered as an absolute proof of whether or not the defendant was telling the truth or is telling the truth or did tell the truth when he was on the stand. It is simply offered as any other expert testimony would be, the weight to be fixed by

> the jury. It is not conclusive, it is not binding upon them. Of course, I see your honor's ruling will be the same, and our case is closed.
>
> The COURT. Yes; I may try a case next year after I read these books. I may decide differently next year, but not now.
>
> And THEREUPON, the defense announced its case closed. WHEREUPON the Government called various witnesses in rebuttal to further maintain the issues on its part joined. And thereupon the Government rested.[233]

McCoy's exchange with Mattingly is essentially a reprise of the trial to which Wigmore subjected Münsterberg in the review of *On the Witness Stand*. "Of course anything may happen," McCoy allowed.[234] "It may be that cases will be tried in the absence of defendants with a mere record of whether he is telling the truth about certain things brought in by an expert; I do not know, but so far the jury looks at the witnesses, hears what they have to say, compares their statements with other statements, and so forth, and then does what human beings out of court do when they determine whether or not a man is telling the truth."[235] Until then, no deception tests: "We do not bring experimental matters into the court."[236]

McCoy also went out of his way to dismiss Marston's research: "I am going to read them when I come back from my vacation," he said, waving aside Marston's publications.[237] He had paged through them, he said, but it hadn't taken him more than five minutes to make up his mind.[238] This was hyperbole. McCoy had reviewed at least one study with care, the study Marston had published in Wigmore's *Journal of Criminal Law and Criminology*, in which Marston reported the results of deception tests he'd conducted on twenty criminal defendants and, as McCoy saw at a glance, the investigation was wildly unscientific: the cases were handpicked; there was no control group; and the blood pressure test itself might have affected subsequent events.[239] "As far as that test

**233.** Transcript of Record, *supra* note 198, at 11-18.

**234.** *Id.* at 11-18.

**235.** *Id.* at 16.

**236.** *Id.* at 11-18.

**237.** *Id.* at 11-18.

**238.** *Id.* at 14.

**239.** *See id.* at 14-15 (in which Chief Justice McCoy states, "I happened to read one test that was made, and I believe it was stated—I could not make out whether it was when a man was on probation after conviction or on the witness stand before conviction. I could not tell that. He was on probation, and it was claimed that this test had been established either that the man—it must be that the man had lied about his case. The judge did something or other—I

is concerned, Dr. Marston will admit that it was not scientific as far as his instrument was concerned, because, as he understands, as a scientist, he has to exclude everything except the constants before he can make a deduction."[240] McCoy's refusal to admit Marston's testimony had less to do with the law of evidence than with the scientific method.

Nothing was left but the closing arguments. Bilbrey said Frye was "the most colossal liar that ever appeared in court."[241] After deliberating for less than an hour, the jury found Frye guilty of the lesser charge of second-degree murder, apparently accepting his story that the gun had gone off accidentally.[242] Despite the conviction of a lesser charge, McCoy sentenced Frye to life.[243] Frye went to Leavenworth.[244] Mattingly announced that he would appeal, on the grounds that Marston's testimony ought not to have been excluded.[245] And Marston decided to offer a new course in the summer session. He made arrangements for a notice to appear in the *Washington Post*: "Prof. William M. Marston, Ph.D., L.L.B., will give a course in the philosophy of law."[246] Both Mattingly and Wood enrolled.[247] (Marston gave them both Cs.)[248] Marston sent another newspaper story to Wigmore. "I'm enclosing some clippings in re our first attempt at the introduction of Deception Tests into court procedure, which may interest you," he wrote. "Of course, we did not expect any lower Court would take the responsibility of admitting the tests, but believed the

don't know what it was – but subsequent to the time the test was made it was found that the man had been guilty of some similar crime. Now, did the judge act upon the test, or did he act upon his additional information as to the perpetration of some other similar crime. As far as that test is concerned, Dr. Marston will admit that it was not scientific as far as his instrument was concerned, because, as he understands, as a scientist, he has to exclude everything except the constants before he can make a deduction. If there are a lot of variables, all he can say is that on the whole this is probably so.").

240. *Id*. at 14.

241. *Convict Slayer of Dr. Brown*, *supra* note 177.

242. On the length of the jury deliberations, see *Holds Frye Guilty of Killing Doctor*, *supra* note 232.

243. *Life-Sentence Penalty in Murder of Doctor*, WASH. POST, July 29, 1922, at 8.

244. Frye's sentence at Leavenworth is chronicled in Application for Executive Clemency, *supra* note 211, and Letter from W.L. Peak, Superintendent, D.C. Penal Insts., to J.A. Finch, Att'y in Charge of Pardons (July 12, 1934) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386).

245. *See Rely on "Lie Test" in Appeal*, WASH. POST, July 22, 1922, at 10.

246. *Offers New Law Course*, WASH. POST, July 30, 1922, at 5. Studying the philosophy of law, however, apparently included conducting lie-detector tests on convicts. *See Lie Detector Said to Clear Dudding In Killing of Uncle 12 Years Ago*, *supra* note 229.

247. Richard Vinton Mattingly, Student Record, *supra* note 200; Lester Wood, Student Record, *supra* note 202.

248. *See* sources cited *supra* note 247.

time was ripe to carry the point up for a Supreme Court precedent."[249] In the fall, American University opened, on Marston's behalf, "the only psycho-legal research laboratory in the United States."[250]

## VII. TWILIGHT ZONE

Initially, the appeal prepared by Frye's attorneys consisted almost entirely of arguments on behalf of Marston's work.[251] "The question whether a witness is testifying or has testified truthfully or falsely is a scientific question which requires the aid of the study and experience of the scientific man to accurately determine," Mattingly and Wood argued in their brief.[252]

> Men come to judge this question by certain arbitrary standards in the course of their dealings with others, and the decision may hinge upon the look in the eyes, the expression on the face, the nervous condition of the witness, the rosy flush which suffuses his countenance, or upon any one of many other evidences which may or may not be taken to indicate truth or deception. We say that there is no standard and no logical or reasonable basis for the determination of this question in general in the absence of positive evidence of deception, and that if science has developed a method of accurately determining whether a man is in a mental condition or state of truth or of deception, the Court and the jury should be given the benefit of this assistance.[253]

The appeal took some time to prepare. Mattingly and Wood twice filed for extensions to the deadlines required for submitting materials.[254] The docu-

249. Letter from William Moulton Marston to John Henry Wigmore (July 30, 1922) (on file with Northwestern University Archives, John H. Wigmore Papers, Box 92, Folder 16).

250. *William Moulton Marston*, AM. U. COURIER, Oct. 1922 ("William Moulton Marston, psychologist and lawyer, has been appointed to the chair of Psychology at the American University, in conformance with Chancellor Clark's program of education expansion and development . . . and arrangements have been made to open, at the American University this fall, what will probably be the only psycho-legal research laboratory in the United States, strengthening greatly both the School of Arts and Sciences and the School of Jurisprudence.").

251. Brief for Appellant, Frye v. United States, 293 F. 1013 (D.C. Cir. 1923) (No. 3968).

252. *Id.* at 2.

253. *Id.* at 2-3.

254. Motion to Extend Time for Filing Brief, Frye v. United States, 293 F. 1013 (D.C. Cir. Sept. 10, 1922) (No. 3968) (on file with National Archives, RG21 Criminal #38325, Box 316, 16W3/08/21/06). Mattingly and Wood's first request for a continuance was granted on September 11, 1922. Memoranda at 4, Frye v. United States, 293 F. 1013 (D.C. Cir. 1923) (No.

ments they first submitted included a bill of exceptions, amendments to that bill, and an excerpt from the court transcript.[255] The initial appeal was filed on March 1, 1923.[256] But then Mattingly and Wood began submitting requests for yet more extensions to file additional material.[257] Not until October 29, 1923 did Frye's lawyers submit a final document, a four-page brief titled *Memorandum of Scientific History and Authority of Systolic Blood Pressure Test for Deception*.[258] In it, Mattingly and Wood offered a review of the psychological literature of testimony and argued that "it is just as proper for testimony as to the truth of falsity of statements . . . to be introduced, as it is for an alienist to testify as to the soundness or unsoundness of the mind of a subject."[259] The U.S. Attorney's Office responded to the Frye science brief in a brief prepared by Peyton Gordon and Joseph Bilbrey and filed on November 2.[260] The final appeal was submitted on November 7. Marston's work was significantly less central in the final appeal than in the documents that Frye's attorneys had first submitted. Initially, Mattingly and Wood had listed eight assignments of errors in the criminal trial as grounds for appeal; errors 4 through 8 involved Marston.[261] Gordon and Bilbrey, in their November 2 brief, noted that "the first three of these assignments have been abandoned" and that the remaining five could be reduced to a single question, "namely, *whether it was error for the trial Court to refuse to admit the testimony of an alleged expert in deception*."[262] To Gordon and Bilbrey, the whole question came down to the credibility of William Moulton Marston. "Dr. Marston claims to have perfected a device or means of measuring and recording the blood pressure to such an extent that with the aid of this device he can detect deception."[263] To substantiate this claim they cited the article about criminal defendants that Marston had published in Wigmore's *Journal of Criminal Law and Criminology* and that McCoy

3968) (on file with National Archives, RG21 Criminal #38325, Box 316, 16W3/08/21/06). Their second request was granted on February 16, 1923. *Id* at 7.

255. For a list of documents submitted on behalf of the appeal, see Index, Frye v. United States, 293 F. 1013 (D.C. Cir. 1923) (No. 3968) (on file with National Archives, RG21 Criminal #38325, Box 316, 16W3/08/21/06).

256. Bill of Exceptions, Frye v. United States, 293 F. 1013 (D.C. Cir. Mar. 1, 1923) (No. 3968) (on file with National Archives, RG21 Criminal #3968, Box 316, 16W3/08/21/06).

257. Motion for Leave to File Supplemental Brief, Frye v. United States, 293 F. 1013 (D.C. Cir. Oct. 23, 1923) (RG21 Criminal #38325, Box 316, 16W3/08/21/06).

258. Memorandum of Scientific History, *supra* note 210.

259. *Id*.

260. Brief for the Appellee, Frye v. United States, 293 F. 1013 (D.C. Cir. Nov. 2, 1923) (No. 3968).

261. Transcript of Record, *supra* note 198, at 3-4.

262. Brief for Appellee, *supra* note 260, at 1-2.

263. *Id.* at 5.

had dismissed as patently unscientific.[264] They also cited a law review article written by Harvard Law School professor Zechariah Chafee, describing it, rightly, as "the only legal article that appears in print in which Dr. Marston's theory and device for detecting deception is mentioned."[265] Chafee knew Marston: in Marston's second year of law school, he had been a student in Chafee's course on Bills of Exchange and Promissory Notes.[266] In an article published in the *Harvard Law Review* in 1922, in which Chafee did not acknowledge that Marston was a former student of his, he firmly dismissed Marston's research:

> W.M. Marston of the Massachusetts bar has experimented with blood pressure and other tests to determine the veracity of witnesses, and states that the results of these tests were corroborated by the subsequently disclosed facts, already known to the witness. Lawyers will await the results of such investigations with open minds. They cannot, of course, be substituted in courts generally for present methods of examination until their usefulness is thoroughly demonstrated. If such tests are ever adopted, it is probably that the jury system will have to be abandoned, unless education will have advanced so far that twelve men picked at random will adequately absorb blood pressures, time reactions, and intelligence quotients, and combine the mass into a just verdict. In other words, the jury might also be subjected to an intelligence test.[267]

Between a psychologist and a jury, Gordon and Bilbrey argued, there was no choice: "Whatever may be said against the system of trial by jury, under the Constitution and laws a jury of twelve impartial men are peculiarly fitted to sift conflicting and contradictory testimony and arrive at a just verdict."[268] As for Marston, "Whether he can or can not detect deception is something that does not appear to be known to anyone except Dr. Marston."[269]

**264.** *Id.*

**265.** *Id.* at 8-9; Zechariah Chafee, Jr., *The Progress of the Law, 1919-1921: Evidence*, 35 HARV. L. REV. 302, 302-17 (1922).

**266.** Chafee began teaching at Harvard Law School in 1916. In 1916-1917, he taught Bills of Exchange and Promissory Notes, also known as "Bills & Notes." HARV. L. SCH., LAW SCHOOL OF HARVARD UNIVERSITY, ANNOUNCEMENTS 1916-1917, at 6 (1916). In Bills & Notes, Marston earned a 72. Transcript of William M. Marston, *supra* note 97.

**267.** Chafee, *supra* note 266, at 309 (footnote omitted). C.T. McCormick later argued that Chafee's article may have doomed Frye's appeal. C.T. McCormick, *Deception-Tests and the Law of Evidence*, 15 CALIF. L. REV. 484, 500 n.51 (1927).

**268.** Brief for Appellee, *supra* note 260, at 8.

**269.** *Id.* at 5.

The ruling came swiftly, and it was fierce. On December 3, 1923, the D.C. Circuit Court of Appeals denied the appeal.[270] Only 669 words long and containing not a single reference to case law or precedent, nor any references to any scientific literature, the ruling has been justifiably described as "cryptic."[271] (For the full opinion, see Appendix I.) The portion that is most commonly quoted, and that established the "*Frye* test," is shorter still, a mere eighty-one words:

> Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while the courts will go a long way in admitting expert testimony deduced from a well recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.[272]

"The Frye test has been accepted as the standard in practically all of the courts of this country which have considered the question of the admissibility of new scientific evidence," the Kansas Supreme Court observed in 1979.[273] *Frye*'s "general acceptance" test wasn't meaningfully challenged until *Daubert v. Merrell Dow Pharmaceuticals*[274] in 1993, in which the U.S. Supreme Court ruled that the *Frye* test had been supplanted by Rule 702 of the Federal Rules of Evidence: "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise."[275] But, as David Bernstein has argued, *Daubert* has not in fact superseded *Frye*. Fifteen states, along with the District of Columbia, continue to rely on the *Frye* standard. Bernstein writes, "*Frye* is not only alive, but it is the plurality rule in state courts, which are the venue for the vast majority of litigation."[276]

The *Frye* test, then, has held sway for nearly a century, despite the slipperiness of the test and the mysterious nature of the ruling. What is "general ac-

**270.** Frye v. United States, 293 F. 1013 (D.C. Cir. 1923).

**271.** JASANOFF, *supra* note 26, at 61. On the leanness of the ruling, see also O'Donnell, *supra* note 26, at 247-52.

**272.** *Frye*, 293 F. at 1014.

**273.** State v. Miller, 732 P.2d 756, 759 (Kan. 1987).

**274.** 509 U.S. 579 (1993).

**275.** FED. R. EVID. 702.

**276.** Bernstein, *supra* note 27, at 1-3.

ceptance," anyway? "The *Frye* court neither cited authority nor offered an explanation for adopting the general acceptance standard," as one scholar has pointed out.[277] The *Frye* court also never mentioned the name of the expert on whose testimony the case turned.

Not only do people who cite *Frye* not mention Marston by name, but they also neither know nor care who Frye was, nor whom he is supposed to have killed.[278] That's how case law works. It has in common with the scientific method an entire lack of interest in history. Case law and case method instruction obliterate context; experimental science repudiates tradition; their rise, a century ago, marked a shift away from the idea that truth can be found in the study of the past.

For all the complaints about the *Frye* ruling's brevity, oddity, and mystery, only a handful of scholars—historians of science—have ever investigated the case. J.E. Starrs, the first person to dig up the trial records in 1982, by which time most of the police reports had been destroyed, speculated that Frye was probably guilty, despite his protestations to the contrary.[279] In 2004, Tal Golan situated the ruling within the history of expert testimony to argue that psychology is where Progressive-era law drew a line between what, of science, can enter the courtroom, and what cannot.[280] In 2007, Ken Alder placed the story within his fascinating history of lie detection.[281] That same year, in an excellent Harvard dissertation, Seán Tath O'Donnell argued that the case could only be understood in the context of race relations in Washington, D.C.[282] All four of these scholars were intrepid archival researchers and even investigative reporters. As historians, working with the patchy historical record, they pieced together scraps of facts. They missed a few: everyone does. Some of those missing facts, though, happen to be rather important.

To wit: no one who has ever cited or studied *Frye v. United States* has ever noticed that Frye's lawyers were enrolled in Legal Psychology at American University in the spring of 1922, or that Marston's experiment in the reliability of testimony, in which Frye's lawyers took part, was undertaken in consultation with the twentieth century's most important scholar of the law of evi-

**277.** Giannelli, *supra* note 27, at 1205.

**278.** A search of legal databases confirms that Marston is essentially never mentioned nor is Frye even so far discussed as to merit the use of his full name.

**279.** J.E. Starrs, *"A Still-Life Watercolor":* Frye v. United States, 27 J. FORENSIC SCI. 684, 685 (1982).

**280.** GOLAN, *supra* note 26, at 245-53.

**281.** KEN ALDER, THE LIE DETECTORS: THE HISTORY OF AN AMERICAN OBSESSION 39-61 (2007).

**282.** *See* O'Donnell, *supra* note 26.

dence, John Henry Wigmore.[283] In that experiment, Marston's students never saw that knife: they didn't notice that it was long, or that it was green, or that the messenger held it in his right hand. They never saw that knife at all.

And no one who has ever written about *Frye v. United States* has ever noticed that, on March 6, 1923, less than a week after Mattingly and Wood filed their initial appeal, their expert was arrested for fraud.[284]

## VIII. THE LIE FINDER

Marston was indicted by a federal grand jury in Massachusetts on December 1, 1922.[285] A warrant for his arrest was issued in Boston, but on February 19, 1923, a U.S. marshal reported that he had been unable to find the defendant in the city.[286] A secret indictment was then forwarded to Washington, where Marston was arrested by federal agents.[287] His arrest was reported in both the *Boston Globe* and the *Washington Post*. "Marston, Lie Meter Inventor, Arrested," read the headline in D.C., in a story that made a point of remarking on Marston's role in the *Frye* case.[288] The irony—an expert at deception arrested for lying—wasn't lost on anyone.

Marston was charged with two crimes: using the mails in a scheme to defraud, and aiding and abetting in the concealment of assets from the trustee in a bankruptcy. Both allegations stemmed from his role as treasurer and stock-

**283.** For instance, both Starrs and O'Donnell refer to Mattingly as a "court-appointed" attorney. O'Donnell adds that he was "appointed to the case at the last minute." O'Donnell, *supra* note 26, at 196. Neither Starrs nor O'Donnell had any knowledge that Mattingly and Wood were Marston's students (or even students at all) and assumed instead that the lawyers sought out the expert. "Mattingly found Marston employed as a lecturer at American University." *Id.* at 12; *see also id.* at 140 (asserting that Mattingly, desperately hoping to corroborate Frye's recantation of his confession, discovered a professor at American University who might help him out).

**284.** *Arrest Inventor of Lie Detector: W.L. Marston Accused of Helping Conceal Assets*, BOS. DAILY GLOBE, Mar. 7, 1923, at 5.

**285.** Indictment for Using the Mails in a Scheme to Defraud, United States v. Marston (Dec. 1, 1922) (on file with National Archives, Boston) [hereinafter Mails Indictment]; Indictment for Aiding and Abetting in the Concealment of Assets from the Trustee in Bankruptcy, United States v. Marston (Dec. 1, 1922) (on file with National Archives, Boston) [hereinafter Concealment of Assets Indictment].

**286.** Report of the W.J. Keville, U.S. Marshal, by James M. Cunningham, Deputy, United States v. Marston (Feb. 17, 1923) (on file with National Archives, Boston); Warrant for the Arrest of William M. Marston (Feb. 17, 1923) (on file with National Archives, Boston).

**287.** *Arrest Inventor of Lie Detector*, *supra* note 284.

**288.** *Marston, Lie Meter Inventor, Arrested*, WASH. POST, Mar. 6, 1923; *see also Arrest Inventor of Lie Detector*, *supra* note 284.

holder of United Dress Goods, a firm he had founded in Boston in 1920.[289] The grand jury charged that Marston had placed orders with businesses in New York for large quantities of fabric and, in that correspondence, had made "false and fraudulent pretenses" regarding the firm's financial condition.[290] United Dress Goods filed for bankruptcy in January 1922; Marston was charged with having knowingly and fraudulently concealed $400 from the firm's trustee.[291]

After his arrest, Marston was brought to Boston, where he was arraigned on March 16, 1923.[292] He pleaded not guilty, insisting that he had no knowledge of the transactions of which he was accused. Bail was set at $2600.[293] On March 17, the story appeared in newspapers in Boston, Washington, and New York.[294] Marston told one reporter that the "publicity was ruining him."[295]

Marston was defended by an old friend from Harvard Law School, Richard Hale, a founder of the Boston firm Hale and Dorr (now WilmerHale), whose offices were in the same building as Marston, Forte, and Fischer.[296] "I persuaded the United States authorities here that they had no case whatever against Marston," Hale explained. As to the charges, "I investigated those things fully and was convinced they had no taint of criminality in them."[297] At the time of his arrest, Marston was teaching a slate of courses—including Psycho-Physiology, Advanced Theoretical Psychology, and an applied course called Psycho-Legal Laboratory.[298] It's not clear whether, after he was released on

289. Mails Indictment, *supra* note 285; Concealment of Assets Indictment, *supra* note 285.

290. Mails Indictment, *supra* note 285.

291. Concealment of Assets Indictment, *supra* note 285.

292. *Marston Held in $2600 for Trial*, BOS. DAILY GLOBE, Mar. 17, 1923, at 3 ("William M. Marston, inventor of the 'Lie detector,' professor of psychology in the American University at Washington, walked into the office of the United States Marshal in the Federal Building yesterday afternoon and was ushered into Judge Morton's chambers, where he was arraigned.").

293. Recognizance of Defendant, United States v. Marston (Mar. 16, 1923) (on file with National Archives, Boston).

294. *Hold 'Lie-Finder' Inventor*, WASH. POST, Mar. 17, 1923, at 3; *"Lie Detector" Inventor Arraigned*, N.Y. TIMES, Mar. 17, 1923; *Marston Held in $2600 for Trial*, *supra* note 292.

295. *Marston Held in $2600 for Trial*, *supra* note 292.

296. The address of Hale and Dorr appears on the firm's letterhead. *See* Letter from Richard W. Hale, Counselor at Law, Hale and Dorr, to the President of Am. Univ. (Nov. 1, 1924) (on file with Faculty/Staff Personnel Records for William Moulton Marston, American University Library).

297. *Id.* Hale's letter refers to Marston's having been dismissed from his position, states that he knew there was no chance Marston would be reappointed and indicates instead that he wrote this letter simply to set the record straight, requesting that it be placed in dossier—which it was. *See id.*

298. AM. UNIV., AMERICAN UNIVERSITY: ANNOUNCEMENT FOR 1922-1923, at 10-15.

bail, he finished the term in the spring of 1923. In any case, his appointment was not renewed.[299] Even though the case never went to trial, the scandal cost Marston the chairmanship of the psychology department at American University, the directorship of the only psycho-legal research laboratory in the United States, and his professorship.[300]

What the scandal cost James Alphonso Frye is more difficult to reckon. Marston's arrest and arraignment were reported in Washington newspapers the month Mattingly and Wood filed their appeal.[301] The publicity could hardly have helped their cause. It may also explain why Mattingly and Wood requested an extension to prepare an additional brief.

"I am so sorry that owing to my absence I was not able to assist in the Frye case," Wigmore apologized, in a letter he later wrote Marston, explaining that he had been out of the country for some months.[302] That summer and fall, Mattingly and Wood—aided, presumably, by Marston—prepared their science brief, *Memorandum of Scientific History and Authority of Systolic Blood Pressure Test for Deception*.[303] The chief purpose of the brief was to diminish Marston's role in establishing the detection of deception, placing him as only one among a larger number of scientists working in the field.[304] It reads as Frye's attorneys' attempt to separate the credibility of deception tests from the credibility of their expert witness,[305] a strategy that would have been wise, even if Marston hadn't been arrested. It didn't work. The D.C. Circuit Court of Appeals issued its ruling in *Frye v. United States* on December 3, 1923: "[W]hile courts will go a

**299.** Marston never again taught at American University, nor are his courses listed in the catalog for 1923-1924.

**300.** Letter from Richard W. Hale, Counselor at Law, Hale and Dorr, to the President of Am. Univ., *supra* note 296.

**301.** *See, e.g.*, *Marston Held in $2600 for Trial*, *supra* note 292, at 3.

**302.** Letter from John Henry Wigmore to William Moulton Marston (Nov. 20, 1923) (on file with Northwestern University Library).

**303.** Memorandum of Scientific History, *supra* note 210, at 4.

**304.** *Id.* at 1-3. The science brief, which had been misfiled, was discovered by O'Donnell, who came across it while searching through other *Frye* bins at the National Archives. *See* O'Donnell, *supra* note 26, at 264 n.731. O'Donnell's discovery of the science brief is invaluable, and will certainly change how historians understand *Frye*. Nevertheless, O'Donnell's analysis is hampered by his not having discovered that Marston was, at the time the brief was written, still awaiting trial on federal grand jury charges of fraud. O'Donnell argues that the science brief, which "refocused the debate from the credentials of one scientist, Dr. Marston, to the work of many scientists," *id.* at 274, is "telling about the extent to which the new science of experimental psychology was able to conceive of itself as a communal activity," *id.* at 265. But I suspect a key motivation for the brief was to distance the case from Marston, whose widely publicized arrest and arraignment had devastated the prospects for a successful appeal.

**305.** Memorandum of Scientific History, *supra* note 210, at 3-4.

long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs."[306] The federal fraud charges against Marston weren't dropped until January 1924.[307]

Of course, the chances for the appeal were never great. But if the court's ruling in *Frye* is cryptic, and contains no mention of any other cases or preceding principles, and no explanation for what is meant by "general acceptance," it may be because the appellant's expert was under indictment by a federal grand jury on charges of fraud.

Appellate courts are supposed to leave the establishment of fact to trial courts. "Facts are to be 'found' by trial courts, and the task of appellate courts is to determine whether the trial court has properly applied the law to the facts found below," as Frederick Schauer explains, describing longstanding guidelines.[308] "For a judge to go outside of the record in the search for additional facts, or for an advocate to encourage a judge to do so, has long been a cardinal taboo of American appellate practice."[309] But not everyone follows the rules. Judge Richard Posner recently confessed that, as an appellate judge, he very often conducted his own factual research because "[a]ll too often facts important to a sensible decision are missing from the briefs, and indeed from the judicial record."[310] While warning that an appellate court should not make its decision turn on a fact missing from the judicial record, unless that fact is incontestable, Judge Posner explains that facts stripped out of documents submitted for an appeal can make rendering a decision bizarre.[311] (He cites the example of briefs submitted in an employment discrimination case that fail to note the nature of the business.)[312] "In engaging in his own factual research, Judge Posner is not alone," Schauer wrote in response, but "Judge Posner is one of the first judges

**306.** Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923).

**307.** Mails Indictment, *supra* note 285. The *nolle prosequi* on the two bills of indictment is dated January 4, 1924. *See id.*; Concealment of Assets Indictment, *supra* note 285.

**308.** Frederick Schauer, *The Decline of "The Record": A Comment on Posner*, 51 DUQ. L. REV. 51, 53-54 (2013).

**309.** *Id.* at 54.

**310.** Richard A. Posner, *Judicial Opinions and Appellate Advocacy in Federal Court—One Judge's Views*, 51 DUQ. L. REV. 3, 11 (2013).

**311.** *See id.* at 11-12.

**312.** *Id.* Judge Posner, using existing categories and inventing some of his own, discriminates among adjudicative facts, legislative facts, background facts, and "coloring-book facts," which he described as facts "designed to make a judicial opinion a little more vivid and colorful." *Id.* The terms "adjudicative facts" and "legislative facts" were introduced in Kenneth Culp Davis, *An Approach to Problems of Evidence in the Administrative Process*, 55 HARV. L. REV. 364, 402 (1942).

to describe and defend the practice."[313] Judge Posner writes of doing most of his research on "the Web," and, as Schauer points out, "the phenomenon of original judicial research into matters and sources not in the record is becoming increasingly widespread largely because of the ease of access by judges."[314] There are perils aplenty here. Writing about the growing tendency of the Supreme Court to consider facts introduced through amicus briefs, Allison Orr Larsen has argued that appellate court consideration of post-trial facts can be distorting—"potentially infecting the Supreme Court's decisions with unreliable evidence"—specifically because the status of the expert has changed, and because of the abundance of false information on the Internet.[315] (Larsen is suggesting that the amicus brief has become in effect an evidentiary backdoor, a way for "expert testimony" to be introduced into the record without having to satisfy the *Frye* and Federal Rules of Evidence standards for expertise.)[316]

Just how the judges on the D.C. Circuit Court of Appeals thought about the appropriateness of taking new facts into consideration can only be guessed at because, in its opinion, the court mentioned neither Marston nor his arrest.[317] But, plainly—dramatically—the facts had changed: the defendant's expert witness had been indicted for fraud. Under these circumstances, perhaps the judges determined that, other than affirming the lower court's decision, and the principle that the science in question ought to be something sounder than charlatanism, nothing more needed to be said, and the less said the better.

The opinion, and the opinion alone, entered the judicial record—which you can find, lately, on the Internet. Most recent changes regarding facts and evidence in appellate decisions have to do with the explosion of information available on the Internet, a technology that, as it happens, has another effect: it widens the gap between the judicial record and the historical record. The more judges and scholars rely on the Internet, the more "lost" are facts that haven't been digitized, and that can be found only on pieces of paper, filed in boxes, and shelved in the basements of libraries and depositories, or in people's attics and closets—the cluttered junk drawers that Marston's history professor, Charles Homer Haskins, so loved pawing through, looking for treasure among the shards of broken glass.

About the *Frye* verdict, Marston affected detachment. "I think it was confirmed in the District Court of Appeals, tho I have not seen the decision," he

313. Schauer, *supra* note 308, at 51-52.

314. *Id.* at 56.

315. Allison Orr Larsen, *The Trouble with Amicus Facts*, 100 VA. L. REV. 1757, 1757 (2014) (arguing that "[t]he trouble with amicus facts . . . is that today anyone can claim to be a factual expert").

316. *Id.* at 1809-11.

317. Frye v. United States, 293 F. 1013 (D.C. Cir. 1923).

wrote Wigmore.[318] "Counsel, of course, expected that result, but wanted to get it before the U.S. Supreme Court in proper form."[319] It appears that Mattingly and Wood had, at least at one point, been specifically preparing to bring the case all the way to the nation's highest court because, in June of 1924, both men were admitted to the Supreme Court bar.[320] They never filed a petition for a writ of certiorari, and the case was never heard.

Lester Wood earned a Doctorate in Civil Law from American University's Graduate School of Law and Diplomacy in 1923, having written a thesis called *The Recent Development of the Use of the Injunction in Labor Disputes*.[321] Three years after the appeal ruling, Richard Mattingly left the law altogether; he went to medical school, and spent the rest of his life working as a doctor.[322] He always said he left the law, in part, because of his regret over the fate of James A. Frye.[323]

Wigmore always considered *The Principles of Judicial Proof* to be his masterwork, but it was barely read and, although designed as a textbook, it was hardly ever adopted. Apart from Wigmore's own classes at Northwestern and Marston's course in Legal Psychology offered at American University in 1922, only one other course in the country, offered at a law school in Idaho, seems ever to have used Wigmore's *Principles* as its textbook.[324] Wigmore taught law at Northwestern for nearly fifty years.[325] He retired in 1934.[326] He died in a traffic accident in 1943, while riding in a taxi home from a meeting of the editorial board of the *Journal of Criminal Law and Criminology*.[327]

**318.** Letter from William Moulton Marston to John Henry Wigmore, *supra* note 207.

**319.** *Id.*

**320.** For Wood and Mattingly's admission to the bar, see *Monday, June 2, 1924*, 192 J. SUP. CT. U.S. 283.

**321.** THE AMERICAN UNIVERSITY NINTH CONVOCATION 4 (1923).

**322.** O'Donnell, *supra* note 26, at 18 n.53.

**323.** *See id.* O'Donnell interviewed Richard V. Mattingly Jr. in 2003; Mattingly, Jr. said that his father "apparently always regretted that he could not do more to clear Frye, leaving law practice altogether just three years after the appellate ruling (in part because of his perceived failure in this case). He went on to graduate from George Washington Medical School, practicing medicine for the rest of his career." *Id.*

**324.** Outside of Northwestern University Law School, where Wigmore himself assigned it, Twining could find only one school, in Idaho, that ever adopted it. TWINING, THEORIES OF EVIDENCE, *supra* note 33, at 165.

**325.** Donna Grear Parker & Edward M. Wise, *Wigmore, John Henry*, AM. NAT'L BIOGRAPHY ONLINE (2000), http://www.anb.org/articles/11/11-00915.html [http://perma.cc/5MAA-S2XM].

**326.** *Id.*

**327.** *Id.* Like Frye, Wigmore, who served as a colonel in the First World War, is buried in Arlington National Cemetery. *Id.*

James Frye spent eight years in Leavenworth before being transferred to a federal penitentiary in Virginia, where he worked as a switchboard operator.[328] In 1934, he requested a pardon. "My inability to prove an alibi was the sole cause of my conviction," he wrote in his application for clemency, "although a death bed statement in regards to my whereabouts was read in open Court during the trial."[329] Frye's application was denied, as was another application filed in 1936.[330] He was paroled on June 17, 1939,[331] after having served more than eighteen years in prison.[332] Upon his release, determined to prove his innocence, he renewed his petition for a pardon.[333] He believed he had been ill-served by his lawyers, and that the jury considered him to be a "smart-aleck."[334] In his 1940 application for pardon, he attributed his conviction to racial prejudice and cited Clarence Darrow ("The once Great Clarence Darrow said 'racial prejudice comes without reason.'").[335] Frye's attempt to clear his name was unceasing. "The facts alone, if take[n] seriously by the Dept. of Justice would be sufficient grounds for Presidential action," he wrote in 1943.[336] He emphasized, again and again, his belief that his conviction had been the result of bias: "This is Washington, and the question of race plays an important part even in the

**328.** The warden at the D.C. Penal Institution in Lorton, Virginia, submitted a letter in support of Frye, citing his work as a switchboard operator and his exemplary behavior. Letter from W.L. Peak, *supra* note 2444.

**329.** James A. Frye, Application for Executive Clemency (July 12, 1934) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386).

**330.** *Id.*; James A. Frye, Application for Executive Clemency (July 21, 1936) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386). Frye submitted, with his 1936 application for executive clemency, an article about Marston written by Olive Byrne, who, publishing under the pseudonym Olive Richard, was a staff writer for *Family Circle*; it was filed within Frye's clemency documents. Olive Richard, *Lie Detector*, FAMILY CIRCLE (Nov. 1, 1935) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386). Byrne asserted that although McCoy had refused to allow Marston to testify, "the fact that there had been a lie detector test which proved Frye innocent got before the jury, and this undoubtedly saved Frye from hanging." *Id.* at 21.

**331.** Letter from Robert H. Turner, Assistant Pardon Attorney, to James A. Frye (Dec. 20, 1940) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386) ("I find that you were released for parole on June 17, 1939.").

**332.** Prisoner Record Card, James. A. Frye (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386).

**333.** Frye filed his first post-release application in 1940. Letter from James A. Frye to the Honorable Robert H. Turner, *supra* note 219. Referring to his earlier applications, he writes in this letter, "At various times I have filed applications for Pardon, however, on each occasion my application failed to be given favorable action." *Id.*

**334.** *Id.*

**335.** *Id.*

**336.** Letter from James A. Frye to Daniel M. Lyons, Pardon Attorney (Aug. 2, 1943) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386).

Courts."[337] His petition for pardon was denied. He tried again in 1945, this time writing to the President, Harry S. Truman. Frye had come to regret that his attorneys had, in their initial appeal, rested their argument on Marston's credibility. "There were more than one hundred exceptions made in the trial, yet only exceptions made in regard to the 'Lie Detector' were submitted to the higher Court."[338] His petition for executive clemency was denied.[339] He died in 1956. His name was never cleared. Instead, it became a rule: the name of a test.

## EPILOGUE: MR. HYDE

Lawyers and judges who cite *Frye* generally read only the court's opinion: 669 words. Law students in a hurry might rely instead on a tidy, 337-word discussion at casebriefs.com;[340] it includes a fifty-nine-word section called "Facts":

> Appellant was charged with and put on trial for murder. At his trial, Appellant attempted to call an expert witness to testify that Appellant had taken a systolic blood pressure deception test and to further testify as to the results of the test. The expert testimony was deemed inadmissible by the lower court. Appellant was convicted of second-degree murder.[341]

Do no other facts matter?

As related in this Essay, the facts behind *Frye* reveal just how great has been the tension, and how wide the gap, between ideas about evidence in history, science, and the law. The historical method involves finding out everything that can be found out, and then deciding what's trustworthy, and what's untrustworthy. The scientific method involves making observations and conducting experiments whose findings can only be verified if other scientists are able to reproduce them. The rules of evidence for historians and scientists have to do with getting at the truth, whether it's the truth of the particular (which is the claim of history) or the truth of the general (which is the claim of science).

337. *Id.*

338. Application for Executive Clemency, *supra* note 211.

339. Letter from James A. Frye to Daniel M. Lyons, Pardon Attorney (Sept. 7, 1945) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386); James A. Frye to Harry S. Truman, President of the United States (Sept. 28, 1945) (on file with National Archives, RG 204, Stack 230, 40:14:2, Box 1583, File 56-386).

340. *See infra* Appendix II.

341. *Frye v. U.S.*, CASEBRIEFS (2014), http://www.casebriefs.com/blog/law/evidence/evidence-keyed-to-fisher/lay-opinions-and-expert-testimony/frye-v-u-s [http://perma.cc/AJ58-D69G].

Historians and scientists cultivate patience and tolerate uncertainty. The law of evidence could hardly be more different. Its concern lies not with truth but with resolution; the law is not patient; and uncertainty is unacceptable.[342] During a trial, timely, certain resolution is achieved by restricting the flow of facts. In the legal record, in casebooks, those restricted facts never come back; they're choked off for good. But would the *Frye* test have held such sway for so long if the facts behind the case were known?

Beyond its specific implications for expert testimony and the law of evidence, and the broader epistemological dilemma it raises (how do we know what we know when we don't know what we don't know?), the cautionary tale I've told here is important for one more reason. Given that judicial opinions are very often online, while historical materials remain for the most part in archives, the gap between the judicial and the historical record is widening. Most of the documents cited in this Essay, for instance, refer to scraps of paper, not to bytes of data. Marston's correspondence with Wigmore is filed, undigitized, among Wigmore's papers at Northwestern. The papers relating to *United States v. Marston* (1923) are filed, undigitized, in the National Archives, Boston. Marston's lawyer's correspondence with the President of American University is held, again undigitized, at the university's archives, which also houses the transcripts of Marston's students and Frye's lawyers.

No mention of Marston's arrest was ever made in any scholarly journal—until this one. Marston's trouble with the law was, at most, the stuff of vague rumors. Although his arrest and arraignment had been reported in newspapers in Boston and Washington, newspapers were, at the time, entirely evanescent: trash. (Some but not all of those newspapers have since been digitized.) Marston, if not Frye, was well served by the absence of a permanent public record of his arrest. Although he lost his position at American University, he was able to continue to pursue an academic career undaunted.

In December 1923, Marston sent Wigmore *Studies in Testimony*, his report on the testimonial experiment he had conducted in his Legal Psychology class, with the Texan with the twang, the leather gloves, and the pocket knife.[343] Wigmore applauded the article as "marked by great scientific care and caution," and recommended its publication; *Studies in Testimony* appeared in

342. "Law differs fundamentally from history and natural science, as to the end which it has in view, when it employs evidence. The business of a law court is to terminate disputes, and disputes of a particular kind, those which arise when one of two parties make a claim or an accusation against the other. It seeks to discover the truth in order that it may give a decision as between the parties; it concerns itself with nothing which is not relevant to that issue. Science and history have no such practical end in view; their immediate purpose is merely to sift the evidence in order to ascertain the truth." GEORGE, *supra* note 47, at 18.

343. Letter from William Moulton Marston to John Henry Wigmore, *supra* note 207.

Wigmore's *Journal of Criminal Law and Criminology* in May 1924.[344] In the 1920s, Marston's work was usually cited approvingly, for instance, in "Deception-Tests and the Law of Evidence," a law review article published in 1927, C.T. McCormick referred to Marston as the field's "pioneer" and described him as "unusually qualified in being both a psychologist and a member of the bar."[345] McCormick sent a questionnaire "to eighty-eight members of the American Psychological Association . . . asking for their opinion on the question of whether deception-tests . . . furnish results of sufficient accuracy as to warrant consideration by judges and jurors of such results in determining the credibility of testimony given in court."[346] Of those who replied, eighteen said yes, thirteen said no, and seven were doubtful.[347] Marston was among the respondents. His answer? "No. Emphatically not if the judges and jurors themselves are to interpret them. Yes, if the records are used as basis of expert testimony."[348] He went on:

> I should think the admission of expert testimony on deception one of the greatest steps toward *real* justice, toward eliciting *real* confessions, and toward deterring crime that ever has been made in court procedure. But I should expect the tests to become rapidly discredited if they were admitted as a sort of 'patent medicine,' a fortune-telling, penny-in-the-slot answer to whether the witness or defendant were telling the truth or not, or as a record which judge, jury, or anybody else could tell the meaning of as well as the trained legal-psychologist. Also, mere psy. training should have less value, I think, in qualifying the expert than legal, or criminological training in investigation and examining of witnesses.[349]

Among the other respondents, Yerkes said a cautious yes: "I consider present methods promising, but their use requires extreme care, caution, skill, and

**344.** Letter from John Henry Wigmore to William Moulton Marston (Jan. 9 and Jan. 18, 1924) (on file with National Archives). Marston revisited the experiments he had conducted at American University in 1922 in an article he published in *Esquire* in 1937, and which was excerpted in *Legal Chatter*. "The startling fact that a jury is never right has been proved beyond doubt by my work in the psycho-legal laboratory. No jury can be right—or anywhere near it—in its total reconstruction of facts." William Moulton Marston, *Is the Jury Ever Right?*, LEGAL CHATTER 1, 30-35 (1937).

**345.** McCormick, *supra* note 267, at 488.

**346.** *Id.* at 495.

**347.** *Id.* at 495-98.

**348.** *Id.* at 496.

**349.** *Id.*

their application demands extreme conservatism."[350] Those who said no to McCormick's questions included Edwin G. Boring of Harvard, who wrote: "I can not avoid the conviction that Marston's success with the tests mentioned is more the success of Marston as an expert using the tests than of the tests themselves in any hands."[351] Langfeld could not answer conclusively: "I should not advocate this use as yet before a jury."[352]

Marston was appointed Assistant Professor of Philosophy and Psychology at Tufts University in 1925.[353] While there, he fell in love with an undergraduate named Olive Byrne, who then moved in with Marston and his wife: they lived together as a threesome.[354] The scandal cost Marston his position at Tufts and, in the end, what was left of his academic career.[355] "He got his Ph.D. degree without any difficulty," Langfeld wrote when asked for a letter of recommendation in 1928. "Since then, he has had several positions, which he has not been able to hold. Rumors have come to me from these various places, which I have not been able to substantiate. It therefore makes it very difficult for me to say anything further than that when he took his degree at Harvard he gave every promise of doing excellent work."[356]

At the end of 1928, Marston went to Hollywood, where he worked as a consulting psychologist.[357] ("Dr. Marston, who won't write B.A., PhD, and LLB

350. *Id.*

351. *Id.* at 496-97.

352. *Id.* at 497.

353. *On the Hill*, TUFTS C. GRADUATE (Sept.-Nov. 1925) (on file with Tufts University Archives) ("Dr. William M. Marston will be Assistant Professor of Philosophy, centering his attention particularly on psychology."). The announcement continued: "Much of his time has been spent at Harvard with Münsterberg and Langfield, his degrees being A.B. in '15, L.L. B. in '18, and Ph.D. in '21. He has taught at Radcliffe, and comes to Tufts after working with the National Committee on Mental Hygiene on two surveys, one on The Schools of Staten Island and the other on The Texas Prisons." No mention was made of his professorship at American University. *Id.* Marston is listed as Assistant Professor of Philosophy and Psychology, living at 440 Newbury Street, Boston, in CATALOGUE OF TUFTS COLLEGE, 1925-1926, at 22. In this catalog, Marston is listed as teaching a slew of courses: 16-3 Applied Psychology; 16-4, Applied Psychology; 16-5 Experimental Psychology; 16-6, Abnormal Psychology; 16-7, Comparative Psychology; 16-7 History of Psychology; 16-9, Seminar in Psychology; and he is also co-teaching 16-1, The Psychology of Human Behavior. *See id.* at 102-103. Marston is not listed in the CATALOGUE OF TUFTS COLLEGE, 1925-1926 (1925).

354. The origins and nature of this relationship is chronicled in LEPORE, *supra* note 38.

355. *See id.* at 128-31.

356. Letter from Herbert Langfeld to the Harvard Appointment Office (Apr. 23, 1928) (on file with author). On the bottom of this damning letter, Langfeld typed: "Confidential: for office only." *See id.* The letter can be found in Marston Undergraduate File, Harvard University Archives. It, along with other letters added to the file in 1928, would have made it virtually impossible for Marston ever again to gain an academic appointment.

357. LEPORE, *supra* note 38, at ch. 17.

after his name in another week because Hollywood is touchy about such things, is going to be the psychological authority behind all forthcoming motion pictures from one big concern," reported the *New York Evening Post*.)[358] One of the films with which he was involved, as a story advisor, was Paramount's 1931 adaptation of *Dr. Jekyll and Mr. Hyde*.[359] (During the film's production, Marston gathered audiences to watch the rushes, hooked them up to blood-pressure cuffs, and measured the state of their arousal.)[360] In the film's opening scene, Professor Jekyll delivers a lecture to a captive audience, in which he maintains that he can use science to separate the good in a man from the evil.[361]

The law preserves what it deems worthy. Most of the past lies hidden. History is Mr. Hyde to the law's Dr. Jekyll. The distinction is an artifice, an act of deception.

It was not until 1941 that Marston began the work for which he is best remembered.[362] Using the pseudonym Charles Moulton, and with a great deal of help and inspiration from Elizabeth Holloway Marston and Olive Byrne, Marston created a comic book superhero named Wonder Woman.[363] With her magic lasso, she can compel anyone to speak the truth.[364] In 1945, in a syndicated newspaper strip, Marston finally extracted his vengeance on Chief Justice Walter I. McCoy. A bumbling, balding Judge Friendly calls Wonder Woman to the witness stand, in a case in which Priscilla Rich is being tried for crimes really committed by a villain known as the Cheetah. Instead of dismissing Wonder Woman's testimony as inadmissible, Judge Friendly welcomes her.

**358**. *Movie Psychology Dooms Cave Man: It's Jung Woman's Fancy That Turns to Love, Dr. Marston Avers*, N.Y. EVENING POST, Dec. 28, 1928.

**359**. Photographs of Marston on the set of the film, and watching the rushes, are in family photograph albums, in the possession of Moulton Marston.

**360**. Marston's tests are described in PREFERRED BY GENTLEMEN, a newsreel from 1931, in the possession of F.I.L.M. Archives.

**361**. DR. JEKYLL AND MR. HYDE (Paramount Pictures 1931).

**362**. LEPORE, *supra* note 38, ch. 22.

**363**. *Id.*

**364**. *Id.*

**Figure 3.**


*Using the pseudonym "Charles Moulton," Marston revisited the* Frye *case in 1944, in a storyline from the Wonder Woman comic strip. Courtesy of the Library of American Comics. Wonder Woman is ™ and © DC Comics.*

"I understand you—er—examined this defendant with your—ah—remarkable Amazonian lasso," the judge says to her. "While it's highly irregular—hm—I'd like to hear your—ah—findings!"

"I will *show* you, judge," offers Wonder Woman, who then lassoes the defendant, and drags her to the witness stand.

"I object!" cries the prosecuting attorney.

"Objection sus—" the judge begins, only to be cut off by Wonder Woman, who, ignoring the objection, interrogates the defendant—who, within the las-

so, is compelled to speak nothing but the truth—whereupon the judge shakes Wonder Woman's hand.

"Your advice was—humph-invaluable, Wonder Woman! I—ah—wish you'd give me—er—further help . . . ."

"Call on me anytime!" says Wonder Woman, cheerfully.[365]

Marston died in 1947, in his home in Rye, New York.[366] In his second-floor study, he kept a lie detector next to his desk.[367] He wanted to use it to pry into the hearts of men, to seek what was hidden, to find our minds. But hidden our hearts and minds remain.

**365.** Charles Moulton (William Moulton Marston) & Harry G. Peter (illustrator), *Wonder Woman*, KING FEATURES SYNDICATES (March 27-31, 1945) (on file with DC Comics Archives, New York). Curiously, Judge Friendly, as drawn by Peter, bears a notable resemblance to Walter I. McCoy, who can be seen in two portraits owned by Harvard Law School: a half-length photograph (Item 26.102 F); and a three-quarter length, in judicial robes (Item 26.87 F). Both are undated but both were acquired in 1926.

**366.** *Dr. W.M. Marston, Psychologist, 53*, N.Y. TIMES, May 3, 1947, at 17.

**367.** Marston, *supra* note 39.

## APPENDIX I: THE FULL TEXT OF *FRYE V. UNITED STATES*

*Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).

VAN ORSDEL, Associate Justice. Appellant, defendant below, was convicted of the crime of murder in the second degree, and from the judgment prosecutes this appeal.

A single assignment of error is presented for our consideration. In the course of the trial counsel for defendant offered an expert witness to testify to the result of a deception test made upon defendant. The test is described as the systolic blood pressure deception test. It is asserted that blood pressure is influenced by change in the emotions of the witness, and that the systolic blood pressure rises are brought about by nervous impulses sent to the sympathetic branch of the autonomic nervous system. Scientific experiments, it is claimed, have demonstrated that fear, rage, and pain always produce a rise of systolic blood pressure, and that conscious deception or falsehood, concealment of facts, or guilt of crime, accompanied by fear of detection when the person is under examination, raises the systolic blood pressure in a curve, which corresponds exactly to the struggle going on in the subject's mind, between fear and attempted control of that fear, as the examination touches the vital points in respect of which he is attempting to deceive the examiner.

In other words, the theory seems to be that truth is spontaneous, and comes without conscious effort, while the utterance of a falsehood requires a conscious effort, which is reflected in the blood pressure. The rise thus produced is easily detected and distinguished from the rise produced by mere fear of the examination itself. In the former instance, the pressure rises higher than in the latter, and is more pronounced as the examination proceeds, while in the latter case, if the subject is telling the truth, the pressure registers highest at the beginning of the examination, and gradually diminishes as the examination proceeds.

Prior to the trial defendant was subjected to this deception test, and counsel offered the scientist who conducted the test as an expert to testify to the results obtained. The offer was objected to by counsel for the government, and the court sustained the objection. Counsel for defendant then offered to have the proffered witness conduct a test in the presence of the jury. This also was denied.

Counsel for defendant, in their able presentation of the novel question involved, correctly state in their brief that no cases directly in point have been found. The broad ground, however, upon which they plant their case, is succinctly stated in their brief as follows:

"The rule is that the opinions of experts or skilled witnesses are admissible in evidence in those cases in which the matter of inquiry is such that inexperienced persons are unlikely to prove capable of forming a correct judgment upon it, for the reason that the subject-matter so far partakes of a science, art, or trade as to require a previous habit or experience or study in it, in order to acquire a knowledge of it. When the question involved does not lie within the range of common experience or common knowledge, but requires special experience or special knowledge, then the opinions of witnesses skilled in that particular science, art, or trade to which the question relates are admissible in evidence."

Numerous cases are cited in support of this rule. Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.

We think the systolic blood pressure deception test has not yet gained such standing and scientific recognition among physiological and psychological authorities as would justify the courts in admitting expert testimony deduced from the discovery, development, and experiments thus far made.

The judgment is affirmed.

## APPENDIX II: THE ENTIRE DISCUSSION OF *FRYE V. UNITED STATES* AT CASEBRIEFS.COM[368]

*Brief Fact Summary.* Mr. Frye (Appellant) was convicted of second-degree murder, after the lower court disallowed Appellant from introducing testimonial evidence relating to the results of a deception test Appellant had taken following the crime. Appellant appeals his conviction here.

*Synopsis of Rule of Law.* When a test (such as a systolic blood pressure deception test) has not gained scientific recognition from psychological and physiological authorities, expert testimony regarding the results of such a test is inadmissible.

*Facts.* Appellant was charged with and put on trial for murder. At his trial, Appellant attempted to call an expert witness to testify that Appellant had taken a systolic blood pressure deception test, and to further testify as to the results of the test. The expert testimony was held inadmissible by the lower court, Appellant was convicted of second-degree murder.

*Issue.* Was it error for the lower court to have excluded the expert testimony regarding the systolic blood pressure deception test at Appellant's criminal trial?

*Held.* No; the test results Appellant attempted to introduce into evidence did not meet the requirement that such evidence be "sufficiently established to have gained general acceptance in the particular field in which it belongs," and therefore the test results were properly excluded by the lower court.

*Discussion.* The court reasoned that although the deception test at issue here has a scientific basis, "[j]ust when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define . . . [and] the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs [to be admissible]." In other words, the court held that without an established place in science, the test was still in the blurred realm between experimental science and demonstrated science, and therefore inadmissible here. In the court's words, as the deception test was not "sufficiently established," the testimony related to it is inadmissible, and the lower court was correct to have excluded it.

368. *Frye v. U.S.*, *supra* note 341.