

Editorial

The Science of Eyewitness Testimony Has Come of Age

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At the beginning of the 20th century, Alfred Binet (1900), in his monograph *On Suggestibility*, envisaged (albeit only in a footnote) a “science of testimony”—but he seems to have given up this endeavor when faced with administrative resistance from the legal system (Wolf, 1973). Louis William Stern, a student of Hermann Ebbinghaus, was more successful, by publishing his first experiments in a legal journal and inspiring other psychologists, teachers, and legal scholars to conduct experiments on their own (Jaffa, 1903; von Liszt, 1902; see Sporer, 1982). Legal scholars like Hans Gross and John Wigmore also incorporated the new findings in their textbooks. Stern was probably one of the first psychological experts providing expert testimony, thus bridging the gap between experimental findings based on group means and the application to individual cases (see Lipmann, 1935). Stern and his followers even instigated legal reforms, but only some of them were ultimately carried out. Together with Otto Lipmann, Stern also founded an institute and edited a journal that, for a century, became the major journal in applied psychology in Germany. Less well known is these pioneers’ work on intentional distortions of testimony—lying (e.g., Lipmann & Plaut, 1927; C. Stern & L.W. Stern, 1909/1999). Unfortunately, for a variety of reasons (not the least of which was that Stern and Lipmann were Jewish) this movement lost momentum.

Stern’s friend, Hugo Münsterberg, only propagated the European ideas like a market crier in the United States with his book *On the Witness Stand* (Münsterberg, 1908), but in doing so he kindled much interest in the “new psychology”—student enrollments in psychology increased dramatically. At times, however, Münsterberg went too far mixing in various legal and political affairs; he indiscreetly commented on an ongoing trial to a zealous reporter (Doyle, 2001; Münsterberg, 1922), and he wrote letters to Theodore Roosevelt, President Wilson, and the press clamoring for a negotiated peace with Germany (Roback, 1952). He died a lonely man when the United States entered the World War, with no graduate students following up his work. Nonetheless, interest in this science of testimony was widespread, as the copious footnotes in Wigmore’s (1909) satirical critique of Münsterberg’s book demonstrate. Unfortunately, many researchers have misinterpreted Wigmore’s sarcastic tone—Wigmore described a trial held on April Fool’s day in the

Superior Court of Wundt County, in which Münsterberg, assisted by Mr. X. Perry Ment, was to pay \$1 in a libel suit for having damaged the legal profession’s reputation with *On the Witness Stand*. However, the notes cover the research not only in Central Europe but spanning the globe from the United States to Russia, India, and Chile. For decades, Wigmore assigned this article to his students as mandatory reading, and readers must have noted the vast amount of international empirical work cited therein.

In the 1970s, there was a renaissance of this science of testimony, with researchers like Elizabeth Loftus and many others trying to render basic memory and social-psychological research more “socially relevant.” Now, after three decades, Wells, Memon, and Penrod review this vast amount of new research, both from the laboratory and the field, which (again) converges to demonstrate the fallibility of eyewitness memory.

As many of these errors can only be estimated after the fact, the determining variables are called estimator variables. However, the major message of the review concerns system, or control, variables; such variables allow us to change the interrogation and evidence-gathering techniques so as to minimize eyewitness errors and thereby increase the probative value of eyewitness evidence. Thus, the new science of testimony has become more positive, and hence perhaps more acceptable to the legal system. Recently, a third group of variables has been studied more intensely: so-called assessment or postdiction variables, which triers of fact may use to retroactively gauge the accuracy of an identification (or of other eyewitness statements).

As this review demonstrates, psychology and law is now a well-established interdisciplinary endeavor based on sound empirical knowledge. A sound theoretical base has been expanded with new experimental and statistical techniques and supplemented by archival research of actual criminal cases. A broader system perspective helps to unravel the mutual dependencies in the judicial system (e.g., the effects of plea bargaining on the ratio of innocently accused defendants). In the future, triers of fact need to consider this pool of expert knowledge to make better decisions. Practitioners have to transform this knowledge base into evidence-based policy, which in turn must be evaluated with respect to its implementation (as in the cognitive interview) and effectiveness.

I have a dream: Someday, eyewitness research will be truly accepted by the courts because it is science based. Then, just as defendants have to be read the Miranda rights for interrogation evidence to be admissible, eyewitness evidence will not be admissible unless best-practice procedures developed by an international panel of legal psychologists have been strictly followed. According to this review, such procedures would include giving unbiased instructions to witnesses prior to lineups, which would be administered by “blind” investigators. Lineup identifications would be videotaped, along with all the interrogations preceding them and the statements made by the witness and the officers, so that this material would be available for scrutiny by the courts. Those who interview witnesses would be trained in nonsuggestive interviewing techniques and would employ a protocol that increases not only the amount of information obtained but also its accuracy. Such a protocol would include special provisions for interviewing children, the elderly, and disadvantaged persons.

And my dream continues: These reforms will not only be governed by the vast amount of research on estimator, system, and assessment variables, which is based on the assumption that witnesses are willing to tell the truth. As the DNA-exoneration cases cited in this review also show, there are many players in the criminal justice system—defendants, jailhouse snitches, and witnesses, but also police officers and state attorneys—who may intentionally distort or withhold the truth. The science of testimony at the beginning of the 20th century had also addressed the questions of suggestion and lying not covered here. A comprehensive science of testimony will need to encompass

both enemies of truth—error and deception—to further prevent miscarriages of justice.

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