# Gold Medal Award for Life Achievement in the Science of Psychology

The American Psychological Foundation (APF) Gold Medal Awards recognize distinguished and enduring records of accomplishment in four areas of psychology: the application of psychology, the practice of psychology, psychology in the public interest, and the science of psychology. The 2013 recipient of the Gold Medal Award for Life Achievement in the Science of Psychology is Elizabeth F. Loftus.

Dorothy W. Cantor, president of the APF, will present the APF Gold Medal Awards at the 121st Annual Convention of the American Psychological Association on August 3, 2013, at 4:00 p.m. Members of the 2013 APF Board of Trustees are Dorothy W. Cantor, president; Charles L. Brewer, vice president/secretary; Gerald Koocher, treasurer; Elisabeth R. Straus, executive vice president/executive director; Norman Anderson; David H. Barlow; Camilla Benbow; Sharon Stephens Brehm; Connie Chan; Anthony Jackson; Ronald F. Levant; Richard McCarty; Aurelio Prifitera; Sandra Shullman; Archie L. Turner; and Louise Douce, APA Board of Directors liaison.

# Elizabeth F. Loftus

#### Citation

"Elizabeth F. Loftus has made extraordinary contributions to our understanding of memory during the past 40 years that are remarkable for their creativity and impact. She has been a pioneering scientist in the area of memory distortion and false memories. Her imaginative and rigorous research has had a profound impact on the field of psychology, on scholars outside the field, and on the administration of justice around the world."

# Biography

Elizabeth F. Loftus is an experimental psychologist who has been tampering with memories for four decades. She has documented something scary about human memory: Namely, many of the things we recall about our lives may have happened in a very different way or may not even have happened at all. Sometimes these "false memories" have sent innocent people to prison. Loftus has spent more than a few sleepless nights worrying about those innocent people.

The girl who would grow up to become Elizabeth Loftus was born on October 16, 1944. Elizabeth Fishman (called Beth as a child) was the oldest of three siblings and grew up in Los Angeles, where her father was a physician and her mother, a former librarian. Her mother drowned when Beth was 14, and her younger brothers, David and Robert, were 12 and 9, respectively. After the tragedy, her father often came home from the office, ate dinner with his kids, and typically spent the evening in his room reading. But Beth found a way to connect: She asked him for help with her math homework. Her father had been a math whiz in his youth, and math became the topic the two could talk about. With the benefit of this "personal tutor," Beth would win mathematics awards and entered college at the University of California, Los Angeles, as a math major. It was there that she took an elective course in Introductory Psychology and got hooked on the field. Nearly every elective course she took thereafter was in psychology, and so she graduated with a double major.

Beth began graduate school at Stanford University in the fall of 1966, when she was just 21 years old. She regularly attended the seminars in mathematical psychology but never developed a passion for it. (In fact, she could frequently be seen in the back row of the seminar room surreptitiously hemming her skirts or writing letters to family and friends who lived far away. This prompted her fellow graduate students to vote for her, in an informal poll, as the least likely graduate student to succeed as a psychologist). She managed to complete a master's thesis under the direction of Richard Atkinson on learning spelling via computer-assisted instruction and a doctoral thesis under the direction of Patrick Suppes on computer-assisted mathematics instruction. While she admired these mentors, she never developed a real passion for these topics either. Toward the end of her graduate school days, she began a collaboration with Jonathan Freedman on semantic memory and continued that work for a number of years after graduate school. Also in graduate school she did develop one clear passion-for a fellow graduate student, Geoffrey Loftus, and it was then and there that Beth Fishman became Elizabeth Loftus.

Loftus spent nearly three decades teaching at the University of Washington, Seattle. There she developed a deep interest in the study of eyewitness testimony. She began showing experimental witnesses films of accidents or crimes and exploring how methods of questioning those witnesses affected their memories. She summarized much of this research in a book called *Eyewitness Testimony*, published by Harvard University Press, which, to her delight, won a National Media Award for a Distinguished Contribution from the American Psychological Foundation. Over the next few decades she would conduct hundreds of experiments showing how postevent information can become incorporated



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into a person's memory, sometimes adding to the memory and sometimes distorting it. The impairment in memory due to exposure to misleading information became known as the "misinformation effect."

When Loftus was not in her research lab or teaching a class, she could often be found in a courtroom, applying her science to actual legal cases. In fact, it was a famous legal case that sparked her interest in the notion of repressed memory and engulfed her in the "memory wars." After studying a number of rather bizarre claims of repressed memory that were being litigated, she concluded that some of these litigants appeared to have developed "rich false memories," that is, memories of entire events that didn't happen. She developed a research paradigm to study the development of such rich false memories. A new program of research ensued, starting with the planting of a childhood memory for being lost in a shopping mall as a child. This was accomplished by feeding experimental subjects life stories ostensibly obtained from their family members. Later, other techniques such as guided imagination, dream interpretation, and false feedback were used to successfully plant rich false memories in the minds of ordinary subjects.

Loftus's investigation of a suspicious case history was partially implicated in her decision to accept a distinguished professorship from the University of California, Irvine, where she moved in 2002. There she plunged into a new line of research with colleagues that was designed to explore the repercussions of developing false memories. In numerous experiments she showed that false memories can affect people's later thoughts, intentions, and behaviors. In some studies, experimental subjects were led to believe that as children they had gotten sick eating particular foods, and afterward they were less interested in eating those foods. And false memories could influence not just eating but also drinking, as shown in some studies in which people were led to believe they had earlier in life gotten sick on certain alcoholic drinks. Moreover, planting a warm fuzzy childhood memory involving a healthy food made people want to eat it more. Along with this power to contaminate memory and control behavior, she argued, come profound ethical considerations: When should we use this kind of mind technology, and should we ever ban its use?

Loftus has been recognized for this research with numerous awards and with six honorary doctorates (from universities in the United States, Norway, the Netherlands, Israel, and Britain). She was elected to the Royal Society of Edinburgh, the American Philosophical Society, and the National Academy of Sciences.

What Loftus's 40-year research program on false memory has shown us is this: Just because a memory of an event is expressed with confidence, just because it contains vivid detail, just because it is expressed with emotion, doesn't mean the event really happened.

### Selected Bibliography

- Bernstein, D. M., Laney, C., Morris, E. K., & Loftus, E. F. (2005). False beliefs about fattening foods can have healthy consequences. *Proceed*ings of the National Academy of Sciences, USA, 102, 13724–13731. doi:10.1073/pnas.0504869102
- Collins, A. M., & Loftus, E. F. (1975). A spreading activation theory of semantic processing. *Psychological Review*, 82, 407–428. doi:10.1037/ 0033-295X.82.6.407
- Freedman, J. L., & Loftus, E. F. (1971). Retrieval of words from longterm memory. *Journal of Verbal Learning and Verbal Behavior*, 10, 107–115. doi:10.1016/S0022-5371(71)80001-4
- Frenda, S. J., Nichols, R. M., & Loftus, E. F. (2011). Current issues and advances in misinformation research. *Current Directions in Psychological Science*, 20, 20–23. doi:10.1177/0963721410396620
- Garry, M., Manning, C., Loftus, E. F., & Sherman, S. J. (1996). Imagination inflation: Imagining a childhood event inflates confidence that it occurred. *Psychonomic Bulletin and Review*, 3, 208–214. doi:10.3758/ BF03212420
- Laney, C., & Loftus, E. F. (2008). Emotional content of true and false memories. *Memory*, 16, 500–516. doi:10.1080/09658210802065939
- Loftus, E. F. (1975). Leading questions and the eyewitness report. Cognitive Psychology, 7, 560–572. doi:10.1016/0010-0285(75)90023-7
- Loftus, E. F. (1993). The reality of repressed memories. *American Psy*chologist, 48, 518–537. doi:10.1037/0003-066X.48.5.518
- Loftus, E. F. (2005). Planting misinformation in the human mind: A 30-year investigation of the malleability of memory. *Learning and Memory*, 12, 361–366. doi:10.1101/lm.94705
- Loftus, E. F. (2007). Elizabeth F. Loftus [Autobiography]. In G. Lindzey & W. M. Runyan (Eds.), *History of psychology in autobiography* (Vol. 9, pp. 198–227). Washington, DC: American Psychological Association.
- Loftus, E. F., & Davis, D. (2006). Recovered memories. *Annual Review of Clinical Psychology*, 2, 469–498. doi:10.1146/annurev.clinpsy.2 .022305.095315
- Loftus, E. F., & Ketcham, K. (1991). Witness for the defense. New York, NY: St. Martin's Press.
- Loftus, E. F., & Ketcham, K. (1994). *The myth of repressed memory*. New York, NY: St. Martin's Press.
- Loftus, E. F., & Loftus, G. R. (1980). On the permanence of stored information in the human brain. *American Psychologist, 35*, 409–420. doi:10.1037/0003-066X.35.5.409

- Loftus, E. F., Miller, D. G., & Burns, H. J. (1978). Semantic integration of verbal information into a visual memory. *Journal of Experimental Psychology: Human Learning and Memory*, 4, 19–31. doi:10.1037/ 0278-7393.4.1.19
- Loftus, E. F., & Palmer, J. C. (1974). Reconstruction of automobile destruction: An example of the interaction between language and memory. *Journal of Verbal Learning and Verbal Behavior*, 13, 585–589. doi:10.1016/S0022-5371(74)80011-3
- Schacter, D. L., & Loftus, E. F. (2013). Memory and law: What can cognitive neuroscience contribute? *Nature Neuroscience*, 16(2), 119– 123. doi:10.1038/nn.3294
- Schooler, J. W., Gerhard, D., & Loftus, E. F. (1986). Qualities of the unreal. Journal of Experimental Psychology: Learning, Memory, and Cognition, 12, 171–181. doi:10.1037/0278-7393.12.2.171
- Steblay, N. K., & Loftus, E. F. (2013). Eyewitness identification and the legal system. In E. Shafir (Ed.), *The behavioral foundations of policy* (pp. 145–162). Princeton, NJ: Princeton University Press.
- Zhu, B., Chen, C., Loftus, E. F., Lin, C., He, Q., Chen, C., . . . Dong, Q. (2010). Individual differences in false memory from misinformation: Cognitive factors. *Memory*, *18*, 543–555. doi:10.1080/09658211.2010 .487051