

Theoretical equations were fitted to retention curves of two kinds: artificial memories in traditional experiments and natural memories concerning past episodes and experiences. The former includes data of classical experiments by Ebbinghaus, Strong, Luh, etc., and retention curves on muscular skill. The latter includes memories of street names, city landmarks, Spanish learned in school, etc., in Bahrik's studies as well as retention curves generated from a study of Warrington and Sanders (1971), which range up to 40 years for subjects of 20 to 60 years old when memory was input. Two kinds of model are discussed: one is based upon differential equation of an assumed underlying process and the other upon two extreme statistics about life span of memory-supporting cues for elements. An element becomes unretrievable when either one cue or all the cues are lost. Goodness of fits and changes of the parameters are discussed in relation to the nature of memory, the method of testing memory, and the age of subjects.