

Edmund C. Berkeley as a Popularizer and an Educator of Computers and Symbolic Logic*

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Abstract

This paper explores how Edmund C. Berkeley tried to instruct and popularize high-speed computers in the 1940s and 1950s and how Berkeley emphasized the connection between computers and symbolic logic. Berkeley strengthened his conviction in the significance of symbolic logic and Boolean algebra before his graduation from Harvard University and maintained this conviction for more than 30 years. Berkeley published books and articles, including *Giant Brains*, and sold electrical toy kits by which young boys could learn electrical circuits and their logical implications. The target audience of Berkeley covered wide range of people including those who were not making computers but were interested in using them, that is, amateur adult technology enthusiasts who enjoyed tinkering with technology or reading about science and technology, and young students. In these projects Berkeley used Shannon's paper of 1938, "A symbolic analysis of relay and switching circuits" as a theoretical basis of his conviction. Design of these kits was fine-tuned by Claude E. Shannon.

Key words: Edmund C. Berkeley, symbolic logic, computer, Claude E. Shannon, *Giant Brains*

1. Introduction

This paper describes how Edmund C. Berkeley, since the 1940s and in a career spanning over twenty years, aspired to popularize and educate the public about the connection between symbolic logic and the structure of computing machinery. Berkeley was one of the founders and the first secretary of the Association for Computing Machinery (ACM), the world's largest society for computing and his contributions to the ACM have been widely discussed.¹ Unlike the other founders and primary figures of the ACM at that time,

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¹ Berkeley's activity in ACM can be found in Atsushi Akera, "Edmund Berkeley and the Origins of ACM," *Communications of the ACM*, vol. 50 no. 5 (May 2007), pp. 30-35, and Jim Adams, "Edmund C. Berkeley: ACM Founder," *Communications of the ACM*, vol. 31 no. 6 (June 1988), pp. 781-782.