Column

"*Always Interesting*"
AI in the news

The Electronic Paul Revere. James J. Haggerty, Jr. *Collier's.* February 3, 1956: pages 82–85. "Lexington is the home of Massachusetts Institute of Technology's Lincoln Laboratory, whose scientists have developed a superintelligent electronic 'brain' which reduces to a bare minimum the human element in the complex problem of tracking and destroying an attacking airplane. Operating at a speed far beyond the capabilities of human intelligence, the almost unbelievable Semi-Automatic Ground Environment machine — or SAGE, as it is more popularly known — can sight the approach of an attacker, compute its course, speed and altitude, 'scramble' an interceptor to meet it, and guide the fighter to the kill. ... SAGE handles all these steps automatically with the single exception of the scramble order, which is still sent by direct-line telephone."

She Tamed the Thinking Machine. Louise Levitas. *Science Digest.* March 1956: pages 53–55. [Condensed from *This Week Magazine*.] "Univac, one of the so-called 'thinking machines' whose lightning calculations with simple arithmetic are already scaring the average thinker, is now getting a college education. The lady in charge of this civilizing process — you might call her a machine-tamer — is Dr. Grace Murray Hopper, an ex-mathematics professor from Vassar. ... Computers have been set to playing chess, predicting the weather and national elections, translating into eight languages at once, guiding Nike missiles against figurative enemy aircraft, and recently the government rented an IBM computer to take charge of the records of 119 million Social Security cardholders. To close some of the gap between man and the formidable computers, to make it possible for almost anyone to feel cozy with a Univac, has now become Dr. Hopper's purpose. ... Last fall [her] innovation, called a 'Compiler,' was officially introduced to users of the Univac. With the Compiler, Dr. Hopper created a new job for herself and a new department at Remington Rand –- research devoted 'teaching' the Univac new skills. ... In fact, thanks to Dr. Hopper's invention, the machine has become something of a smart aleck. It now answers to call-words written in plain English. It spots and traces contradictions in the work of careless programmers; it is always ready to point out human error."

Math Made Malleable. *Newsweek.* March 5, 1956: page 94. "Norbert Wiener is the M.I.T. mathematics professor who has pioneered the science which he calls cyber-

netics* (automatic controlling devices, automatic factories). As is now well known, cybernetics points to a frightening new industrial revolution in which human labor will largely be replaced by robot calculating and operating apparatus. *From the Greek *kubernetes* — 'steersman.'"

Intelligence Amplifier. *TIME.* May 7, 1956: page 70. "Computer experts are fascinated by the question: Will thinking machines ever be as intelligent as the human brains that create them? Dr. W. Ross Ashby of Britain, a mathematically minded psychiatrist, believes that the machines can at least 'amplify' human intelligence just as the engine of a bulldozer amplifies the muscle power of the man who controls it. In *Automata Studies,** Dr. Ashby explains how an intelligence amplifier might be constructed." [*1956. C.E. Shannon and J. McCarthy, eds. Princeton Univ. Press.]

Union Warned By TUC Against Automation Fears. Reuters; appearing in *The Christian Science Monitor.* May 29, 1956: page 6. "Leaders of Britain's Trades Union Congress, representing 8,000,000 workers, have warned their members not to let good industrial relations be upset by 'the exaggerations of the science fiction writers' on automation. 'The first business must be to get the facts -- and that is just what the TUC has been seeking to do,' a congress half-yearly report stated. The trade union leaders have been worried by the pointblank resistance of many British workers to new techniques and machines which they regard as 'robots' liable to deprive them of their jobs."

"Brain" Computes New Tune for TV. *The New York Times.* July 3, 1956: page 51. "The first ballad to be composed by an electronic computer will be played July 15 in a science show on television. The tune was composed by the Datatron, an elec-

tronic brain of the ElectroData division of the Burroughs Corporation. ... The computer is 'instructed' in simple melody-composing rules and turned loose. Douglas Bolitho and Dr. Martin Klein, who set the machine to music, emphasized that their accomplishment was 'an experiment of mathematical importance only.' It is not apt to put composers out of business, they said, since 'no computer will ever possess the esthetic gifts which are responsible for art.'"

Gambling Robot Wins High. *Science News Letter.* August 18, 1956: page 102. "A gambling robot that has been successfully beating the majority of its human opponents is in operation at the Bell Telephone Laboratories, Murray Hill, N.J. Nicknamed SEER, the electronic computer has won 5,218 times and lost only 4,577 times against visitors and employees at the Laboratories. The odds against getting this large a lead by chance alone, D.W. Hagelbarger of the Laboratories said, are about 10,000,000,000 to one. In addition to penny-matching to the enjoyment of those who want to match man against machine, the device has a serious purpose. It is a forerunner of computers that some day might be capable of adjusting to a changing environment. This would result in a machine that could do more than routine jobs."

Homage to Orwell. Editorial. *The Nation.* October 6, 1956: page 278. "No sooner did we get rid of one nightmare about the future than another besets us. It was somewhat reassuring to learn recently from Mr. Anthony West, with the tentative concurrence of Mr. Kingsley Amis, that Airstrip One, the setting of *Nineteen Eighty-Four,* is actually a paranoiac version of George Orwell's preparatory school and not a projection of certain trends in modern society. Even with this explanation, the nightmare remains; but it is humanized, domesticated, made less terrifying. Unfortu- nately, scientists are less prone than novelists to project private fantasies as to society's future shape and pattern. What, then, is one to make of Automex, the new think-machine devised by the Westinghouse Research Laboratories? Automex has a 'built-in intelligence,' a remarkable capacity for 'dispassionate judgment in distinguishing between success and failure' as well as the ability to distinguish between right and wrong. ... From Big Brother to Automex is quite a step; already Orwell seems a bit old-fashioned. But the real difference, of course, is that Automex is not a fantasy."