

Alan Turing: Father of AI

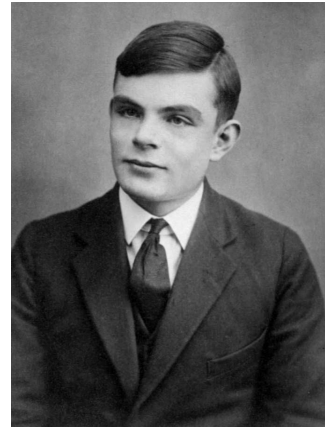
By: Paige Platter

October is lesbian, gay, bisexual, and transgender (LGBT) history month, so it's time to talk about one of the most underrated and ignored LGBT people in history. Alan Turing. The inventor of the Turing Machine, father of modern artificial intelligence (AI), broke the Nazi code during World War Two (WWII) and still no one knows who he was. His works were hidden for years by the British Government under the Official Secrets Act. When his works were released people still didn't acknowledgment him and his achievements.

Turing was a genius from an early age. He was born in London in 1912, to a soldier and a housewife. He attended many schools throughout his life, including St. Michael's Day School where the teachers saw his talent early on. At age 13, he attended Sherborne School in Dorset. However, the first day coincided with the 1926 General Strike in Britain. He was so determined to go to school he rode his bike all the way there, staying the night in an Inn. Turing's specialty in mathematics and science was not appreciated at Sherborne, due to their idea of education being focused on the classics. The headmaster even wrote to his parents saying, "I hope he will not fall between two stools. If he is to stay at public school, he must aim at becoming educated. If he is to be solely a Scientific Specialist, he is wasting his time at a public school." (Andrew Hodges *Alan Turing: The Enigma*). Still, Turing stayed and studied, he started doing calculus early on until he found Albert Einstein's work and began to study that, *at the age of 16*.

At Sherborne, Turing formed a strong bond with a boy named Christopher Morcom, many refer to Morcom as Turing's 'first love' though many histories swipe that under the rug and called them best friends. Their relationship ended abruptly when Morcom died from Bovine Tuberculosis he got from drinking contaminated cows milk. The grief from Morcom's death caused Turing to focus more on his study of mathematics and science. Turing himself stated, "I am sure I could not have found anywhere another companion so brilliant and yet so charming and unconceited. I regarded my interest in my work, and in such things as astronomy (to which he introduced me) as something to be shared with him and I think he felt a little the same about me ... I know I must put as much energy if not as much interest into my work as if he were alive, because that is what he would like me to do." (Christian Caryl *Poor Imitation of Alan Turing*).

During WWII, Turing worked for the Government Code and Cypher School (GC&CS), helping to break German codes. They were using the Polish code-breaking technique that was rather temperamental and relied on an encryption key that the Germans were likely to change. In 1940 they did, rendering the Polish Bomba useless. Turing was assigned to make a Bombe, a different type of decryption method. The Bombe was the original AI, as the machine could think for itself for the most part. You had to input the encrypted message and the machine would run a cycle of all known encryption codes and give the final result. The machine was the reason



the German code was broken, but Turing didn't just stop with it. (Professor Jack Good *The Men Who Cracked Enigma*).

From 1945-1947 he designed the Automatic Computing Engine (ACE), however, it would take three more years for it to run its first program. (Jack B. Copeland *Colossus: The secrets of Bletchley Park's code-breaking computers*).

Turning created the 'Turing-Test' a test to prove if a machine is sentient. It was a simple test where the interrogator asked the machine questions and if the machine could 'fool' the interrogator it was deemed intelligent. This test has become the heart of AI discussions. (Stevan Harnad *The Annotation Game: On Turing (1950) on Computing, Machinery and Intelligence*).

Turing was never secretive of his sexuality, taking many lovers in his life. However, when the police found out about Turing and one of his lovers, he was charged with 'gross indecency,' Turing stated there was nothing wrong with what he did. Turing was forced into chemical castration designed to lower his libido. For one year he was pumped full of estrogen which made him infertile and caused breast tissue to form. Fulfilling Turing's prediction of, "no doubt I shall emerge from it all a different man, but quite who I've not found out". Due to his charges, he was barred from having security clearance and was forced to end his work at the Government Communications Headquarters. He was allowed to keep his academic job. (Andrew Hodges *Alan Turing: The Enigma*).

He committed suicide on June, 7th, 1954 at the age of 41. He had taken a fatal dose of cyanide through an apple. It's been speculated that he was recreating a scene from his favorite fairy tale *Snow White and the Seven Dwarfs*. (Encyclopedia Britannica). Alan Turing was pardoned in August of 2014 by Queen Elizabeth II. *60 years after his death*.