# Persecution and Tragic End of Alan Turing

Alan Turing, a name synonymous with groundbreaking contributions to mathematics, computing, and cryptography, faced a tragic and unjust end due to the societal prejudices of his time. Despite his invaluable contributions to the Allied war effort during World War II and his pioneering work in theoretical computer science, Turing's life was marred by persecution and discrimination because of his sexual orientation.

**Early Life and Contributions**

Alan Turing was born on June 23, 1912, in London, England. From a young age, he exhibited a remarkable aptitude for mathematics and science, which set him apart from his peers. His parents recognized his potential and ensured he received a robust education that would nurture his intellectual abilities. Turing's formal education began at Sherborne School, a prestigious boarding school in Dorset. Despite facing challenges in adapting to the school's rigid classical curriculum, Turing's passion for science and mathematics flourished. He often conducted scientific experiments at home, demonstrating an early inclination towards practical problem-solving and innovation1.

In 1931, Turing entered King's College, Cambridge, where he pursued a degree in mathematics. His time at Cambridge was transformative, as he was exposed to the forefront of mathematical thought and research. Turing's brilliance was soon recognized, and he was elected a Fellow of King's College in 1935, a rare honor for someone so young. During his tenure at Cambridge, Turing developed the foundational concepts of what would later become known as computer science. One of Turing's most significant early achievements was his 1936 paper, "On Computable Numbers, with an Application to the Entscheidungsproblem." In this groundbreaking work, Turing introduced the concept of a theoretical computing machine, now known as the Turing machine. This abstract device could simulate the logic of any computer algorithm, laying the theoretical foundation for modern computers1.

**World War II and Codebreaking**

During World War II, Turing's expertise became crucial to the Allied effort. At Bletchley Park, the UK’s top-secret intelligence center, he led a team that cracked the codes of the Enigma machine, a German encryption device considered unbreakable. Turing didn’t rely on traditional methods of code-breaking but instead created a systematic mathematical approach using Banburismus, a statistical technique to analyze letter frequencies and reduce the number of possible Enigma settings. Turing's most famous invention was the Bombe, a sophisticated electromechanical device designed to automate the process of deciphering Enigma messages. The Bombe was instrumental in decoding German communications, giving the Allies a crucial edge during the Battle of the Atlantic. The ability to locate U-boats with precision helped save countless lives and secure vital supply lines2.

**Persecution and Legal Troubles**

Despite his monumental contributions, Turing's life was marked by tragedy. In January 1952, after reporting a burglary at his house, the authorities became aware of Turing’s relationship with a man named Arnold Murray. During the investigation, Turing acknowledged the relationship, and both men were charged with gross indecency under Section 11 of the Criminal Law Amendment Act 1885. Turing pleaded guilty to this charge, which carried a jail sentence. As such, he was faced with a choice: he could opt either for imprisonment or probation, on the condition that he would undergo hormonal “treatment” involving chemical castration over the course of a year3.

As a result of his conviction, Turing had his security clearance removed and could no longer work as a consultant for the Government Communications Headquarters (GCHQ). Furthermore, for the same reason, he was denied entry to the United States. The invasive procedures performed on Turing led to a number of side effects which gradually took a toll on him3.

**Tragic End**

On June 7, 1954, Alan Turing was found dead in his home, aged 41, beside a half-eaten apple believed to have been poisoned. The subsequent inquest concluded that Turing’s cause of death was suicide by cyanide poisoning. The official ruling was suicide, but the circumstances surrounding his death have led to much speculation and debate32.

**Legacy and Posthumous Recognition**

Alan Turing's legacy has been celebrated in recent years, with numerous honors and recognitions. In 2013, he was posthumously pardoned by Queen Elizabeth II, and in 2017, the UK introduced the Policing and Crime Bill, also called the “Turing Law,” posthumously pardoning 50,000 homosexual men and providing pardons for the living4. Turing's contributions to mathematics, computing, and cryptography continue to be recognized and celebrated, and his story serves as a poignant reminder of the destructive power of prejudice and the enduring importance of justice and equality.