

1 Alan Turing and the Apple

2 In his article “Evolution of the Universal Machine” Dr Karl discussed the possible origins of the original
3 Apple logo — the rainbow-striped silhouette of an apple, with a bite out of it. The widespread story
4 about the origins of this logo is also linked with the genius Alan Turing, the father of the modern
5 computer.

6 During WW II, Alan Turing and his colleagues at Bletchley Park outside of London were able to bust the
7 supposedly unbreakable German Enigma code. He did this using an early predecessor to our modern
8 computer. Some historians say his work was essential to winning the war. Turing, in his theoretical
9 design for our modern computer, had realised a fundamental truth.

10 In the real world, there is a big difference between a tool, and the medium that the tool acts upon. For
11 example, in carpentry, a metal saw (a tool) is quite different from the timber (which is processed by the
12 saw). Not so in the virtual world, and Turing realised this. He proved that there is no fundamental
13 difference between 'data' and the 'instructions' that process the data. (Today, we label these 'instructions'
14 as 'programs' or 'applications'). This is why you and I accept that our computers easily handle both
15 programs and data as bunches of 1s and 0s.

16 But Turing was the first person to prove mathematically that there was no essential difference between
17 data and applications. This deep and fundamental understanding sped up the introduction of computers
18 by decades. It has been said that Turing's work in breaking the Enigma code shortened the Second World
19 War by two years. But for various reasons, the work of Turing and his colleagues was kept secret by the
20 British until 1974. In January 1952, Alan Turing's house was broken into. He told the police that he
21 suspected the robber to be a friend of his boyfriend. At that time, homosexuality was a criminal offence in
22 the United Kingdom. Alan Turing pleaded guilty and was given the choice of either jail imprisonment,
23 or probation with chemical castration — that is, injections of female hormones.

24 Alan Turing chose the punishment of the feminizing hormones, became sexually impotent, and grew
25 breasts. He was labelled a security risk, and no longer had access to the people and projects he loved.
26 As the story goes, on 7 June, 1954, he committed suicide by eating an apple laced with cyanide. Indeed,
27 a half-eaten apple was found in his apartment. What is the significance of the half-eaten apple? It turns
28 out that Turing's favourite movie was Snow White. You know the plot — the princess falls into a deep
29 sleep after eating the poisoned apple, and is awakened by the kiss of the prince. That's supposedly why
30 Turing committed suicide with a poisoned apple.

31 So is that the reason why, some two decades later, to honour Alan Turing, the Apple company designed
32 their logo to have a missing bite? And was it because he was a homosexual, and as a salute to Gay Pride,
33 that the Apple logo from 1976 to 1999 also incorporated a horizontal band of rainbow colours?

34 No. Stephen Fry asked Steve Jobs, one of the founders of Apple, whether this urban myth was true. Steve
35 Jobs replied, "God, we wish it were." But, like all successful myths, it has elements of truth in it. Yes,
36 at the inquest the coroner determined that Alan Turing did die from cyanide poisoning. Yes, there was
37 an apple with a bite taken out of it in his apartment. But first, the coroner did not analyse the apple to see
38 if it contained cyanide. So we'll never know that detail. Secondly, there is much circumstantial evidence
39 suggesting it was not a suicide, but an accident. Alan Turing had set up an apparatus to electroplate
40 spoons with gold in his tiny spare room. He was using potassium cyanide to dissolve the gold, and may
41 well have accidentally inhaled cyanide fumes. He always ate an apple before going to bed, and would
42 sometimes leave them half-eaten.

43 Despite the stress of his legal setbacks, and the side-effects of the female hormones, Turing was not
44 depressed and indeed was in good humour. In fact, he had written down a list of jobs to complete at work
45 after the holiday weekend. Most of us with computers have no idea that Alan Turing was their father. But
46 we all make our own personal tribute to this genius, every time we press the screen of our smartphone to
47 ring, or 'Turing', somebody (get it?) ...

Adapted from [Dr Karl's Great Moments in Science](#)