

# Week 9 Writing Activity: Chapter 7 of the *Scientific Attitude*

Prof. Jordan C. Hanson (INTD100)

October 31, 2022

## 1 The Imitation Game: The Story of Enigma, Alan Turing, and the Birth of Computation

We now dive into the subject of scientific fraud, which involves lying, subterfuge, and other shady forms of human behavior. The following clip from *The Imitation Game*, is good medicine: <https://youtu.be/Qdfp5Za0XVg>.

## 2 Scientific Fraud

1. In your own words, what is the definition of *fraud*?
2. Create a 2D graph below, with the x-axis corresponding to the mildness or severity of a fraudulent action, and the y-axis corresponding to the intentionality of an action. On this graph, shade in regions that correspond to the following shenanigans:
  - p-hacking social science data surrounding grade inflation
  - p-hacking data associated with COVID vaccine efficacy
  - Fabricating personal data on a college admission application
  - Fabricating personal data during a Federal background check
  - Engaging in confirmation bias in the analysis of physics data related to dark matter detection

## 3 Passive Voice

Convert the following paragraph into passive voice:

We cracked the German code Enigma in 1941. The code is a complex cypher created by a machine with settings that are changed daily. The enemy converts written messages into what appears to be random text. Using reasonable guesses at inputs, we use our newly invented computational machinery to work out the original text. We determine the original enigma settings for a given day by running messages repeatedly through our machines until we obtain a reasonable message that matches the inputs. Using this machine, we decode enemy messages, and we are able to anticipate their strategic moves. Our work limited the duration of WWII.