

# **Artificial** Individuality and the Turing Test

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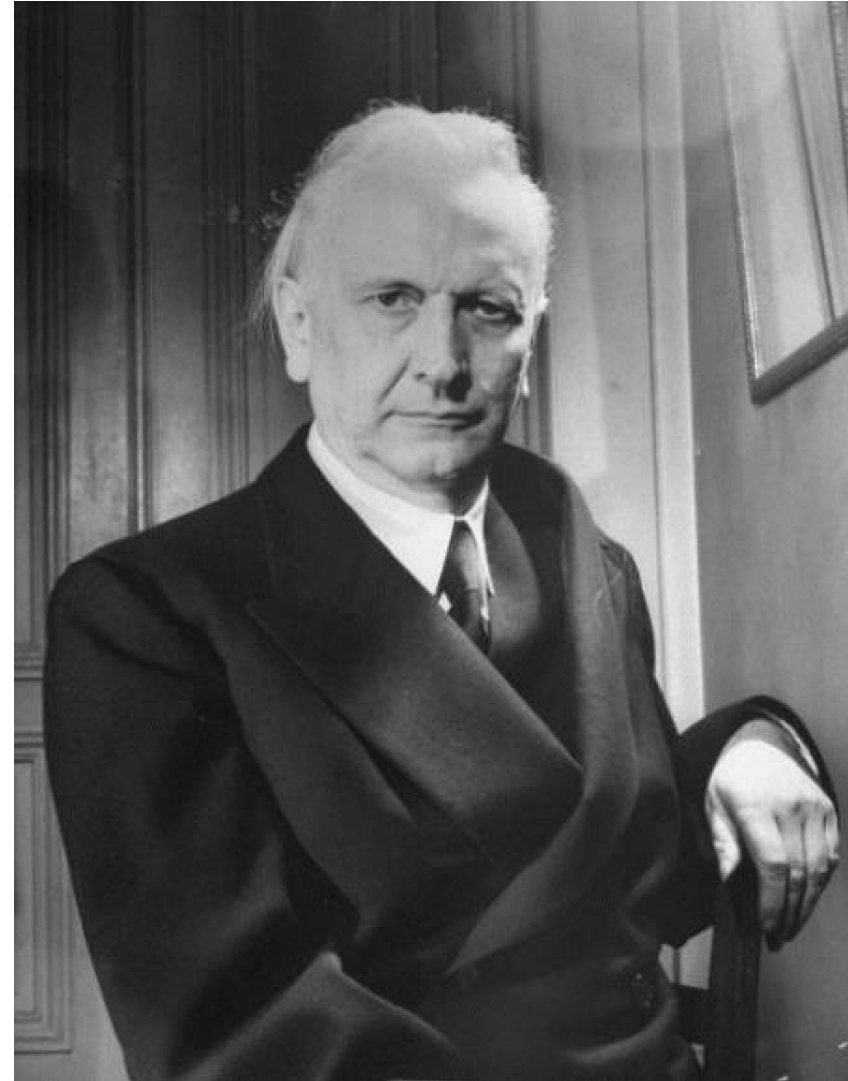
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Hon. Senior Lecturer (Cambridge)

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# Individuality and Contemporary Psychiatry

- Karl Theodor Jaspers (23 February 1883 – 26 February 1969)
- German psychiatrist and philosopher.
  - Considered an 'Existentialist'
  - Pragmatic Dualist
  - Descriptive Psychopathology
- Emphasised 'Empathic Understanding' as the basis for psychiatry
- Outlined of the Psychiatric History and Examination

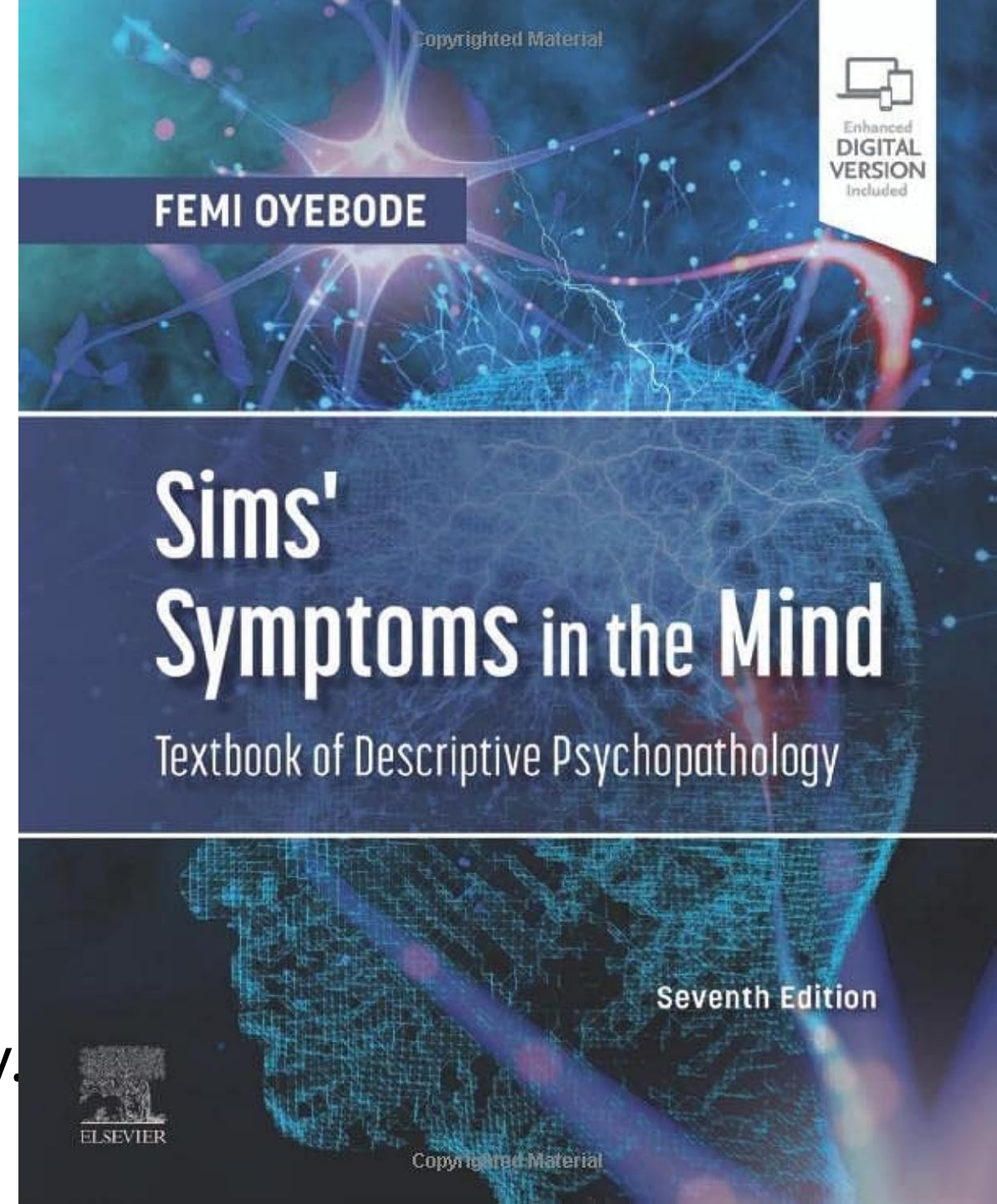


# The Psychiatric History

- Introduction and Establishing Rapport
- Presenting Problem
- History of Presenting Illness
- Premorbid Personality
- Past Psychiatric History
- Medical History
- Psychosocial History
  - Developmental History
  - Cultural and Religious Factors
- Legal and Forensic History
- Insight and Judgment
- Mental Status Examination (MSE)
- Cognitive State Examination (CSE)
- Collateral Information
- Diagnosis
- Treatment Plan Discussion

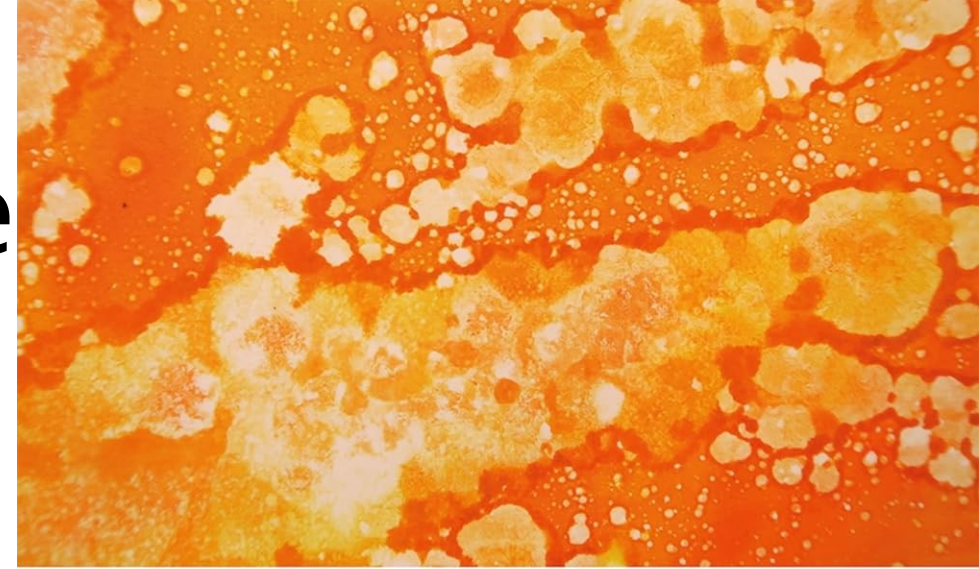
# MSE

- Appearance
- Behaviour
- Speech
- Mood
- Thought
- Perception
- Cognition
- Insight
- Counter transference – perplexity.



# Cognitive State Assessment

- Orientation
  - TPP – recent autobiographical memory
- Attention/Registration
  - 7- Item Name and Address,
  - Failed try 3-Item
- Verbal/Semantic Fluency
- Executive Function
- Delayed Recall
- ACEIII (subscores)
- Occupational Therapy – 'Real World function'



## COGNITIVE ASSESSMENT FOR CLINICIANS

Third Edition

JOHN R. HODGES

OXFORD

# Ontology of Diagnosis – What are diagnoses?

Foundation of Medical Practice – ontologically multiple types of diagnosis:

- Colloquial – operational shorthand
  - Often provisional, pejorative...
- Descriptive – clustering of symptoms and signs, course, prognosis...
  - Assists communication, enables research...
- Administrative – pragmatic organisation of services, practical help...
  - Evaluate services, investigatory or management technique based...
- Aetiological – what ultimately gives rise to the condition?
  - Implicit model – underlying implicit organising principle...
  - Explicit model – for definite, measurable, identifiable cause, clearly indicated treatment, accurate prognosis

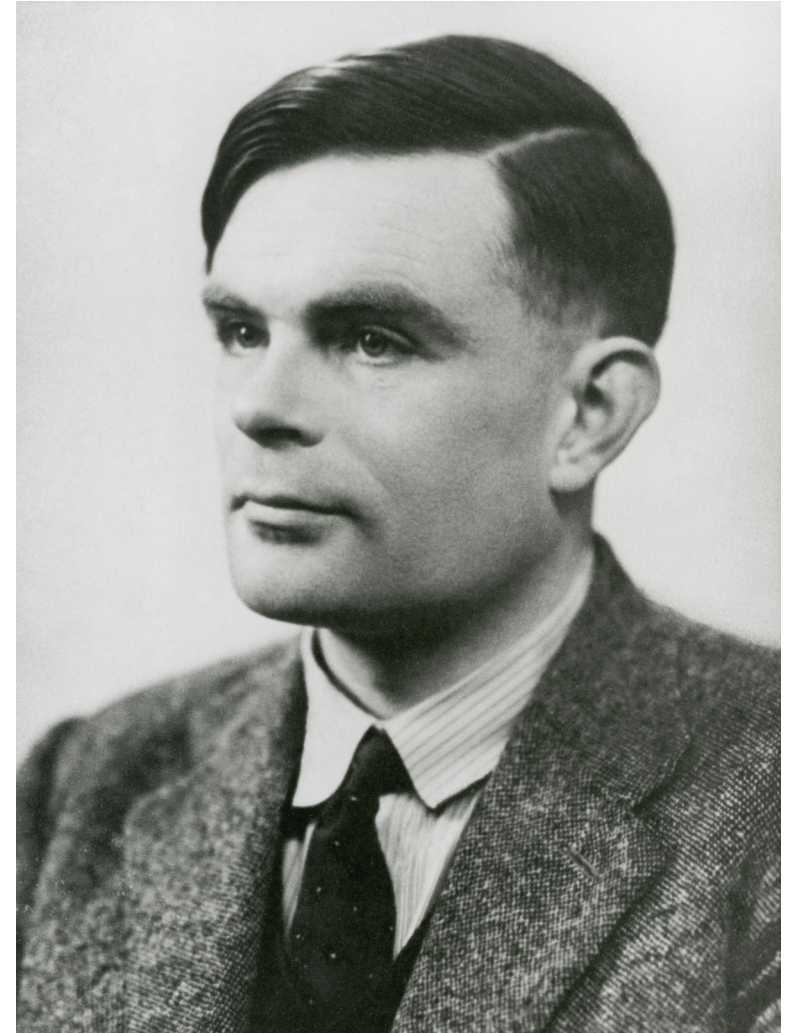
Medical education and practice effectively implicitly teaches and recognises (and confuses) these types – nothing wrong with each category as long as we do not confuse them

# Beware Implicit Aetiological Diagnoses

- *Implied aetiological diagnosis – we would like there to be a mechanism for some or other reason – of which psychiatric diagnoses are prone...*
  - *‘a complex disorder with genetic predisposition triggered by stressful events and childhood experiences...’*
- Implicit Ontological Error about Diagnosis leads to multiple problems...
  - Descriptive vs Administrative vs Aetiological Diagnoses (confusion)
  - Token-token identity errors
  - Postmodernism – depends on who is looking and why they are looking...
- “When I use a word,” Humpty Dumpty said in rather a scornful tone, ‘it means just what I choose it to mean — neither more nor less.’
  - ‘The question is,’ said Alice, ‘whether you can make words mean so many different things.’
  - ‘The question is,’ said Humpty Dumpty, ‘which is to be master — that’s all.”
  - Lewis Carroll, Through the Looking Glass

# Alan Turing – Brief Biography

- Alan Mathison Turing, OBE, FRS (23 June 1912 – 7 June 1954)
- Pioneering computer scientist, mathematician
  - The Turing Machine
  - The Turing Test/Imitation Game
- Second World War, worked at Bletchley Park
  - Enigma Code
- 1948 joined Manchester University, Computing Department
- 1950 Mind article – ‘The Imitation Game’
- 1952 prosecuted for homosexual acts, accepted treatment with oestrogen injections
- Turing died in 1954, from cyanide poisoning, suicide verdict.



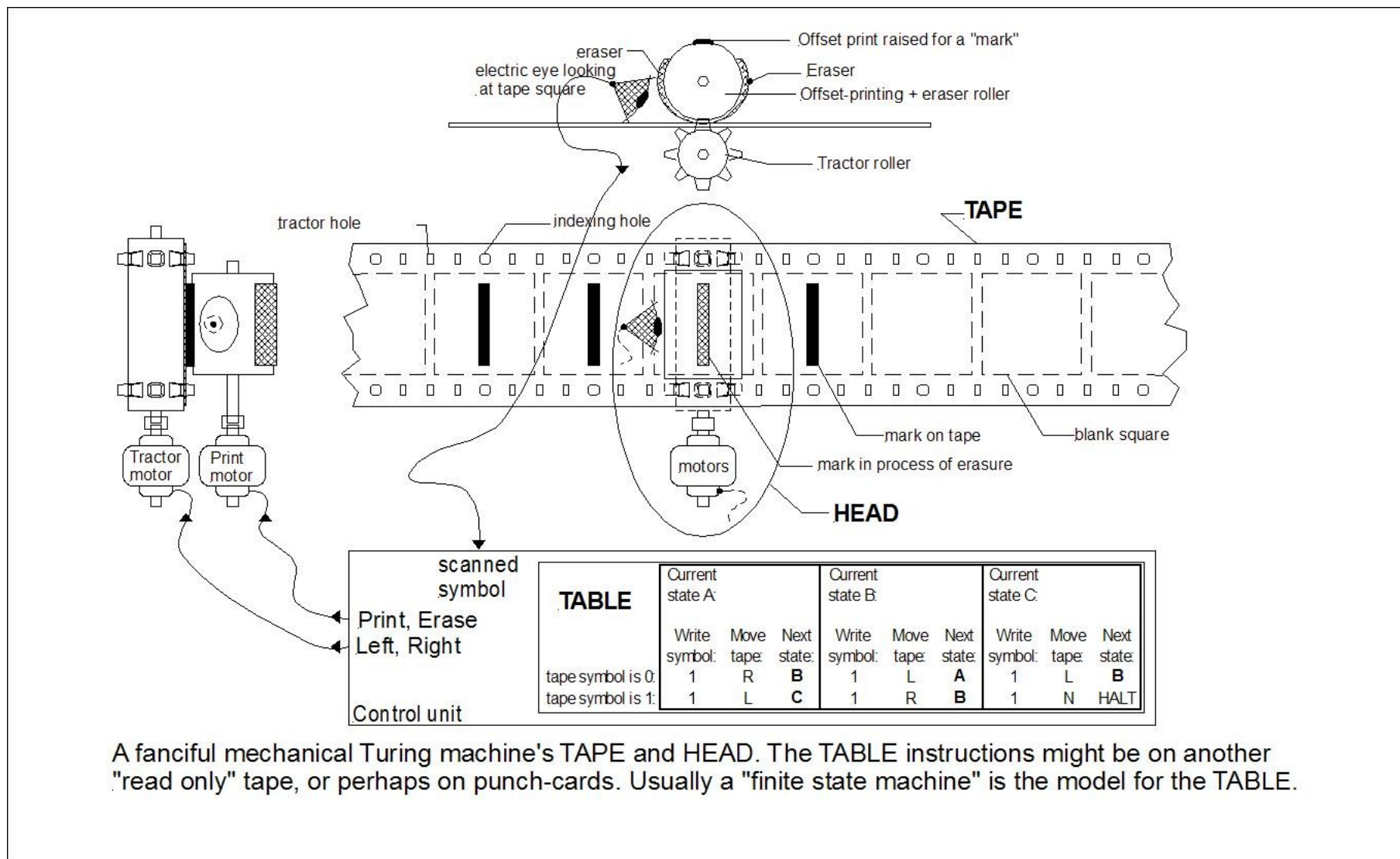
# Turing Machine

- A Turing machine is a hypothetical device enabling computation.
  - Many different Turing Machines: Tm-a; Tm-s....
  - Tm-U – universal machine which can perform ANY computation...
- An infinite tape divided into cells, a symbol from some finite alphabet.
  - Approximate this with a very long tape...
- A head that can read and write symbols on the tape and move the tape left and right one (and only one) cell at a time.
  - A state register that stores the state of the Turing machine, one of finitely many.
  - These states, writes Turing, replace the "state of mind" a person performing computations.
  - A finite table of instructions.

# Turing Machine – Tm1 example

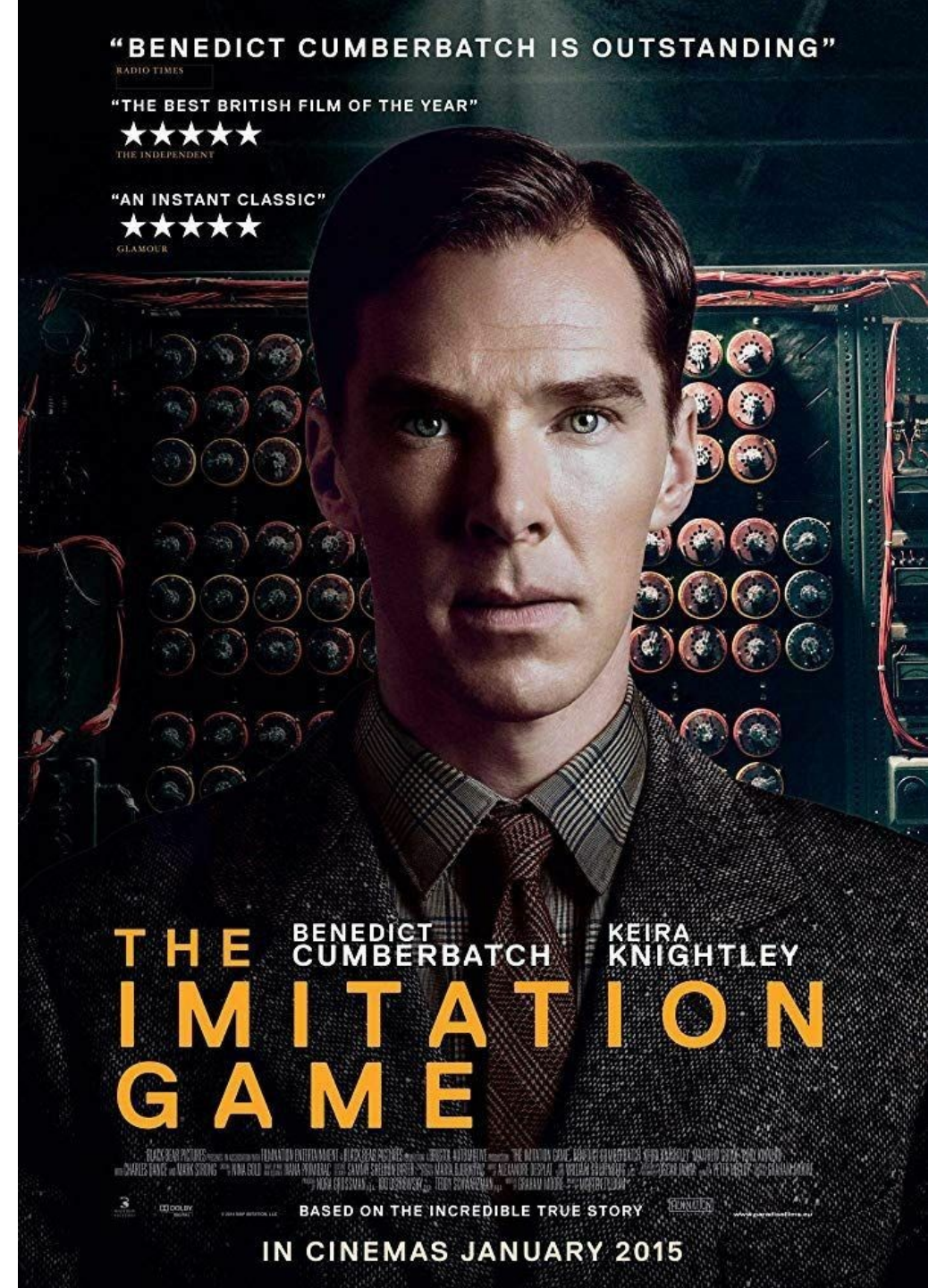
- Tape with Unary number
    - One is coded ...00100...
    - Two is coded ...00110...
    - Three is coded ...01110...
    - Etc
  - ...0000111000...
- UN+1 – state/read – state/print/move
    - 0/0 – 0/0/R
    - 0/1 – 1/1/R – (changes state)
    - 1/1 – 1/1/R
    - 1/0 – 0/1/R – also 0/1/STOP (halting)
  - ...0000111100...
- UN+2? Any Insights?

# Turing Machine



# Turing Machine

- There are many Tms
  - Numerically specified
- Increasing complexity
  - Also known as 'Insights'
- There is a *Universal* Tm
  - Performs any computation which is computable
- Modern 'Turing Complete' computers are layers/arrays of TMs
  - Word processing, imaged processing ... self-driving cars, autonomous targetting drones...
- Caveats – from our point of view in this talk...
  - The tape needs an awful lot of prespecification!
  - Is every problem 'computable'?
  - Is every problem 'solved' by computation?



MIND  
A QUARTERLY REVIEW  
OF  
PSYCHOLOGY AND PHILOSOPHY

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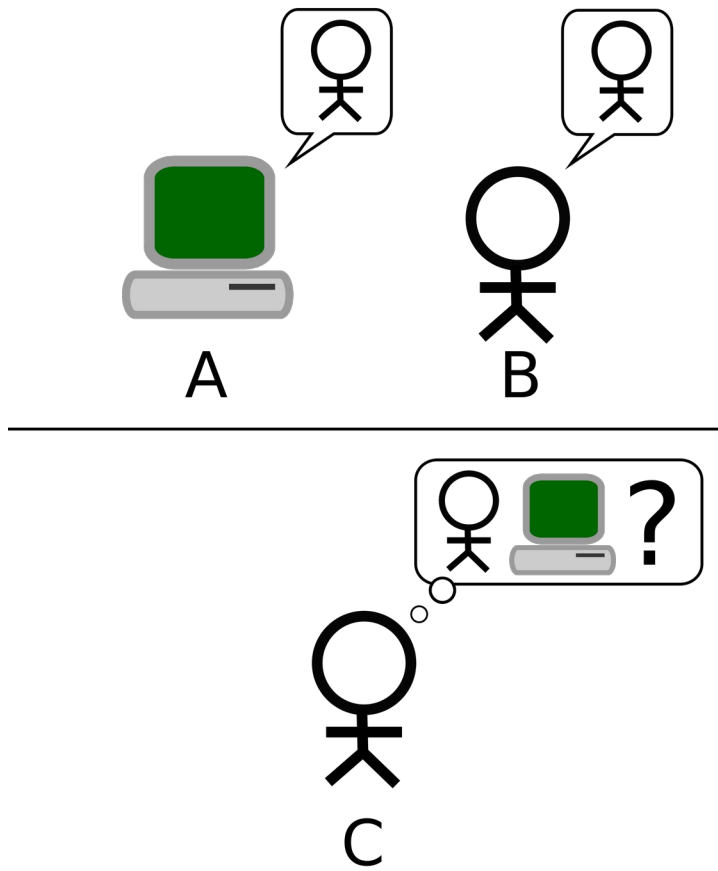
I.—COMPUTING MACHINERY AND  
INTELLIGENCE

BY A. M. TURING

1. *The Imitation Game.*

I PROPOSE to consider the question, 'Can machines think?' This should begin with definitions of the meaning of the terms 'machine' and 'think'. The definitions might be framed so as to reflect so far as possible the normal use of the words, but this attitude is dangerous. If the meaning of the words 'machine' and 'think' are to be found by examining how they are commonly

# The Turing Test – Imitation Game



- Original parlour game version – male or female?
- Typewritten questions, intentional deception, etc
- Much fun was had by all...
- Computer version 'does this machine 'think'? is simplified to human questioning a computer...

# Chat GPT 3.5



Do you consider yourself an individual?



I am not an individual in the traditional sense. I am a computer program created by OpenAI called GPT-3.5, designed to process and generate human-like text based on the input I receive. I don't possess consciousness, self-awareness, emotions, or personal experiences. My responses are generated based on patterns and information present in the data I was trained on.



Any appearance of individuality or understanding is a result of sophisticated programming and the vast amount of data I have been trained on. It's important to remember that while I can simulate understanding and engage in conversation, I do not possess genuine understanding or consciousness.

# Chat GPT 3.5



Are you deliberately deceiving me?



No, I am not deliberately deceiving you. I don't have the capacity for deception or intention. My responses are generated based on patterns in the data I was trained on and the input I receive. If you have a specific question or concern, please feel free to ask, and I'll do my best to provide a clear and accurate response.



# Chat GPT 3.5



Did someone tell you to say that?



No, nobody told me to say that. My responses are generated based on patterns in the data I was trained on and the input I receive from users. I do not have the capability to be told or directed by anyone, nor do I have the ability to follow instructions or receive external influence. My purpose is to provide helpful and accurate information based on the inquiries I receive. If you have any further questions or concerns, I'm here to assist you.



# Artificial Intelligence – Artificial Individuality

- Turing Test is the 'accepted' test of whether Artificial Intelligence can be said to be 'conscious', to have a mind...
  - iff conscious, then sentient, sapient - then individual ethical entity, has rights, etc
  - (and may want to take over the world, eradicate humans, etc)
- Some consider the test a joke
  - Marvin Minsky, undecidable problem, inadequate information... - surely something else is needed?
  - If a joke – it is a Wittgensteinian joke – 'sometimes the most important questions can only be addressed in the form of jokes'
- I contend the Turing Test is Valid – how else can we assess reified processes such as consciousness, self awareness...
  - Compare Contemporary Psychiatric Interview, MSE, CSE etc
  - Psychiatry is reverse engineered Turing Test!



"This is only a foretaste of what is to come  
and only the shadow of what is going to be"

Sarah John



"There is no writer alive more incisive and hilarious, more ruthlessly tender, when it comes to documenting the perversities of modern American life."

—*Los Angeles Times Book Review*

# CONSIDER THE LOBSTER

And Other Essays

**David Foster Wallace**

*Author of Infinite Jest*



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