

# Maths, Psychology and Mental Health

## Discussion Points

- In what ways can maths help us understand mental health?
- What are the limits of using data (e.g. statistics, algorithms) to diagnose or treat mental illness?
- How can psychological concepts (like bias, emotion, or cognition) affect the design of mathematical models?
- What ethical issues arise when using machine learning or prediction tools in mental health?
- How do we measure wellbeing — and should we try to?
- What happens when personal experience doesn't match what "the numbers" say?

## Have You Considered...?

- Exploring how statistics are used in psychology experiments — what does "significance" mean?
- Reading about how machine learning is being used to detect depression or anxiety from online behaviour?
- Looking into the mathematics of risk seeking and its challengers?
- Considering how mathematical tools like network theory or game theory are applied in therapy or group dynamics?
- Asking: how do numbers shape mental health policy, funding, and public perception?
- Writing a short reflection: *Can we "quantify" the human mind? Should we try?*

## Further Reading & Exploration

### ☐ **Gerd Gigerenzer – *Risk Savvy: How to Make Good Decisions***

*A corrective to pop-psych overreach—deeply relevant to how we interpret data in real-world contexts, including health.*

### ☐ **Annie Duke – *Thinking in Bets***

*Written by a former professional poker player turned decision theorist.*

### ☐ **Ed Yong – *An Immense World* or *I Contain Multitudes***

*Not strictly about psychology or mental health, but both books beautifully explore how perception and systems thinking reshape our view of minds, bodies, and behaviours.*

### ☐ **Lisa Feldman Barrett – *How Emotions Are Made***

*A bold, empirically rich theory of emotion that challenges the brain-as-machine model and opens up questions about categorisation, modelling, and subjectivity.*

### ☐ **Eleanor Morgan – *Hormonal***

*Combines memoir and scientific journalism. Great resource for thinking about lived experience alongside biomedical models.*

### ☐ **Matthew Cobb – *The Idea of the Brain***

*A history of how we've conceptualised the brain.*

### ☐ **Tanya Luhmann – *Of Two Minds: An Anthropologist Looks at American Psychiatry***

*An ethnographic deep dive into the culture of mental health care and diagnosis.*