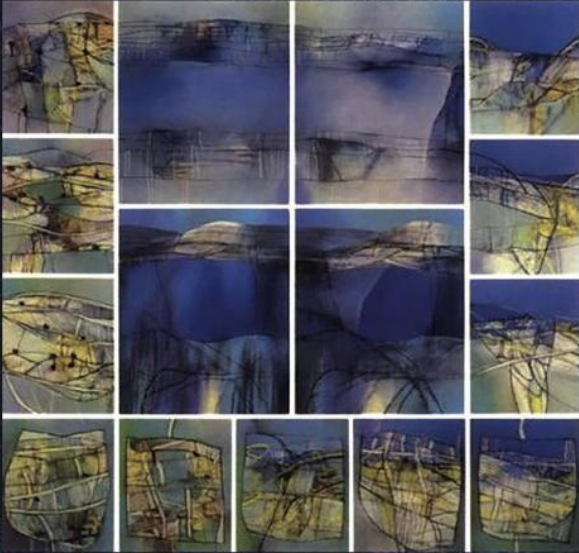


# ARTIFICIAL INTELLIGENCE

Humans at the Heart of Algorithms

*Second Edition*



Alan Dix

A Chapman & Hall Book

 CRC Press  
Taylor & Francis Group

## Chapter 23

Philosophical, ethical  
and social issues

# Generate and filter

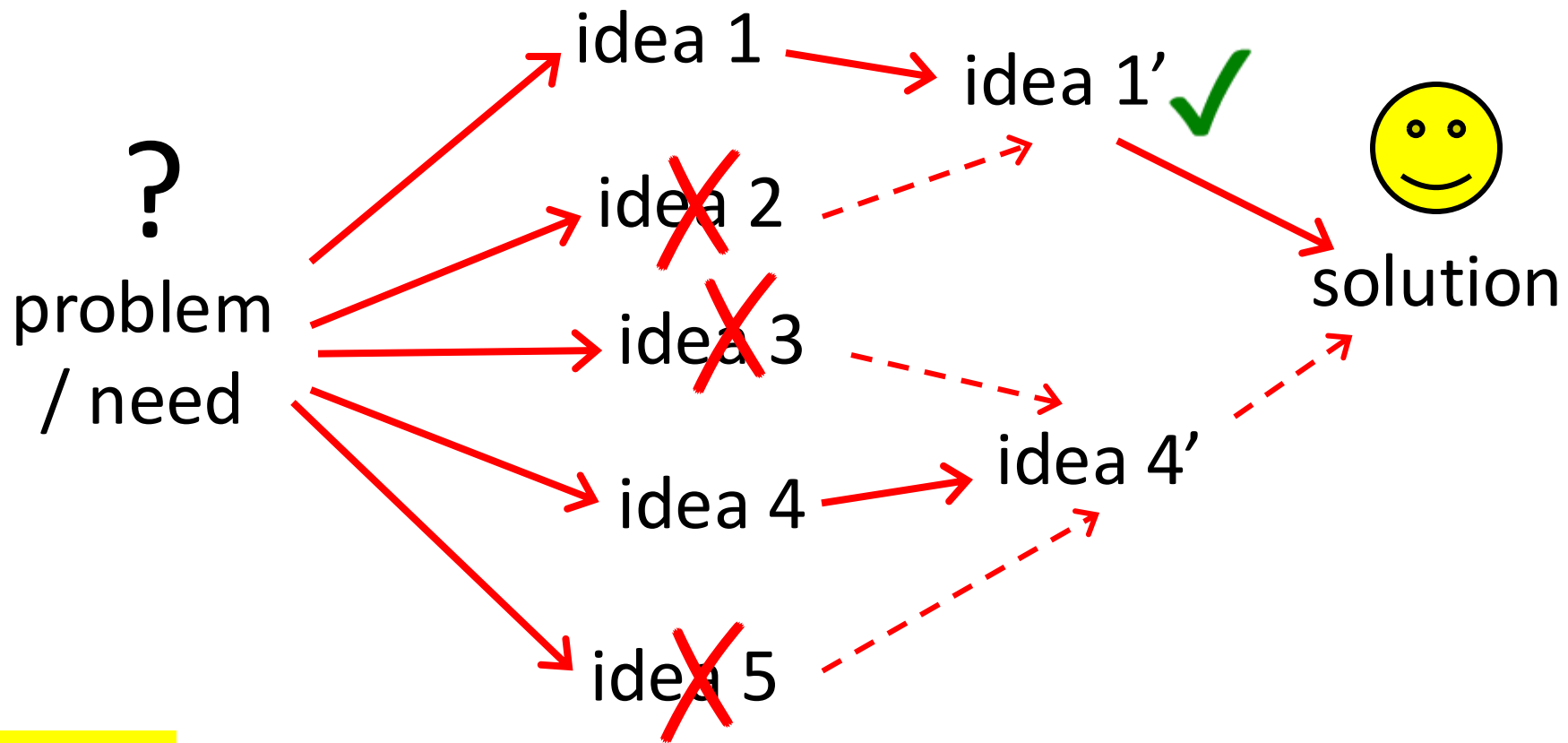


Fig. 23.1

# The UKRI AREA Framework for Responsible Innovation

- Anticipate** – Describe and analyse the impacts, intended or otherwise, that might arise. Do not seek to predict but rather support the exploration of possible impacts (such as economic, social and environmental) and implications that may otherwise remain uncovered and little discussed.
- Reflect** – Reflect on the purposes of, motivations for and potential implications of the research, together with the associated uncertainties, areas of ignorance, assumptions, framings, questions, dilemmas and social transformations these may bring.
- Engage** – Open up such visions, impacts and questioning to broader deliberation, dialogue, engagement and debate in an inclusive way.
- Act** – Use these processes to influence the direction and trajectory of the research and innovation process itself.

**Fig. 23.2**

Trolley problem – do you sacrifice one life to save five?

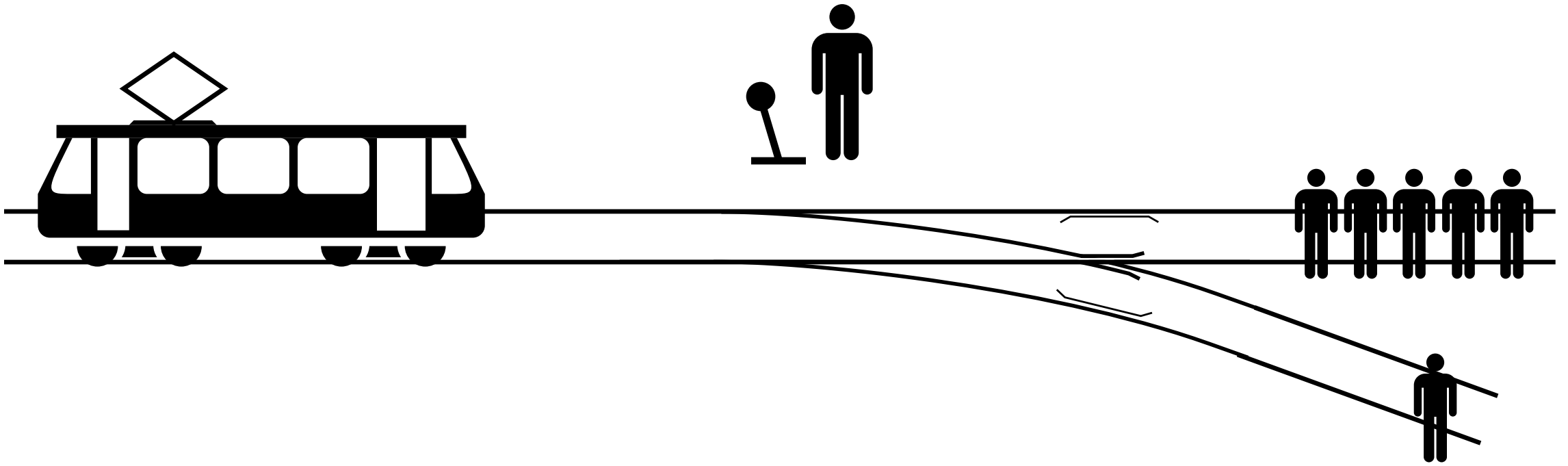


Fig. 23.3

# Trolley problem – do you sacrifice one life to save five?

do nothing

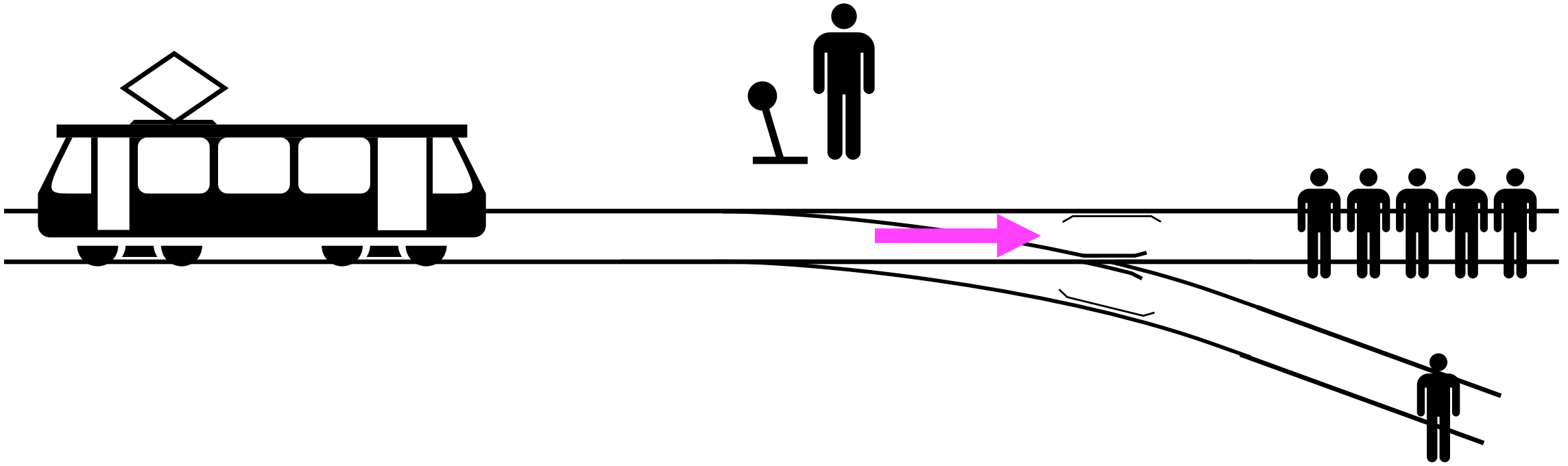


Fig. 23.3

# Trolley problem – do you sacrifice one life to save five?

do nothing

five people die

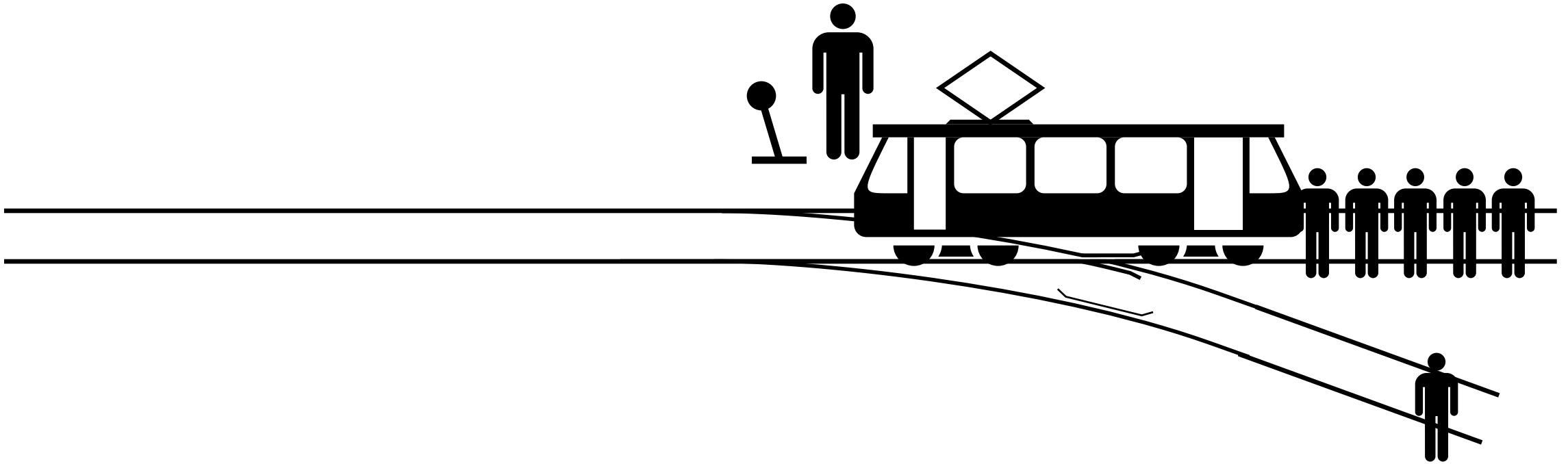


Fig. 23.3

Trolley problem – do you sacrifice one life to save five?

pull lever

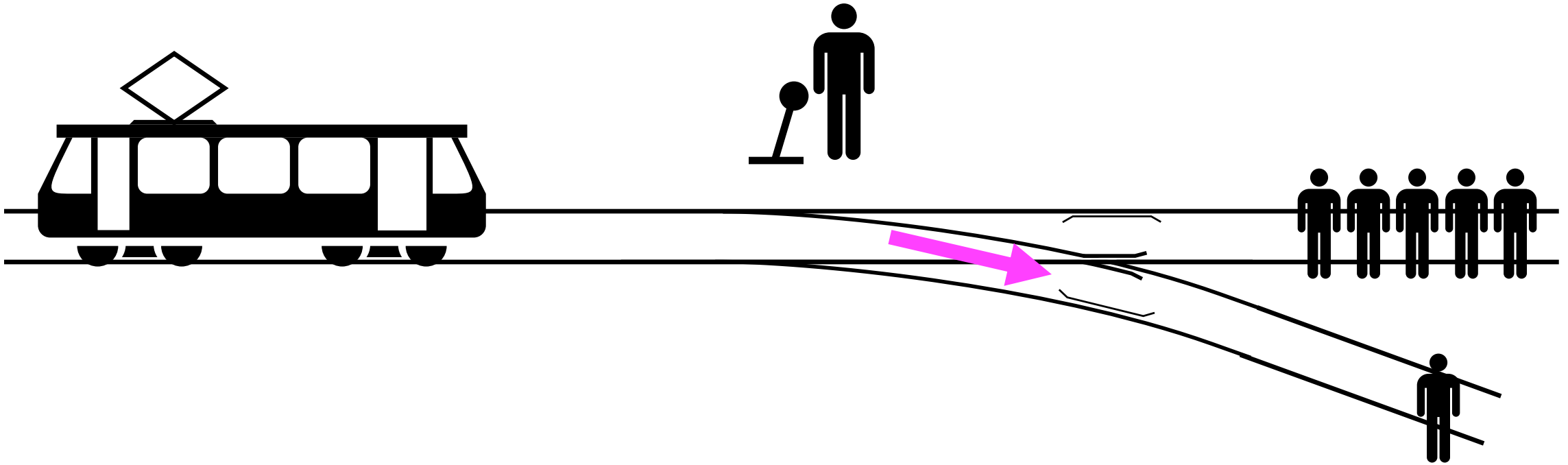
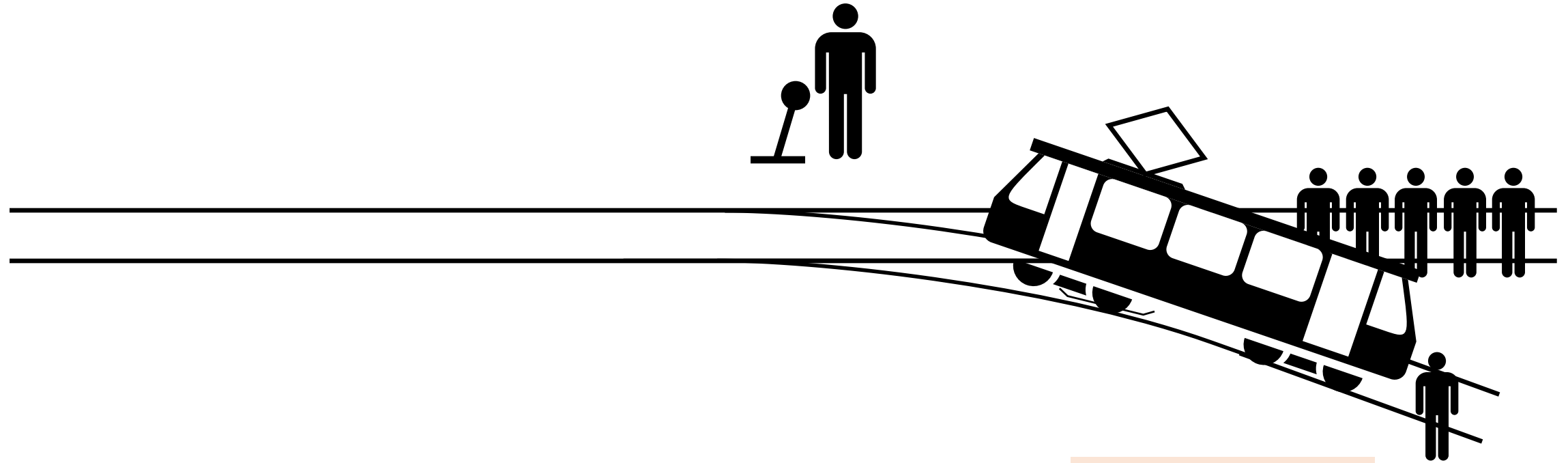


Fig. 23.3

# Trolley problem – do you sacrifice one life to save five?

pull lever

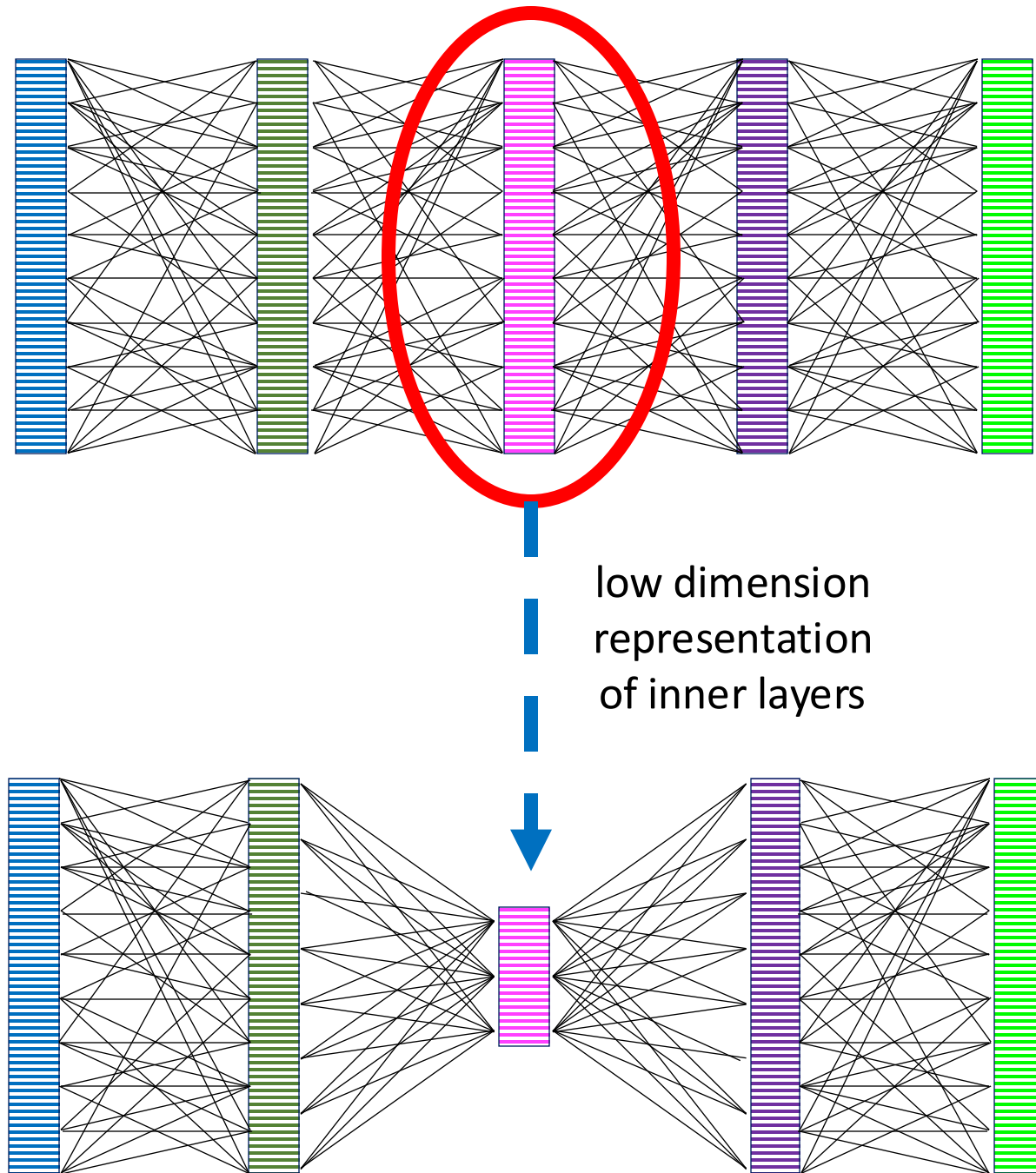
five saved



one dies

Fig. 23.3

Reducing the dimensionality of inner layers



**Fig. 23.4**