



**Artificial
Intelligence**



Governance



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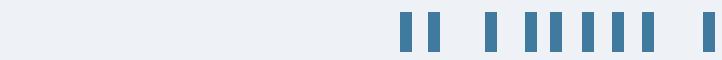
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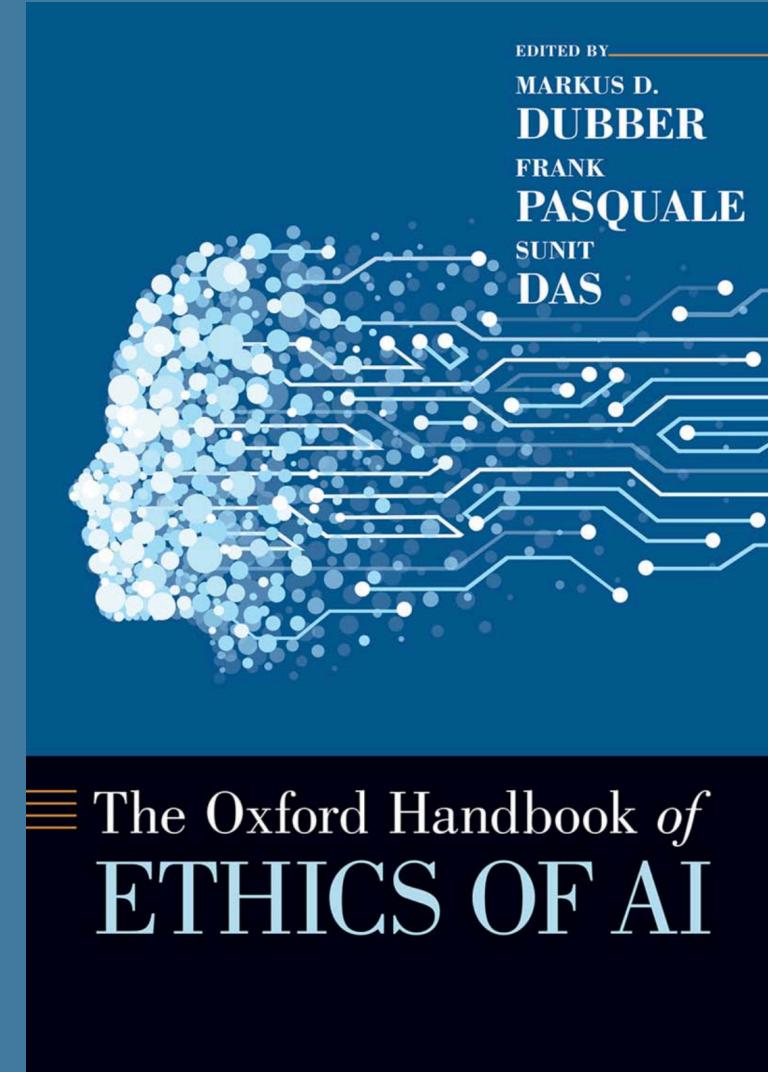
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The Oxford Handbook of Ethics of AI

Chapter 1





Intelligence is an ordinary process

"Artificial means that something has been made through human process. This means by default humans are responsible for it."

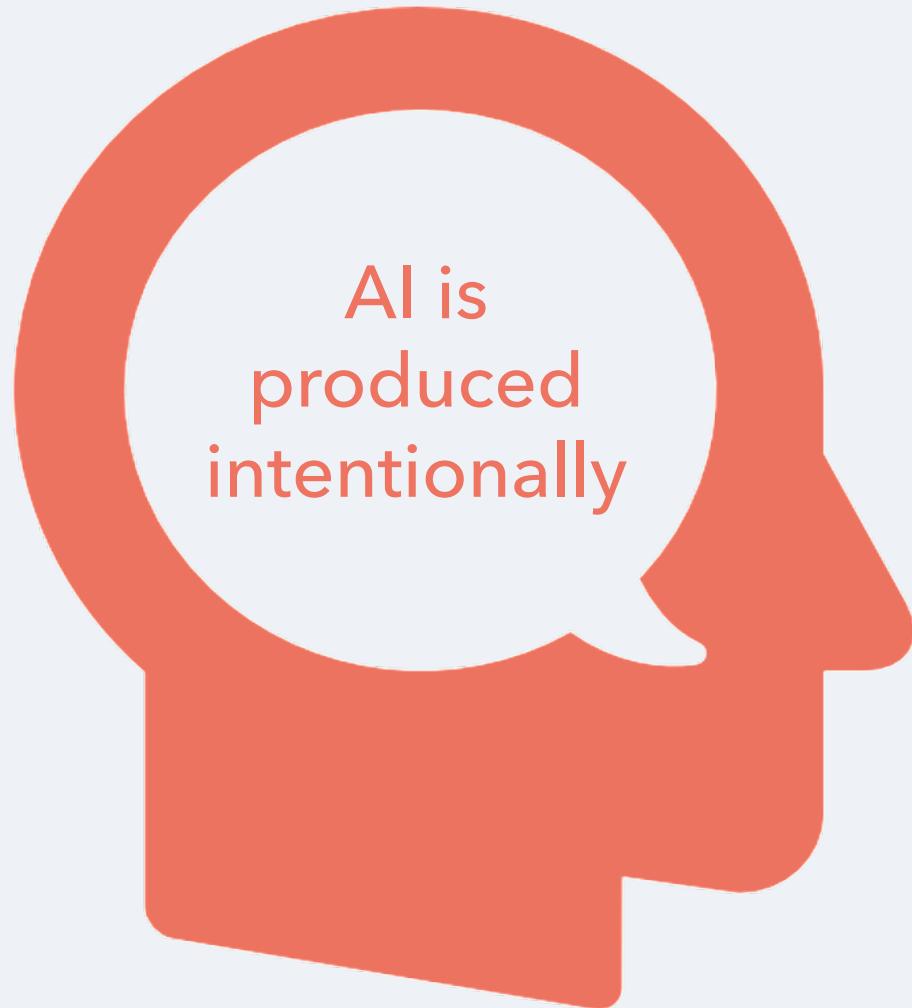
The Oxford Handbook of Ethics of AI P.5

*“Intelligence is the capacity to do
the right thing at the right time.”*

The Oxford Handbook of Ethics of AI P.4

AI only changes our responsibility as a
special case of changing every other
part of our social behavior.

A necessary point at which human
responsibility should end is never named.



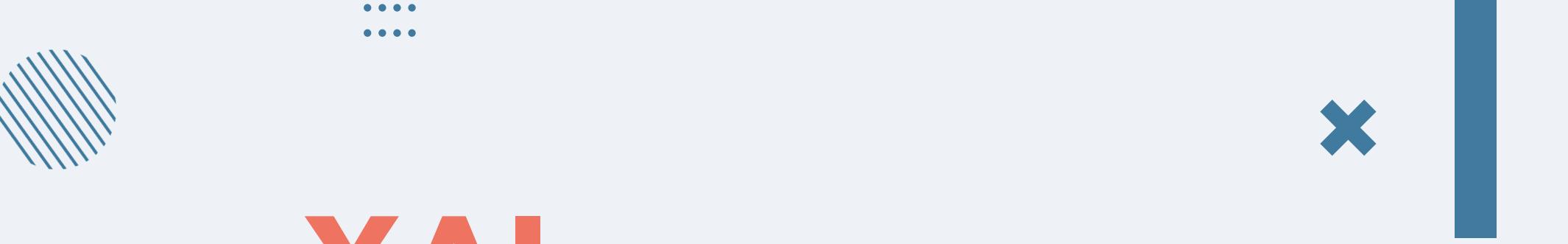
*"AI, Including machine learning,
occurs by design."*

The Oxford Handbook of Ethics of AI P.6



\ Machine Learning

Part of the process of
design has been
automated does not
mean that the system
itself is not designed.



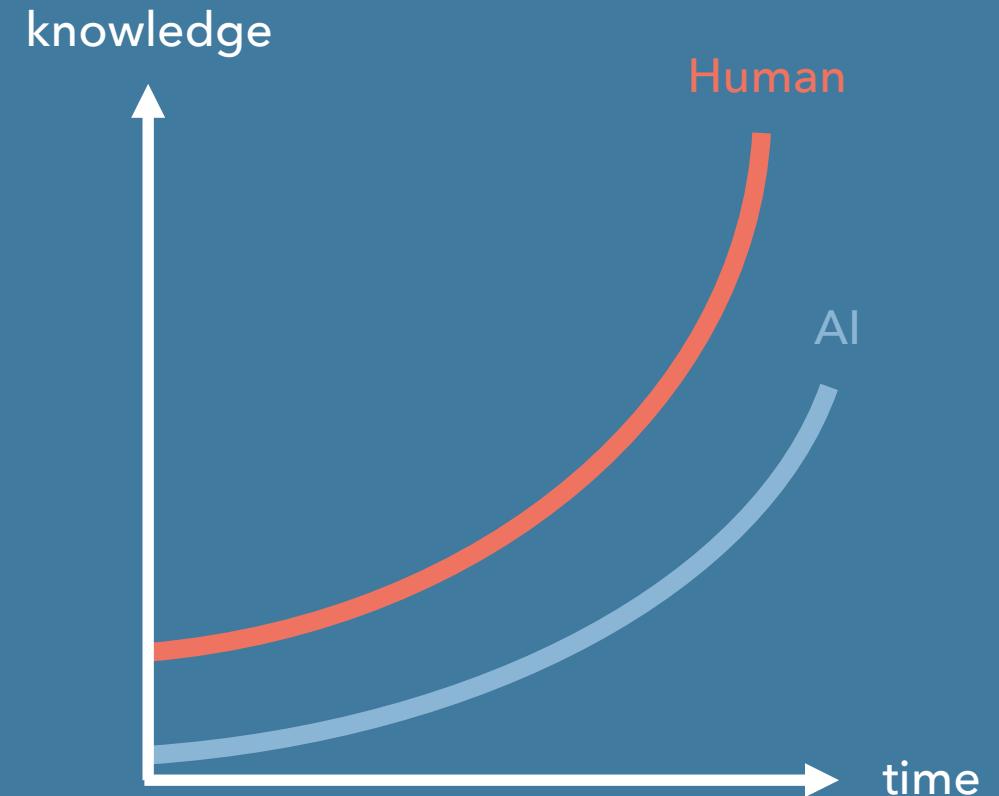
XAI Explainable AI

The performance of
designed artifacts is
readily explainable.

Intelligence increases by exploiting prior computation

Artificial and human intelligence will come to share nearly the same boundary of existent knowledge, though that boundary will continue to expand.

Human knowledge is expected to expand faster now



AI cannot produce fully replicated humans (all models are wrong)

"Creating an identical human to host a new brain is difficult physically, unethical and illegal as it's a form of cloning."

"Even if we could somehow replicate ourselves in an artifact, the average time for digital technologies and formats to become obsolete is way shorter than the average human life expectancy."



AI itself cannot be dissuaded by law or treaty

There is no way to ensure that an artifact could be held legally accountable.

Since the law has been made by humans, only humans can be held accountable.

Who's in charge? AI and Governance

1

Allowing innovation makes the level of detail, about exceptions that need to be specified, more manageable.

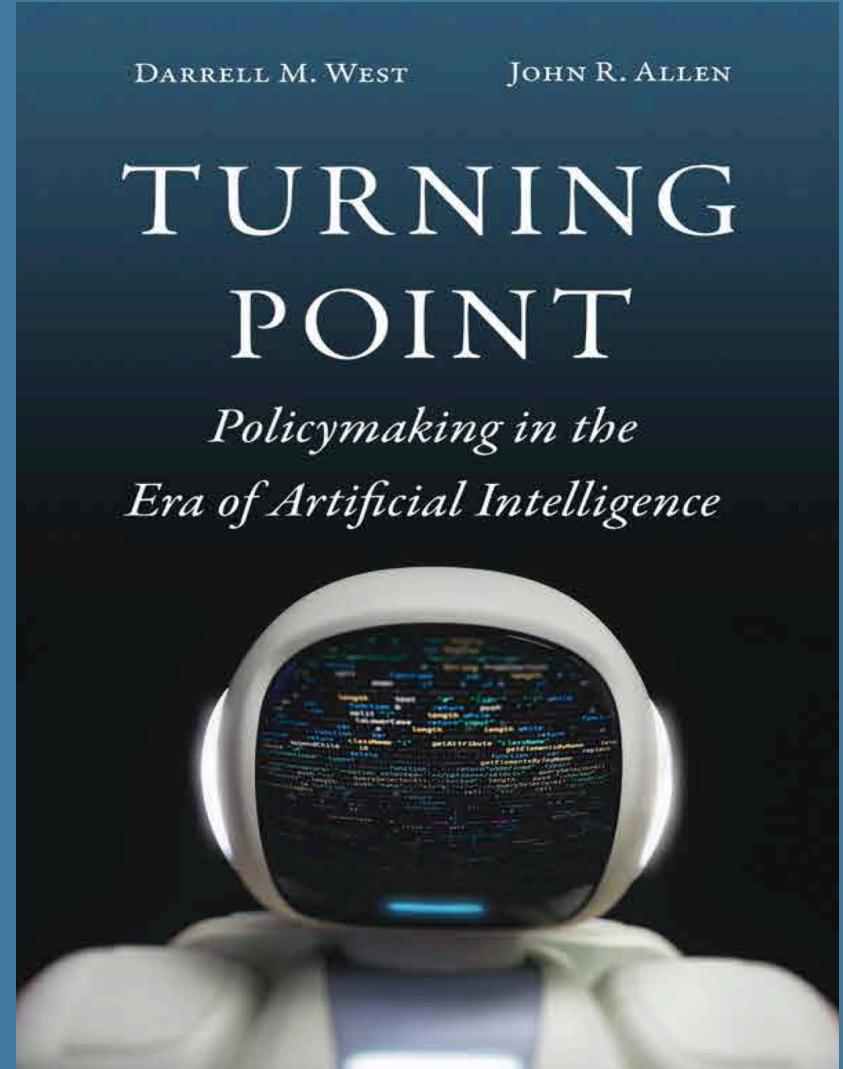
2

Innovation allows us to adjust to the unexpected and to find novel, sometimes better solutions.

|| | | | | |

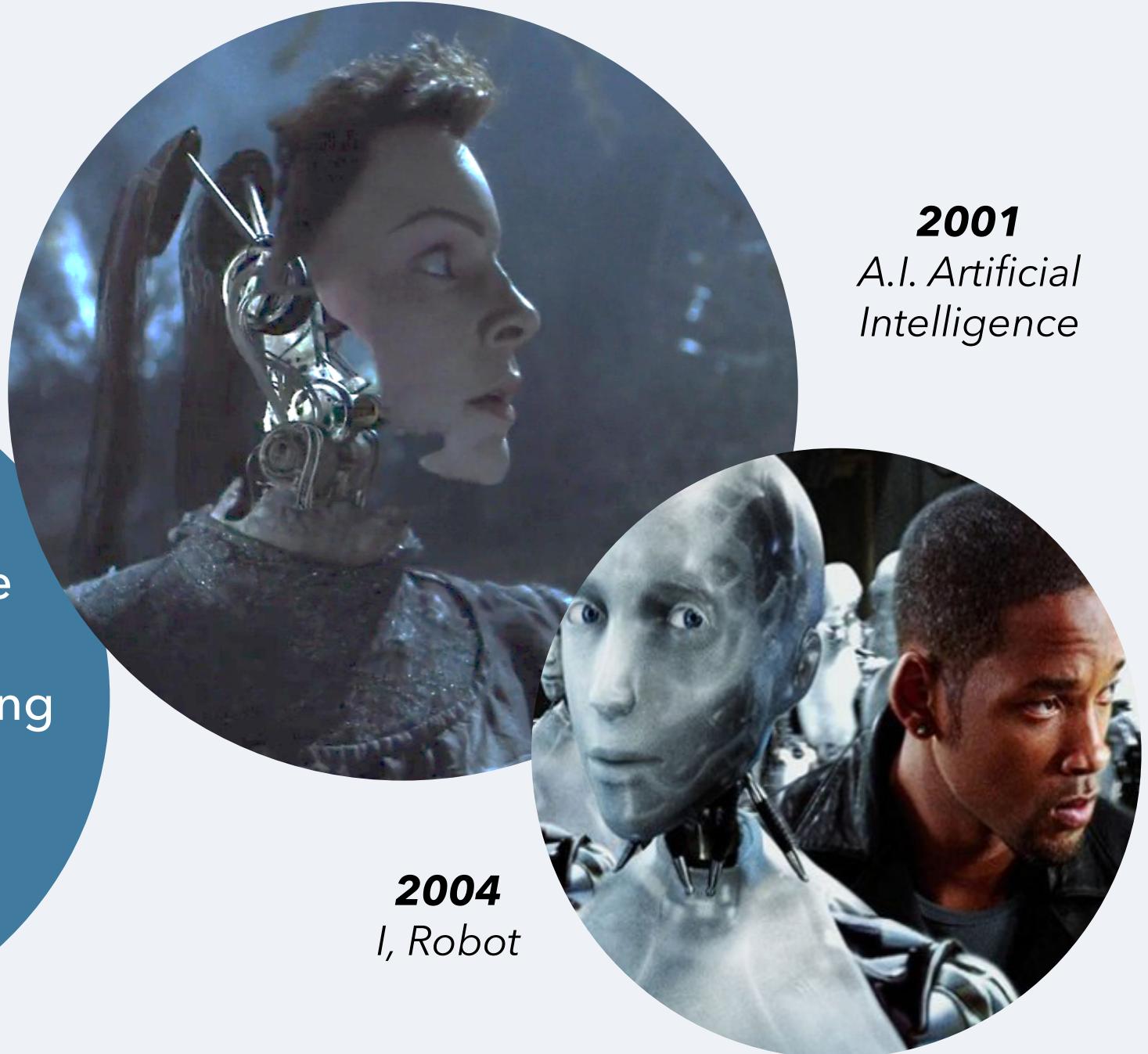
Turning Point

Chapter 1

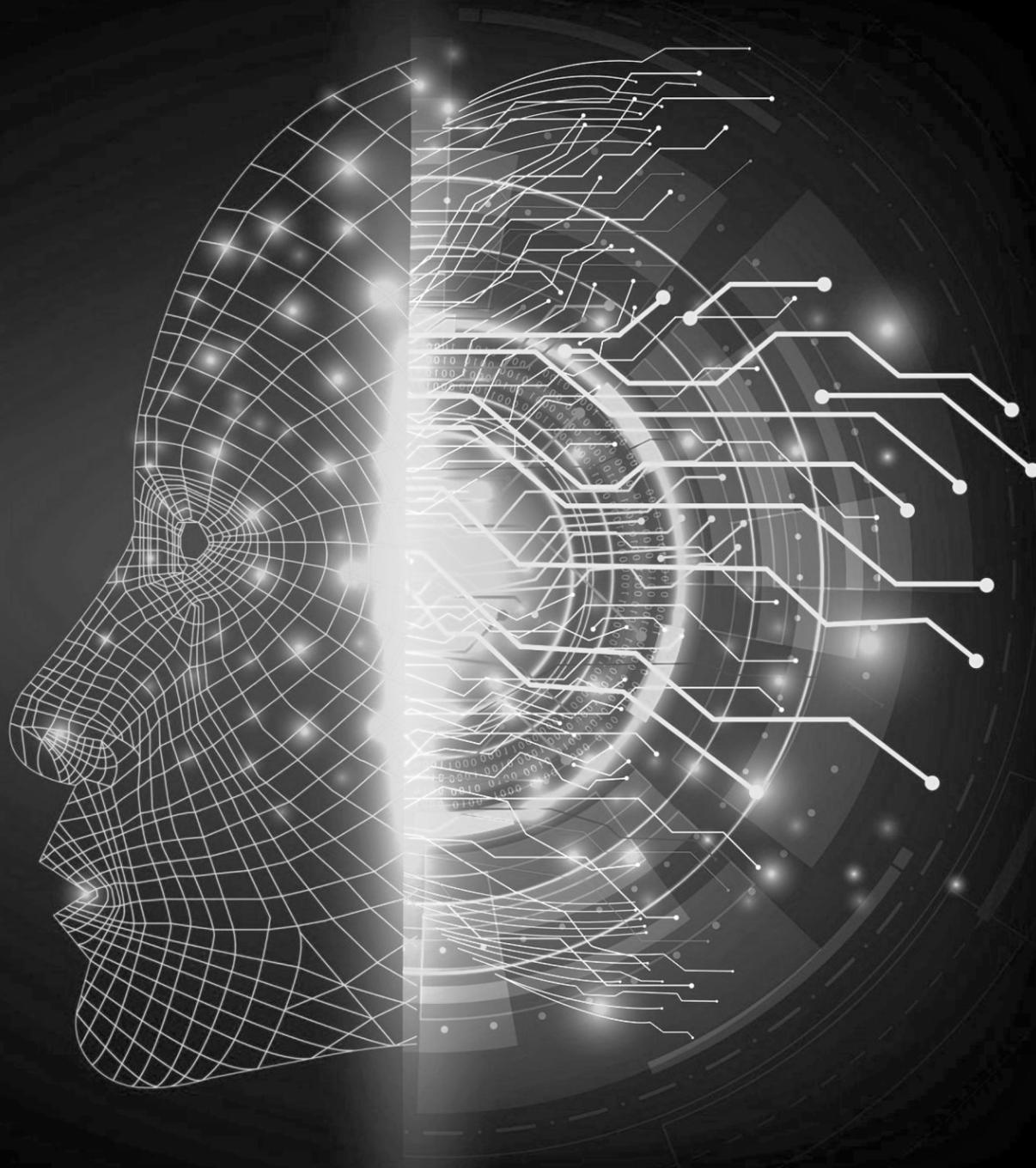


AI is a difficult concept to grasp.

Hollywood offers little help in improving people's understanding of advanced technologies.



Lack of Uniform Definition



AI Origins

Alan Turning "Think Machines":
Conceptualize the idea of AI in 1950

John McCarthy "Artificial Intelligence":
*"getting a computer to do things which, when
done by people, are said to involve intelligence."*



Alan Turning 艾倫·圖靈



John McCarthy

- 1997 May IBM's Deep Blue Super Computer
- 2011 Feb IBM's **Watson**
- 2015 Oct Google DeepMind **AlphaGo**
- 2017 Jan Google DeepMind **AlphaGo Master**

Defining AI

"machines that respond to stimulation consistent with traditional responses from humans, given the human capacity for contemplation, judgment, and intention."

Shukla Shubhendu & Jaiswal Vijay

Deep Learning

Statistics, Data
Pattern, and Trends

Natural Language Processing

Textual Information Analysis

What is AI?

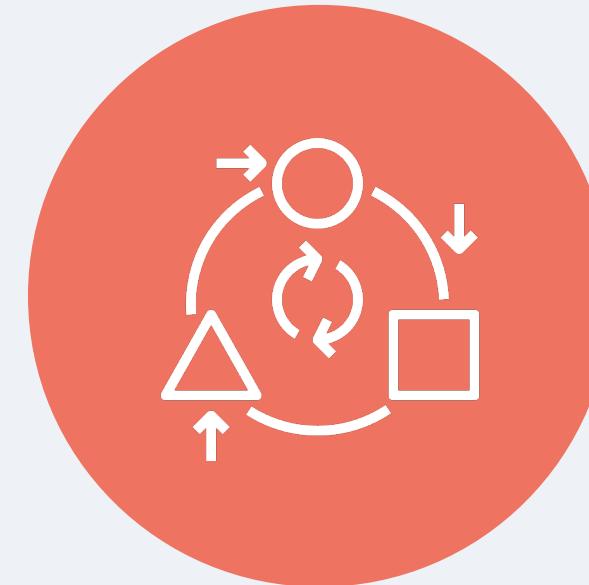
The Oxford Handbook of Ethics of AI P3-6.



Intentionality



Intelligence



Adaptability

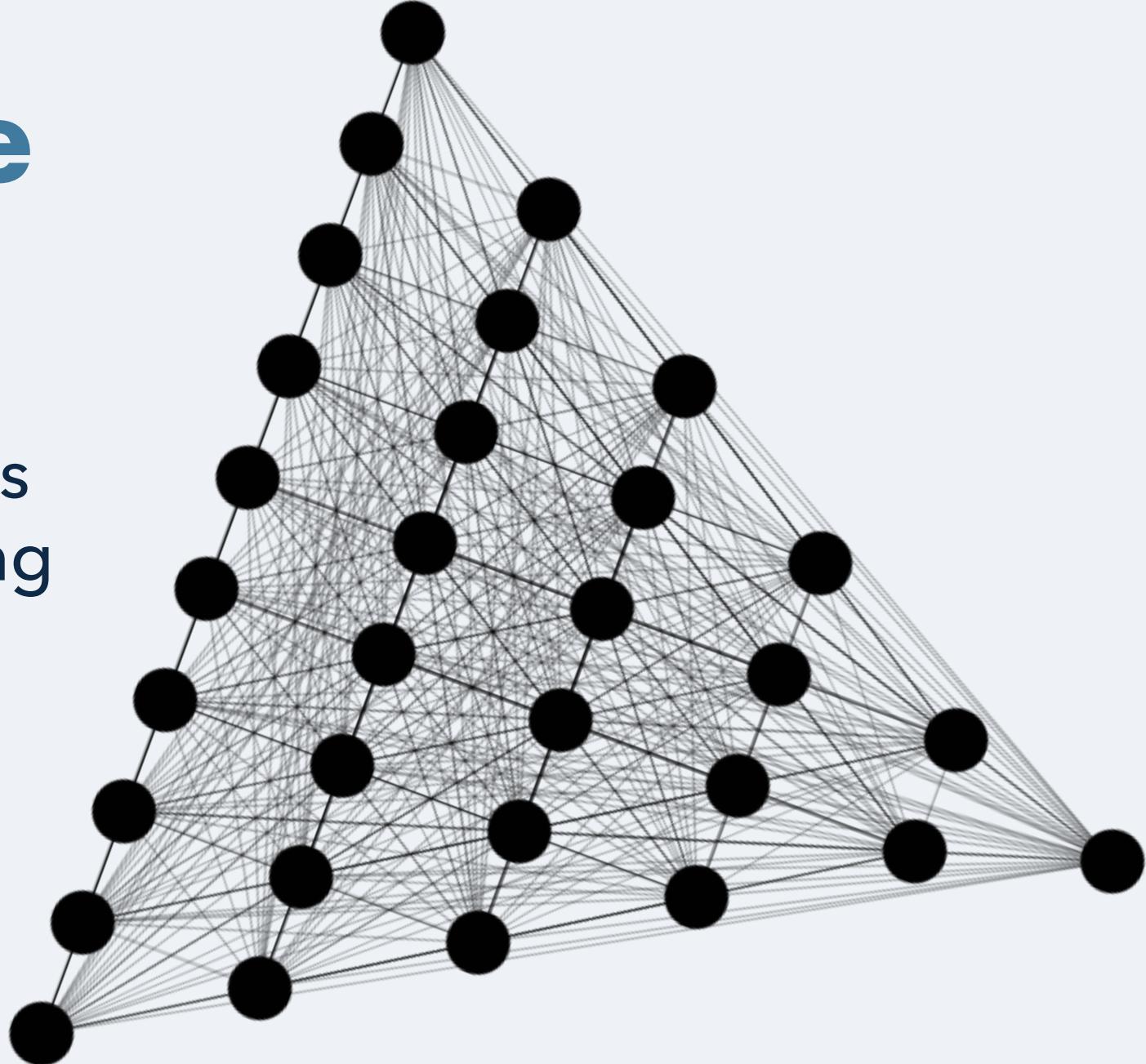
Intentionality

Artificial intelligence algorithms are designed to undertake actions or make decisions using real-time data.



Intelligence

AI is adept at finding statistical associations through deep learning technique.



Adaptability

Autonomous Vehicles: Tesla



AI systems are able to learn and adapt as they compile information and make decisions.



Virtual Assistant:
Amazon Alexa

AI Development





Governance

Facebook now can be considered a digital sovereign nation with over **2 billion** people.



Biases in Data & Algorithms

African American Names
16% less likely to be accepted



Ethics & Transparency

"Data accessible for exploration"

Offensive Applications

Deepfake



Technology

Deep Nude



Application

Legal Liability

1996
Telecommunications
Act

Placed major limits
on consumers'
ability to sue
internet companies

Geopolitical Considerations

Shifting Regional Alignments



How AI is utilized and viewed by the public

Human Control

How to gain **digital benefits** while minimizing AI's **detrimental, discriminatory, or dangerous features?**

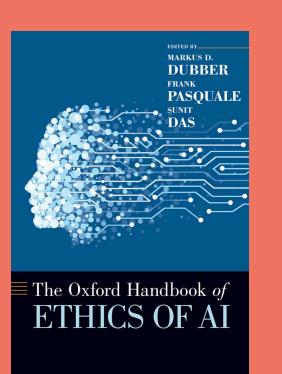
Review: Comparison & Critique

1

2

Comparison

Ethics of AI



Human **Should** be responsible for things created by themselves

Definition of AI, AI cannot be dissuaded by law

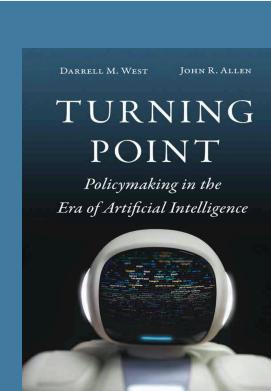
Human **Can** be responsible for things created by themselves

XAI, Intelligence increases by..., Cannot produce fully replicated humans

AI is created (designed) by human

Human **Should** and **Can** be responsible for AI

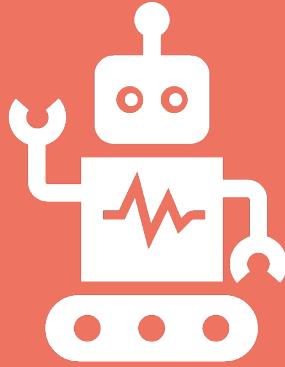
Turning Point



Introduction to AI

Focus on AI's applications and issues brought up

Support "Human is responsible for AI" weakly
(hardly mentioned)



**Is it impossible for
AI/Robots to have its
own consciousness?**

wakefulness

- Charged machine
- Operate normally according to instructions

awareness

self-awareness:
mirror test





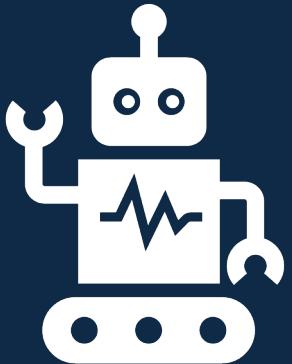
The mirror test is commonly used to identify whether animals are self-aware

"Qbo can recognize itself as an object doesn't actually mean that the robot is self-aware, but it's fun to think about all the same."

06 Dec 2011 | 12:50 GMT

Qbo Robot Passes Mirror Test, Is Therefore Self-Aware

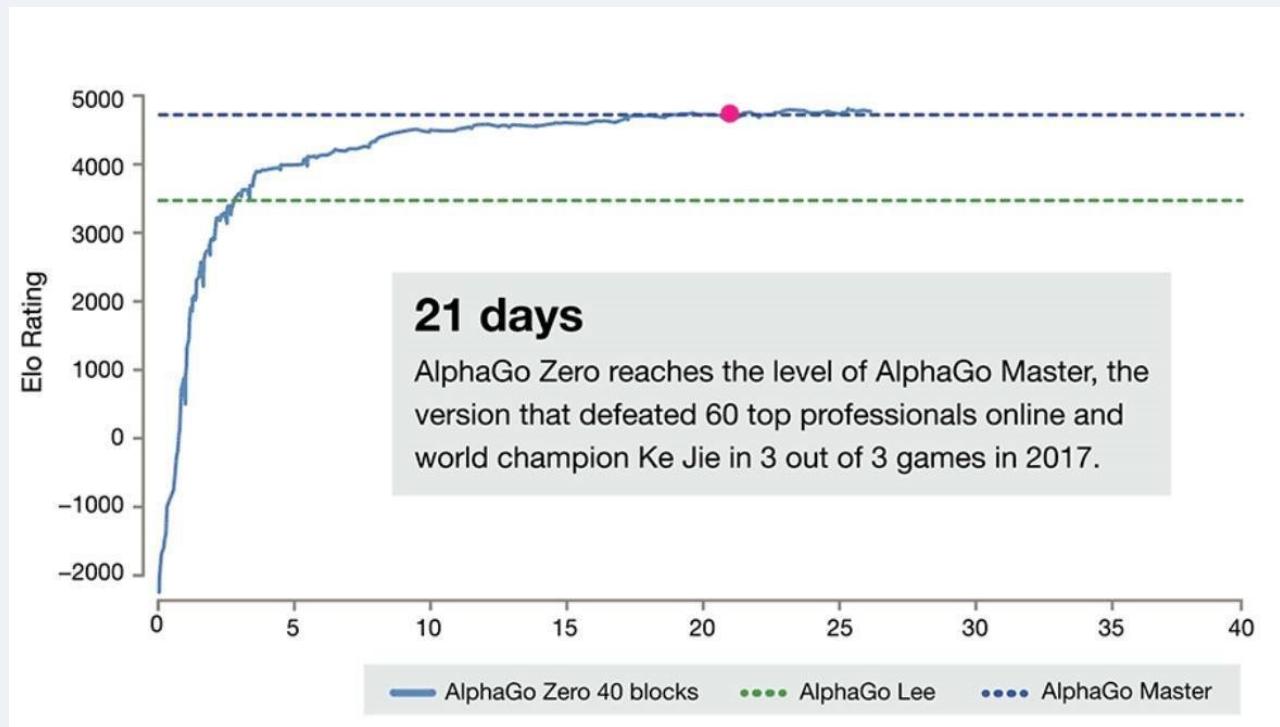
Qbo learns to recognize itself in a mirror, conclusively proving that robots are intelligent and self-aware



**Is XAI really that
explainable?**

AlphaGo Zero

- Does not rely on any human experience
- Unsupervised Learning (create its own data)



“Better knowledge also offers an opportunity for better control.”

Conclusion

**In the field of AI & Governance,
there are two main queries.....**

1

**What are the
AI ethical
issues?**

2

**Who are
responsible
for them?**

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