

and then the hammer broke: seeing machine vision

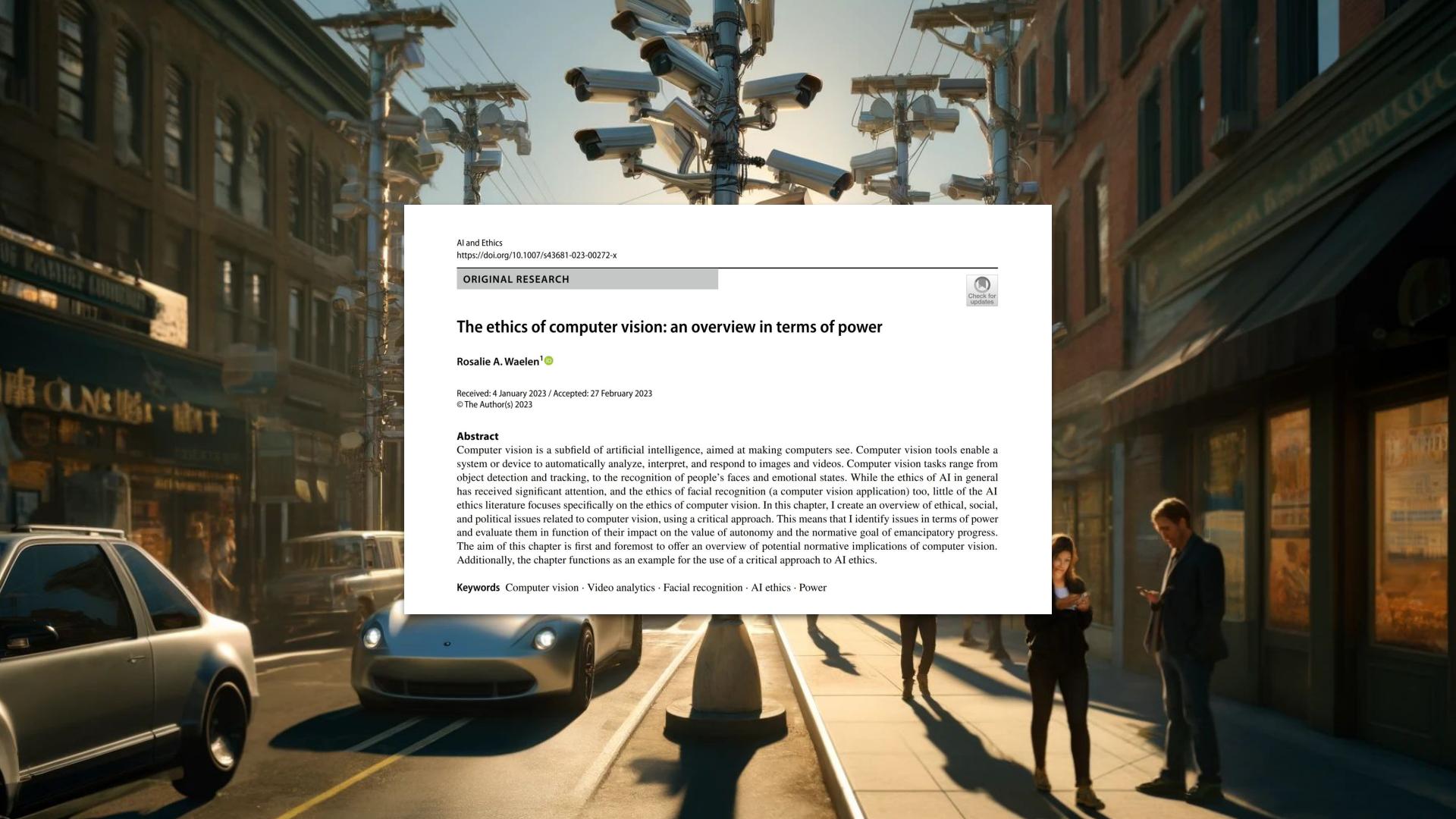


**“Seeing everything from nowhere...
this eye fucks the world to make
technomonsters.”**

Donna Haraway







AI and Ethics

<https://doi.org/10.1007/s43681-023-00272-x>

ORIGINAL RESEARCH



The ethics of computer vision: an overview in terms of power

Rosalie A. Waelen¹

Received: 4 January 2023 / Accepted: 27 February 2023

© The Author(s) 2023

Abstract

Computer vision is a subfield of artificial intelligence, aimed at making computers see. Computer vision tools enable a system or device to automatically analyze, interpret, and respond to images and videos. Computer vision tasks range from object detection and tracking, to the recognition of people's faces and emotional states. While the ethics of AI in general has received significant attention, and the ethics of facial recognition (a computer vision application) too, little of the AI ethics literature focuses specifically on the ethics of computer vision. In this chapter, I create an overview of ethical, social, and political issues related to computer vision, using a critical approach. This means that I identify issues in terms of power and evaluate them in function of their impact on the value of autonomy and the normative goal of emancipatory progress. The aim of this chapter is first and foremost to offer an overview of potential normative implications of computer vision. Additionally, the chapter functions as an example for the use of a critical approach to AI ethics.

Keywords Computer vision · Video analytics · Facial recognition · AI ethics · Power



AI and Ethics

<https://doi.org/10.1007/s43681-023-00272-x>

ORIGINAL RESEARCH

The ethics of computer vision: an overview in terms of power

Rosalie A. Waelen¹ 

Received: 4 January 2023 / Accepted: 27 February 2023

© The Author(s) 2023

Abstract

Computer vision is a subfield of artificial intelligence, aimed at making computers see. Computer vision system or device to automatically analyze, interpret, and respond to images and videos. Computer vision object detection and tracking, to the recognition of people's faces and emotional states. While the ethic of AI has received significant attention, and the ethics of facial recognition (a computer vision application) to ethics literature focuses specifically on the ethics of computer vision. In this chapter, I create an overview and political issues related to computer vision, using a critical approach. This means that I identify issues and evaluate them in function of their impact on the value of autonomy and the normative goal of eman. The aim of this chapter is first and foremost to offer an overview of potential normative implications of computer vision. Additionally, the chapter functions as an example for the use of a critical approach to AI ethics.

Keywords: Computer vision · Video analytics · Facial recognition · AI ethics · Power

CHAPTER

13 Race and Gender

[Get access >](#)

Timnit Gebru

<https://doi.org/10.1093/oxfordhb/9780190067397.013.16> Pages 252–269

Published: 09 July 2020

 Annotate  Cite  Permissions  Share ▾

Abstract

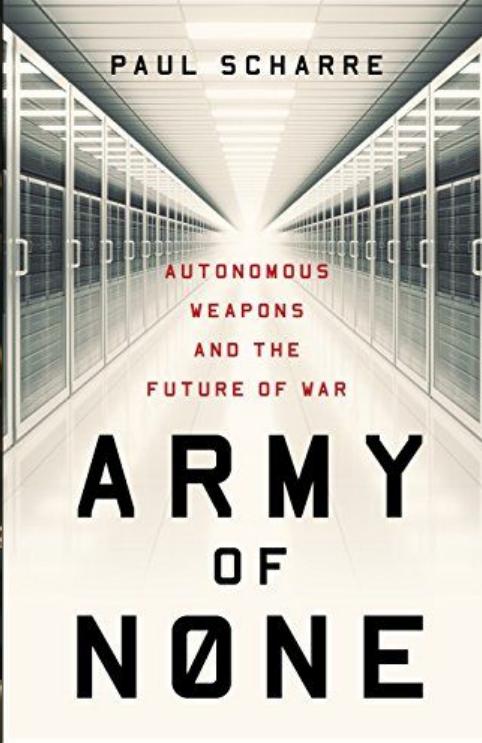
This chapter discusses the role of race and gender in artificial intelligence (AI). The rapid permeation of AI into society has not been accompanied by a thorough investigation of the sociopolitical issues that cause certain groups of people to be harmed rather than advantaged by it. For instance, recent studies have shown that commercial automated facial analysis systems have much higher error rates for dark-skinned women, while having minimal errors on light-skinned men. Moreover, a 2016 *ProPublica* investigation uncovered that machine learning-based tools that assess crime recidivism rates in the United States are biased against African Americans. Other studies show that natural language-processing tools trained on news articles exhibit societal biases. While many technical solutions have been proposed to alleviate bias in machine learning systems, a holistic and multifaceted approach must be taken. This includes standardization bodies determining what types of systems can be used in which scenarios, making sure that automated decision tools are created by people from diverse backgrounds, and understanding the historical and political factors that disadvantage certain groups who are subjected to these tools.

Keywords: race, gender, artificial intelligence, face-recognition systems, machine learning systems, societal biases, automated decision tools, AI ethics, machine learning fairness, fairness accountability transparency and ethics

Subject: IT and Communications Law, Law

Series: Oxford Handbooks

Collection: Oxford Handbooks Online



and Ethics
<https://doi.org/10.1093/oxfordhb/9780190067397.013.16> Pages 252–269

ORIGINAL RESEARCH

The ethics of computer vision: an overview in terms of power

Oosalie A. Waelen¹ 

Received: 4 January 2023 / Accepted: 27 February 2023
The Author(s) 2023

Abstract

Computer vision is a subfield of artificial intelligence, aimed at making computers see. Computer vision system or device to automatically analyze, interpret, and respond to images and videos. Computer vision object detection and tracking, to the recognition of people's faces and emotional states. While the ethics of computer vision have received significant attention, and the ethics of facial recognition (a computer vision application) in ethics literature focuses specifically on the ethics of computer vision. In this chapter, I create an overview of political issues related to computer vision, using a critical approach. This means that I identify issues and evaluate them in function of their impact on the value of autonomy and the normative goal of emanation. The aim of this chapter is first and foremost to offer an overview of potential normative implications of computer vision. Additionally, the chapter functions as an example for the use of a critical approach to AI ethics.

Keywords: Computer vision · Video analytics · Facial recognition · AI ethics · Power



CHAPTER

13 Race and Gender [Get access >](#)

Timnit Gebru

<https://doi.org/10.1093/oxfordhb/9780190067397.013.16> Pages 252–269

Published: 09 July 2020

 Annotate  Cite  Permissions  Share ▾

Abstract

This chapter discusses the role of race and gender in artificial intelligence (AI). The rapid permeation of AI into society has not been accompanied by a thorough investigation of the sociopolitical issues that cause certain groups of people to be harmed rather than advantaged by it. For instance, recent studies have shown that commercial automated facial analysis systems have much higher error rates for dark-skinned women, while having minimal errors on light-skinned men. Moreover, a 2016 *ProPublica* investigation uncovered that machine learning-based tools that assess crime recidivism rates in the United States are biased against African Americans. Other studies show that natural language-processing tools trained on news articles exhibit societal biases. While many technical solutions have been proposed to alleviate bias in machine learning systems, a holistic and multifaceted approach must be taken. This includes standardization bodies determining what types of systems can be used in which scenarios, making sure that automated decision tools are created by people from diverse backgrounds, and understanding the historical and political factors that disadvantage certain groups who are subjected to these tools.

Keywords: race, gender, artificial intelligence, face-recognition systems, machine learning systems, societal biases, automated decision tools, AI ethics, machine learning fairness, fairness accountability transparency and ethics

Subject: IT and Communications Law, Law

Series: Oxford Handbooks

Collection: Oxford Handbooks Online



CHAPTER

13 Race and Gender

[Get access >](#)

Timnit Gebru

<https://doi.org/10.1093/oxfordhb/9780190067397.013.16> Pages 252–269

Published: 09 July 2020

[Annotate](#) [Cite](#) [Permissions](#) [Share ▾](#)

Abstract

This chapter discusses the role of race and gender in artificial intelligence (AI). The rapid permeation of AI into society has not been accompanied by a proportionate investigation of sociopolitical issues. Because certain groups of people are harmed more than others by advanced technologies, for instance, recent studies have shown that commercial automated decision analysis systems have much higher error rates for dark-skinned women than for men, having minimal errors on light-skinned men. In 2016, a public investigation uncovered that machine learning-based tools that analyze crime and recidivism rates in the United States are biased against African Americans. Other studies show that natural language-processing tools trained on news articles exhibit societal biases. While many technical solutions have been proposed to alleviate bias in machine learning systems, a holistic and multifaceted approach must be taken. This includes standardization bodies determining what types of systems can be used in which scenarios, making sure that automated decision tools are created by people from diverse backgrounds, and understanding the historical and political factors that disadvantage certain groups who are subjected to these tools.

Keywords: race, gender, artificial intelligence, face-recognition systems, machine learning systems, societal biases, automated decision tools, AI ethics, machine learning fairness, fairness accountability transparency and ethics

Subject: IT and Communications Law, Law

Series: Oxford Handbooks

Collection: Oxford Handbooks Online



PAUL SCHARRE

AUTONOMOUS
WEAPONS
AND THE
FUTURE OF WAR

and Ethics

https://doi.org/10.1093/oxfordhb/9780190067397.013.16

OF HUMAN

RESOURCES

View in the

Chapter

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

Published online in

January 2020

Editor(s) 2020

Published online in

January 2020

Author(s) 2020

god trick

Computer vision is a subfield of artifi-
cial intelligence that focuses on giving
computers the ability to interpret visual
information from the world around them.
This chapter will introduce you to the
fundamental concepts of computer vision,
including how it works, what it can do,
and its potential applications. By the end
of this chapter, you'll have a solid
understanding of what computer vision
is and how it can be used.

AI has been accompanied by concerns that it may be biased against certain groups of people, particularly those from minority backgrounds. A recent study found that AI language-processing tools trained on news articles from major publications have learned stereotypes about race and ethnicity, such as associating dark-skinned individuals with negative traits like aggression and crime. The researchers also found that these biases were more pronounced in AI systems that used machine learning algorithms. This suggests that AI systems can perpetuate and even reinforce existing social biases. The implications of this for society are significant, as AI is increasingly used in decision-making processes across various fields, from law enforcement to hiring practices.

many tech systems have been proposed as multifaceted approaches to determining what kind of automated decision tools can be used by certain groups of people. Some of these tools.

Keyword race, gender, artificial intelligence, face-recognition, machine learning, bias, metal biases, automated decision tools, machine learning, transparency, accountability, ethics.

Subject: Intellectual Property Law
Books: Intellectual Property Law Books



A dramatic photograph of a hammer and a box resting on a dark wooden deck. The hammer, on the left, has a dark, textured handle and a head that is a glowing, ornate box. A bright blue light emanates from a circular opening on the box's head, and white energy arcs crackle around its base. The box itself is gold-colored with intricate silver patterns. To the right, another hammer lies on the deck, its head made of a rough, light-colored stone. The scene is set against a dark background with faint, glowing star-like particles.

Heidegger's Hammer

Thor's Hammer

A man with white hair and a beard is looking through a large, antique-style telescope. A bright, glowing stream of light erupts from the eyepiece, cascading down and mixing with the surrounding space. The background is a deep blue space filled with stars, nebulae, and a prominent, swirling galaxy on the right side.

playing god with telescopes

Haraway's god trick

new machines: machines that learn

A futuristic, bipedal robot with a metallic body and glowing red eyes is captured mid-air in a grand, classical library. The robot is positioned centrally, facing upwards towards a large arched window at the far end of the room. The floor is covered in a chaotic pile of numerous old, yellowed, and torn pieces of paper, books, and debris. The library features tall, dark wood bookshelves filled with books, ornate wooden balconies with railings, and large columns supporting the ceiling. Light streams in from the arched window, creating a bright focal point and illuminating the falling debris.

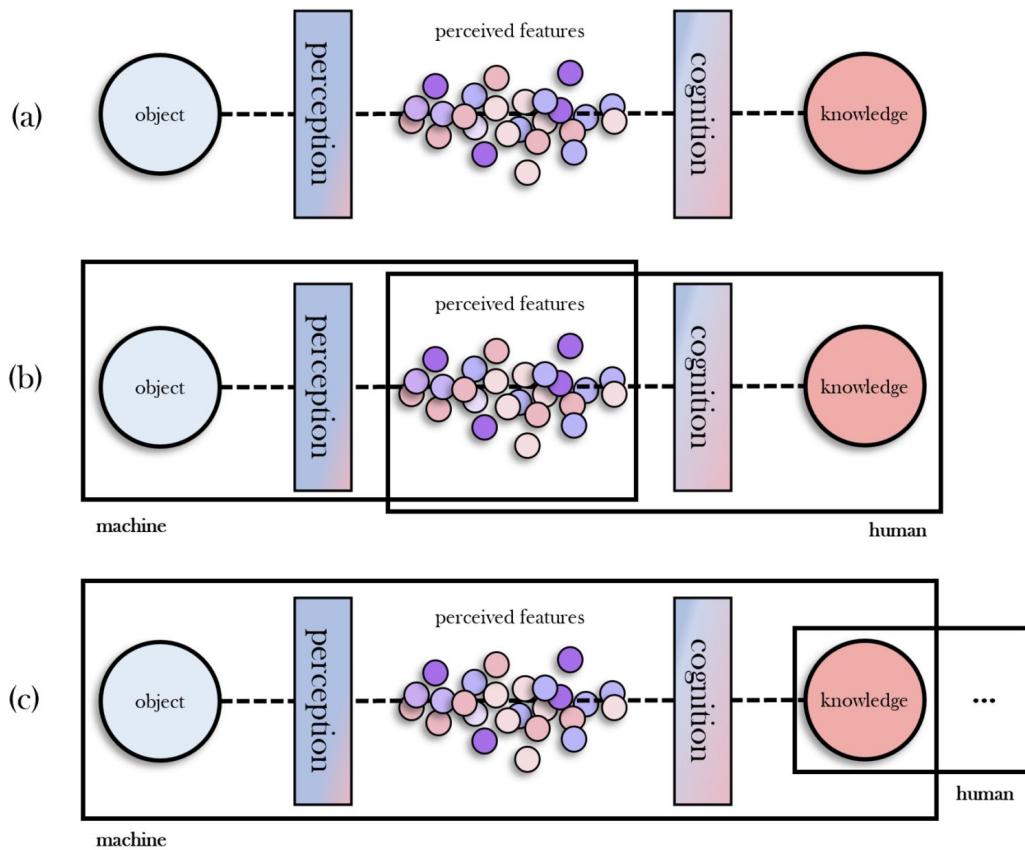


Figure 1: a) *Vision in general*: objects are mapped to perceived features, which are cognized as knowledge. b) *Vision for Haraway's machine vision*: the machine perceives the object and generates perceived features, which we cognize into (false) knowledge. c) *Vision for our contemporary machine vision*: the machine both perceives and cognizes the object, and we take the resulting knowledge and use it for some other purpose.

human intelligence

extended human intelligence
(with tools)

artificial intelligence

from gods to disciples:



the new god trick

machines are bad at playing gods



Heideggerian hammers require our ethical labor



Heideggerian hammers require our ethical labor



"With whose blood were my eyes crafted?"
Donna Haraway

