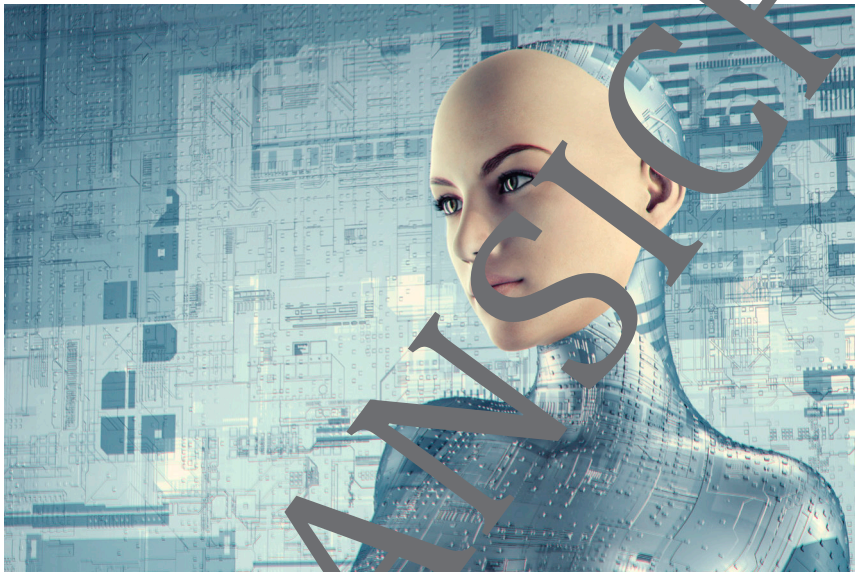


# Artificial Intelligence – Risks and benefits

by Rita Reinheimer-Wolf



© RAABE 2022

© gremlin/E+

Künstliche Intelligenz oder zumindest Elemente von künstlicher Intelligenz gibt es schon heute. Ob es Smart Home Geräte sind, autonome Elektro-Shuttles, die in einigen Städten schon anstelle von Linienbussen eingesetzt werden, oder Supermärkte, in denen die Kunden alle Artikel zum menschen und dann einfach den Laden verlassen, um später über eine App zu bezahlen: Künstliche Intelligenz ist bereits Bestandteil unseres jetzigen Lebens. Selbst bis zu den ersten selbstfahrenden Autos wird es nicht mehr weit sein.

Diese Unterrichtsreihe bietet den Schülerinnen und Schülern die Möglichkeit, die Chancen und Gefahren künstlicher Intelligenz zu erarbeiten und in interaktiven Formen zu diskutieren.

# Artificial Intelligence – Risks and benefits

by Rita Reinheimer-Wolf

<b>Facts</b>	1
<b>Notes on the material</b>	1
<b>Topic 1: Artificial Intelligence – What is it all about?</b>	4
<b>Topic 2: Defining Artificial Intelligence – AI explained in 10 minutes</b>	10
<b>Topic 3: Understanding the theory behind Artificial Intelligence – Learning about the theoretical background</b>	18
<b>Topic 4: Artificial Intelligence and me – AI in our everyday life of the future</b>	23
<b>Topic 5: Literary visions of the future – AI as seen by recent writers</b>	30

## Competences and skills:

This unit contains texts and tasks that can be classified as level B2/C1 (*Gemeinsamer Europäischer Referenzrahmen*). By working with the materials, students enhance their **reading skills**. Furthermore, they practise their competences in **explaining** and **analysing** texts when working closely with the extracts of non-fictional and fictional materials. Students' **speaking** and **presentation skills** are improved through short presentations covering short-cut topics. They demonstrate their **listening** and **viewing skills** by answering questions on the video. Other tasks (comment, characterisation) focus on **writing competence** and students' topic-related **vocabulary** knowledge.

## Overview:

List of abbreviations:

**A** Analysis

**CT** Creative task

**G** Group work

**LVC** Listening/viewing comprehension

**P** Working with a picture/cartoon

**R** Research

**S** Summary

**VI** Working with a video

**C** Comment

**D** Discussion/debate

**L** Language

**M** Mind map/visualisation

**PR** Presentation

**RC** Reading comprehension

**T** Working with a text

**W** Writing

Topic	Material	Methods/Skills
1: Getting started: AI – What is it all about?	M1	G, RC, W
2: Defining AI – Defining AI in 10 minutes	M2–M4	D, G, LVC, RC, W
3: Understanding the theory behind AI – Learning about the theoretical background	M5–M6	C, RC, T, W
4: AI and me – AI in our everyday lives of the future	M7–M9	D, G, RC
5: Literary visions of the future	M10–M14	A, C, D, G, PR, RC, T, W

## Topic 1: Artificial Intelligence – What is it all about?

### M1 Worksheet – Quotations about AI

#### Lead-in



1. Read the quotations about Artificial Intelligence in the grid below.



2. Classify each quotation as either positive, negative or neutral in its message.

3. Justify your decision. Make notes.

Quotations about Artificial Intelligence	Your notes (positive, negative, neutral)
<p>a) AI is likely to be either the best or worst thing to happen to humanity. (Stephen Hawking)</p>	
<p>b) We are not creative enough to make meaningful jobs out of nothing – and that's what we'll be left with when we give all the skilled labour and unskilled labour to machines. (A college professor)</p>	
<p>c) Artificial Intelligence is about replacing human decision making with more sophisticated technology. (Falguni Desai)</p>	

## Worksheet – Info box: Visions of the future

M4

### Working with the info box

- Explain the following expressions from the info box in English:
  - (to) envision a threatening future
  - manipulation of genes
  - reproductive cloning
  - (to) operate autonomously
  - Avatars
  - (to) embrace the potential of super-intelligent machines
  - (to) enhance something
  - cyborg
- Match the following collocations.

1. (to) tamper with	a) a rule
2. (to) violate	b) of entire human beings
3. the reproduction of	c) a cyborg
4. (to) bear	d) new forms of life
5. (to) enhance	e) nature
6. (to) operate	f) a task
7. (to) constitute	g) a striking resemblance
8. (to) perform	h) autonomously

- Based on the info box, write down five statements about what you think the future of science and technology will bring.
- Read your partner's statements and say whether you agree with them or not. Give reasons for your agreement/disagreement.  
The following list of topic-related vocabulary might help you.

big impact on the way self-driving cars are accepted in society. Who would buy a car programmed to sacrifice the owner?

So can science help? Today, we get an answer of sorts thanks to the work of Jean-François Bonnefon at the Toulouse School of Economics in France and a couple of pals. These guys say that even though there is no right or wrong answer to these questions, public opinion will play a strong role in how, or even whether, self-driving cars become widely accepted.

So they set out to discover the public's opinion using the new science of experimental ethics. This involves posing ethical dilemmas to a large number of people to see how they respond. And the results make for interesting, if somewhat predictable<sup>4</sup>, reading. "Our results provide but a first foray<sup>5</sup> into the thorny issues raised by moral algorithms for autonomous vehicles," they say.

Here is the nature of the dilemma. Imagine that in the not too distant future, you own a self-driving car. One day, while you are driving along, an unfortunate set of events causes the car to head toward a crowd of 10 people crossing the road. It cannot stop in time but it can avoid killing people by swerving into a wall. However, this collision would kill you, the owner and occupant. What should it do?

One way to approach this kind of problem is to act in a way that minimizes the loss of life. By this way of thinking, killing one person is better than killing 10.

But that approach may have other consequences. If fewer people buy self-driving cars because they are programmed to sacrifice their owners, then more people are likely to die because ordinary cars are involved in so many more accidents. The result is a Catch-22 situation.

Bonnefon and co are seeking to find a way through this ethical dilemma by gauging<sup>6</sup> public opinion. Their idea is that the public is much more likely to go along with a scenario that aligns with<sup>7</sup> their own views.

So these guys posed these kinds of ethical dilemmas to several hundred workers on Amazon's Mechanical Turk to find out what they thought. The participants were given scenarios in which one or more pedestrians could be saved if a car were to swerve into a barrier, killing its occupant or a pedestrian.

At the same time, the researchers varied some of the details such as the actual number of pedestrians that could be saved, whether the driver or an on-board computer made the decision to swerve and whether the participants were asked to imagine themselves as the occupant or an anonymous person.

## M11 Worksheet – Kazuo Ishiguro: *Klara and the Sun* (Part 1)



### Approaching the topic

1. Card survey: Imagine what the relationship between humans and androids might be like in the future. Will they be friends or foe? Write your ideas on cards (one idea per card) and stick them on a wall/blackboard.
2. Cluster the cards and find categories for them.
3. Discuss whether your class has a more positive or negative outlook on future relationships between androids and human beings.



### Working with the extract



4. Read the extract from the novel *Klara and the Sun*. Then answer the following questions in writing.



- a) What do you think is the novel about?
- b) How would you characterise the narrator?
- c) What is the atmosphere? Choose one of the following adjectives and justify your decision: gloomy – captivating – humorous – depressing – entertaining – joyful – sinister – haunting – sad – optimistic – futuristic – threatening – funny.
- d) What do you make of the label “B2” and the abbreviation “AF”?
- e) Speculate on a possible continuation of the story: what is going to happen to Rex, Rosa and the narrator?



5. Form small groups and prepare a brief presentation on the questions a–e from task 4. For your presentation, summarise your findings under the following headings: A. Topic, B. Characterisation, C. Atmosphere, D. Plot (Continuation). Your presentation can be carried out with the help of a flipchart or a computer (*PowerPoint*).
6. Finally, which suggested plot continuation) do you consider to be most probable? Take a vote.

# Sie wollen mehr für Ihr Fach?

## Bekommen Sie: Ganz einfach zum Download im RAABE Webshop.



**Über 5.000 Unterrichtseinheiten**  
sofort zum Download verfügbar



**Webinare und Videos**  
für Ihre fachliche und  
persönliche Weiterbildung



**Attraktive Vergünstigungen**  
für Referendar:innen mit  
bis zu 15% Rabatt



**Käuferschutz**  
mit Trusted Shops



Jetzt entdecken:  
**www.raabe.de**