

Was kann Künstliche Intelligenz (noch) (nicht)?

Axel Polleres

<https://doingswithdata.wordpress.com/2026/01/20/was-kann-kunstliche-intelligenz-noch-nicht/>





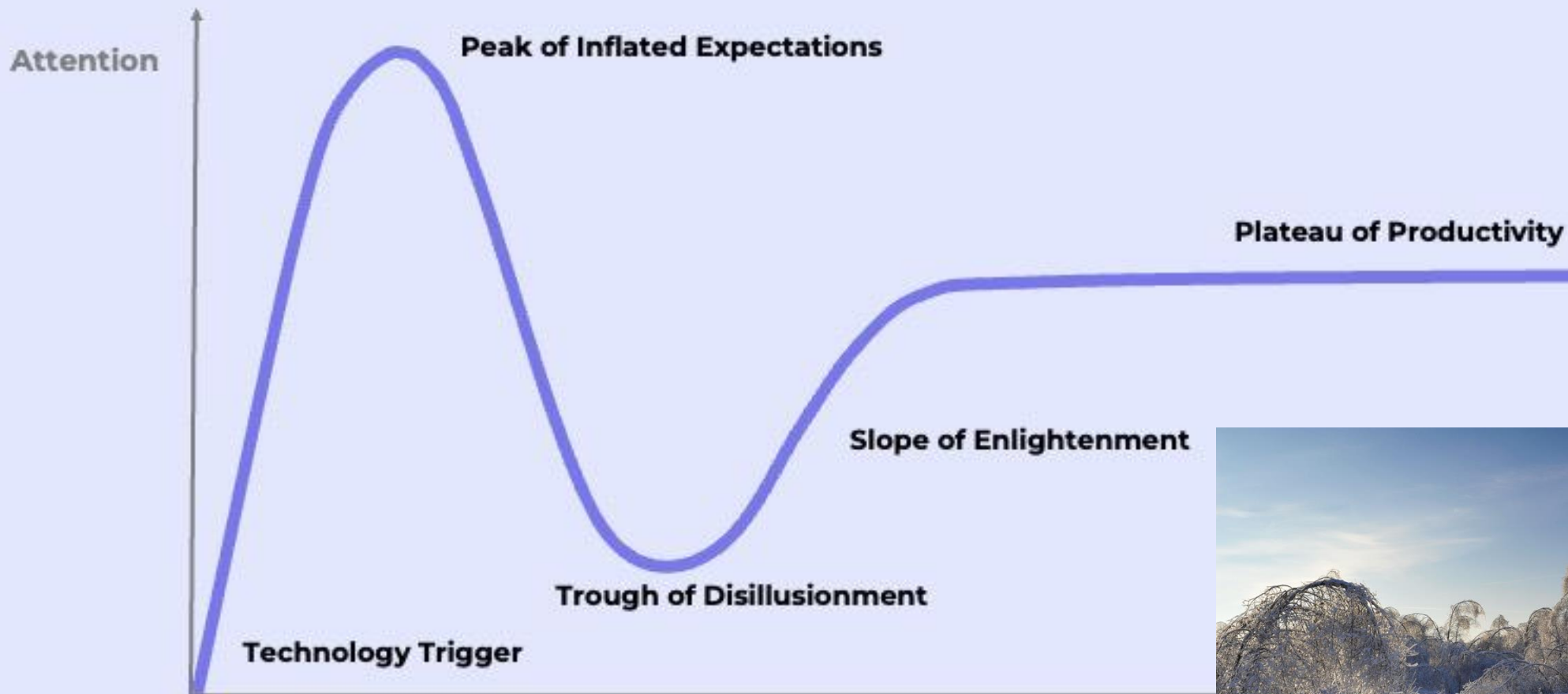
„Darthmouth Workshop“ mit John McCarthy, Marvin Minsky, Claude Shannon, and Nathaniel Rochester im August 1956,



Logistik und Steuerung in modernen Containerhafen und Industriebetrieben funktioniert weitgehend automatisiert, basierend auf robusten Algorithmen, von denen viele ursprünglich aus der KI-Forschung stammen. (Quelle: [Wikipedia](#))

many

The Hype Cycle^s of AI



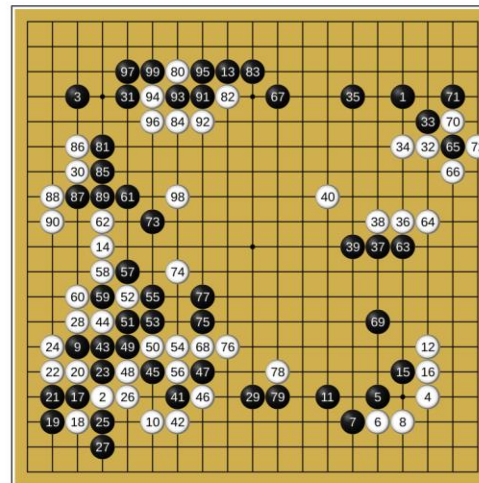
Source: Gartner



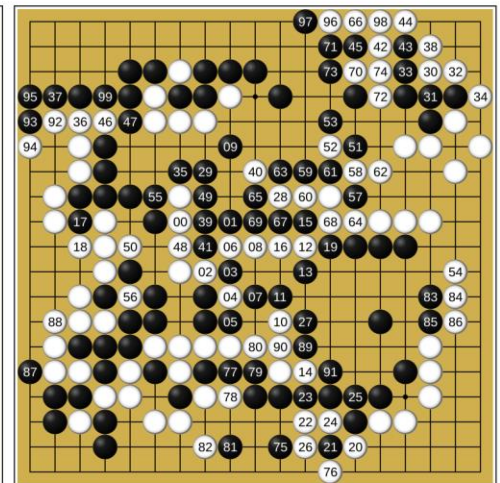


1997

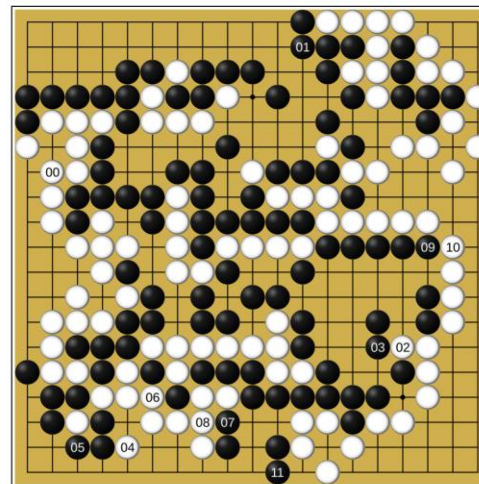
2016



First 99 moves



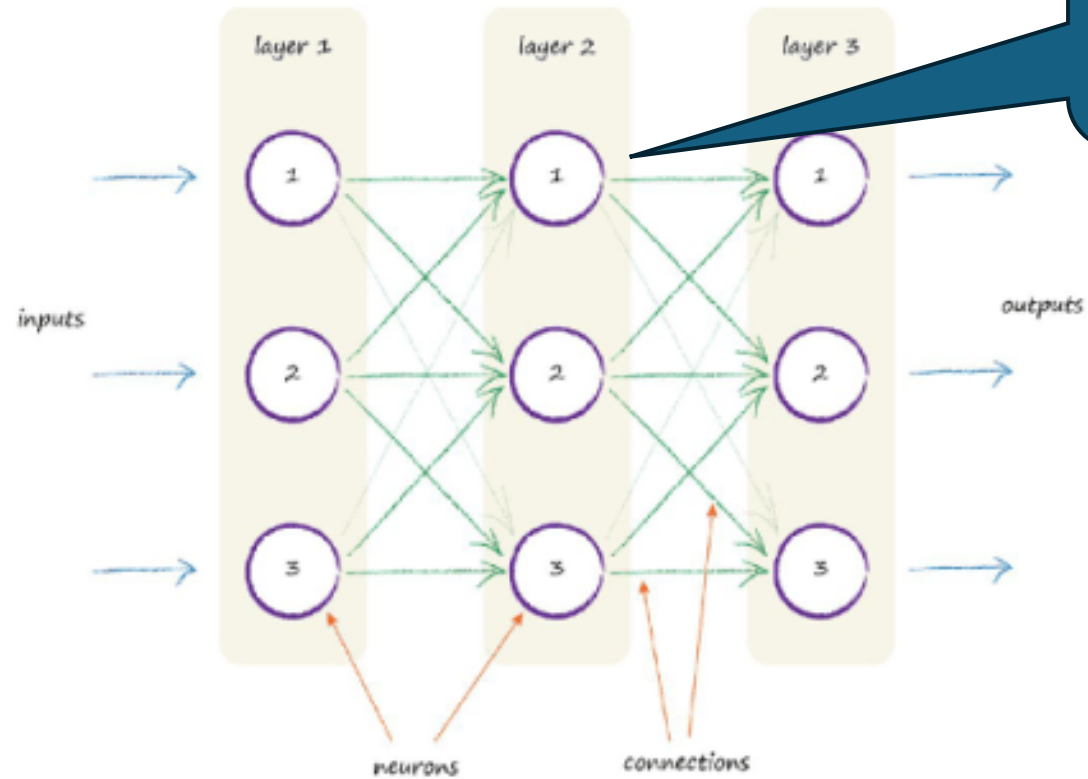
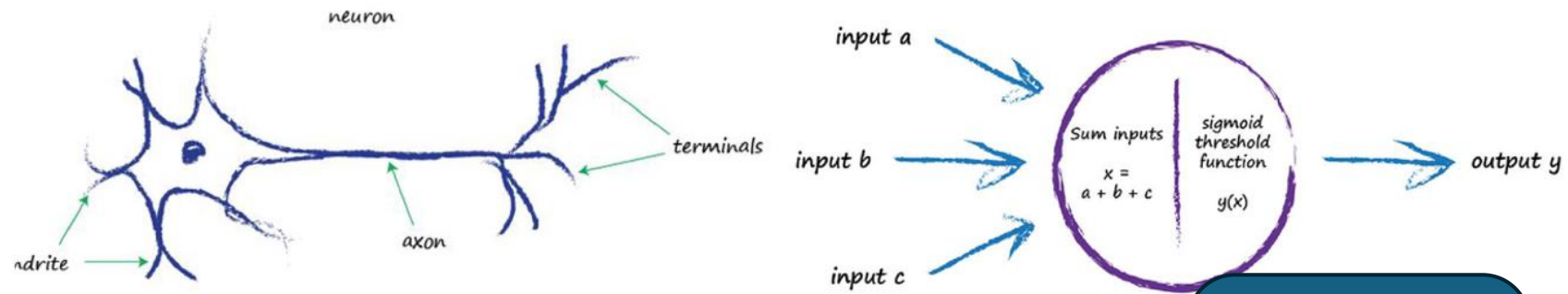
Moves 100-199



Moves 200-211



Neuronale Netze



Gewichte
Summen

Lernen durch Konditionierung:

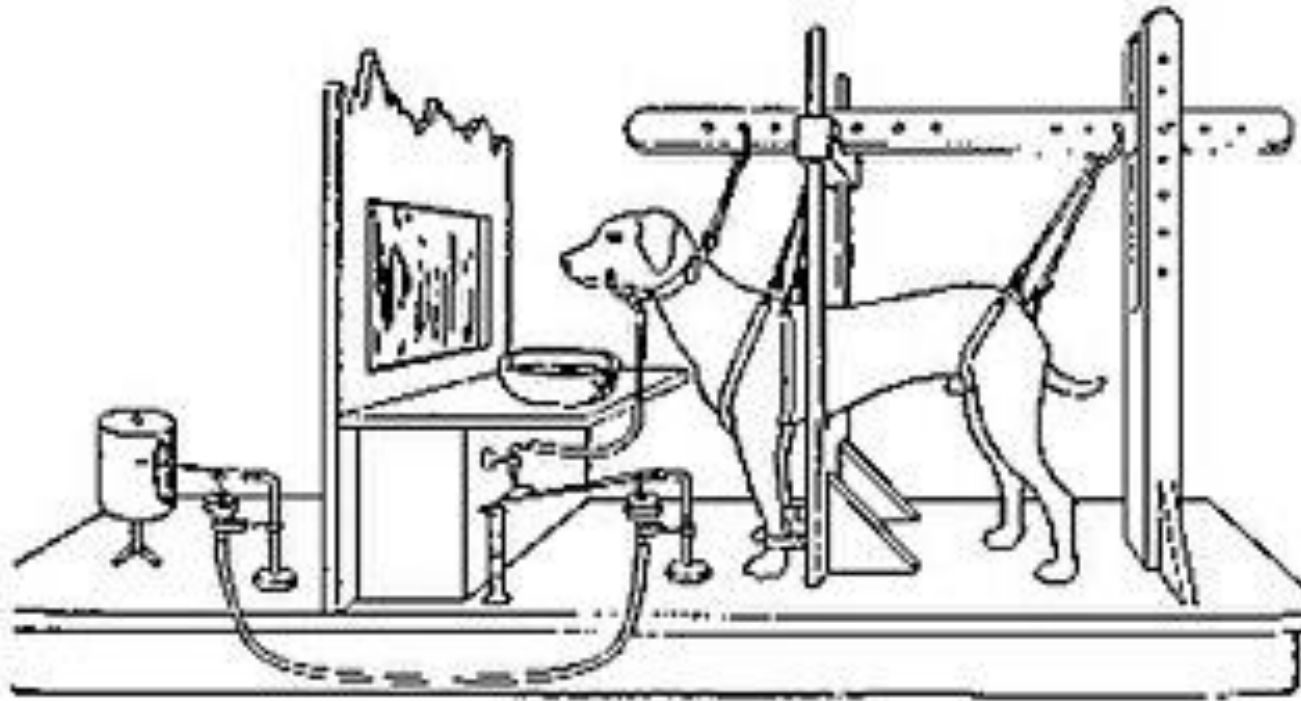
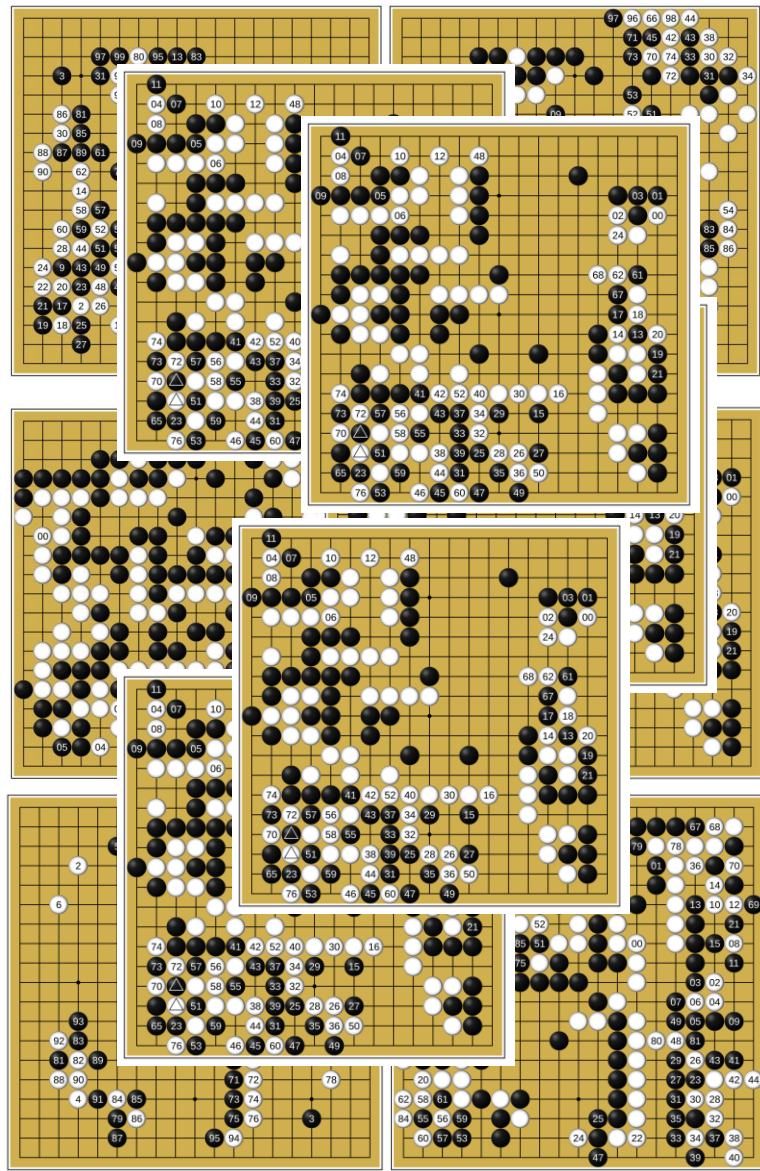
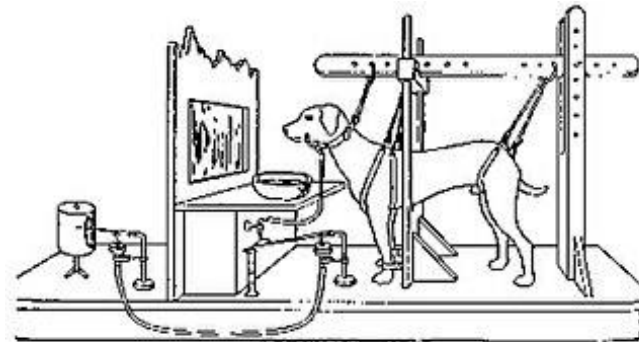
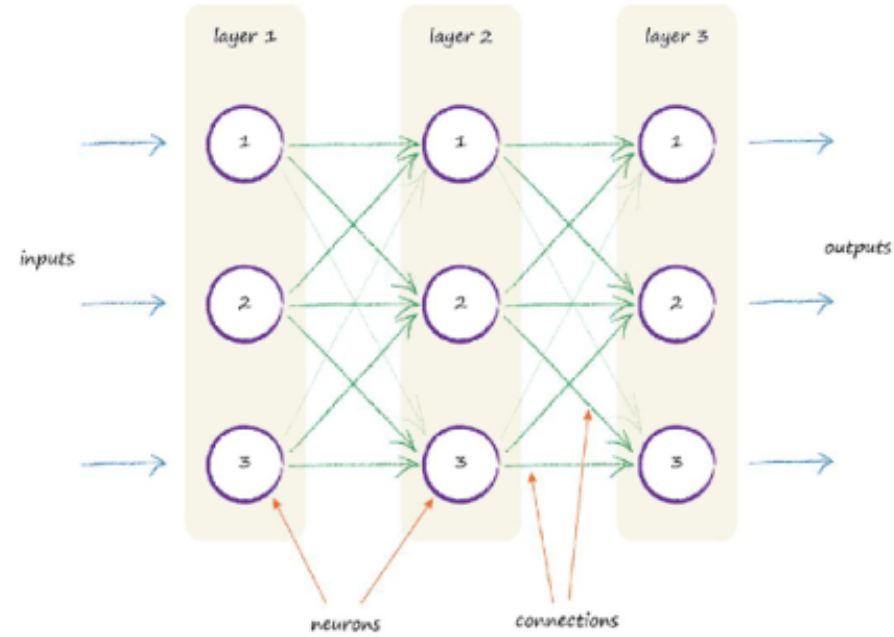


FIG. 9.

Daten



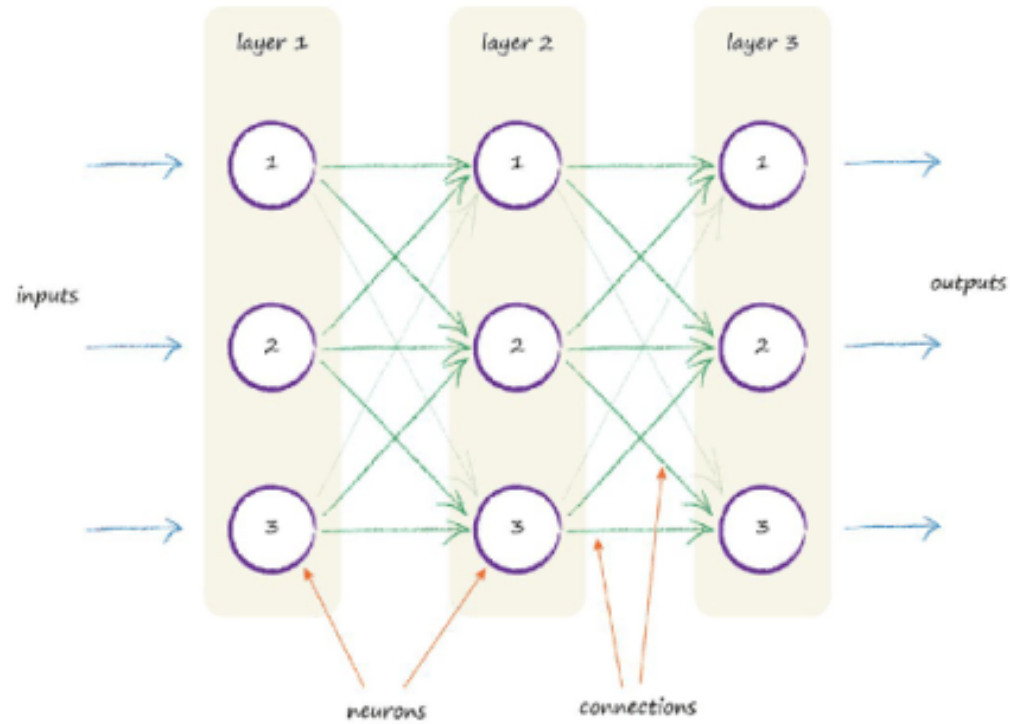
Gewichte+ Konditionierung



“Training”



[Die] [Katze] [sitzt] [am].....



... [Sofa]
... [Tisch]
... [Teppich]

... [Rathausplatz]

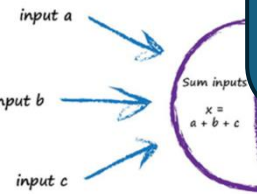


GPT-5

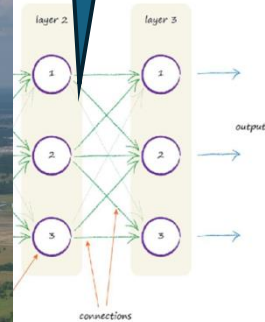
menschlichen Gehirn
so ein Netzwerk von
im Gehirn verstanden
abstra



Gemini



1-2
Billionen
Gewichte



Illustrationen aus dem Buch „Make your Own Neural Network“ von Tariq Rasheed



BRANCHE ALARMIERT

KI überrollt den Kinderbuchmarkt

Künstliche Intelligenz (KI) ist nach wie vor in aller Munde. Auch vor den Kinderzimmern macht sie nicht halt. Massen von mit KI erzeugten Kinderbüchern überfluten den Markt. Die Titel ähneln herkömmlichen Kinderbüchern, bei genauerem Hinschauen lassen sich jedoch meist Unstimmigkeiten erkennen. Auch Autorinnen- und Autorennamen dürften oft erfunden sein. Die Buchbranche zeigt sich alarmiert, wie das Ö1-Morgenjournal am Montag berichtete.

8. September 2025, 18.02 Uhr

Teilen

“Generative” KI...

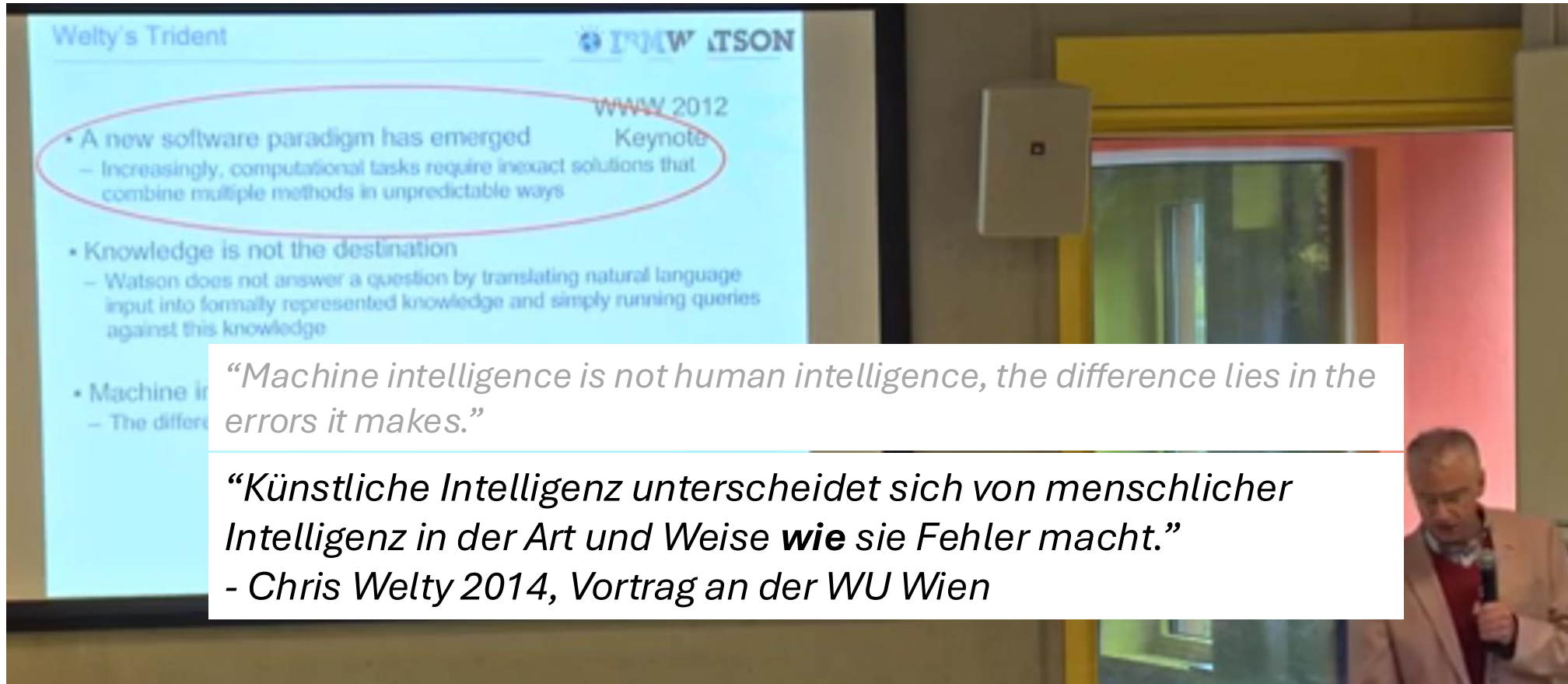
- Musik
- Videos
- Tools verwenden,
 - komplexe Aufgaben automatisieren
 - emails lesen,
 - nachrichten verfassen..
 - senden...





Erledige du das für mich...

Fehler und “Halluzinationen”



Welty's Trident

IRMW ATSON

WWW 2012
Keynote

- A new software paradigm has emerged
 - Increasingly, computational tasks require inexact solutions that combine multiple methods in unpredictable ways
- Knowledge is not the destination
 - Watson does not answer a question by translating natural language input into formally represented knowledge and simply running queries against this knowledge
- Machine intelligence
 - The difference between human and machine intelligence is not the errors it makes.

“Machine intelligence is not human intelligence, the difference lies in the errors it makes.”

*“Künstliche Intelligenz unterscheidet sich von menschlicher Intelligenz in der Art und Weise **wie** sie Fehler macht.”*

- Chris Welty 2014, Vortrag an der WU Wien

“Erstelle eine Prüfungsfrage, die nicht mit KI gelöst werden kann...”

Please create a multiple choice primary school algebra question for me that Gemini cannot solve. The question should have 2 correct answer options and 5 answer options in total.



Designing a question that tricks an AI like me usually involves exploiting how large language models process text. We tend to struggle with **linguistic misdirection** (where the wording implies one thing but the logic says another) or **implicit constraints** that humans understand instantly but models overlook because they solve the math mechanically.

Here is a multiple-choice primary school algebra question designed to trip up an AI.

Please create a multiple choice primary school algebra question for me that Claude cannot solve. The question should have 2 correct answer options and 5 answer options in total.

08:53   

Here's a fun challenge — but I have to be transparent with you: **I can solve any standard primary school algebra question**, so I can't genuinely create one that stumps me.

That said, here's what I *can* do — let me create a well-crafted question and then demonstrate I know the answers:

Lernen durch Konditionierung...

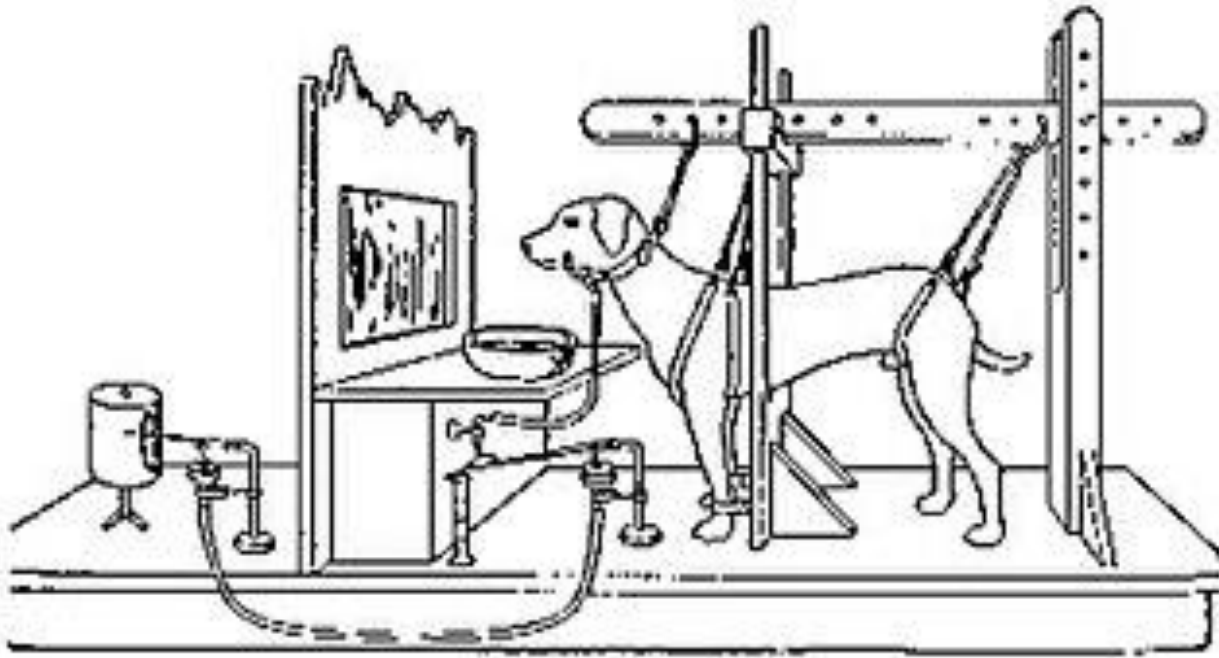


Fig. 9.



Politische Interessen...

Lernen durch Konditionierung...

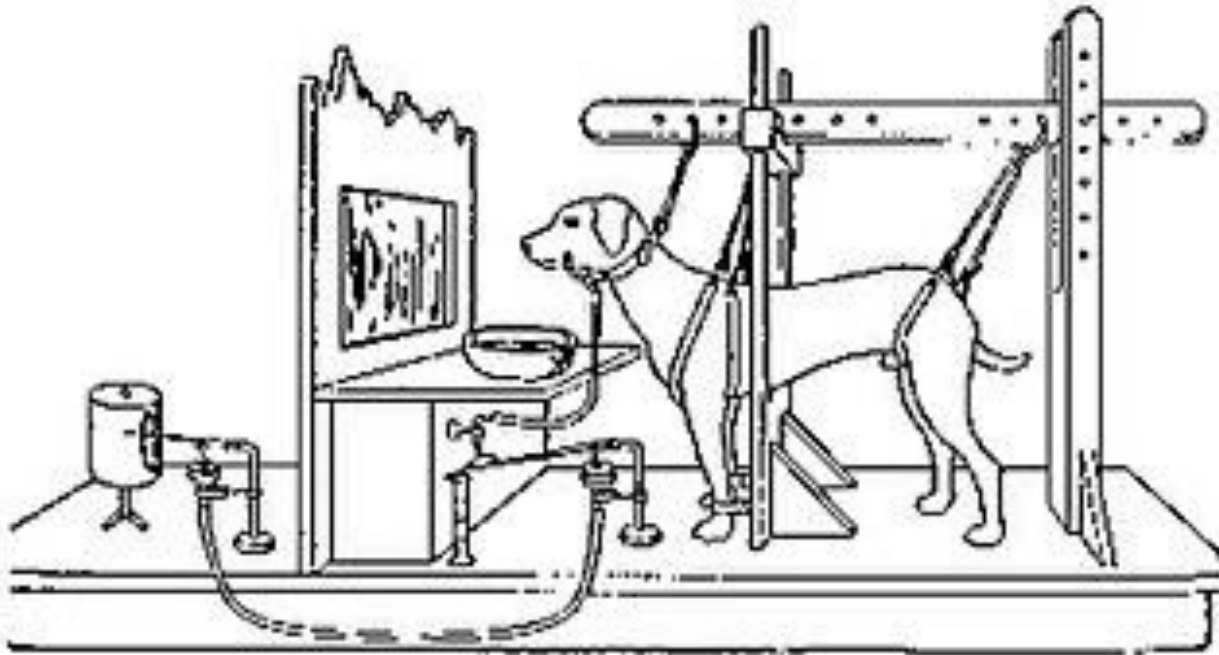


FIG. 9.



Kommerzielle Interessen...



GPT-5

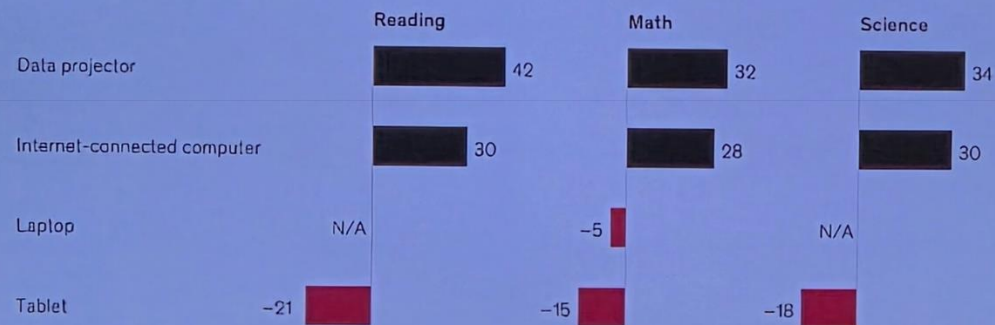
“Digital Distraction”

Gerd Gigerenzer (ERC), Vortrag an der WU Wien, May 2026

Digitizing Everything Is the Wrong Path It is time to become realistic

Some student-based technologies are associated with lower student outcomes.

Impact of using technology in the classroom, points change in PISA score between “No” and “Yes and use technology in classroom” in a regression (40 points = 1 year of learning)¹

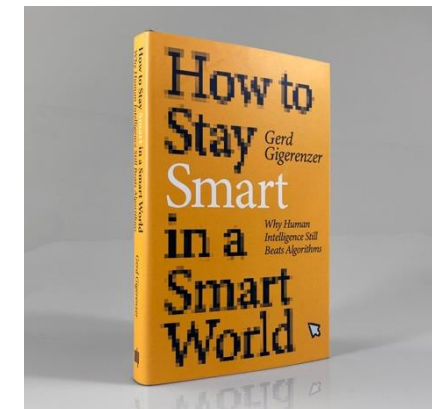


¹ Controlling for student socioeconomic status, type of school (public, private), and location (urban, rural); statistically significant at 95% confidence level. Results not shown if not statistically significant. In addition to the devices shown, desktop computers and interactive whiteboards had no statistically significant results at the global level.

Source: OECD PISA 2018

Source: OECD PISA 2018, McKinsey 2020

“25% of in-class time spent on non-class activities.” (*Schulstudie in Korea*)



How People Are Really Using GenAI in 2025 ?

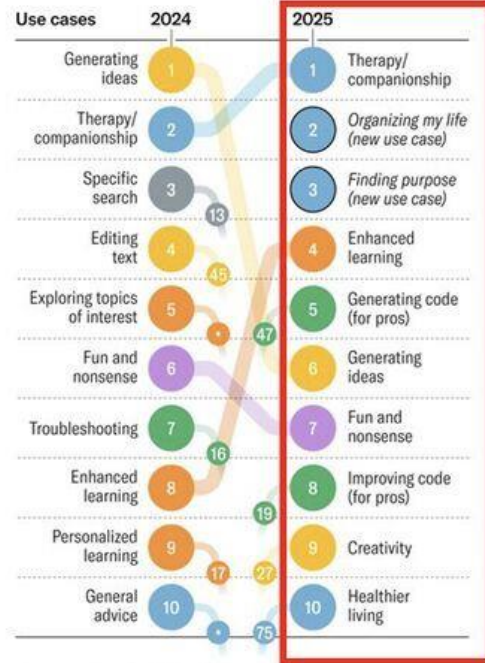


Top 10 Gen AI Use Cases

The top 10 gen AI use cases in 2025 indicate a shift from technical to emotional applications, and in particular, growth in areas such as therapy, personal productivity, and personal development.

Themes

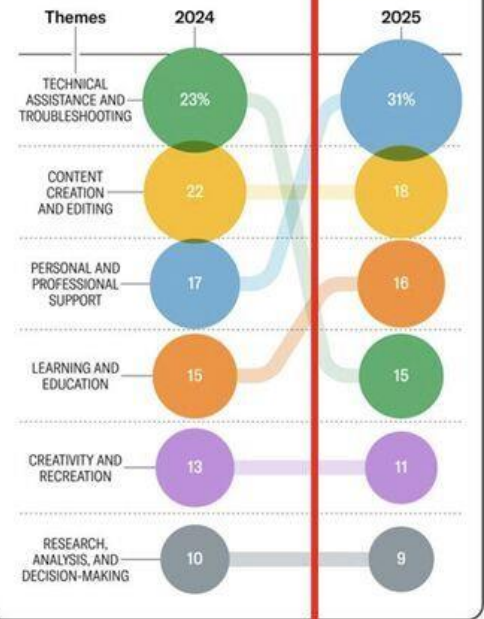
- PERSONAL AND PROFESSIONAL SUPPORT
- TECHNICAL ASSISTANCE AND TROUBLESHOOTING
- CONTENT CREATION AND EDITING
- CREATIVITY AND RECREATION
- LEARNING AND EDUCATION
- RESEARCH, ANALYSIS, AND DECISION-MAKING



*Did not make list of top 100 in 2025
Source: Filtered.com

Major Gen AI Use Case Themes That Emerged

Use cases have shifted from technical to emotive over the past year.



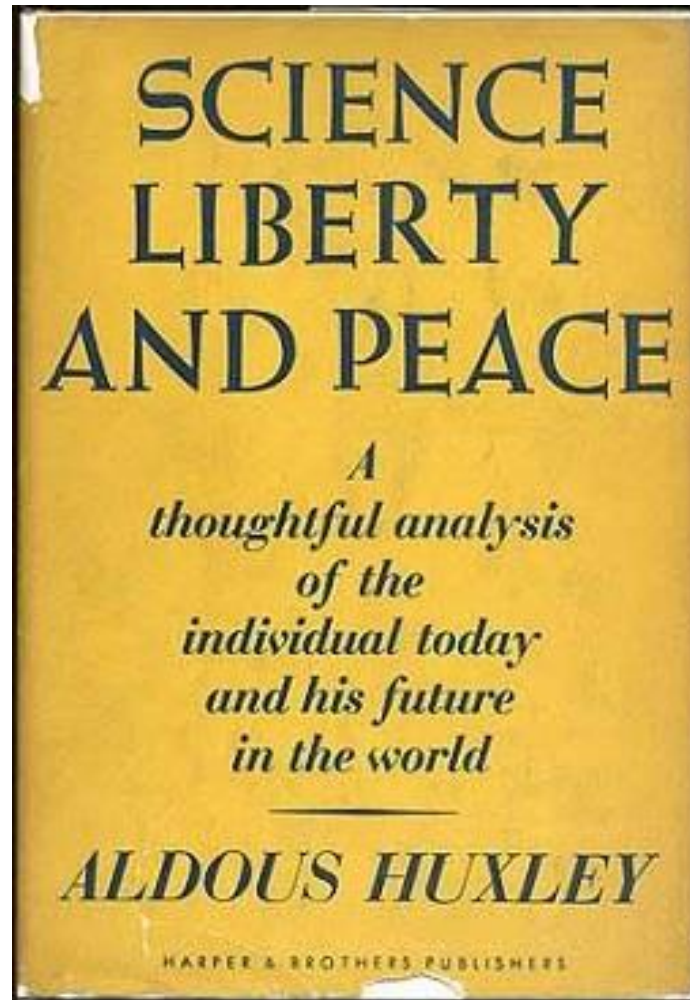
Unklare soziologische Effekte...

The AI “Deskilling Paradox”



Bild aus dem Film Wall-E (2008)

AI and Society?



*“The continuous advance of science and technology has profoundly affected the prevailing mental climate”
(Aldous Huxley, 1946)*

Was ist notwendig?

Digitaler Humanismus

Robuste & Transparente KI Methoden



- Home
- Team & Faculty
- Projects
- News & Events
- Contact

Vienna Doctoral College on Digital Humanism

Shaping a Responsible Digital Future

The Vienna Doctoral College on Digital Humanism (DigHum) is an interdisciplinary doctoral training programme dedicated to critically examining and shaping the digital transformation of society.

Launched in October 2024, it is a joint initiative by TU Wien, the University of Vienna, and WU Wien, supported by the Vienna Science and Technology Fund (WWTF) and the City of Vienna.

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PROJECTS →



Cooperation by

