

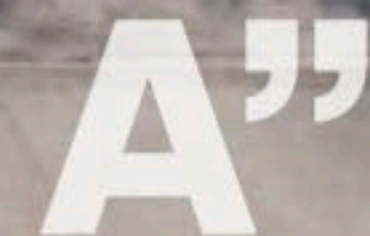
ARTIFICIELL

INTELLIGENS

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KULTURARBETARSYNNVINKEL

Dr. Tomi Slotte Dufva  
Aalto-University, School of Arts, Design & Architecture  
tomi.slottedufva@aalto.fi  
Mastodon: [tomidufva@mastodon.nu](mailto:tomidufva@mastodon.nu)



Aalto University  
School of Arts, Design  
and Architecture

Bild: Sougwen Chung: Drawing operations

# Artificiell intelligensens världar

## 1. Allmän uppfattning om artificiell intelligens

How AI is perceived by the public can have significant impact on how it is developed, deployed and regulated. Some commentators argue that perceptions are currently distorted or extreme. (Cave, Coughlan, & Dihal, 2019; Selwyn, 2020)

## 2. Vem får tala om artificiell intelligens?

Discussions around AI need more heterogeneous voices to be heard (Slotte Dufva & Mertala, 2021)

## 3. Artificiell intelligensens materiella kostnader

Artificial intelligence, then, is an idea, an infrastructure, an industry, a form of exercising power, and a way of seeing; it's also a manifestation of highly organized capital backed by vast systems of extraction and logistics, with supply chains that wrap around the entire planet (Crawford, 2021)

## 4. Artificiell intelligensens roll i konst och kultur

From *I've seen more self-aware ants!* (Jones 2019) to more diverse understanding of AI art practises (Slotte Dufva 2022)

By Evan Ackerman

Posted 1 Dec 2017 | 18:30 GMT

# Automatisering av "allt"

På sätt och vis har artificiell intelligens redan under lång tid (åratal) funnits överallt och har vävt sig in i vardagen, samhället, fritiden och till och med kulturen.

<https://spectrum.ieee.org/cars-that-think/transportation/human-factors/deep-learning-and-google-street-view-can-predict-neighborhood-politics-from-parked-cars>

WILL ROBOTS TAKE MY JOB?

Men...

42%

Fine Artists, Including  
Painters, Sculptors, and  
Illustrators

SOC CODE: 27-1013

<http://bruegel.org/2014/07/the-computerisation-of-european-jobs/>

<https://willrobotstakemyjob.com>

# ARTIFICIALLY



# ENERGI- OCH MATERIALANVÄNDNING

Hur många tomater kan man egentligen odla bara genom att träna GPT-3 en gång?

*En miljon tomater.*



Artificial intelligence is both *embodied* and *material*, made from natural resources, fuel, human labour, infrastructures, logistics, histories, and classifications.

Mann, 2023

Crawford, 2021

# Algorithm- och databias

**BIG DATA  
PROCESSES  
CODIFY THE  
PAST. THEY  
DO NOT  
INVENT THE  
FUTURE.**

- Vad är en algoritm?
- Hur presenterar algoritmen "verkligheten"?
- Hur hanterar algoritmer data?
- Algoritmer skapar modeller från data, men hur?
- Vad innebär det när vi kollektivt, och i stor skala, använder verktyg (t.ex. AI) som är baserade på bias?

# Mimi Onuoha: The Library of Missing Datasets (2016)





INTELLIGENS

## Svag (snäv) artificiell intelligens

*Artificiell intelligens som inte är medveten och vars kompetens är begränsad.*

## Stark artificiell intelligens, allmän artificiell intelligens (AGI)

*Hypotetisk maskin som kan lösa vilket problem som helst.*

## Super artificiell intelligens

*Avancerad form av allmän artificiell intelligens vars förmågor överstiger allt. Singularitet.*

**VI HAR INTE AGI, MEN DET FINNS EN STARK DRIVKRAFT ATT NÅ DIT**

# INTELLIGENCE - STATISTICS

*Artificial intelligence (AI) is intrinsically data-driven. It calls for the application of statistical concepts through human-machine collaboration during the generation of data, the development of algorithms, and the evaluation of results.*

*Yu & Kumbier, 2018*

*The research on and application of artificial intelligence (AI) has triggered a comprehensive scientific, economic, social and political discussion.*

*Here we argue that statistics, as an interdisciplinary scientific field, plays a substantial role both for the theoretical and practical understanding of AI and for its future development. Statistics might even be considered a core element of AI.*

*Friedrich, et al., 2022*

# MÅNGA INTELLIGENSER

*"Here, at the inaugural moment of the computer age, the erasure of embodiment is performed so that "intelligence" becomes a property of the formal manipulation of symbols rather than enaction in the human lifeworld"*

*Hayles, 1999*

*"Intelligence is a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture"*

*Gardner, 1999*

*"A mental activity directed toward purposive adaptation to, selection and shaping of, real-world environments relevant to one's life"*

*Sternberg (1985)*

# INTELLIGENS - KONST

“So usually, we tend to see the world and tag things as relevant or irrelevant to a problem we're working on based on our prior expectations. But people in the arts are really good at constantly seeing things with fresh eyes. They're constantly good at putting aside their prior preconceptions and trying to find meaning in the here and now.”

Kaufman, 2020



Art is not about human control over materiality, but a zone of contact with the strange; not fully understandable agencies of things.

Hood & Lewis, 2021

“Artists make stuff because in doing so they reveal something deep and important about our nature, indeed, I would go so far as to say, about our biological nature... art isn't a phenomenon to be explained. Not by neuroscience, and not by philosophy. Art is itself a research practice, a way of investigating the world and ourselves. Art displays us to ourselves, and in a way makes us anew, by disrupting our habitual activities of doing and making.”

Noë, 2014

# “stochastic parrot”

Bender, E. M., Gebru, T., McMillan-Major, A., & Shmitchell, S. (2021). *On the Dangers of Stochastic Parrots*. In. New York, NY, USA: ACM. <http://dx.doi.org/10.1145/3442188.3445922>



Generativ AI är strukturellt konservativ, till och med nostalgisk. Allt den producerar är baserat på interpolering av befintliga data. På sätt och vis är det en bakåtblickande prognos: Den gör troliga gissningar om vad som kunde ha varit, baserat på bilder från det förflutna.  
-Roland Meyer

Roland Meyer: Midjourney-generated image, prompt: happy Austrian family

# Men vad betyder allt detta för kulturen?



*Bild: Stable Diffusion prompt: en maltipoo  
av Paul Klee i ett landskap av Caspar David  
Friedrich*



# Genererade bilder utmanar det "verkliga"



Kanske blir dessa modeller med sina kanoniserade, västerländska konsthistorierelaterade (?), inspirerade (?), beräknade bilder allestädes närvarande, och vi skapar en ny nivå av det hyperrealistiska, en sorts hyperhyperrealitet.

Denna nya hyperrealitet är inte något som bara finns i våra sinnen eller i kulturen, utan sträcker sig också till de teknologiska lagren.

Slotte Dufva, 2024

# Att skapa konst kommer inte att försvinna..

THE WEEKEND ESSAY

## WHY A.I. ISN'T GOING TO MAKE ART

*To create a novel or a painting, an artist makes choices that are fundamentally alien to artificial intelligence.*

By Ted Chiang

August 31, 2024



<https://www.newyorker.com/culture/the-weekend-essay/why-ai-isnt-going-to-make-art>

# ..Men konstnärens inkomster är hotade

# *Automationens fördelar och nackdelar*



To automate

Or

Not to

Automate?

That is the question.

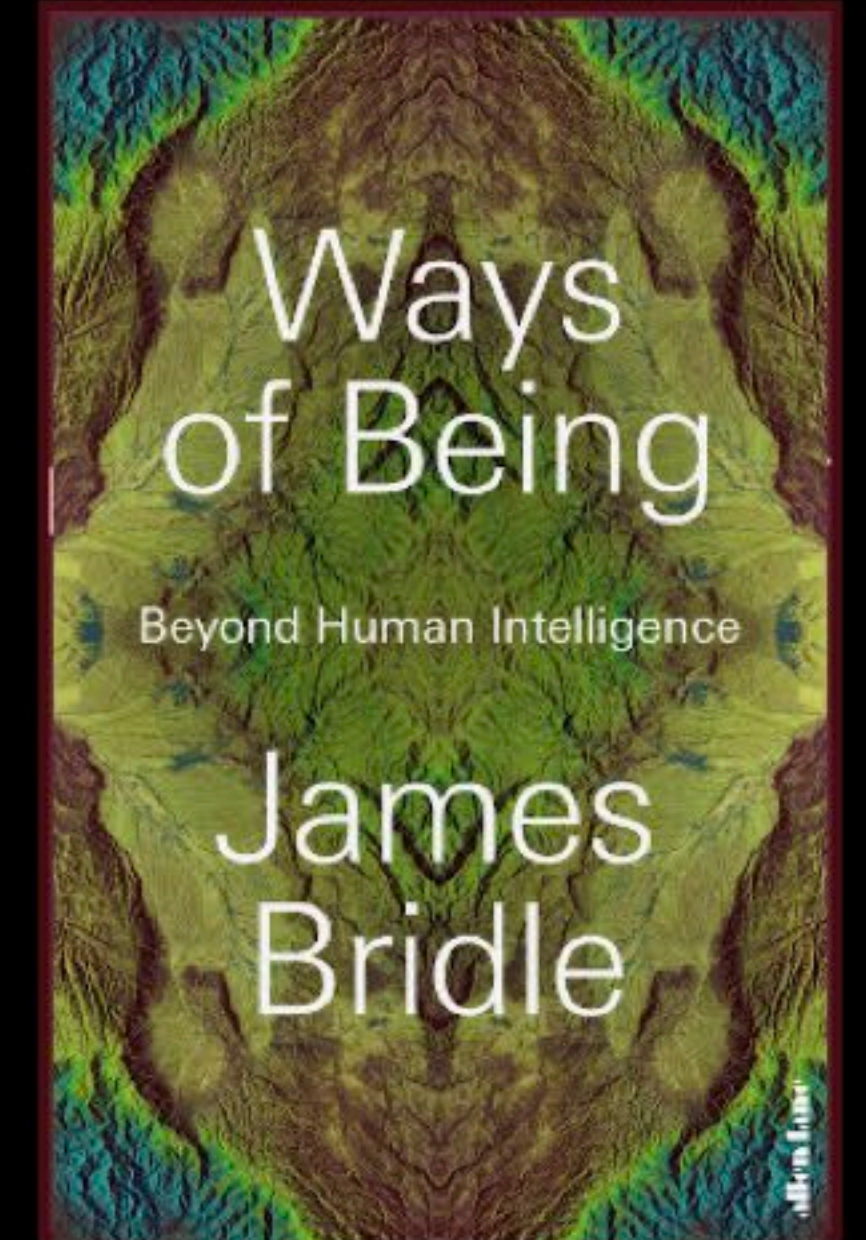
TACK!



Ian McEwan  
Machines Like Me  
/  
Maskiner som jag



Jeanette Winterson  
Frankissstein,  
a love story  
/  
Frankissstein : en  
kärlekshistoria



James Bridle, Ways  
of Being: Animals,  
Plants, Machines:  
The Search for a  
Planetary  
Intelligence

# REFERENSE

- Bender, E. M., Gebru, T., McMillan-Major, A., & Shmitchell, S. (2021). *On the Dangers of Stochastic Parrots*. In. New York, NY, USA: ACM. <http://dx.doi.org/10.1145/3442188.3445922>
- Cave, S., Coughlan, K., & Dihal, K. (2019). "Scary Robots". In. New York, NY, USA: ACM. <http://dx.doi.org/10.1145/3306618.3314232>
- Chiang, T. (2024). *Why A.I. Isn't Going to Make Art*. <https://www.newyorker.com/culture/the-weekend-essay/why-ai-isnt-going-to-make-art>
- Crawford, K. (2021). *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*. Yale.
- Gardner, Howard (1999), *Intelligence Reframed: Multiple Intelligences for the 21st Century*, Basic Books, ISBN 978-0-465-02611-1
- Glaveanu, V. P., Hanchett Hanson, M., Baer, J., Barbot, B., Clapp, E. P., Corazza, G. E., Hennessey, B., Kaufman, J. C., Lebuda, I., Lubart, T., Montuori, A., Ness, I. J., Plucker, J., Reiter-Palmon, R., Sierra, Z., Simonton, D. K., Neves-Pereira, M. S., & Sternberg, R. J. (2020). Advancing Creativity Theory and Research: A Socio-cultural Manifesto. *The Journal of Creative Behavior*, 54(3), 741-745. <https://doi.org/10.1002/jocb.395>
- Friedrich, S., Antes, G., Behr, S. et al. Is there a role for statistics in artificial intelligence?. *Adv Data Anal Classif* 16, 823-846 (2022). <https://doi.org/10.1007/s11634-021-00455-6>
- Hayles, N. K. (1999). *How We Became Posthuman*. University of Chicago Press.
- Hood, E. J., & Lewis, T. E. (2021). 'Oohing and ahhing': The power of thin(g)king in art education research. *International Journal of Education Through Art*, 17(2), 223-233. [https://doi.org/10.1386/eta\\_00062\\_1](https://doi.org/10.1386/eta_00062_1)
- Jones, J. (2019). 'I've seen more self-aware ants!' *AI: More Than Human - review*. <https://www.theguardian.com/artanddesign/2019/may/15/ai-more-than-human-review-barbican-artificial-intelligence>
- Mann, T. (2023). *Pushing The Limits Of HPC And AI Is Becoming A Sustainability Headache*. <https://www.nextplatform.com/2023/11/17/pushing-the-limits-of-hpc-and-ai-is-becoming-a-sustainability-headache/>
- O'Neil, C. (2017). *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*.
- Onuoha', M. (2016). *The Library of Missing Datasets*.
- Selwyn, N., Hillman, T., Eynon, R., Ferreira, G., Knox, J., Macgilchrist, F., & Sancho-Gil, J. M. (2020). What's next for Ed-Tech? Critical hopes and concerns for the 2020s. *Learning, Media and Technology*, 45(1), 1-6. <https://doi.org/10.1080/17439884.2020.1694945>
- Slotte Dufva, T. Grasping AI Entanglements: Digital Feminism and Generative AI. In R. Rousi (Ed.), *Humane Autonomous Technology Re-thinking Experience with and in Intelligent Systems*.
- Slotte Dufva, T. (2023). Entanglements in AI Art. In *Global Media Arts Education* (pp. 181-196). Springer International Publishing. [https://doi.org/10.1007/978-3-031-05476-1\\_11](https://doi.org/10.1007/978-3-031-05476-1_11)
- Slotte Dufva, T. & Mertala, P. (2021). Sähkö ja alkemia: Tekoälydiskurssit Yleisradion verkkoartikkeleissa. *Media & viestintä*, 44(1), 95-115. <https://journal.fi/mediaviestinta/article/download/107302/62752>
- Sternberg, R. J. (1985). *Beyond IQ: A triarchic theory of human intelligence*. Cambridge University Press.
- Yu, B., Kumbier, K. Artificial intelligence and statistics. *Frontiers Inf Technol Electronic Eng* 19, 6-9 (2018). <https://doi.org/10.1631/FITEE.1700813>