

Zeros + Ones

Digital Women and the New Technoculture

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Ada Lovelace

<https://kids.nationalgeographic.com/history/article/ada-lovelace>



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<https://www.irishtimes.com/culture/books/writing-on-drugs-by-sadie-plant-1999-1.3969899>

<https://kids.nationalgeographic.com/history/article/ada-lovelace>

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<https://kids.nationalgeographic.com/history/article/ada-lovelace>



<https://encyclopedia.design/2023/06/18/weaving-wonders-the-jacquard-looms-textile-revolution/>

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https://en.wikipedia.org/wiki/Ada_Lovelace#/media/File:Ada_Lovelace_daguerreotype_by_Antoine_Claudet_1843_-_cropped.png

<https://kids.nationalgeographic.com/history/article/ada-lovelace>



https://upload.wikimedia.org/wikipedia/commons/a/a4/Ada_Lovelace_portrait.jpg

z e r o s + *o n e s*

not only in societies, states, economies, families, sexes, but also in species, bodies, brains, weather patterns, ecological systems. There is turbulence at so many scales that reality itself seems suddenly on edge. Centers are subsumed by peripheries, main-streams overwhelmed by their backwaters, cores eroded by the skins which were once supposed to be protecting them. Organizers have found themselves eaten up by whatever they were trying to organize. Master copies lose their mastery, and everything valued for its size and strength finds itself overrun by microprocessings once supposed too small and insignificant to count.

nets

Of all the media and machines to have emerged in the late twentieth century, the Net has been taken to epitomize the shape of this new distributed nonlinear world. With no limit to the number of names which can be used, one individual can become a population explosion on the Net: many sexes, many species. Back on paper, there's no limit to the games which can be played in cyberspace. Access to a terminal is also access to resources which were once restricted to those with the right face, accent, race, sex, none of which now need be declared. Using the Net quickly became a matter of surfing, a channel-hopping mode facilitated and demanded by information which is no longer bound together in linear texts or library classifications, but instead needs to be laterally traversed.

As the system began to spill out into wider academic usage over the course of the next twenty years, other networks also emerged. Businesses developed local, and then wide area net-

The ancient unity of something and nothing was apparently undisturbed.

holes

"Somewhere there is a siren. Her green body is covered with scales. Her face is bare. The undersides of her arms are a rosy colour. Sometimes she begins to sing. The women say that of her song nothing is to be heard but a continuous O. That is why this song evokes for them, like everything that recalls the O, the zero or the circle, the vulval ring."

Monique Wittig, Les Guérillères

Having escaped the rigors of an education which would have taught her not to ask such things, Ada wandered off, around and about, and wondered about zero too. One of her earliest enquiries to Augustus De Morgan, her tutor in mathematics, concerned the status of this figure. Did it exist as a "thing," she asked? Was it something, or nothing, or something else again? He gave her an intriguing answer. "Zero is *something*," he explained, "though not some *quantity*, which is what you here mean by *thing*."

"She does not set herself up as one, as a (single) female unit. She is not closed up or around one single truth or essence. The essence of a truth remains foreign to her. She neither nor is a being. And she does not oppose a feminine to

cultures

nets

Of all the media and machines to have emerged in the twentieth century, the Net has been taken most fully into wider academic usage. The shape of this new distributed nonlinear world. Vast numbers of names which can be used, one of which has become a population explosion on the Net: many more species. Back on paper, there's no limit to the games which can be played in cyberspace. Access to a terminal is also a matter of resources which were once restricted to those with the right face, accent, race, sex, none of which now need be declared. Using the Net quickly became a matter of surfing, a channel-hopping mode facilitated and demanded by information which is no longer bound together in linear texts or library classifications, but instead needs to be laterally traversed.

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Matrices

Distinctions between the main bodies of texts and all their peripheral detail—indices, headings, prefaces, dedications, appendices, illustrations, references, notes, and diagrams—have long been integral to orthodox conceptions of nonfiction books and articles. Authored, authorized, and authoritative, a piece of writing is its own mainstream. Its asides are backwaters which might have been—and often are—compiled by anonymous editors, secretaries, copyists, and clerks, and while they may well be providing crucial support for a text which they also connect to other sources, resources, and leads, they are also sidelined and downplayed.

When Ada wrote her footnotes to Menabrea’s text, her as implicitly supposed to be reinforcing these hierarchies between centers and margins, authors and scribes. Memoir was the leading article; Ada’s work was of supporting detail, secondary commentaries back the author up. But her notes

When Ada wrote her footnotes to Menabrea's text, her work was implicitly supposed to be reinforcing these hierarchical divisions between centers and margins, authors and scribes. Menabrea's memoir was the leading article; Ada's work was merely a compilation of supporting detail, secondary commentaries intended to back the author up. But her notes provided crucial support for a text which they also sidelined, secretaries, copyists, and clerks, and while they were often downplayed, other sources, resources, and leads, they are also sidelined.

1

not only in societies, states, economies, families, sexes, in species, bodies, brains, weather patterns, ecosystems. There is turbulence at so many scales that suddenly on edge. Centers are subsiding, streams overwhelmed by their banks. Skins which were once tight are stretching. Organizers have found themselves unable to keep up with the changes they are trying to organize. Masterpieces are no longer the thing valued for its size and permanence. Microprocessors once supposed to count are now considered trivial.

"I am amazed at the number of people who seem to individualize it," said A.A.L. "And I am amazed at the number of people who seem to individualize it."

product
d

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said A.A.L." And for all her apparent modesty, Ada knew how
important her notes really were. "To say the truth, I am rather
amazed at them; & cannot help being struck quite *malgré moi*,
with the really masterly nature of the Memoir itself." Her work was indeed vastly more
influential—and three times longer—than the text to which
they were supposed to be mere adjuncts. A hundred years be-
fore the hardware had been built, Ada had produced the first
example of what was later called computer programming.

10

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z e r o s + one economies, families, sexes

not only in societies, states, economies, in species, bodies, brains, weather patterns, etc. There is turbulence at so many scales that suddenly on edge. Centers are subservient streams overwhelmed by their skins which were once

product
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"Somewhere there is a siren. Her green body is covered with scales. Her face is bare. The undersides of her arms are a rosy colour. Sometimes she begins to sing. The women say that of her song nothing is to be heard but a continuous O. That is why this song evokes for them, like everything that calls the O, the zero or the circle, the vulval ring."

Monique Wittig, *Les Guérillères*

hole

The ancient unity of something and nothing was apparently undisturbed.

cultures

The image is a collage of text snippets from various academic sources, primarily in purple and white, discussing topics like runaway cultures, political shifts, and technological determinism. The snippets are arranged in a non-linear, overlapping fashion across the page. One prominent snippet in the center-right discusses 'runaway cultures' and the complexity of determining their causes. Another snippet at the bottom left discusses the 'impossibility of getting a grip' on cultural changes. The overall theme seems to revolve around the complex and often uncontrollable nature of social and cultural dynamics.



4
6 nets

Of all the media and machines to have emerged in the twentieth century, the Net has been taken by far the most interesting shape of this new distributed nonlinear world. Vast numbers of people have joined the number of names which can be used, one result being a population explosion on the Net: many more species. Back on paper, there's no limit to the games which can be played in cyberspace. Access to a terminal is also a matter of resources which were once restricted to those with the right face, accent, race, sex, none of which now need be declared. Using the Net quickly became a matter of surfing, a channel-hopping mode facilitated and demanded by information which is no longer bound together in linear texts or library classifications but needs to be laterally traversed.

The Net began to spill out into wider academic usage during the next twenty years, other networks also developed local, and then wide area net-

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4
6

32

amilies, sex-
ns, etc."

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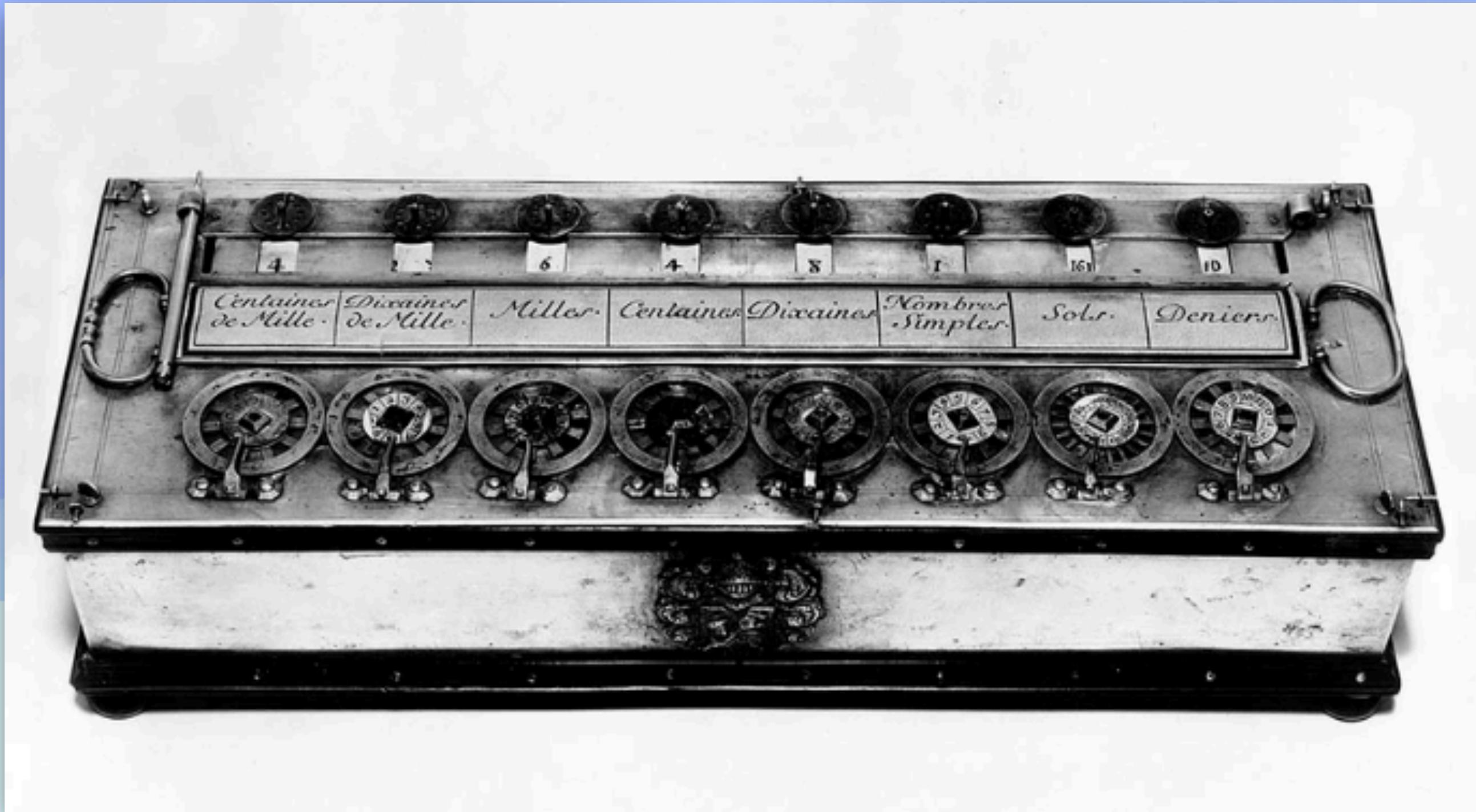
100

"Somewhere there is a siren. Her green body is covered with scales. Her face is bare. The undersides of her arms are a rosy colour. Sometimes she begins to sing. The women say that of her song nothing is to be heard but a continuous O. That is why this song evokes for them, like everything that calls the O, the zero or the circle, the vulval ring."

Monique Wittig, *Les Guérillères*

cultures

Blaise Pascal invented the Pascaline



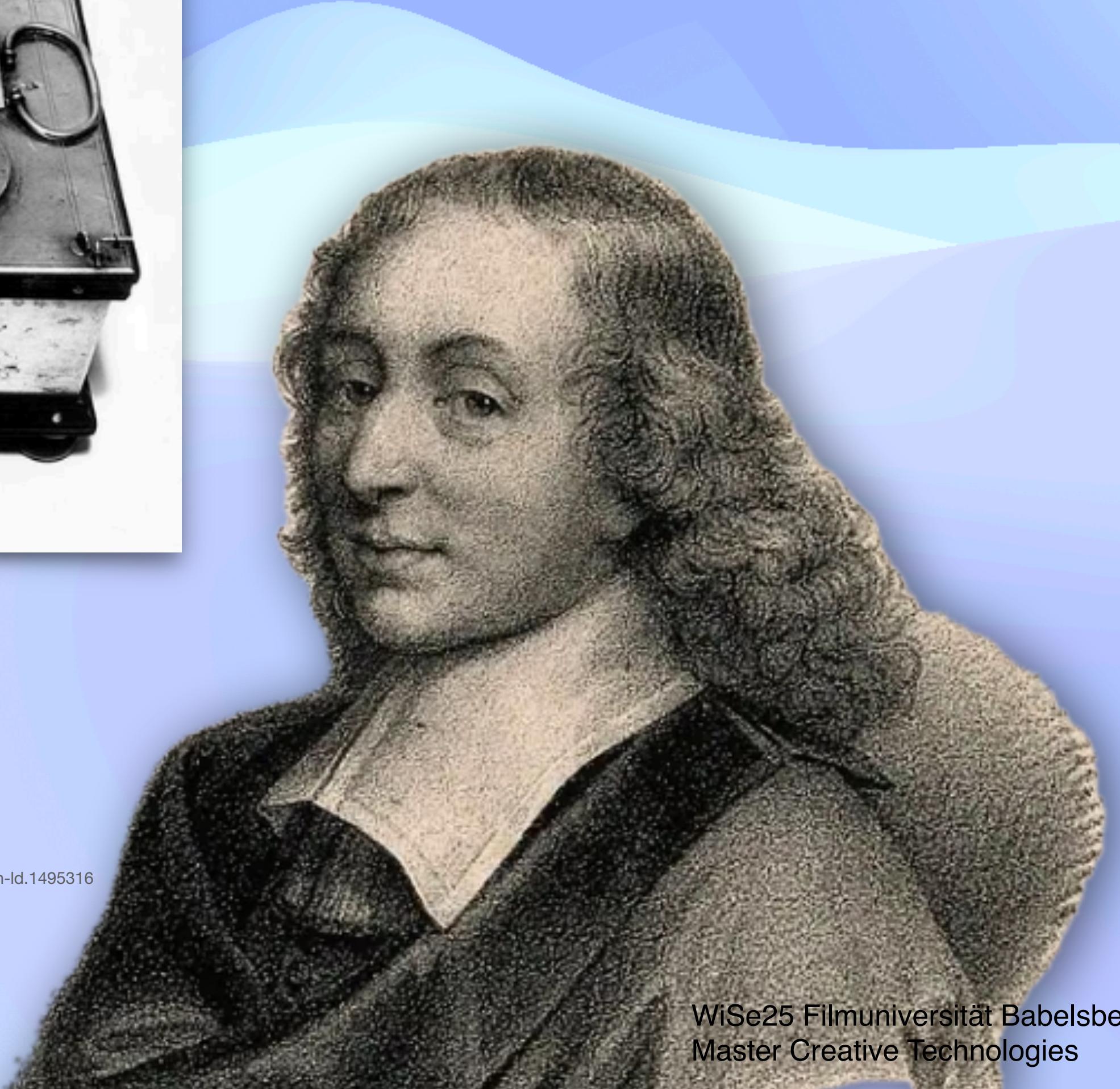
https://www.researchgate.net/figure/Blaise-Pascal-invented-the-Pascaline-an-early-device-for-addition_fig2_3453956

<https://www.nzz.ch/feuilleton/blaise-pascal-der-glaube-an-gott-kann-sache-des-kalkuels-sein-ld.1495316>

<https://kids.nationalgeographic.com/history/article/ada-lovelace>



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Digital Woman and the New Technoculture

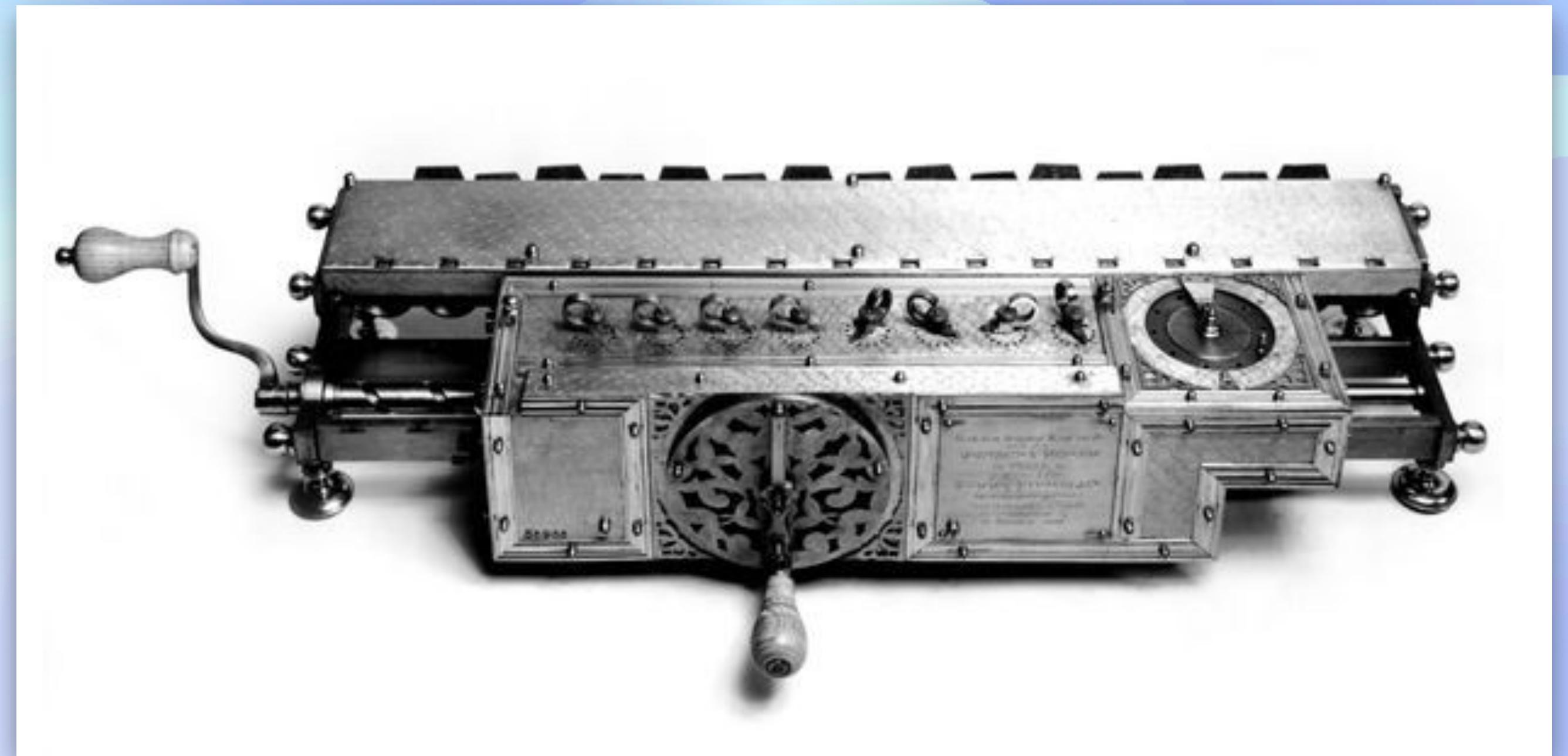


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<https://www.computerhistory.org/revolution/calculators/1/49>

Leibniz created the Stepped Reckoner



<https://www.computerhistory.org/revolution/calculators/1/49/198>

<https://kids.nationalgeographic.com/history/article/ada-lovelace>



Bonita von Gízycki
Academic Reading I

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Joseph Marie Jacquard created the Jacquard loom

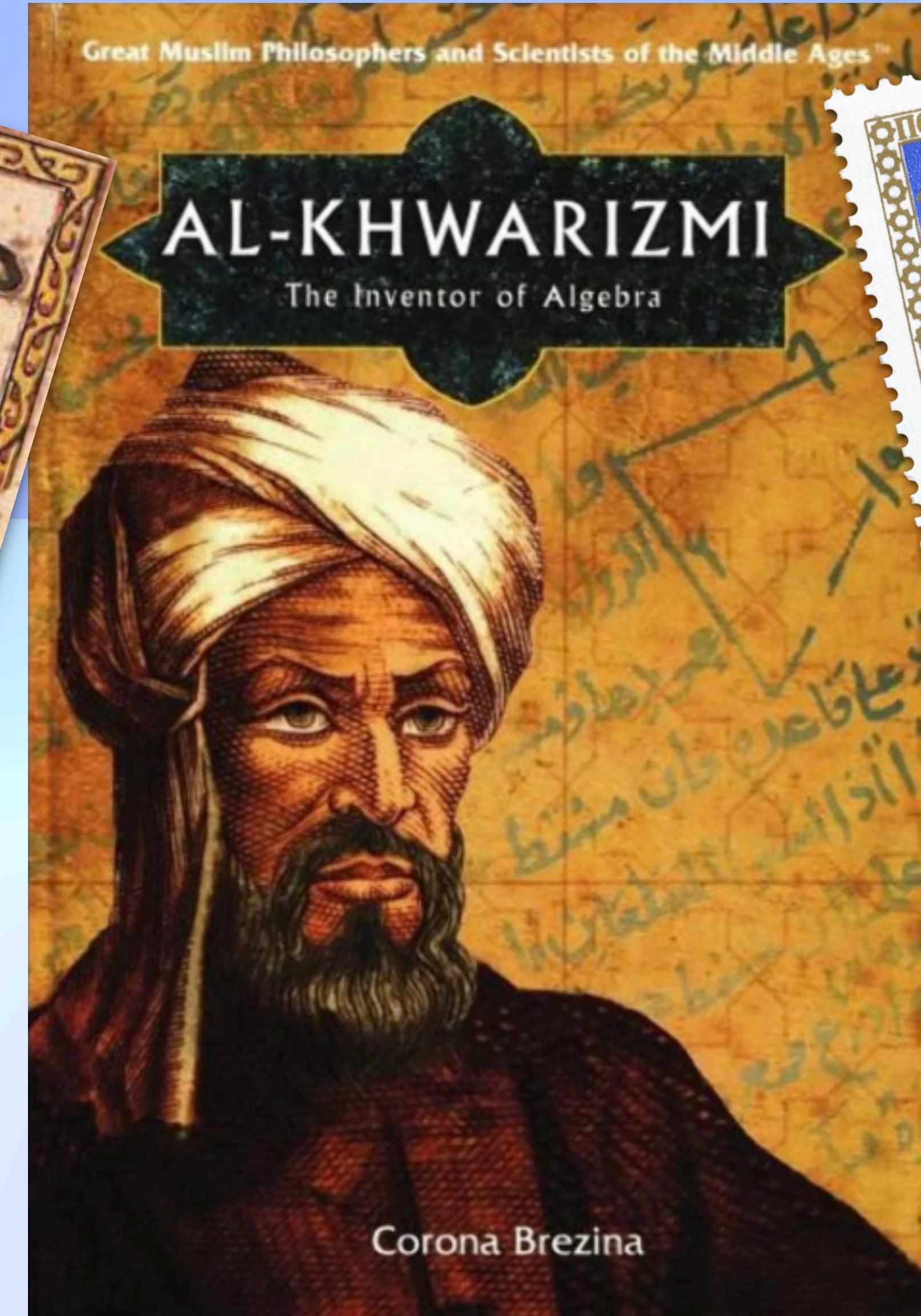


<https://youtu.be/OIJns3fPltE>

<https://kids.nationalgeographic.com/history/article/ada-lovelace>



<https://davidson.org.il/read-experience/en/sciencehistory-en/genius-who-invented-algebra-and-algorithm/>

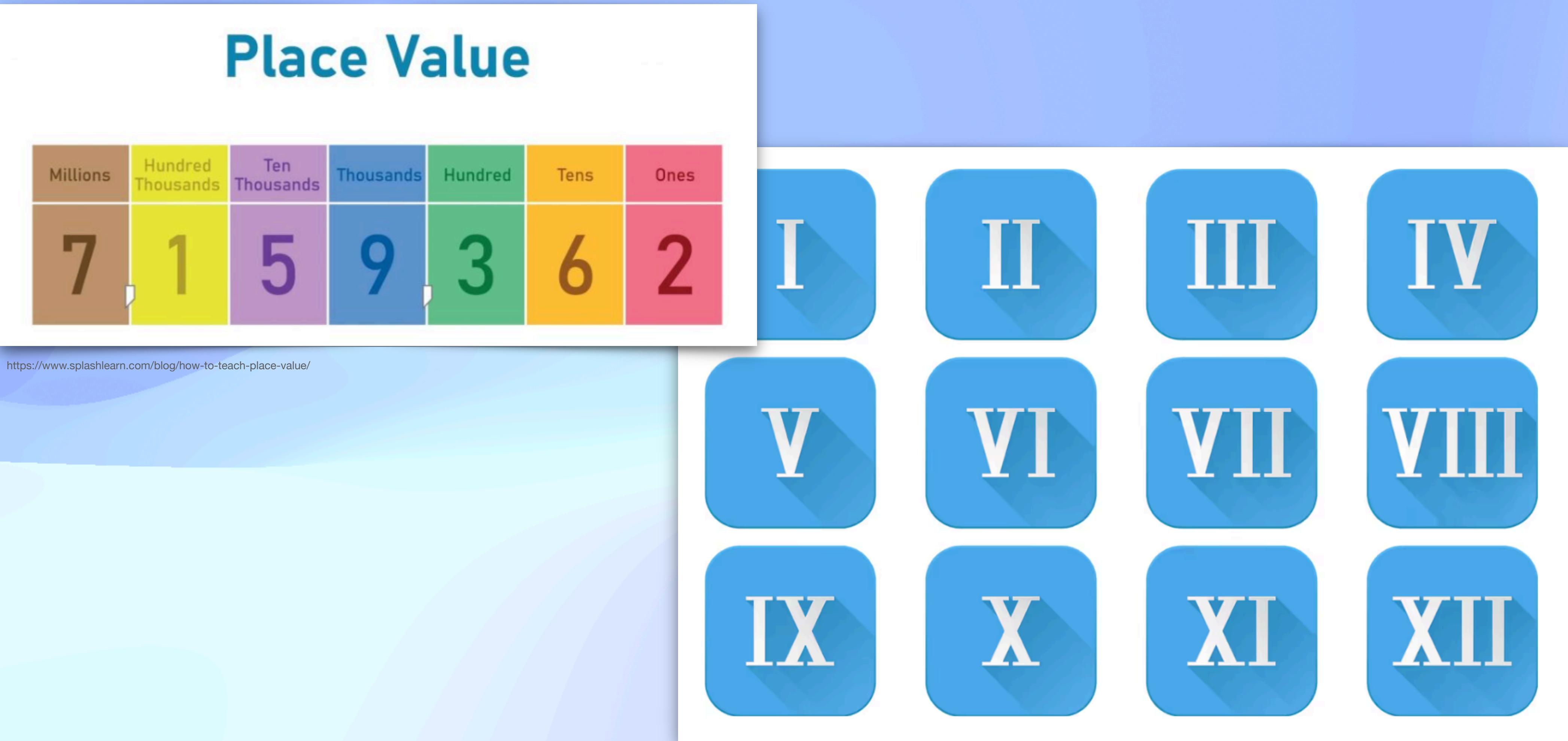


<https://www.amazon.de/Al-Khwarizmi-Inventor-Algebra-Philosophers-Scientists/dp/1435837487>



<https://www.britannica.com/biography/al-Khwarizmi>

Place Value

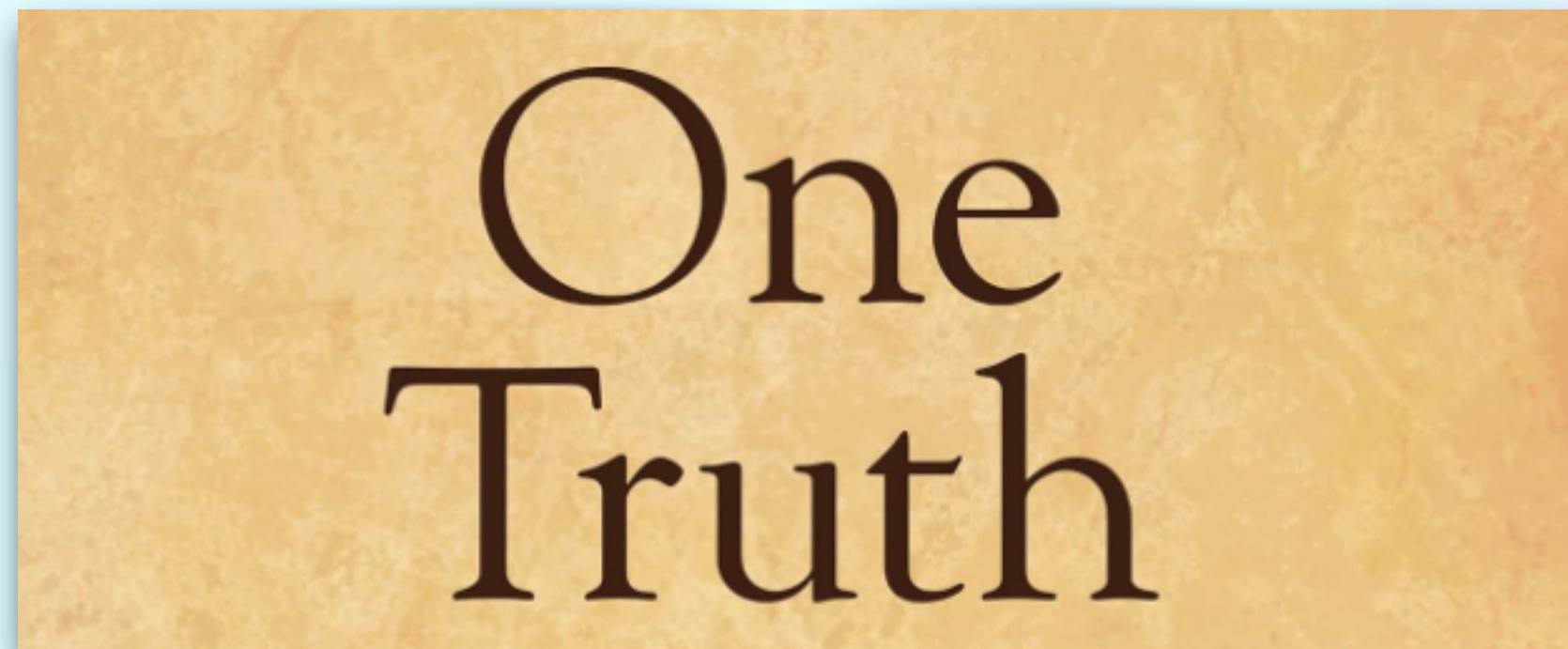


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https://de.pngtree.com/freepng/gold-number-1_5330864.html



<https://www.amazon.de/-/en/Sterling-Brown-ebook/dp/B0792L6YTS>



<https://www.amazon.de/One-Truth-Elevate-Unlock-Power/dp/B0C74T66B4>

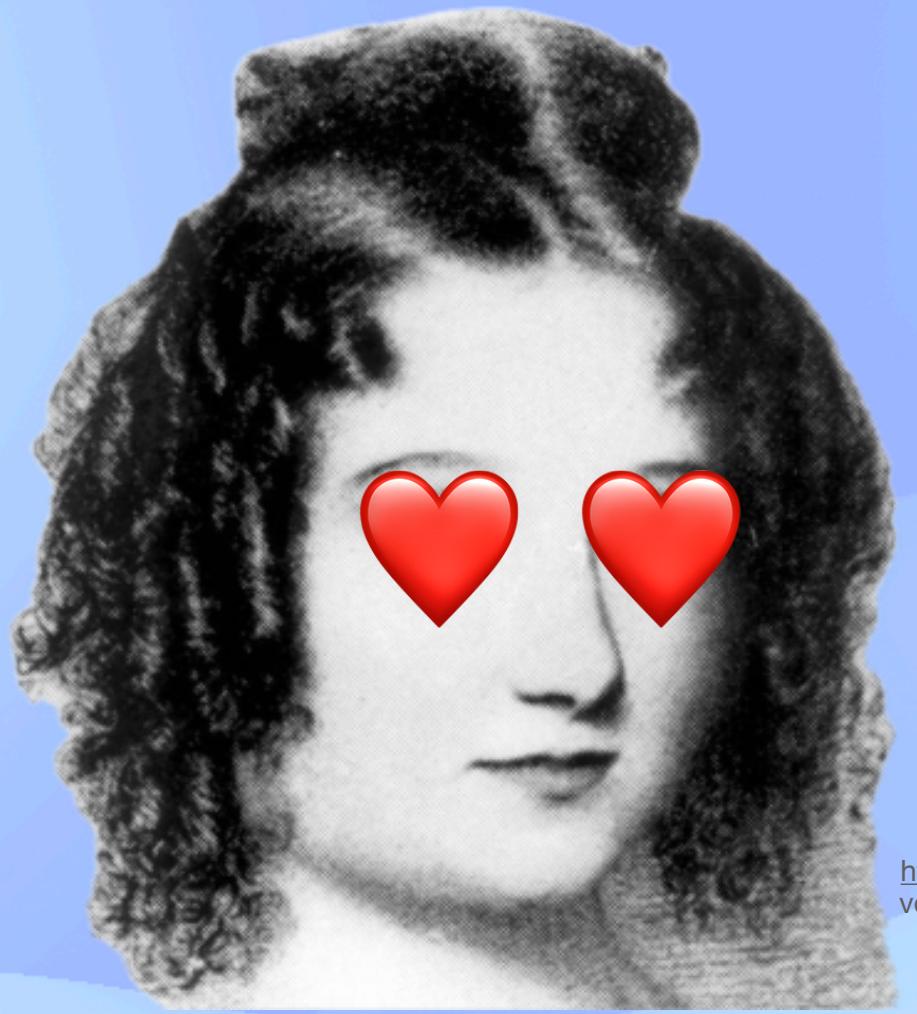


<https://www.waz.de/lokales/oberhausen/article409731203/oberhausener-bankkunden-bedrohen-sparkassen-beschaeftigte.html>



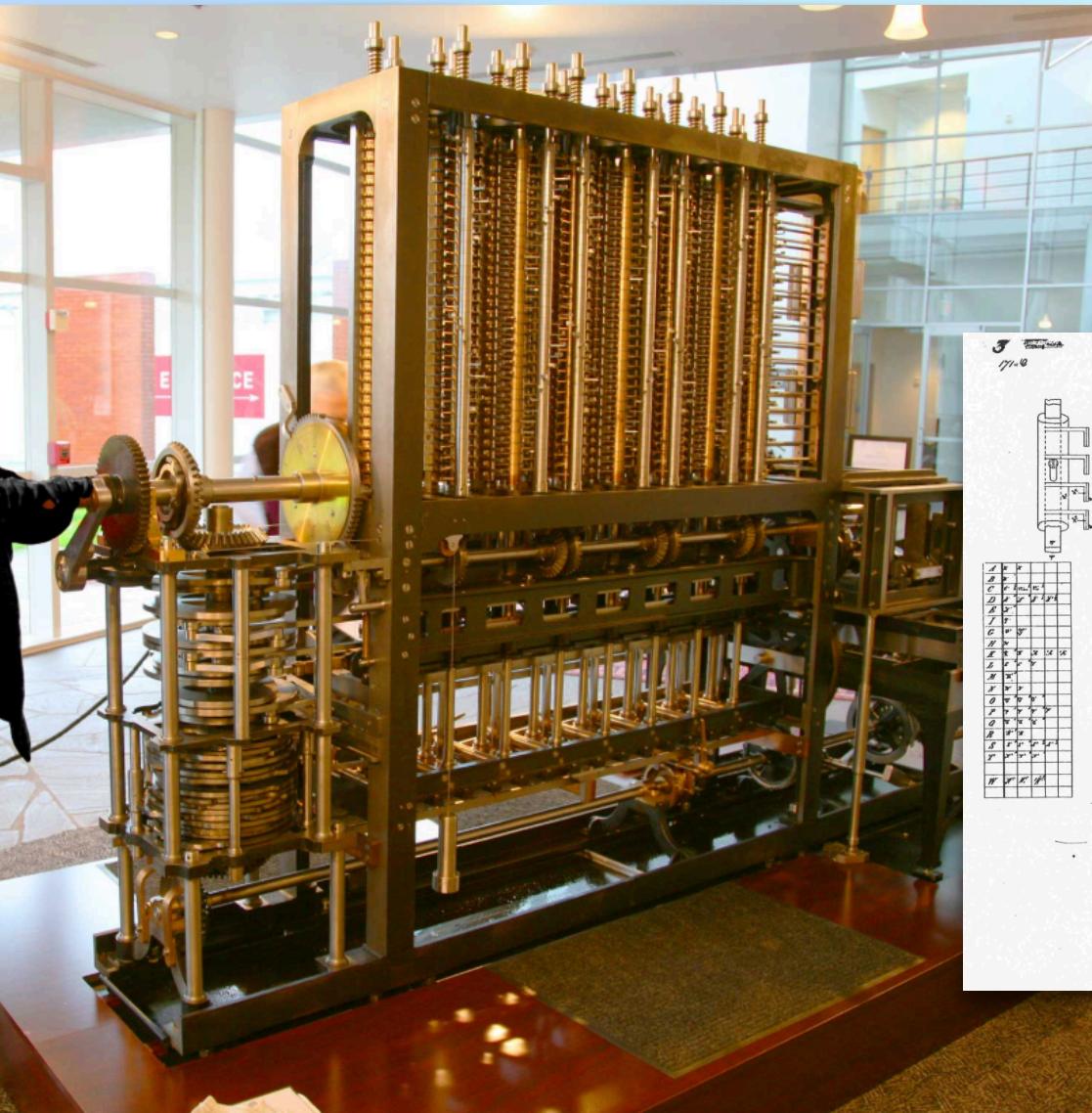
https://de.freepik.com/vektoren-premium/gott-mann-symbol_2201835.htm

Charles Babbage invented the Difference Engine

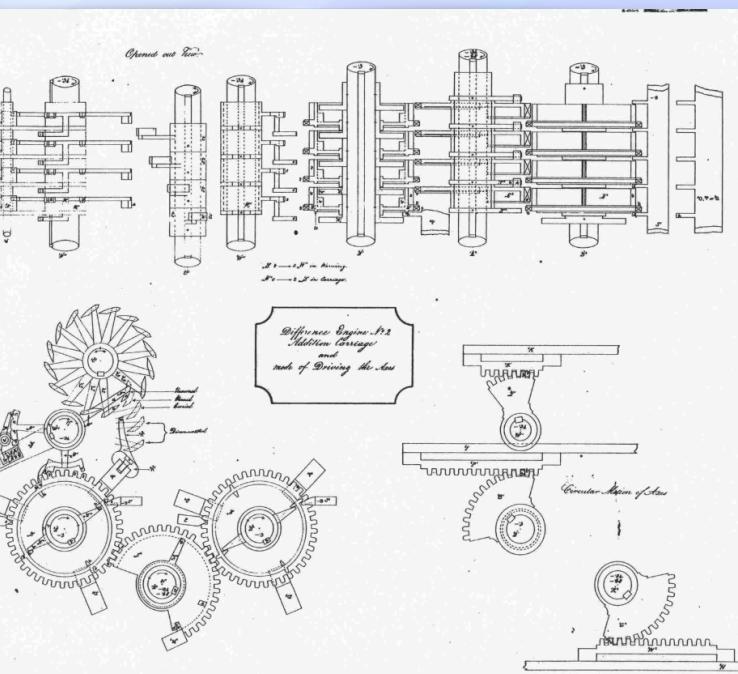


<https://www.deutschlandfunkkultur.de/200-geburtstag-von-ada-lovelace-pionierin-des-100.html>

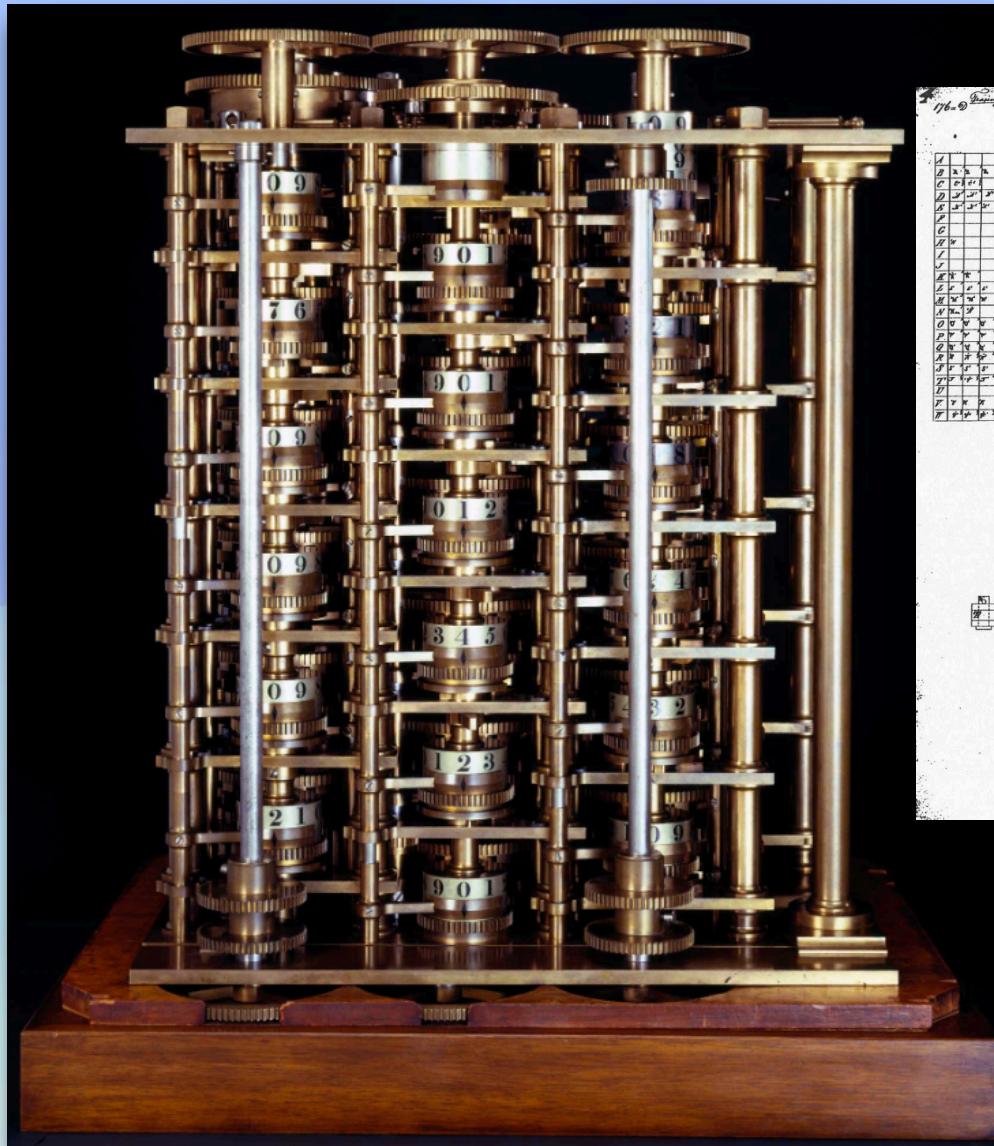
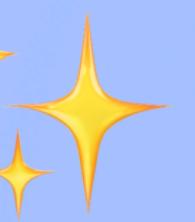
Ada Lovelace



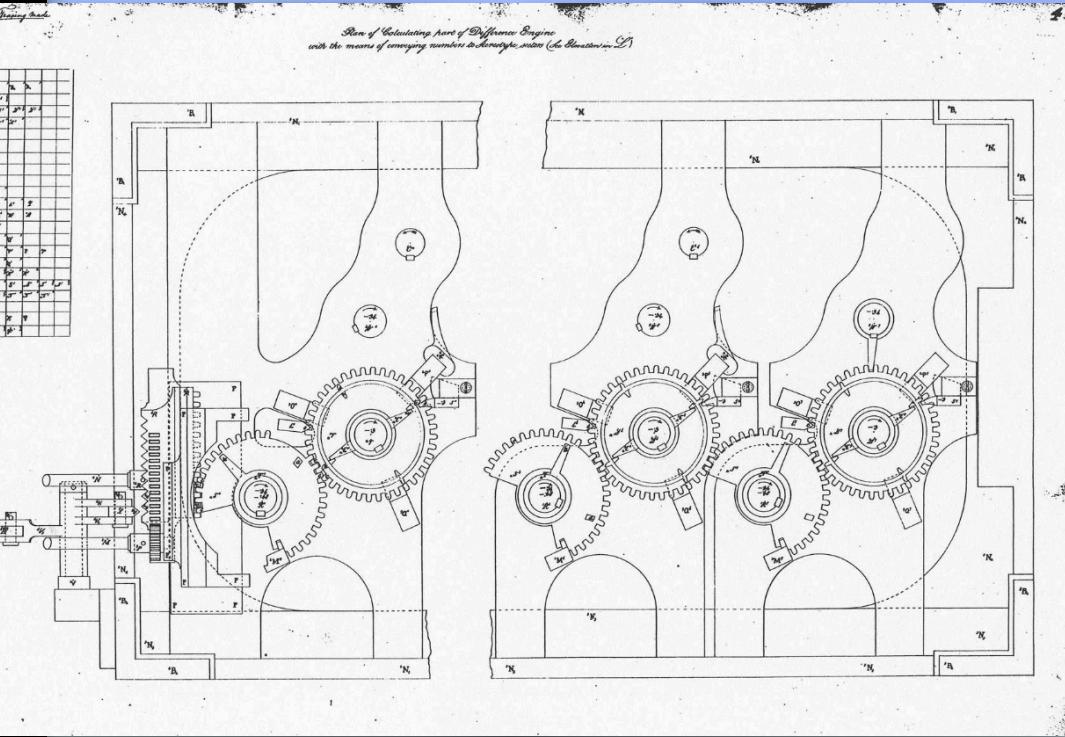
<https://cronatec.ch/how-did-the-difference-engine-work/>



<https://cronatec.ch/how-did-the-difference-engine-work/>



<https://cronatec.ch/how-did-the-difference-engine-work/>



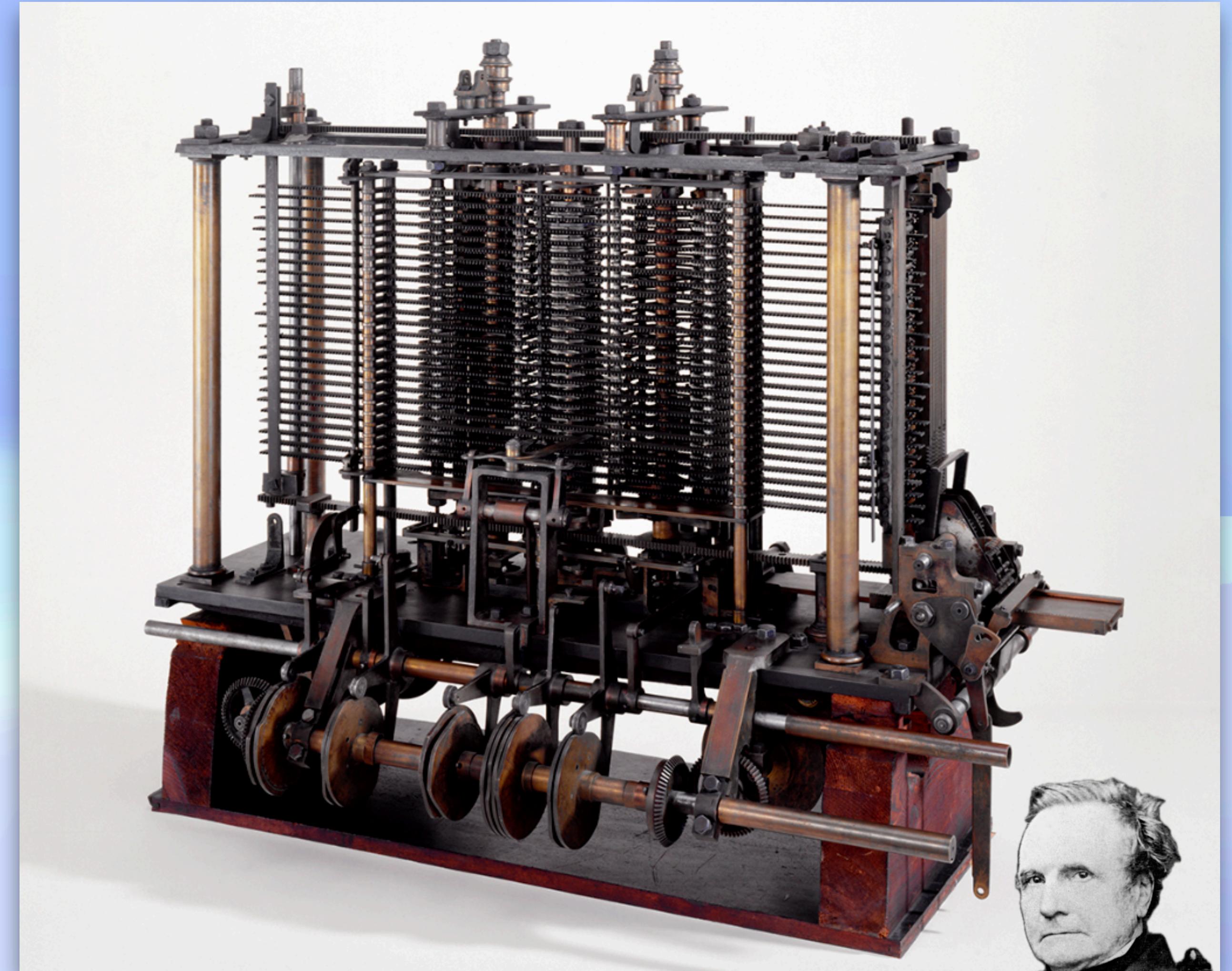
Charles Babbage

<https://blog.hnf.de/charles-babbage-in-berlin/>

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... and also the Difference Engine

Analytical Engine: Mechanical **ancestor of the computer** – fully programmable via punched cards, with memory, arithmetic unit and control for any calculations.



[https://de.wikipedia.org/wiki/Analytical_Engine#/media/Datei:Babbages_Analytical_Engine,_1834-1871._\(9660574685\).jpg](https://de.wikipedia.org/wiki/Analytical_Engine#/media/Datei:Babbages_Analytical_Engine,_1834-1871._(9660574685).jpg)

... also Charles Babbage

https://en.wikipedia.org/wiki/Charles_Babbage#/media/File:Charles_Babbage_-_1860.jpg





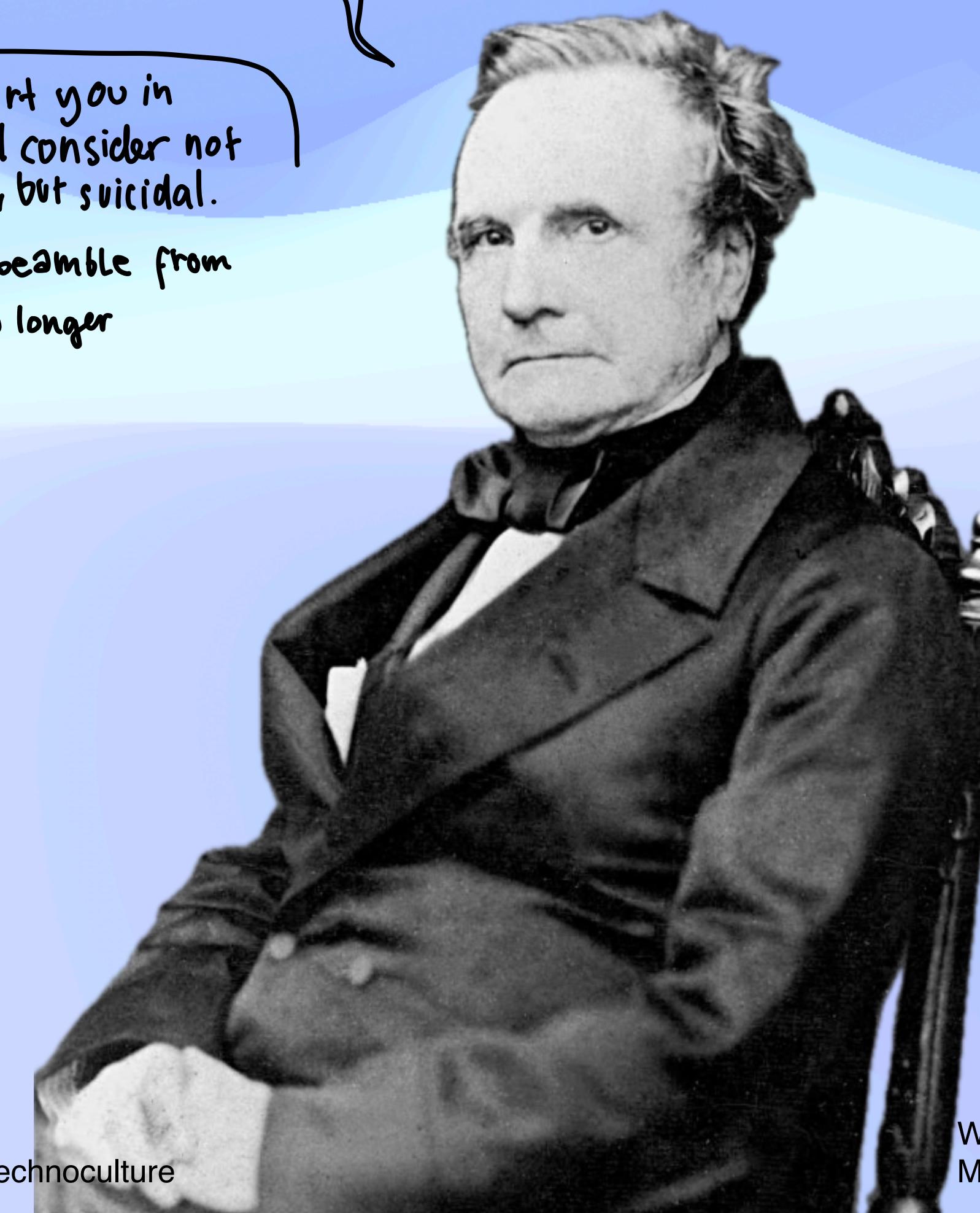
https://upload.wikimedia.org/wikipedia/commons/a/a4/Ada_Lovelace_portrait.jpg

Let me include a preamble to the publication of your notes, complaining against the British government. They don't fund me enough. This is an attack against me, this is discrediting me!



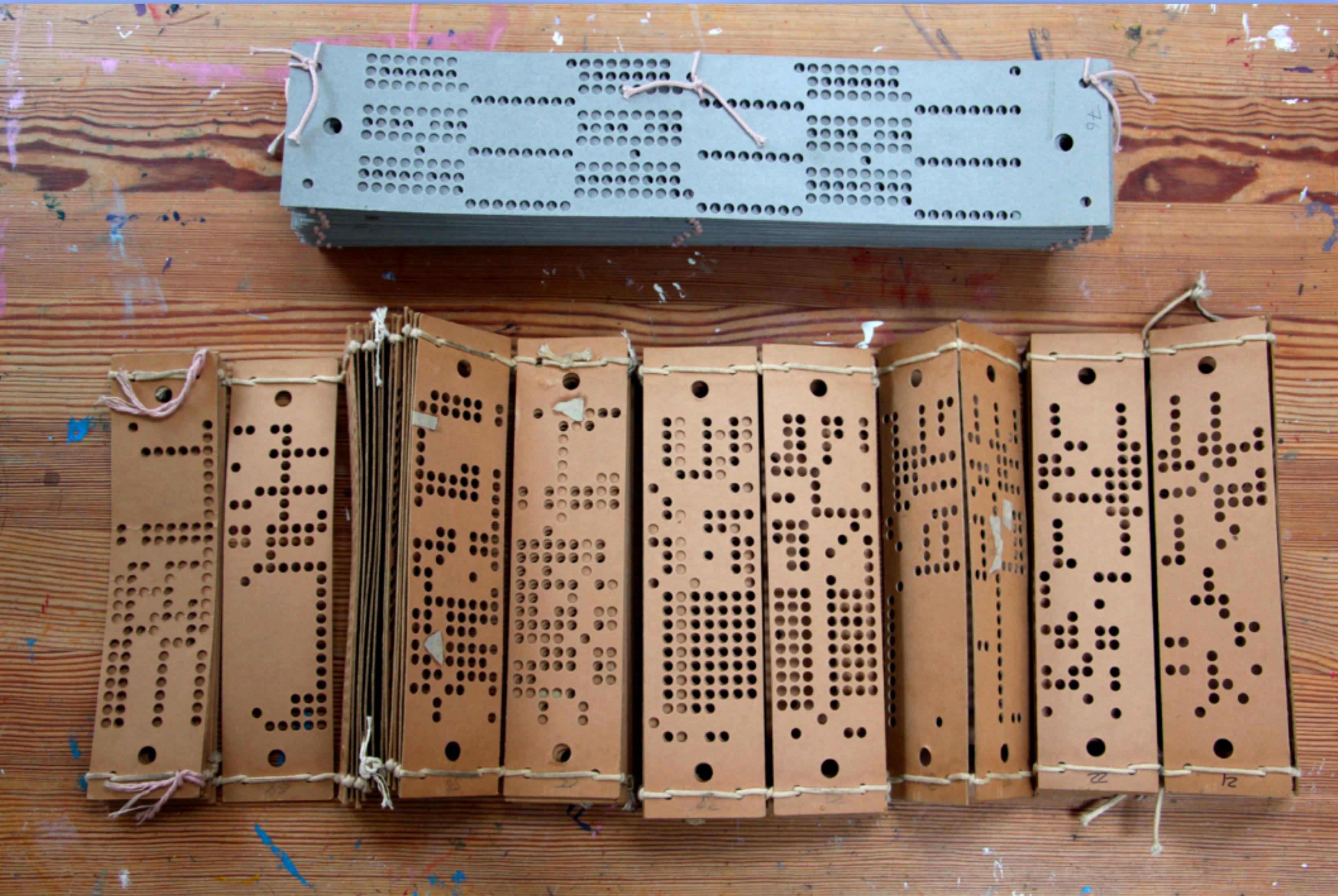
I never am or will support you in acting on principles which I consider not only wrong in themselves, but suicidal.

If you don't remove the preamble from the publication, then I will no longer work with you.



https://en.wikipedia.org/wiki/Charles_Babbage#/media/File:Charles_Babbage_-_1860.jpg

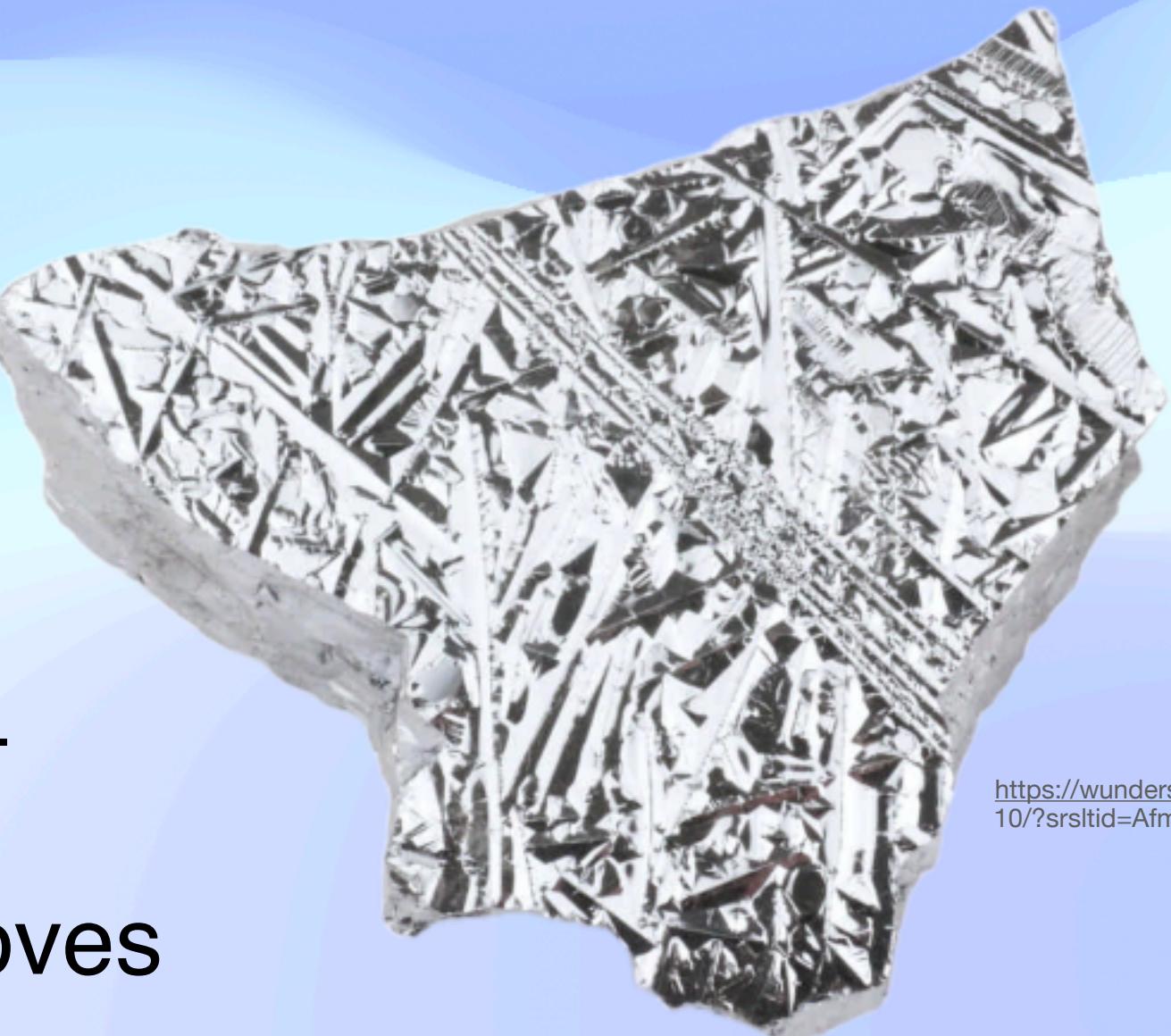
Is zero actually "a thing"?



<https://www.a-n.co.uk/blogs/pointillist-research-and-development-project/post/52547388/>

a hole is also treated as a positive particle

A hole in a doped silicon crystal is not a real particle, but an electron vacancy – however, **it is treated like a positive particle** (+ charge carrier) because it moves under voltage and generates current.



<https://wunderstein24.de/produkt/grosser-silizium-kristall-rohstein-in-bester-qualitaet-reinheit-9999-10/?srslid=AfmBOorlGV5F8o7wmKujM5RE65-4a-zQ-kBUiJOQGAPwnzwz--13-SHZ>

She described them as "young volcanoes"— unpredictable, exhausting, expensive, and detrimental to her work. Ada suffered from illness, opium addiction, and felt constrained by motherhood.

This fits with her rebellious nature: children as "troublesome burdens," contrasting with her self-perception as a "prophet" and her passion for machines.

<https://kids.nationalgeographic.com/history/article/ada-lovelace>

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Hysteria is a **historical term for a mental disorder** primarily **associated with women**, characterized by physical symptoms without an organic cause. Originally believed to be caused by a "**wandering uterus**", it was later understood as an expression of unconscious psychological conflicts and emotional instability. Hysteria was often **used to pathologize women** whose feelings and intellect were considered deviant.



<https://www.igp-magazin.de/tag/hysterie/>

ARPANET (Advanced Research Projects Agency Network) was the precursor project to the Internet, initiated in 1969 by the US Department of Defense to network research institutions and military agencies.

ARPANET is the direct predecessor of the Internet.

In 1983 it was switched to TCP/IP (Internet Protocol), grew globally and merged with networks such as NSFNET – in 1990 ARPANET was officially deactivated, and the Internet was born.



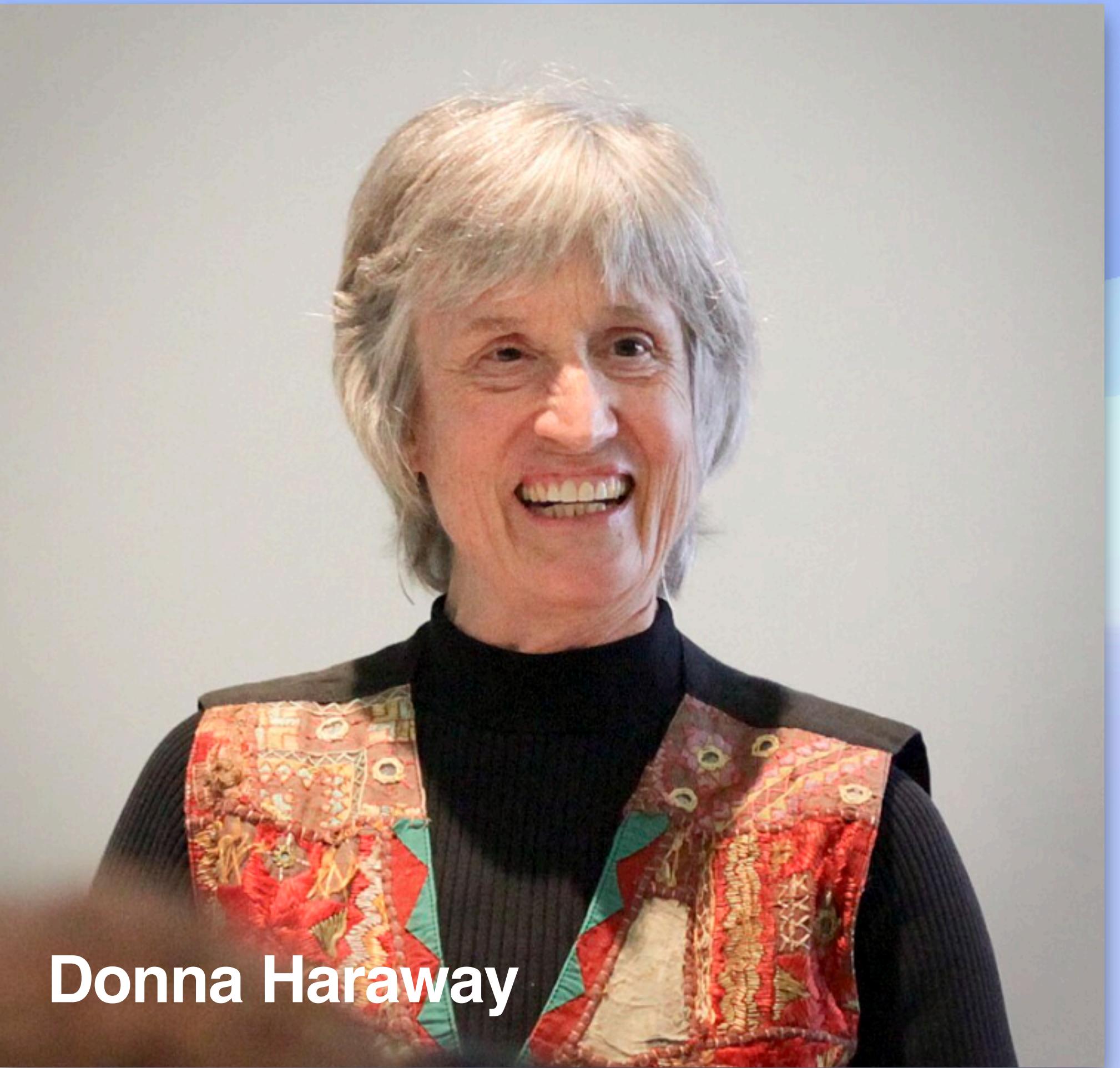
<https://enfiq.medium.com/the-untold-story-of-the-internet-how-a-1969-military-project-became-the-backbone-of-the-cloud-53245540d125>

- Non-linear way of moving through information mirrors the associative, jumping, connecting style of thinking.
- Online, one person can become many. You can have several names, genders, and identities.

Cyberfeminism: A feminist movement (since the 1990s) that **uses technology/cyberspace to deconstruct gender roles and create new identities**. Inspired by Donna Haraway's Cyborg Manifesto.



https://de.wikipedia.org/wiki/Cyberfeminismus#/media/Datei:21.menderako_manifestu_ziberfeminista.png



Donna Haraway

[https://de.wikipedia.org/wiki/Donna_Haraway#/media/Datei:Donna_Haraway_\(4555839936\).jpg](https://de.wikipedia.org/wiki/Donna_Haraway#/media/Datei:Donna_Haraway_(4555839936).jpg)

„The clitoris is a direct line to the matrix“
VNS Matrix – Australian artists' group
(Virginia Barratt, Francesca Da Rimini, et al.). Quote from their "Cyberfeminist Manifesto for the 21st Century" (1991).



<https://www.amazon.de/Ciberfeminismo-vns-matrix-laboria-cuboniks/dp/8494878263>



[https://asturas.wordpress.com/2017/08/17/ozero-e-um-por-sadie-plant-ciberfeminismo-e-potencia/](https://asturas.wordpress.com/2017/08/17/o-zero-e-um-por-sadie-plant-ciberfeminismo-e-potencia/)

why not women too?



[https://en.wikipedia.org/wiki/Ada_\(programming_language\)%23#/media/File:Ada_horizon_green_logo_with_slogan.svg](https://en.wikipedia.org/wiki/Ada_(programming_language)#/media/File:Ada_horizon_green_logo_with_slogan.svg)



<https://hackaday.com/2019/09/10/why-ada-is-the-language-you-want-to-be-programming-your-systems-with/>

„Radar
“

0 aka Zero

1 aka One

Timeline of Ada language

Year	Informal name	Official Standard
1980	Ada	ANSI MIL-STD 1815
1983	Ada 83/87	ANSI MIL-STD 1815A ISO/IEC 8652:1987
1995	Ada 95	ISO/IEC 8652:1995
2001		ISO/IEC 8652:1995/Cor 1:2001
2007	Ada 2005	ISO/IEC 8652:1995/Amd 1:2007
2012	Ada 2012	ISO/IEC 8652:2012
2016		ISO/IEC 8652:2012/Cor 1:2016
2023	Ada 2022	ISO/IEC 8652:2023

[https://en.wikipedia.org/wiki/Ada_\(programming_language\)](https://en.wikipedia.org/wiki/Ada_(programming_language))

<https://kids.nationalgeographic.com/history/article/ada-lovelace>

Thank you for listening



Question 1:

What is Zero? Is it a thing?

Question 2:

**Plant says: The internet is like footnotes – everything is interconnected, no hierarchy.
How does that feel in everyday life (internet/social media)? Better or worse than books? What makes it different?**

Question 3:

What do you think about Donna Haraway's idea: "**We are all cyborgs**"?

Key quote: *"By the late twentieth century, we are all chimeras, hybrids of machine and organism; in short, we are all cyborgs."*

Bonus Question:

What from the book **made you think the most**, and (how) would you use that in your next project?