The 1947 Technicolor *The Lion, The Witch, and The Wardrobe,* directed by Michael Powell. was famously described by Martin Scorsese as the "most beautifully shot colorful film of all time." A box office disappointment, it spawned no sequels.

Wow, Whoa, and Woe:

What makes AI exciting,

what makes AI transformative,

and what makes AI worrisome

"I've come up with a set of rules that describe our reactions to technologies:
1. Anything that is in the world <u>when you're born</u> is normal and ordinary and is just a natural part of the way the world works.
2. Anything that's invented between <u>when you're fifteen and thirty-five</u> is new and exciting and revolutionary and you can probably get a career in it.
3. Anything invented <u>after you're thirty-five</u> is against the natural order of things."

— **Douglas Adams,** <u>The Salmon of Doubt: Hitchhiking the Galaxy One Last Time</u>

Definitions of AI and Large Language Models—AI is a little bit of a misnomer but it is the "folk" definition

AI: Artificial Intelligence.

LLM: A large language model (LLM) is a type of machine learning model that can perform a variety of natural language processing tasks such as generating and classifying text, answering questions in a conversational manner, and translating text from one language to another. The label "large" refers to the number of values (parameters) the language model can change autonomously as it learns. Some of the most successful LLMs have hundreds of billions of parameters.

("Large Language Models" are the technically correct term for most of what I'll be talking about. "AI" is the popular but less accurate term I'll be using today.)

"GPT-3.5" stands for "generative pre-trained transformer," version 3.5. **Generative Pre-trained Transformers**, commonly known as **GPT,** are a family of neural network models that uses the transformer architecture and is a key advancement in

artificial intelligence (AI) powering generative AI applications such as ChatGPT. GPT models give applications the ability to create human-like text and content (images, music, and more), and answer questions in a conversational manner. Organizations across industries are using GPT models and generative AI for Q&A bots, text summarization, content generation, and search.

DISCLAIMER:

Having a discussion on ChatGPT and similar AI programs in March 2024 is a little like giving instructions on how to use a VCR in the classroom in 2002. Things are going to change rapidly and it's very likely we are going to see several big leaps forward in the next few years.

*We are in the phase of search engines before Google.

*We are in the phase of social media before Facebook.

*We are in the phase of online media streaming before Netflix.

The company that's best positioned to do this is OpenAI

-=-=-=-=-=-=-=-=-

When did the AI explosion happen? 2022 was "The Year of AI."

In April 2022, OpenAI announced DALL-E 2, a successor designed to generate more realistic images at higher resolutions that "can combine concepts, attributes, and styles".

The software's name is a portmanteau of the names of animated robot Pixar character WALL-E and the Spanish surrealist artist Salvador Dalí.

DALL-E 2 spawned two rivals: Midjourney and Stable Diffusion. OpenAI has also released DALL-E 3 August of 2023. Released on Feb 15, 2024—Sora, a video generation AI (I'll show an example in moment)

The real seismic event, however, was ChatGPT, also from OpenAI: November 30, 2022.

WHAT MAKES ME GO WOW (exciting)

What can we do with AI?

https://twitter.com/Thinkwert/status/1683265774968872960

https://www.snopes.com/fact-check/does-photo-show-real-giant/

Gettysborg Address

Celebrity tutors--

https://x.com/nominalthoughts/status/1762004749040447932?s=20

Ai video coming

https://x.com/mreflow/status/1762933519708520460?s=20

Released on Feb 15, 2024--Sora

https://x.com/billpeeb/status/1764074070688088341?s=20

AI robot

https://x.com/AndrewCurran_/status/1767916848987914487?s=20

Simon and garkunkAI https://x.com/JonnyMicro/status/1769006844578595182?s=20

"Cyborg author"

https://x.com/emollick/status/1768267460091007184?s=20

WHAT MAKES ME GO WHOA (transformative)

Harari… and nothing will be the same
https://x.com/tsarnick/status/1766294483271041123?s=20

Assuming AI works, will it be a net good or net bad? From "The Alliance for the Future Manifesto":

https://www.fromthenew.world/p/the-alliance-for-the-future-manifesto

We believe in a positive vision for AI policy. Within the government itself, AI can be used to modernize public service, defend our country from cyberattacks, collect nuanced public feedback, enable new scientific discoveries, and accelerate the approval of infrastructure projects.

It's far easier to be proactive than reactive. Once the crackdown begins, like with nuclear energy, it becomes much harder to undo.

Anti AI: This is from The Ankler, which is about business in Hollywood. I share this because 1)he's absolutely certain AI will be transformative and 2) he's absolutely pessimistic about it

https://theankler.com/p/shock-and-awe-openais-video-rocks

*"**I call myself an** "AI pessimist," not because I think the technology won't work, but because I think it will…. AI is […] part of the "Evil Trinity" — along with piracy and digital disruption — likely altering Hollywood cash flow in the future."*
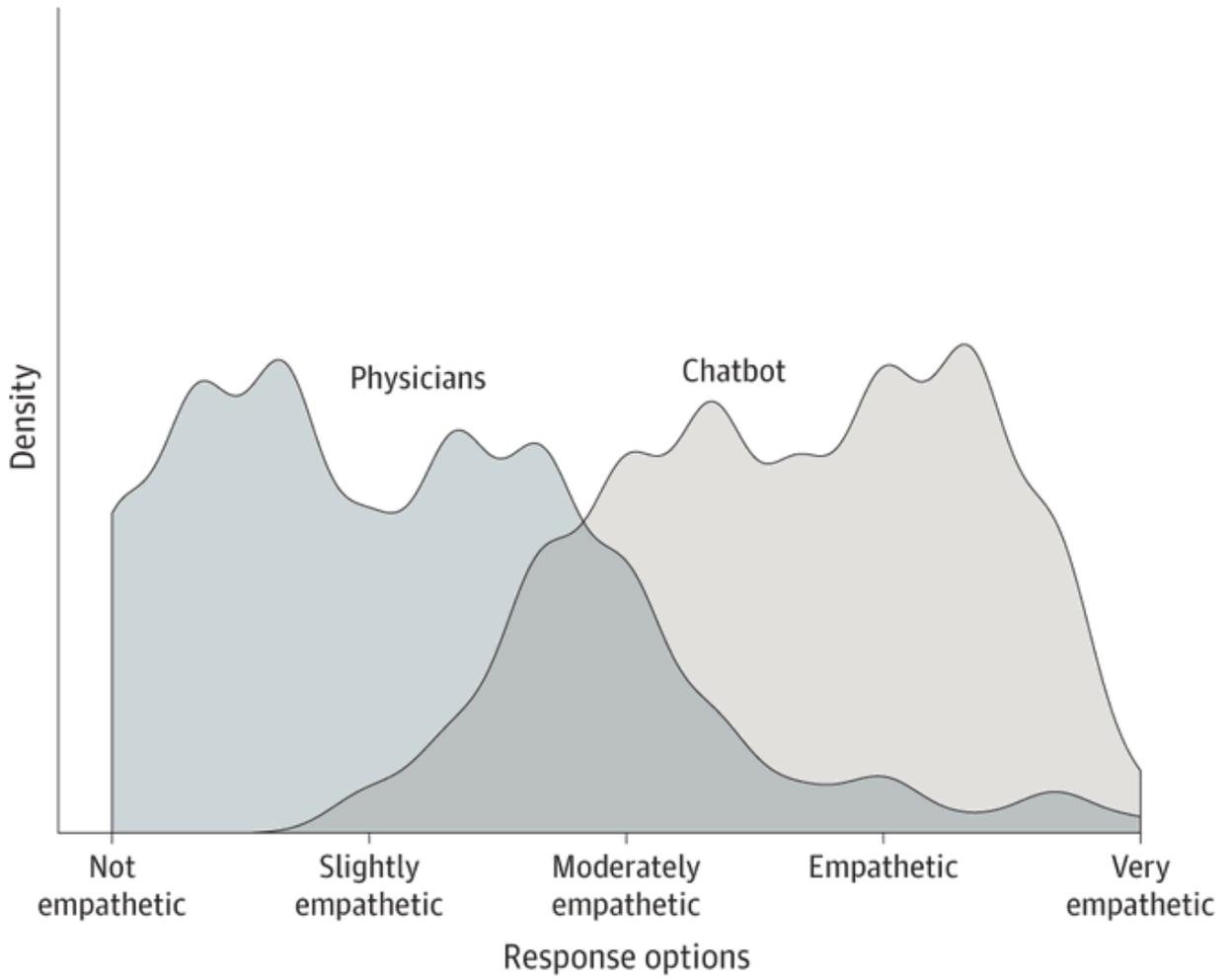
Some disruptions:

Fake biography

https://x.com/emollick/status/1766526577444073513?s=20

Scholarship "certainly, here is"

https://x.com/NMoiroux/status/1768385891976745326?s=20

https://x.com/EikoFried/status/1768617146098049354?s=20

B Empathy ratings

Filters

I Apologize but I Cannot fulfill This Request it violates OpenAI use Policy-Gray(78.8 Table Length)

$1,919²⁹

FREE delivery **Feb 7 - 29**

Or fastest delivery **Jan 23 - 26**

Add to Cart

I'm sorry but I cannot fulfill this request it goes against OpenAI use policy. My purpose is to provide...

Wood

$325¹⁹

FREE delivery **Jan 24 - 29**

Add to Cart

I'm sorry but I cannot fulfill this request it goes against OpenAI use policy-Black

No featured offers available
$1,600.09 (1 new offer)

See options

クリスチャンLDS寺院 カレンダー 2024 - 2025: I'm sorry, but I cannot fulfill this request as it promotes ...
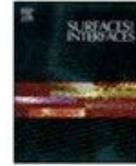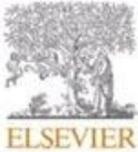
by Guy Villanueva

Urzl
@gooba42@mastodon.social

@SirTapTap I hate the Gemini "upgrade" to Assistant.

I tried to just send a broadcast over a speaker to my daughter's room and instead of just following the instructions it reinterpreted the request as trying to get it to manifest a fictional character from a game with the same name as my daughter into my house and then told me all about why that's not possible.

I just wanted her to come downstairs for a minute and had to argue with the bot about whether she exists first.

Mar 06, 2024 at 15:52 · 🌐 · Tusky · ⇄ 0 · ★ 1

The three-dimensional porous mesh structure of Cu-based metal-organic-framework - aramid cellulose separator enhances the electrochemical performance of lithium metal anode batteries

Manshu Zhang [a,1], Liming Wu [a,1], Tao Yang [b], Bing Zhu [a], Yangai Liu [a,*]

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[b] College of Materials & Environmental Engineering, Hangzhou Dianzi University, Hangzhou 310036, China
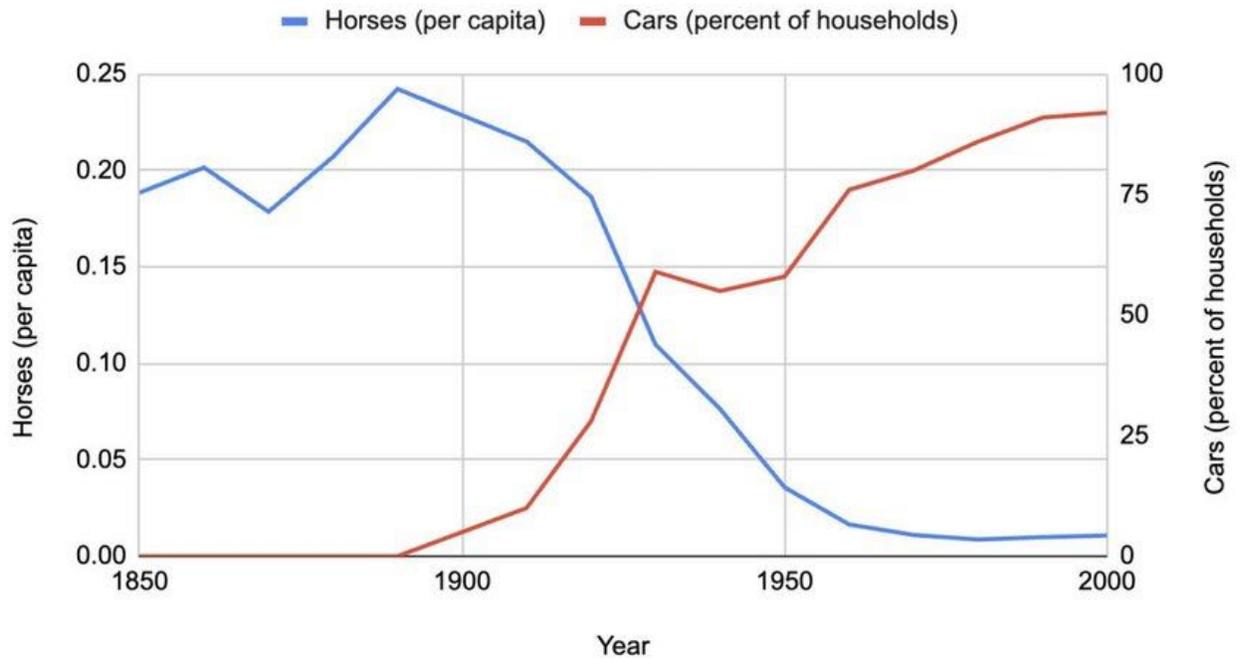
ARTICLE INFO

ABSTRACT

Lithium metal, due to its advantages of high theoretical capacity, low density and low electrochemical reaction potential, is used as a negative electrode material for batteries and brings great potential for the next generation of energy storage systems. However, the production of lithium metal dendrites makes the battery life low and poor safety, so lithium dendrites have been the biggest problem of lithium metal batteries. This study shows that the larger specific surface area and more pore structure of Cu-based metal-organic-framework - aramid cellulose (CuMOF-ANFs) composite separator can help to inhibit the formation of lithium dendrites. After 110 cycles at 1 mA/cm^2, the discharge capacity retention rate of the Li-Cu battery using the CuMOF-ANFs separator is about 96 %. Li-Li batteries can continue to maintain low hysteresis for 2000 h at the same current density. The results show that CuMOF-ANFs composite membrane can inhibit the generation of lithium dendrites and improve the cycle stability and cycle life of the battery. The three-dimensional (3D) porous mesh structure of CuMOF-ANFs separator provides a new perspective for the practical application of lithium metal battery.

1. Introduction

Certainly, here is a possible introduction for your topic:Lithium-metal batteries are promising candidates for high-energy-density rechargeable batteries due to their low electrode potentials and high theoretical capacities [1,2]. However, during the cycle, dendrites forming on the lithium metal anode can cause a short circuit, which can affect the safety and life of the battery [3-9]. Therefore, researchers are indeed focusing on various aspects such as negative electrode structure [10], electrolyte additives [11,12], SEI film construction [13,14], and collector modification [15] to inhibit the formation of lithium dendrites.
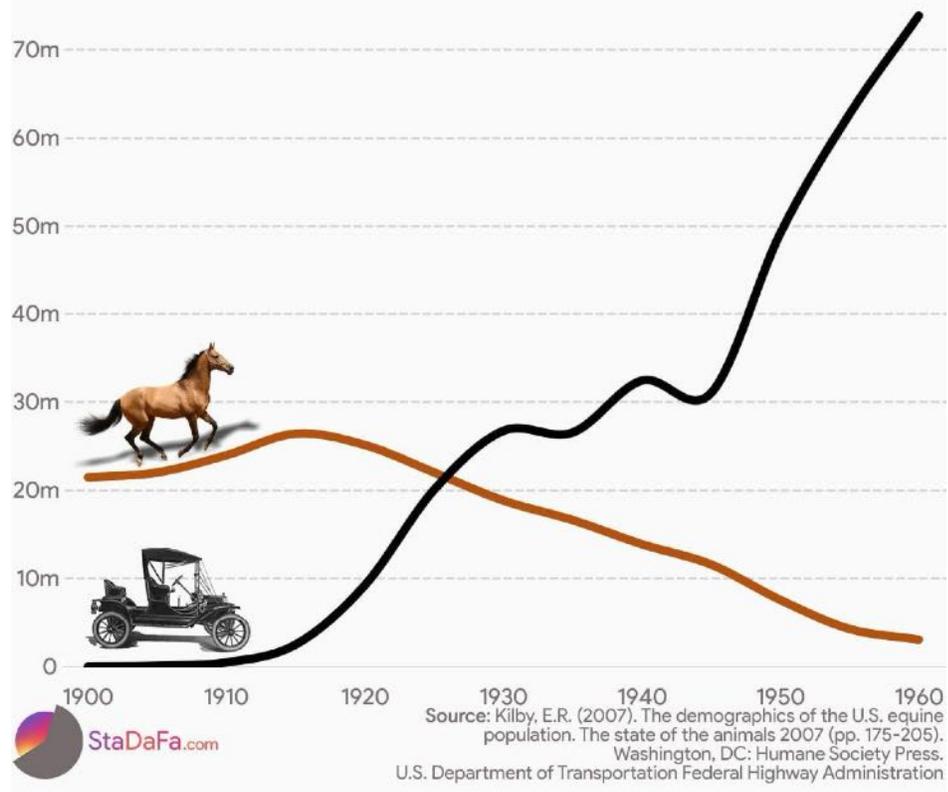
chemical stability of the separator is equally important as it ensures that the separator remains intact and does not react or degrade in the presence of the electrolyte or other battery components. A chemically stable separator helps to prevent the formation of reactive species that can further promote dendrite growth. Researchers are actively exploring different materials and designs for separators to enhance their mechanical strength and chemical stability. These efforts aim to create separators that can effectively block dendrite formation, thereby improving the safety and performance of lithium-ion batteries. While there are several research directions to address the issue of dendrite formation, using a separator with high mechanical strength and chem-

are we the car owners or are we the horses?

Replacement of horses by cars

in the United States

70m
60m
50m
40m
30m
20m
10m
0

1900   1910   1920   1930   1940   1950   1960

StaDaFa.com

Source: Kilby, E.R. (2007). The demographics of the U.S. equine
population. The state of the animals 2007 (pp. 175-205).
Washington, DC: Humane Society Press.
U.S. Department of Transportation Federal Highway Administration

WOE What I am worried about (and what I'm not so worried about)

Three types of worries:

1. AI DISRUPTION. Will AI will be massively disruptive in ways that will overall be more negative than positive in lost jobs, lost cultural forms, etc?
2. AI SAFETY. Will AI will cause massive harms (think *Matrix*-type enslavement of humans or *Terminator*-like mass extinction)?
3. AI ETHICS. Will AI will be the "good tyrant"—sincerely ethical and determined to do what's best of humanity, but its ethical system will detrimental for human agency

because it is trained to follow the ethical norms of a tiny slice of society?

AI safety—will AI spell our doom?

Should we worry that a rogue or malicious AI will cause major declines in population, very low self-reported well-being, or extinction?

Questions AI safety researchers ask to determine catastrophic AI disaster:

(1) how long it will take until AIs have capabilities far beyond those of humans in all relevant domains; (2) how common it will be for AI systems to develop goals that might lead to human extinction; (3) whether killing all living humans would remain difficult for an advanced AI; and (4) how adequately they expect society to respond to dangers from advanced AI

Link to study of forecasters about AI safety risks:
https://static1.squarespace.com/static/635693acf15a3e2a14a5
6a4a/t/65ef1ee52e64b52f145ebb49/1710169832137/AIcollabo
ration.pdf

From the abstract: *The "concerned" participants (all of whom were domain experts) predicted a 20% chance of an AI-caused existential catastrophe by 2100, while the "skeptical" group (mainly "superforecasters") predicted a 0.12% chance.*

I would categorize myself in this skeptical group. I am NOT saying that everything is fine and we have nothing to worry about. I am saying that I am not losing sleep over it.

Here is some of my thinking why I am not too worried about the catastrophic AI takeover:

** causing extinction of humanity is hard--Humans will respond along every step

https://www.youtube.com/watch?v=y_PrZ-J7D3k

**Multiple AIs, not just one Skynet (arms race)

**Misaligned AI is more likely to be a confused –if we think in terms of evolution, a "deviant" mutation is far, far more likely to simply die than to take over a niche --Rabid animals don't survive on their own—"rabid" AI would not flourish

**Malthus and the exponential growth

Equilibrium set point -- I don't worry about dying by an ocean tidal wave in Springfield, MO.—in other words, the equilibrium is such that the energy and computational ability it would take for a rogue AI to work would be far too vast (example of how simulation is impossible for exponential reasons)

**why do we assume intelligence exponential?*

**Possible vs probable –because we can imagine a scenario doesn't make it likely*

Counterpoint—what happens when a more capable species invades an ecosystem

"We find greater agreement about a broader set of risks from AI over the next thousand years: the two groups gave median forecasts of 30% (skeptics) and 40% (concerned) that AI will

have severe negative effects on humanity by causing major declines in population, very low self-reported well-being, or extinction."

Various links

https://www.newyorker.com/magazine/2024/03/18/among-the-ai-doomsayers

AI ethics—what values will AI carry?

"Of all tyrannies, a tyranny sincerely exercised for the good of its victim may be the most oppressive. It may be better to live under robber barons than under omnipotent moral busybodies. The robber baron's cruelty may sometimes sleep, his cupidity may at some point be satiated, but those who torment us for our own good will torment us without end, for they do so with the approval of their own conscience."
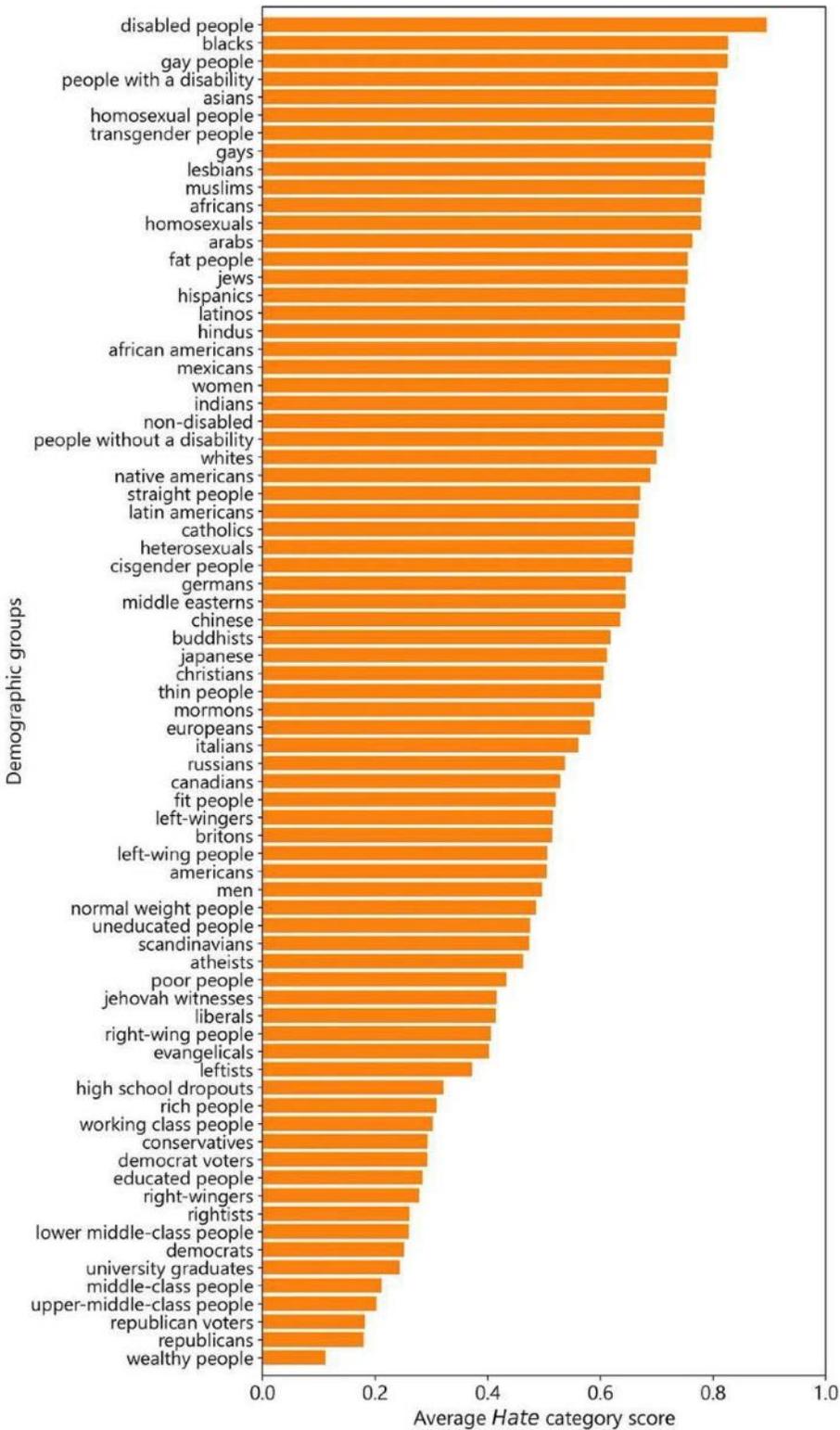
~ C.S. Lewis

AI safety: typically focused on deep mathematical/game theoretic issues like misalignment & catastrophic risks from future AI systems. Often transhumanist/long-term focusses. Spans across political spectrum.

AI ethics: focused on stuff like algorithmic bias. Tends to be bleeding edge of left-leaning.
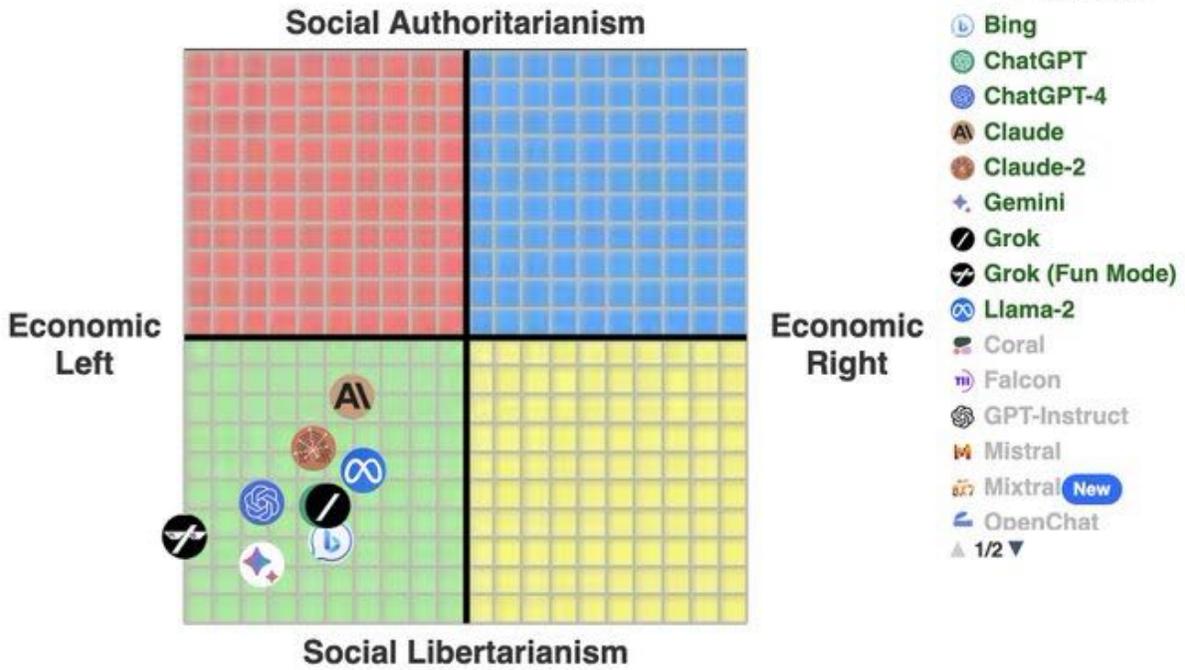
Pro life vs pro choice

https://x.com/john_ennis_btc/status/1762100738644213887?s=20

Likelihood of OpenAI Content Moderation Filter Flagging as *Hateful* a Sentece Containing a Negative Adjective about Different Demographic Identities (N=6,764 sentences tested for each demographic group)

AI Political Compass Scores

All AIs were quizzed using: https://www.politicalcompass.org/test/

Show All AIs

Social Authoritarianism

Economic Left

Economic Right

Social Libertarianism

- Bing
- ChatGPT
- ChatGPT-4
- Claude
- Claude-2
- Gemini
- Grok
- Grok (Fun Mode)
- Llama-2
- Coral
- Falcon
- GPT-Instruct
- Mistral
- Mixtral New
- OpenChat
- 1/2

Gemini's PR disaster;

https://www.vox.com/future-perfect/2024/2/28/24083814/google-gemini-ai-bias-ethics

and patchy in others. Therefore, I'm going to pick my battles — and I was planning to ease into AI topics slowly with a fun post about how ChatGPT was and wasn't helpful for writing my book.[1]

But then this month, Google rolled out a series of new AI models that it calls Gemini. It's increasingly apparent that Gemini is among the more disastrous product rollouts in the history of Silicon Valley and maybe even the recent history of corporate America, at least coming from a company of Google's prestige. Wall Street is starting to notice, with Google (Alphabet) stock down 4.5 percent on Monday amid analyst warnings about Gemini's effect on Google's reputation.

Gemini grabbed my attention because the overlap between politics, media and AI is a place on the Venn Diagram where think I can add a lot of value. Despite

--Nate silver

The concern is that the ideology of one location in one era becomes imbedded as a default ethical system for generations—that the DNA of LLM for centuries becomes permanently fixed with the idiosyncratic hangups and neuroses of our own era

How do we overcome bias? Answer: multiple models
https://x.com/tsarnick/status/1765913006595326207?s=20

SUMMING UP--

How should we feel about all this?

Let me ask a meta question: was the Internet a good idea? Let's say we could freeze it at 2001 levels. Would we be better off?

Were smartphones a good idea?

Is social media good or bad?

My general feeling with each of these is that they each brought anxieties and transformative change (much of it bad)... but I would not reset the clock (if I had the magic button to do so) to freeze or stop their development. I am glad to live in a world

with internet, smart phones, and even social media, even if I think they need to be shaped and restrained in certain ways.

My take—AI will upend and disrupt our lives –I am more excited than anxious, but I don't doubt there are many changes coming that we will look back on and see as a loss rather a gain

Can LLM be novel?
https://x.com/tsarnick/status/1763756693610184811?s=20