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Welcome to Quinn's AI Update

Issue #20, March 2024

Hello, AI Enthusiasts! And welcome new subscribers! Glad you're here riding the wave!

In this issue: a great man passes, lots of NVIDIA news, how science fiction helps us to imagine possible futures. Embrace the change!

Here we go:

- RIP Vernor Vinge
- Apple to Include Google Gemini in the iPhone?
- NVIDIA Unveils GROOT
- Nuro powered food delivery
- The Once and Future Timeline
- Jensen Huang Wouldn't Do It Again

Read on for more!



Image generated with Leonardo ai and the prompt
"an image of Vernor Vinge in the style of the artwork from his novel, "A Fire Upon the Deep. Please make the image heroic as an homage to him as a visionary."

RIP Vernor Vinge

I remember interviewing Dr. Vernor Vinge for PBS in 1996 and first learning of his concept of the "technological singularity" which he coined in 1983 and enshrined in [a paper for NASA in 1993](#).

Afterwards, reading his books "*A Fire Upon the Deep*", "*Marooned in Real-time*" and, especially, "*Rainbows End*" you got a sense of what the future held for humankind. I remember him saying on the phone interview "I would be surprised if the technological singularity happened later than 2032." He may have been a little optimistic about that timeline but I am more saddened that he did not get to see it.

I also remember trying to talk to a founder of FORE Systems, a telecommunications company I worked for, around 1998 about the Singularity, only to be quickly told he didn't want to talk about science fiction that would never happen.

I wonder how he feels about LLMs and AI now?

Maybe the FORE founder was right and we'll never see the Singularity—and that might be a good thing for human existence. But we're in the exponential curve now and it sure looks to go vertical in the next 20 years.

[Here's the Wikipedia entry](#) on Vernor Vinge if you want a deeper dive on the man.

Apple Making Moves?

I've pointed out in an earlier newsletter how many more AI startups Apple has invested in versus their rivals (21 versus 12 for Microsoft and 11 for Meta). However, Apple hasn't had much to show for it so far. Even the Apple Vision Pro headset was launched without really mentioning AI.

Further, Apple has dropped its "Apple Car" efforts, which it had plowed \$10 billion into over the years. That's a helluva sunk cost to walk away from.

Rumors now suggest that Apple is in talks with a major AI compeny—possibly Google—to incorporate AI into the iPhone. That could be a jumpstart for Apple on AI and help Google get past their flubbing of the launch of their generative art AI, Gemini.

An upgrade for Siri is also expected—as we mentioned in another newsletter while Siri was ground breaking when it was launched, it's now pretty passe' compared to ChatGPT 4 and Claude 3.

Now there's a prediction from Ben Reitzes at Melius Research that there will be an "AI App" on the iPhone App store by June. According to Reitzes, Apple is known for "perfecting a tech landscape" so that when Apple is ready, the market is ready for Apple. Here's a quick [interview with Reitzes on CNBC](#).

In addition, rumors are that Apple will be upgrading the iPhone itself in terms of it's own silicon hardware to be able to handle AI on devices at the edge of the network like smartphones.

Will Apple surprise us all? Given their track record, I never bet against Apple (or Elon Musk). I remember when Apple launched the iPhone in June 2007—into a market where the RIM Blackberry was dominant (it was so popular and addicting people called it the CrackBerry) and everyone from Samsung (Blackjack) to Microsoft Windows CE (aka WinCE) were busy launching new "smartphones." Apple had acquired the touchscreen technology of a company called Fingerworks in 2005. Siri was also an [acquisition in 2010](#). Since Apple has acquired and invested in more AI startups than other large tech companies, I have to wonder if they don't have something up their sleeve they'll spring on everyone soon.

Has Apple "perfected the market"? Stay tuned!

NVIDIA Says: "I am GROOT"

NVIDIA, the gaming GPU (Graphics Processor Unit) company that has seen a massive sales increase over the last several years and now has a \$2.4 Trillion market cap just had its developer day and announced a slew of impressive progress in the AI space.

How many is a "slew"? So many I'm sure I'm going to forget something in this summary.

First, they've announced "Blackwell", a new computer chip 30 times faster than NVIDIA's already fast "Hopper" chip.

Next, they've announced new software tools to enable organizations to implement AI faster.

Next, they're launching chips designed for fully autonomous cars.

If that's not enough, Jensen Juang, NVIDIA CEO, also announced Project GROOT, which he says will help develop a "foundation model for AI-driven robots." GROOT will enable a digital simulation—like a virtual reality—that gives robots a "digital robot gym" to go learn how to be a robot.

The GROOT platform "will be designed to understand natural language and emulate movements by also observing human actions." GROOT should enable robots to learn how to move in the real world faster by practicing movement in simulated worlds.

NVIDIA calls this simulated world the Omniverse and claims that Siemens is connecting their engineering capabilities to the Omniverse. That lets everyone working on programs at Siemens—from engineers and product managers to marketers and sales people—to be on the same page with product releases.

Huang also announced that the Apple Vision Pro now connects to the Omniverse—"it's now a portal to the Omniverse."

Wow—quite a list. But, wait—there's more!

Additional announcements:

- Being able to simulate as a "digital twin" an entire product before you build it in the real world so now you can build very complex things perfectly.
 - Creating a digital twin of the Earth called Earth 2 for predicting the weather on a regional basis at extremely high resolution.
 - NVIDIA Healthcare is building models for the "models of life" for researchers around the world. Whether it's medical imaging, gene sequencing, or computational chemistry it's very likely, Huang says, that NVIDIA is the cimpuation behind it.
 - A new software developer's kit called Isaac Perceptor. Allowing robots to find their way through a warehouse without way-finding systems.
 - AI "Design Copilots" to help NVIDIA engineers based on the Llama 2 Large Language Model. This has resulted in engineers creating chatbots all over NVIDIA.
- NVIDIA may be powering the exponential growth of AI all by itself. You can see CEO Jensen Huang explain things [here](#), [here](#) and [here](#).

"People with very high expectations have very low resilience. And, unfortunately, resilience matters in success. I don't know how to teach it to you ... but for all you Stanford students, I wish upon you ample doses of pain and suffering."
—NVIDIA co-founder and CEO Jensen Huang at the Stanford Institute for Economic Policy Research

Robot DoorDash?

Nuro.ai, a company developing fully autonomous delivery robots, is eyeing the DoorDash Market. How long until DoorDash delivery is completely automated?

Hey, ChatGPT 4: tell us about Nuro.ai.

"Nuro.ai has developed the Nuro delivery robot which represents an innovative step forward in the domain of autonomous vehicle technology, specifically designed for the purpose of delivering goods to consumers. Nuro's approach diverges from traditional delivery services by focusing on a fully autonomous, unmanned vehicle tailored to the transportation of goods rather than passengers."

"Nuro's robots are smaller and lighter than conventional cars, which reduces the risk of causing severe injury in the event of a collision. They are designed to navigate urban and suburban environments autonomously, using a suite of sensors, cameras, and artificial intelligence algorithms to understand their surroundings, predict the actions of others, and navigate streets safely."

"Nuro has been actively testing and deploying vehicles in the San Francisco Bay Area and Houston, Texas. The company has also been reported to have vehicles in Arizona, further expanding its operational footprint."

Thanks, ChatGPT 4!

You can see the Nuro delivery robot [here](#).

I've seen the little robot carts in Austin, TX, driving in the bike lanes and delivering pizza. Not sure what company owns them. But how long until I no longer have to pick up my HEB groceries curbside and Nuro delivers them direct to me?

And I don't have to worry how much to tip the DoorDash human in order to get my order promptly?

Deep Dive: The Past Through Tomorrow

The passing of Vernor Vinge the man in a bit of a wistful, pensive mood and so I've been thinking a lot about the science fiction that influenced me and the society around me.

I remember watching *Star Trek: The Original Series* with my Dad—it was the episode that won Harlan Ellison an Emmy: *City on the Edge of Forever*. I must have been 4 or 5 at the time.

Then I remember discovering *Star Trek* all over again in reruns in 1973—I would ask my science teacher, Mrs. Clough, to explain the concepts they were talking about on the show. I'd write them down as I heard them and she was kind enough to explain them to me—What's warp drive? What's a phaser? How far is Alpha Centauri?

Then I made a great set of friends interested in the same things. On TV: *Star Trek*, *UFO*, *The Six Million Dollar Man*, *Kolchak*; (it was so popular and addicting people called it the CrackBerry) and everyone from Samsung (Blackjack) to Microsoft Windows CE (aka WinCE) were busy launching new "smartphones." Apple had acquired the touchscreen technology of a company called Fingerworks in 2005. Siri was also an [acquisition in 2010](#). Since Apple has acquired and invested in more AI startups than other large tech companies, I have to wonder if they don't have something up their sleeve they'll spring on everyone soon.

Robert A. Heinlein was one of the SF writers with the biggest influence on me.

It probably began when one of those friends gave me the short story collection "The Past Through Tomorrow" for my birthday (maybe I was 12).

From stories like "The Man Who Sold the Moon" to "The Roads Must Roll" and "If This Goes On—" which is the prequel to "Revolt in 2100"; I was captivated by the vision Heinlein put forward for how he thought the future would unfold. Despite the fact these stories were originally written in the 1940s and 50s they still resonated with me in the 70s and 80s. And he wrote about more than technology—he wrote about timeless things like honor and responsibility and asked questions like: are there better ways to organize society? Are there different family structures? What is a good life?

And that lead me to "Starship Troopers", "The Moon is a Harsh Mistress" and "Stranger in a Strange Land." And on to Arthur C. Clarke, Ray Bradbury, Isaac Asimov, AE Van Vogt, Frank Herbert, Larry Niven, David Brin, Greg Bear, Charles Stross, Vernor Vinge, Ken McLeod and all the rest.

All of these authors have already considered many of the technological changes we see happening today: artificial intelligence, nanotechnology, genetic manipulation, fusion power, autonomous cars, cyberspace, etc. The future for me is not an alien landscape.

And that's certainly influenced my life even beyond the way I think about the future. I've joked over the years that the reason I chose my undergraduate major—physics—was because of science fiction. I only found out a year ago that that was the goal of Heinlein and the rest—you can read about their "social engineering" of children into STEM fields here in a book published recently: [Astounding](#).

So I encourage anyone interested in this future unfolding before us to read these "portals to the future" to see the Past Through Tomorrow. The beauty is that you don't actually need to read all the books—Pro Tip: ask ChatGPT to summarize the books and explain their most salient aspects. You can even ask ChatGPT (or Claude 3 or Perplexity, I presume) to take deep dives into the subjects/technologies that are discussed.

What an amazing world we are living in. And it's all been pre-imagined—we don't need to start from scratch.

This is definitely the most entertaining timeline.

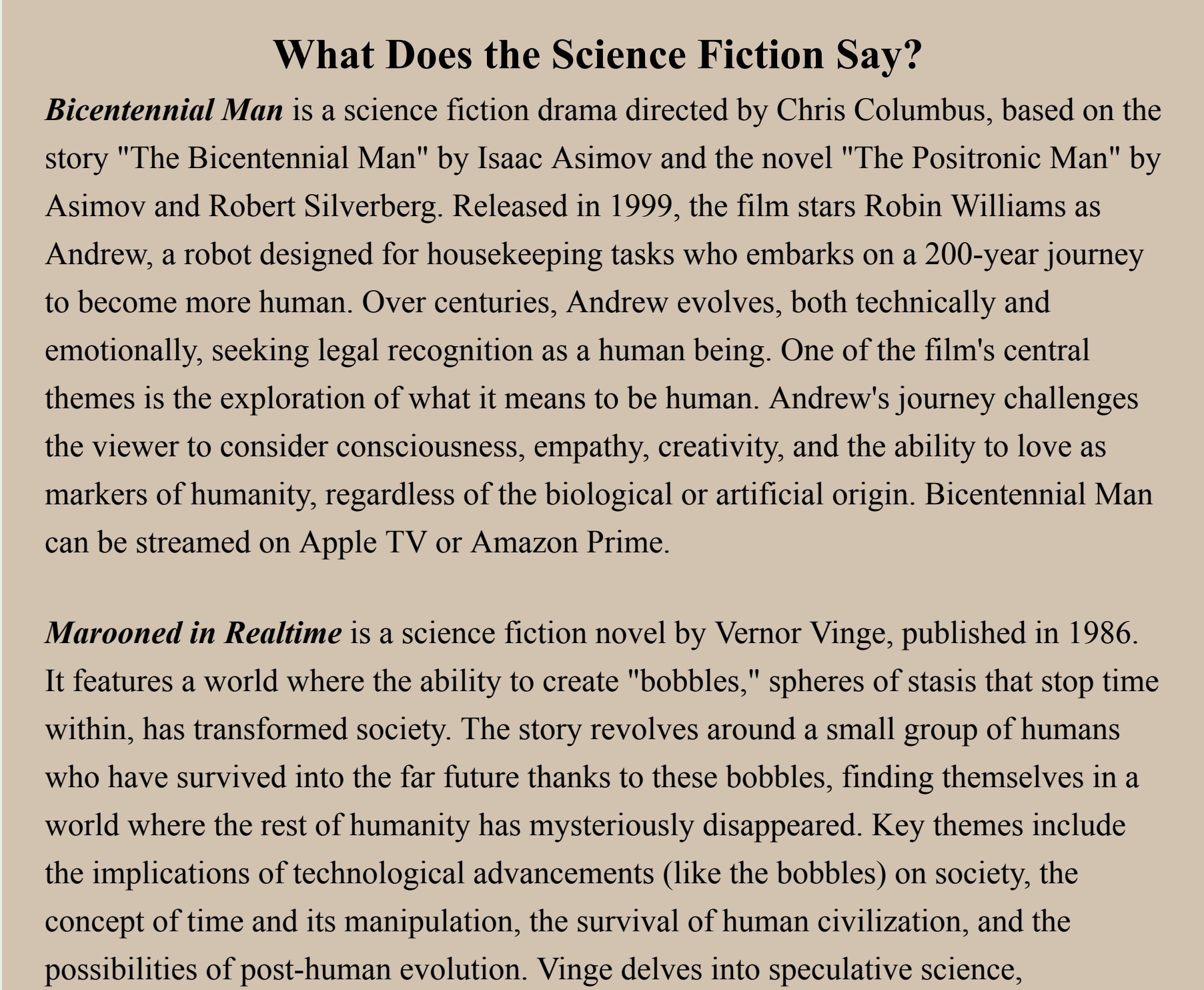


Image generated by Leonardo.ai with the prompt
"a photorealistic image of the great golden age and silver age science fiction authors looking through a portal at the future worlds they envisioned. Include Heinlein, Clarke, Fontana, Asimov, Niven, Le Guin."

Jensen Huang Wouldn't Do It Again

Jensen Huang, CEO of NVIDIA, is rapidly becoming a new hero of mine.

When he said recently if he could start over as an entrepreneur again, what would he do —he asked he wouldn't do it again. You can see the video [here](#).

Why so negative from a guy sitting on top of the world? The immense difficulty and challenges he's endured.

I quote him below and that quote resonates with me, having started my own business in the 90s and then watching others fail and succeed at their own endeavors. It always seemed to me that successful people are always able to fool themselves into thinking that what they're striving for will be easier than it actually is. And it's their personal grit and resilience that gets them through.

I'm grateful for the efforts of the super successful tech entrepreneurs—they've made it possible for me to make a living and build wealth using the tech they've created. But I certainly wouldn't want to be them.

When I worked with PBS in the 90s, we interviewed a fellow at Stanford, a fellow who I think was named Norman Bradburn, who had led efforts to develop the first GPS systems. And I was stunned that during the interview he broke down in tears thinking about all those people he'd led and what they'd sacrificed to make GPS a reality—all the broken marriages, the troubled children, the alcoholism and drug dependency and worse. All for something we take for granted today.

Thank God for entrepreneurs and the naive assumptions they make. Our world would be much poorer without them.

Jensen Huang when asked what he would start today if he could start over again:

"I wouldn't do it. And the reason for that is really quite simple...building a company and building NVIDIA was a million times harder than I expected it to be. And if you knew all the challenges you would face, all the pain and embarrassment you would endure, I don't think anyone would do it. That's the super power of an entrepreneur. They don't know how hard it is and they only ask themselves 'How hard can it be?'"

What Does the Science Fiction Say?

Bicentennial Man is a science fiction drama directed by Chris Columbus, based on the story "The Bicentennial Man" by Isaac Asimov and the novel "The Positronic Man" by Asimov and Robert Silverberg. Released in 1999, the film stars Robin Williams as Andrew, a robot designed for housekeeping tasks who embarks on a 200-year journey to become more human. Over centuries, Andrew evolves, both technically and emotionally, seeking legal recognition as a human being. One of the film's central themes is the exploration of what it means to be human. Andrew's journey challenges the viewer to consider consciousness, empathy, creativity, and the ability to love as markers of humanity, regardless of the biological or artificial origin. Bicentennial Man can be streamed on Apple TV or Amazon Prime.

Marooned in Realtime is a science fiction novel by Vernor Vinge, published in 1986. It features a world where the ability to create "bobbles," spheres of stasis that stop time within, has transformed society. The story revolves around a small group of humans who have survived into the far future thanks to these bobbles, finding themselves in a world where the rest of humanity has mysteriously disappeared. Key themes include the implications of technological advancements (like the bobbles) on society, the concept of time and its manipulation, the survival of human civilization, and the possibilities of post-human evolution. Vinge delves into speculative science, examining how such technologies could alter human experiences, society, and even the universe itself. You can purchase the book [here on Amazon](#).

The Smart Money in AI

- [Diversification Needed to Capitalize on AI Investing Opportunities](#)
- [Top AI investment opportunities beyond Nvidia](#)
- [AI in investment management survey 2024](#)
- [How do asset managers see AI?](#)

The Last Word...for now.

Thanks for reading my newsletter—let me know how I can make it even better!

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Let me know what you think!

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