

Hubris—From the Metaverse to ChatGPT to TikTok's Time of Tribulation

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This month's hubris: The Metaverse is dead, ChatGPT is the bomb diggity, and it's TikTok's Time of Tribulation.

With typical tech hubris, the Metaverse has been pronounced dead as an arrested and charged presidential candidate. There seems to be some life, but when the various Metaversi have like 18 players inside of them, people are calling it over, which is not quite true.

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INTRODUCTORY TECH HUBRIS

The Metaverse has been at the forefront of the tech industry for the last decade when the founding of Oculus, now Meta, got us all thinking that maybe Neal Stephenson's *Snow Crash* was finally going to happen. But what really happened was that hubris was followed by supposed death, and the story was pulled from the news. What really happens after the love is gone is anyone's guess, but in typical tech fashion, there is

usually someone out there still working on it that is going to bring back resurgent love when their new tweak on it all surfaces from their quiet garage into the limelight.

DID THE METAVERSE DIE?

So, let's talk about what happened to the Metaverse. We just had the Oculus DK1 10-year anniversary, and many people online got together to remember the wow of it a decade ago. A decade ago, there was similar hubris around the HTC Vive, and I remember getting invited to the

coolest of off-Game Developers Conference (GDC) demos in 2013, a demo that worked for my group but then failed to work for all of the following people in line—it didn't seem like a completed product you could sell in 2013, and that remained true even later. When we all

proven hardware and support software. Large game companies, like Activision-Blizzard, Electronic Arts, and others, still, to this day in 2023, don't want to invest in building a full *Call of Duty* experience for, say, the Meta Quest 2 when the number of

So, we are now all thinking that the Metaverse is dead, but really, we might just be in the phase when people go back to the drawing board to replan how they are going to become instant billionaires. So, maybe it's not dead, or maybe it's all up to Apple to breathe life back into the Metaverse. So, right now, it's on the back burner and cooling off because the back burner gas is off, and people are sweeping up the ashes and trying to figure out what to do next.

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saw how cool virtual reality (VR) headsets were a decade ago, we all wanted to build games and other experiences with them, but what did we find? We went to a whole host of venture capitalists (VCs), and *none of them* wanted to fund the development of content. They all wanted to fund new hardware.

The consequence is that when I visited Jiangsu in 2018, I met this guy, and his company had to support 75 different headsets (Figure 1)! And there was some nice demo software, but we didn't have great games or anything experiential as no one wanted to fund the as-yet not fully

Quest 2 headsets sold is only about 20 million. Activision-Blizzard wants to see 100 million headsets sold before they want to invest in the rollout of a large game for that platform. And if we have 75 different headsets, then Mr. Jiangsu is the man to see, and you hope he supports what you have. So, we know where the VCs put their money—into the rollout of large numbers of headsets globally because they understand investing in hardware. VCs just don't have the stomach for investing in the content—the software—that makes the purchase of that hardware successful.

WHERE DID WE SEE THIS BEFORE?

Between 1995 and March 2000 was the Internet bubble. During that period, everyone and his brother and sister wanted to become instant billionaires, and they left their steady jobs to build some piece of hardware or software for the Internet. I remember I had a Ph.D. student who was about 120 days from finishing who dropped out to found a networking company, and he did phenomenally. The Internet bubble was followed by the dot-com crash, and by October 2002, all of the stock gains were lost. So, people's attitudes around tech changed a lot. They seemed to have morphed from the steady-and-slow method of making tech progress to the big-bang/big-crash method. That kind of explains why we all think the Metaverse is dead. We spent a lot of money building the hardware and not enough on the software, and now, we are in the crash.

Things are not dead, but I remember when my son went to the University of California San Diego as a computer science student, and my wife would explain that to her friends in Carmel, and they would ask why and say, "There are no jobs in computer science," thinking that the crash was forever. We all know now that crashes are just part of tech life and people get back to work, retool, and think about how to resurrect success from the crash's ashes. And they do this quietly and in the dark to avoid the close scrutiny of the pundits who



FIGURE 1. Seventy-five different VR headsets in Jiangsu (17 December 2018).

want to be the first to declare that new tech dead. I know really smart people who build their startups completely in silence because of this.

CHATGPT IS TODAY'S BOMB DIGGITY

Large language models are today's cat's meow. With ChatGPT, everyone is promising that programmers can easily be replaced, screenwriters are no longer necessary, and students can generate their term papers with just a short specification and without any real work. And professors are saying, "Let the students use ChatGPT as it's just the latest tool, and besides, their papers will be better!" Well, if you are old enough, we saw this in 1973 when college professors told us, "You must use a slide rule and not this new-fangled thing, the calculator" because the slide rule was forever! I was pretty good with the slide rule, but in 1974, when I started my first applied mechanics and engineering science class, we were all told, "The slide rule is over; you all need to buy a calculator by next week." So, ChatGPT is in the hubris phase, and the promises of its prowess are paramountly prodigious. And the serious work being done with ChatGPT is going on in the dark and in the quiet to avoid the punditry.

CAN CHATGPT REPLACE PROGRAMMERS AND SCREENWRITERS?

Everyone who has ever written a budget has wanted to replace programmers with some piece of magical wizardry. Because if you can just wave a wand at it, and the software is written without human intervention, then a lot of your budget lines go down. The real issue is then: What happens if you deploy that software, and it doesn't quite work as expected? Immediately, you will want a live programmer to go take a look, and what will that live programmer say? "I don't understand what this piece of software does; I need to rewrite it from scratch." So,

who will trust this piece of software other than accountants? So, ChatGPT is going to need to come up with some kind of software understanding system that tells you what it can/cannot do. And if it can do that, then it could just give you the right thing in the first place. But deploying ChatGPT

written by Leigh Brackett in 1972 and based on a novel by Raymond Chandler. So, let's see how this experiment went.

EXPERIMENTS WITH CHATGPT

So, the first thing I wanted to do was just hand the complete screenplay

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software into anything critical is maybe a long way away, in the "after the love is gone" phase.

Screenwriting is the art of taking some creative idea and turning it into a written exposition that can maybe be turned into a film or television series. Screenplays have dialog and short scene descriptions, and the purpose of the screenplay is to act as a guide to the making of that film or television show. So, can ChatGPT do this? Of course! My first experiment with ChatGPT was with the screenplay for *The Long Goodbye*,

to ChatGPT and let it rip, but I got the "too much text" message, so that didn't work. I then thought about how ChatGPT crawls across the Internet and reads everything it finds, and I found the screenplay I was using, *The Long Goodbye*, on the Internet. So, I took page 2 of the screenplay (Figure 2).

And then, I gave it to ChatGPT—I figured it probably already read the rest of the screenplay in its crawl. I received the result shown in Figures 3 and 4.

So, with a little bit of guided help from me, ChatGPT gave me part of a

ZY TERRY
Looks like it. You want to hear all the sordid details?
MARLOWE
No. Okay, Terry, what can I do for you?
TERRY
I've got to get away for a while.
Maybe we'll both have some second thoughts. Will you take me to Tijuana?
(a beat)
I could drive myself, but that red Maserati stands out like a searchlight, and I don't want her sending people to track me down.
MARLOWE
Tijuana.
(he sighs, not happy, but willing to do it)
Fix yourself a drink. I'll be with you in a couple of minutes.
Marlowe's car, an undistinguished heap, not too old, not too new, passes through the gate to the Mexican side.
B2 E X T . TIJUANA STREET - NIGHT
Marlowe's car pulls in to the curb. Terry gets out, lifts the suitcase from the back seat, leans back in to shake hands with Marlowe, and walks away along the street, carrying the case.
B3 E X T . TIJUANA STREET - NIGHT
Marlowe looks after Terry, shakes his head, then does a U-turn and drives off.

FIGURE 2. Page 2 of the 1972 screenplay of the film, *The Long Goodbye*.

new screenplay, but it clearly needs some more guidance from me. I asked ChatGPT if I could give it an entire screenplay—I wanted to say, “Generate me a sequel to this film.” ChatGPT said I could upload a pdf, or I could give it a Dropbox link, and I got all excited, but neither of those two methods would work for me, so I moved on.

Clearly, ChatGPT has some capabilities, and they are going to grow over time, and this is the hubris phase. Hopefully, we can drop into the post-hubris phase so the scientists can get some actual work done.

TikTok’s TIME OF TRIBULATION

Whenever the U.S. Congress and presidential-level politicians realize that they are not doing anything of value for the American people, they look for an easy target we can all rally around. Even the U.S. Department of Defense (DoD) is looking for an easy target they can point at to stop the public from paying attention to such recent failures as the disorganized pull-out from Afghanistan. Consequently, it is TikTok’s time of tribulation. Now, TikTok is a social media platform where the young post short

videos of whatever they want without parental discretion, videos that will live forever in infamy, and the bonus for the politicians and DoD is that ByteDance, the owner of TikTok, is a Chinese company. For those of us who worked inside the DoD at the end of the Cold War (1989), we all know that without the Soviet Union as our mortal Cold War nemesis, the DoD has been pointing the finger toward China since then, even though China had only about five warships in 1989 and manufactured all our computers. So, what’s all of the hubbub?

Well, the U.S. Government is saying that “it’s worried China could use its national security laws to access the significant amount of personal information that TikTok, like most social media applications, collects from its US users.”² So, China is going to keep track of all those young people dancing suggestively on TikTok in some large database somewhere.

A counterpoint quote in “What Are the Arguments for Banning TikTok?”³ says:

“It is easy to make a statement that TikTok has user data that might be shared with the Chinese Government. To actually prove it and state why that might be of concern is quite another thing. Additionally, the large user audience of TikTok and the massive amount of data collected makes the prospect of going through that data to determine meaningful information about the user a daunting task and a very large computational effort.

Once we go down that road, we then will have calls for the blocking of other Chinese apps, such as WeChat, that have a more pervasive Chinese Government monitoring. Perhaps a TransGlobal [Cold] DataWar is the inevitable outcome if we do.”

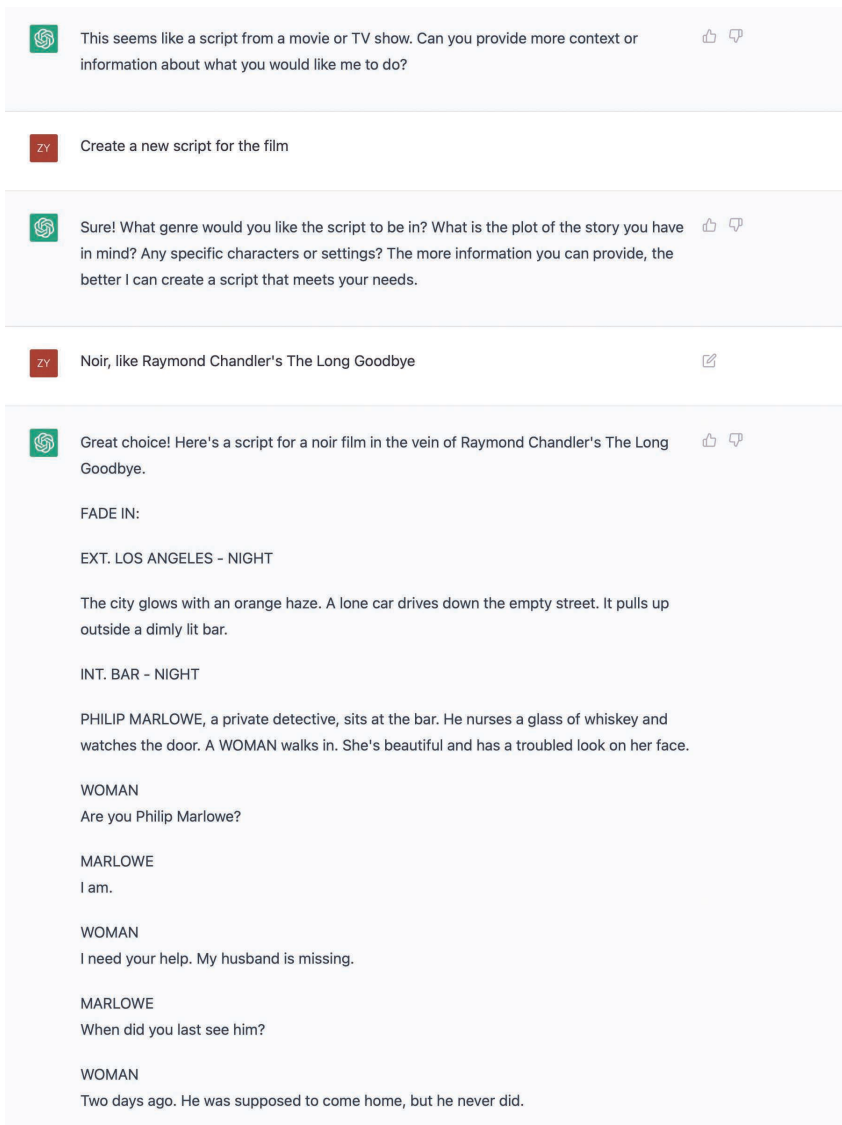


FIGURE 3. My conversation with ChatGPT.

So, we can go down this road, making faux arguments that we are protecting personal privacy, but Scott McNealy said it best in January 1999: “You have zero privacy anyway. Get over it!”

This proclamation is attributed to Sun Microsystems CEO Scott McNealy, who reportedly told a group of reporters and analysts this in an interview. Scott was right, and this applies forward as well. And now, we have the TikTok Time of Tribulation, and we are all worrying about personal privacy in the Metaverse too.

ARCHITECTING THE METAVERSE—BUILDING IN SUPPORT FOR PERSONAL PRIVACY

So, I wanted to start with Scott McNealy’s quote as his comment was made at the height of the Internet boom (26 January 1999). The Internet boom started about 1994, and by January 1999, it was quite clear that personal privacy was really gone as no one had thought to architect it in from the first posted webpage forward. Since we are at the start of building the Metaverse, maybe we can build in some support for personal privacy other than unread end-user license agreements.

PRIVACY LEAKS AND HOLES AND PRIVACY IMPOSSIBILITIES

I start out by presenting an illustration of the way I see personal privacy (see Figure 5). In this illustration, we have a

personal client (in the upper level), and in the lower level, we have examples of personal clients—phones/tablets, laptops/desktops, local backup drives, cloud service backup, and a network out to the various Metaversi. I colored

CUT TO:

EXT. ABANDONED WAREHOUSE - DAY

Marlowe pulls up outside an abandoned warehouse. He gets out of the car and walks inside.

INT. ABANDONED WAREHOUSE - DAY

Marlowe walks through the warehouse. He hears a noise and pulls out his gun.

MARLOWE
John? John Porter, is that you?

There's no answer. Marlowe walks further into the warehouse. He sees a figure in the shadows.

MARLOWE
Come out where I can see you.

The figure steps into the light. It's a WOMAN. The same blonde from the bar.

WOMAN
You shouldn't have

FIGURE 4. Continuation of ChatGPT written screenplay.

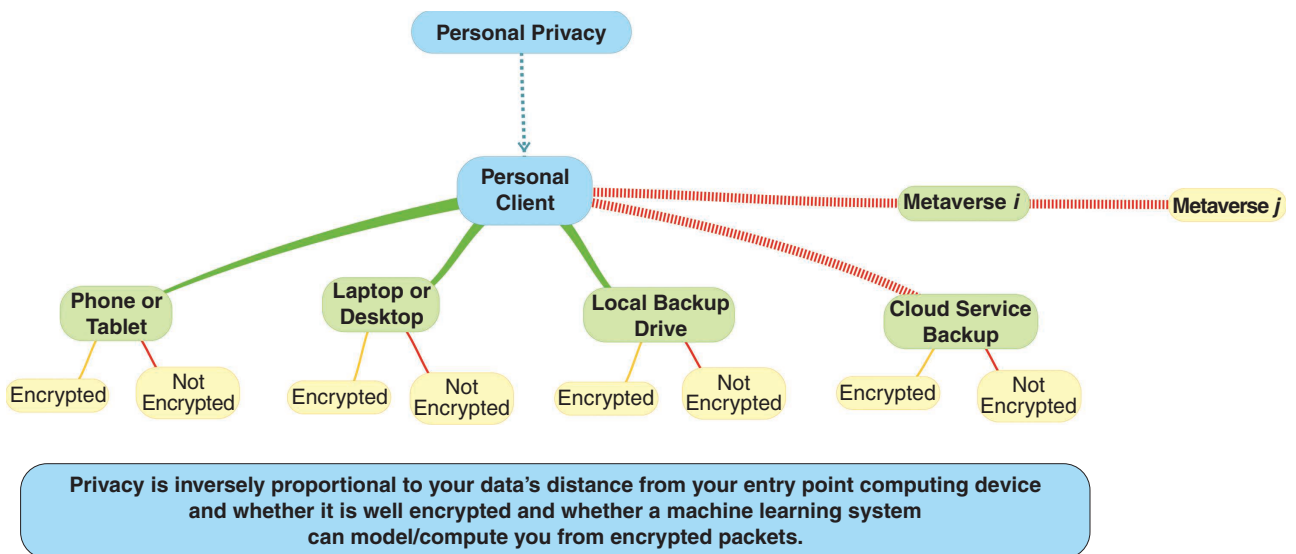


FIGURE 5. How I think about personal privacy vulnerabilities.

things in red where things can be leaks or holes with respect to personal privacy. One hole is “data not encrypted,” and if that is the case, someone else will harvest it, and you are out there in the wind of the Internet. Another

METaverse PRIVACY

There are many layers of concern with respect to privacy in the metaverse. Most of those concerns, again, stem from when we have unencrypted data anywhere in the system or any data

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hole is when you start pushing your data from your personal client to anything on the Internet. Once you are on the Internet, it doesn't matter much if your data are encrypted because most encryption is crackable *if someone really wants to*. I call that privacy impossibilities. And the bonus is that once you start using data packets in open metaverse standards, they become even easier to crack. So, I am sure this is what Scott McNealy had in his mind when he said, “You have zero privacy anyway. Get over it!” Basically, if what you are doing online is worrying you about who might see it, then maybe don't do it online.

that are going out on the Internet, encrypted or not. When we start integrating sensors into our metaverse devices, let's say biosensors or eye tracking, we get into the realm of knowing a lot about the individual wearing the sensors. When we start turning those sensor data into human emotional or mental or physical states, then you either trust the system that now knows you intimately, or you disconnect from it and do something else. When we start interacting with others in a networked metaverse and passing around our personal states (emotional, mental, and physical), then we are probably really close to the “no personal privacy” foreseen by McNealy. When we start passing that human state information to artificial intelligence characters that are going to interact with us on the basis of our personal state, then the cat is out of the bag. At that point, you do not know what the system will do with your state, especially if there is a government regulation that requires such state streams to be recorded for posterity. For a clearer understanding of what I am talking about, I suggest reading my previous column titled “Building a Human-Intelligent Metaverse.”⁴


COMMENTS?

If you have comments about this article, or topics or references I should have cited or you want to rant back to me on why what I say is nonsense, I want to hear. Every time we finish one of these columns, and it goes to print, what I'm going to do is get it up online and maybe point to it at my Facebook (mikezyda) and my LinkedIn (mikezyda) pages so that I can receive comments from you. Maybe we'll react to some of those comments in future columns or online to enlighten you in real time! This is the “Games” column. You have a wonderful day.

If the DoD was seriously interested in issues of national defense, it wouldn't bother with TikTok. It would take Discord offline for its hosting of stolen classified documents.¹ Discord has been totally left alone, and there are no Congressional

committees or DoD personnel trying to shut it down. Perhaps the potentials for riches from starting a new cold war with China are too enticing. Or perhaps our Congressmen are more interested in meeting some of the most popular TikTok influencers and dancers.

ACKNOWLEDGMENT

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