

You're listening to imaginary Worlds, a show about how we create them and why we suspend our disbelief. I'm Eric Molinsky.

About 9 years ago, I went to the base of the Brooklyn Bridge to see a work of art called The Telectroscope. It looked like an enormous Victorian telescope that had emerged from the ground. When I got to the lens, I could see a live feed of people in London waving back at me.

The artist behind The Telectroscope was Paul St. George.

PS: So you could say they were Skyping but emotional response and the excitement was as if they had encountered a new invention and as if they were, you went to Brooklyn end.

I live in Brooklyn, exciting and it didn't occur to me go home.

PS: No, we're not going hey, Eric! Wow! I don't believe it!

Paul is fascinated by telecommunications; particularly the way inventions follow our desires – or at least they used to. In fact, he says you can go back and look at 19th century cartoons and see fantasies of technology that we have today.

PS: I've got a fantastic one from 1875 some people are watching daughter play tennis in South Asia and they are in London and have screen, having conversation.

And the neat thing is this work of art --- The Telectroscope – was based on a real patent from the 1890s. The device wouldn't have worked, but the story behind it really fascinated Paul.

PS: There was a guy called Fige, a French journalist in America, and he was typing up story misheard, true story about electroscope, put at T in front, and called it a T, which didn't exist, and he thought it was devise for suppression for absence, which is pure poetry as far as I'm concerned.

It is a great phrase -- the suppression of absence. In other words feeling the absence of your loved ones living far away felt like an unbearable problem that demanded a technological solution.

All these amateur inventors around the world tried to patent the Telectroscope, which would've looked like a Steampunk version of Skype. That's how Mark Twain learned about it. He incorporated the Telectroscope into short story called "From the London Times of 1904." And that is considered the first work of science fiction to imagine The Internet.

READING: His mind was always busy with the catastrophe of his life, and with the slaughtered inventor, and he now took the fancy that he would like to have the teleelectroscope and divert his mind with it. He had his wish. The connection was made with the international telephone-station, and day by day, and night by night, he called up one corner of the globe after another, and looked upon its life, and studied its strange sights, and spoke with its people, and realized that by grace of this marvelous instrument he was almost as free as the birds of the air, although a prisoner under locks and bars.

I've been thinking about The Telectroscope lately – and how wondrous technology seemed at that moment because I've been feeling disillusioned by the Internet. I'm just so exasperated by all the angry echo chambers, information bubbles, and the whole issue of "fake news." I usually pride myself on keeping up with technology, but I've been feeling "future shock" – which is a phrase from the '70s to describe people who couldn't keep up with rapid changes.

And I know this is wrong – but a part of me is annoyed at science fiction writers because I don't feel like they prepared me well enough. I was ready for flying cars, not Twitter trolls.

JW: I'll read a 1963 book with moon bases that is set in 2017 but on the other hand, they only have one computer and it takes up half the moon base!

That is the novelist Jo Walton.

JW: I don't think many of the negative and complex things that the Internet has given us predicted. I think people weren't looking and happened very, very, very fast.

I talked Jo Walton and a number of experts because I wanted to know which writers did imagine The Internet, and is there anything we can learn from those stories.

So get ready to take a deep dive into the past -- or at least the past's idea of the future, which is our present. That's just after the break.

BREAK

In looking at the history of the Internet in science fiction, I really wanted to consult with Ed Finn, at Arizona State University.

EF: I am the director for the center of science in the imagination.

He's also got a great job title.

Ed says the next writer to imagine The Internet, after Mark Twain, was EM Forester.

Yes, that EM Forester – the guy who wrote *A Room With A View* and *Howard's End*. Those Merchant Ivory movies from 1980s and '90s were period pieces, but when the books came out in the early 20th century – they were about people living at that time. Forester was very interested in the world around him. And in 1909, he noticed that the emerging middle class had new kinds of jobs where they could work at a desk all day instead of manual labor, and they had time to write lots of letters. They could live prosperous lives without going anywhere. So in his short story *The Machine Stops*, Forester added one more thing to those desks – a screen people could gaze at.

EF: So people live in these rooms where everything is automated and you basically spend your day living life in FB, you attend lectures, Face Time with friends and doing things in physical world, visiting people is frowned upon and then depreciated – it's no longer supported feature and people spend their whole lives on line.

READING: But it was fully fifteen seconds before the round plate that she held in her hands began to glow. A faint blue light shot across it, darkening to purple, and presently she could see the image of her son, who lived on the other side of the earth, and he could see her.

"Kuno, how slow you are."

He smiled gravely.

"I really believe you enjoy dawdling."

"I have called you before, mother, but you were always busy or isolated. I have something particular to say."

“What is it, dearest boy? Be quick. Why could you not send it by pneumatic post?”

“Because I prefer saying such a thing. I want —”

“Well?”

“I want you to come and see me.”

Vashti watched his face in the blue plate.

“But I can see you!” she exclaimed. “What more do you want?”

EF: There’s this entropy story which is a classic sci-fi trope that we build magnificent sandcastles but fall apart and part of it is about complexity we build the thing to be so complicated that no one understands how works anymore and this is true when everyone mesmerized by this proto social media experience that nobody doing anything everyone in the real world So things fall apart and no one notice because everyone invested so much faith in the machine and the machine becomes religious object, a God by end of the story.

Sounds far fetched, but I used to think of Apple with that kind of reverence.

But the next story that comes along reminds me more of Google. In 1946, Murray Lenster wrote a story called “A Logic Named Joe,” about a machine in everyone’s house that could answer any question.

EF: The story is about people getting information they don’t want, getting insights that are uncomfortable, and the logical extension is what if everyone had all knowledge, society constructed around that not happening. Society is constructed around the idea that certain knowledge not being accessible to everyone all the time.

READING: This fella punches, “How can I get rid of my wife?” Just for the fun of it. The screen is blank for half a second. Then comes a flash. “Service question: Is she blonde or brunette?” He hollers to us an’ we come look. He punches, “Blonde.” There’s another brief pause. Then the screen says, “Hexymetacryloaminoacetine is a selective poison which is fatal to blonde females but not to brunettes or male of any coloring. This fact has not been brought out of by human experiment, but is a product of logics service.” The screen goes blank, and we stare at each other. It’s bound to be right.

Despite the 1940s lingo – or maybe because of it – I’m amazed that this story is basically about a search engine. And I think it’s quite prescient that this computer is named Joe to make people feel comfortable putting it in their homes. That’s right out of Steve Jobs’s playbook.

But Ed says a lot of these stories failed to imagine a key component about the Internet. They didn't realize in the future, information would be able to flow in both directions.

EF: The metaphor was of the masses, of the 20th century, you think about radio, TV, people that are a large group collective block and the Internet more complicated, and it's not just a few plucky outsiders and big group of sheep following one message, it's a big mess.

Again, Jo Walton:

JW: What you tend to have in SF generally if you'll get something like Google but it's 100% reliable. But the answer you get it's like looking in an encyclopedia, it's the correct answer, you don't get 57 million random answer some right, wrong and people arguing about what's right and what's wrong.

That makes sense. They imagined computers as one-trick ponies. So the Wild West nature of the Internet took many of us by surprise.

As I mentioned, I'm making big leaps from 1909 to 1946, and we're going to jump to the 1970s. But first, I want to take a brief sidebar.

The novelist Ada Palmer says there aren't many sci-fi stories about telecommunications during this time because Western sci-fi was preoccupied with the rise of fascism, Civil Rights and the Cold War. But writers in Asia were exploring technology much more. Her favorite example is Osamu Tezuka (oh-SAH-moo Te-ZOO-kah), who created Astro Boy and the Phoenix series.

AP: He has a number of stories issues of robots communicate over distances while humans can't yet or computer intelligences being able to communicate over distances while humans can't yet.

And she says we shouldn't be so literal in looking at whether these stories got certain technologies right. Some writers were imagining the problems of the Internet using pure fantasy.

AP: Science fiction lets us fight our moral battles in advance, and SF tries out many, many, many different ideas explores social and moral consequence and gives us a

preview, So let imagine no SF not imagine social networks but we had SF imagine if you could teleport and communication speeds change and that helps us understand social networks because it's similar. And for that reason prepared for unfamiliar social change in a way that the medieval ages weren't prepared because they never speculated what if the world were different or changed radically in an unprecedented new way.

And that kind of thinking around telecommunications reached its apex in the West with the cyberpunk novelists.

Jo Walton's favorite example from that era is the 1973 story "The Girl Who Was Plugged In" by James Tiptree. You might remember I did an episode about Tiptree – who was the pseudonym for a female writer named Alice Sheldon. Living a double life allowed her to imagine that some day, it might be useful to have -- what we could call -- an online avatar.

JW: It's a wonderful story that is terrifying and awful and read it and shudder but it's also quite amazing how many things she got right in terms of reality TV and instant celebrity and companies creating false instant celebrity people who can become powerful but under control of the corporations who have created them.

The story is about a guy who falls for a hot celebrity that is actually a reanimated corpse wirelessly controlled by a deformed woman in a lab. In other words, it's about a guy who gets catfished.

READING: Can't you take what I'm explaining to you? They've got the whole world programmed! Total control of communication. They've got everybody's minds wired in to think what they show them and want what, they give them and they give them what they're programmed to want—you can't break in or out of it, you can't get hold of it anywhere. I don't think they even have a plan except to keep things going round and round—and God knows what's happening to the people or the earth or the other planets, maybe. One great big vortex of lies and garbage pouring round and round getting bigger and bigger and nothing can ever change. If people don't wake up soon we're through.

Of course the groundbreaking cyberpunk novel was William Gibson's Neuromancer from 1984. I asked Ed Finn which scene feels more prescient to him. He said the scene where the protagonist Henry Case, who is a cyberspace junkie, finally gets back online.

EF: And then there's this moment where he jacks in and you get that sense of the rush, that sense of vertigo that sense of elation and that sense where Case has become someone else, he was one person before, this spiraling denizen of underworld and now he's a superhero in this virtual space again. He is more alive -- he is more himself online than offline.

READING: With is deck waiting, back in the loft, an Ono-Sendai Cyberspace 7. They'd left the place littered with the abstract white forms of the foam packing units, with crumpled plastic film and hundreds of tiny foam beads. The Ono-Sendai; next year's most expensive Hosaka computer; a Sony monitor; a dozen disks of corporate-grade ice; a Braun coffeemaker. Armitage had only waited for Case's approval of each piece.

And once the cyberpunk novelists got online, they updated their thinking quickly. Vernor Vinge was on an early version of the Internet called UseNet, which he incorporated into his 1992 book *Fire Upon the Deep*. When Jo Walton read that novel, she thought this Internet thing was something Vinge had made up.

JW: I read that before I went online when I got online and discovered UseNet, I was so happy it was real! That was amazing!

To me this is a fun exercise – seeing what these writers got right and what they got wrong. But then I talked with Cory Doctorow – the novelist, political activist and co-editor of the awesome website *Boing Bong*. And he challenged a lot of my assumptions.

First, he reminded me that sci-fi writers are not psychics – which I know, but he was like, you're still treating them that way. He says when we look back at sci-fi – even if it seems to be prescient – we have to remember those writers could only react to the moment they're living in.

CD: I sometimes compare it to when doctor does when she teases back of throat with swab, and rubs it on petrie dish and leaves it comes back and looks at it, she gets to find something what's going on in your body, not because she's made accurate model of your body, but because she's made a really usefully inaccurate model of your body where one factor has eclipsed all other factors and I think that's what happens with sci-fi writers pluck a single technology out of the world and grow it to encompass the whole world. It doesn't tell us how we'll react with all the other complexities of the world but it does give us a moment when we can inhabit the emotional lives of people who are being

upturned by it. And when you've lived in the skin of Winston Smith, the problems of surveillance stop being abstract and become concrete Orwellian matter.

Of course, the best writers in any genre have their thumb on the pulse of changes in society. Cory thinks that's why cyberpunk novelists resonate today -- not just because they were writing about telecommunications -- but because they were writing about economic changes that are still defining our time, and the way we use technology.

CD: And when you read the cyberpunk from that moment, that's when we get big corporate dystopias that unimaginably large and wealthy people who are unimaginably wealthy because people telling all sorts of stories in 1980 but the stories we paid attention to ones where rich became super rich and corporate power metastasized to unimaginable levels and maybe we were living in that moment sense it, and the stories spoke to us and maybe we can now look back and understand them.

And he also doesn't share my disillusionment with social media – even after the election. He takes the long view and thinks the Internet is changing things for the better.

CD: I believe that the internet is the nervous system of 21st century, it's a single wire, free press, access to educating, tools, ideas etc. every accomplishment whether society is a good one.

CD: So instead of optimistic or pessimistic, I'm hopeful and hope is a thing familiar to anyone who's plotted a novel, if you can solve problem before you, from new vantage point see solutions to problem past, doing one thing to improve situation suggests another thing to improve situation that's how a plot works, and I feel like if there's one tiny way make things slightly better then after that's done.

CD: And the future is not on rails, we get a different future depending on what we do, the only way sci-fi predictive if future didn't change based on what we did.

In other words science fiction can only rehearse the future. It's our job to make it a good one.

That's it for this week, thank you for listening.

Special thanks to Jo Walton, Paul St. George, Ada Palmer, Ed Finn and Cory Doctorow – who says just because the cyberpunks were skeptical of

capitalism, doesn't mean they wouldn't accept a little embedded advertising. In fact, a German soup company agreed to publish Neuromancer if William Gibson would add scenes like this one, where the character Molly Millions says:

CD: She says, all right boys get out of here quick. First who wants soup? What kind of soup do you want? We've got beef barley, we've got broccoli, and that soup sounds amazing! And they eat soup for the rest of the page, and then they escape from the sense net pyramid.

Imaginary Worlds is part of the Panoply network. You can like the show on Facebook and I tweet at emolinsky.

There was a lot of great stuff I couldn't fit into this episode. Ada Palmer had a great anecdote about how she runs a LARP every year at the University of Chicago where her students play out the papal election of 1492 – which was full of Machiavellian scheming. She says that exercise gave her student new insights into the 2016 election. That bonus audio is on the show page for this episode at imaginary worlds podcast dot org.