

Brian Hudson

(transcript)

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00:32 Speaker 1: Brian K. Hudson is a citizen of the Cherokee Nation from Bushyhead, Oklahoma. He is currently a post-doctoral fellow. Is that still true? I thought you were finished. Anyway, he'll let you know. At the University of California, at Riverside. He received his PhD in English, with a concentration in the literary and cultural studies from the University of Oklahoma. Hudson published a special issue of studies in American Indian literatures on animal studies, and edited Carter Revard's latest collection of poetry called, "From the Extinct Volcano, A Bird of Paradise."

01:09 S1: He has recently published the Cherokee cyberpunk short story, "Digital Medicine," in Lightspeed. His short story, "Land Run On Sooner City" will be published by Theytus Books in the upcoming anthology... [01:23] word.

01:24 Speaker 2: I can't pronounce it, either. It's Anishinaabe. It's long.

[foreign language]

01:32 S1: Sorry. I didn't say that right at all, for sure. Indigenous science fiction and speculative storytelling. He's currently working with Grace Dillon on a collection of critical essays on indigenous science fiction. Welcome.

01:44 S2: Thank you guys so much. Can you hear me?

01:47 S?: Yeah.

01:47 S?: Yes.

01:48 S2: Oh, great. I want to first thank Concordia, Jason and Skawenatti for bringing me up here. When I was on Adak Island, as my little robot avatar, trying to throw all these ideas at Skawenatti that I'd been thinking of since I'd seen her machinima in 2011. I was happy to be able to get that chance. I didn't think that it would lead them to bringing me up here. But I'm very grateful for that. I'm also, I wanna show my respect for the beautiful Okanagan land that we're on.

02:22 S2: And thank you all for coming out. So, the title of my presentation is, "If Sequoyah Was A Cyberpunk." I know that's not grammatically correct. But I'll explain. And this presentation is actually going to be in essay form in the book that Grace and I are working on. It should be coming out soon. So I take the title of my presentation from Bunky Echo Hawk's "If Yoda Was An Indian." [laughter] So if you haven't seen this, it's a depiction of Yoda, and a bunch of traditional planes like garb. And Echo Hawk, who's from Oklahoma, but he's Pawnee and Yakima, it's a play on the title of his painting. He's a fellow Okie. The regional use of "was" instead of "were" for the subjunctive mood in the past tense is an Okie thing, so I'm borrowing that from him, too, in my ungrammatical title.

03:27 S2: But what I'm doing in this presentation is kind of like what he's doing. He's taking an iconic sci-fi figure, and thinking about what Yoda would look like as an Indian, but also pointing out the indigenous roots of Yoda and the "Star Wars" trilogy altogether. So if you don't know a whole lot about "Star Wars," Joseph Campbell's work was very influential. And Joseph Campbell was very influenced by his study of Native American oral traditions. So there's definitely a genealogy at work there.

04:04 S2: But what I'm doing is a little bit different. Instead of taking an iconic mainstream sci-fi figure, and thinking about what that figure would look like as an Indian, I'm doing, kind of, the obverse. What I'm looking at is an iconic Cherokee figure, and thinking what that Cherokee figure would look like as a mainstream type of sci-fi figure, specifically, a hacker. And in thinking about this possibility of Sequoyah as a hacker, I really have to credit Roy Boni's work, specifically, his graphic depiction of the Cherokee language, as it moves from invention to digitization. This is the last panel of a five or six-page work that Boni uses. Sequoyah moves, actually moves himself out of the painting, the iconic painting that we've seen him in, and starts talking to the reader about how Cherokee syllabary makes its way from media like typewriters, and throughout time, into digital media.

05:26 S2: Specifically, now, you can... Well, I'll get to this a little later. Digital media, so if you have a new generation iPhone, or a new generation Android, you can text in Cherokee on it right now. Like they like to say in the Language Department of Cherokee nation, it's native to the system. Cherokee is native to these systems. So, Roy Boni's work was influential in me thinking about Sequoyah as a hacker. What do I mean by Sequoyah as a hacker, though? I wanna be clear that I'm not making some anachronistic argument for Sequoyah as a computer hacker, although that would make some really cool alternate history.

[laughter]

06:06 S2: Sequoyah was well known for his civil work and I can see him soldering breadboards and making computers by hand in this alternate history that I'm concocting in my head. What I am arguing, instead of that anachronism though is that Sequoyah was a culture hacker. So what is the culture hacker? The quick explanation of this is to think of social engineering, and this is something that hackers talk about when they... Well, malicious hackers, when they con people into giving up information such as passwords and this sort of stuff so they can get into systems. So they're using cultural human interaction to hack a computer system by impersonating someone in authority most often.

06:58 S2: Cultural hacking is kinda like that but broader in a philosophical sense and not necessarily manipulative. So cultural hacking can be inspiring someone, inspiring culture to take on a particular trait or to run with a particular code. In the scenario I'm laying out for Sequoyah, being a cultural hacker... I'm gonna lay it out quickly. It goes like this: The dominant writing system at the time... American English and thereby American culture was the current operating system, the early 1800, still is. Sequoyah, in his invention of the Cherokee syllabary, recodes or hacks that current operating system with his Cherokee syllabary. Sequoyah as a hacker was also committed to an open source philosophy, what we understand now as the open source philosophy. "Information wants to be free," is the old cyberpunk motto. And the Cherokee syllabary as information definitely wanted to be free. And he travelled all the way through Texas and to Mexico trying to help the proliferation of the Cherokee writing system, all the way to Mexico where he passed, where he died.

08:17 S2: So what I'm saying is that Sequoyah was a hacker and a culture hacker and that his cultural hack of the syllabary provided the possibility for Cherokee agency in digital mediums. So Cherokee digital agency, I'm thinking of it figuratively through the novels and short stories that I see in the tradition of Cherokee cyberpunk but also literally as in the case of the inclusion of the Cherokee language in Google and Microsoft, Android and Apple software. I wanna start real quickly by mentioning Metis writer Misha's "Red Spider White Web" because this is the beginning

of indigenous cyberpunk. Without indigenous cyberpunk, there is no Cherokee cyberpunk. Misha provides in her protagonist, Kumo. This is 1990, so for those of you who are familiar with Neal Stephenson's "Snow Crash" and "Raven", this is two years before that. Her protagonist, Kumo, is a nuanced depiction of indigeneity. She is a human; she is also part wolverine because she is a genetic experiment but she is a nuanced depiction of indigeneity in the cyberpunk genre. I call Misha, the matron saint of indigenous cyberpunk.

09:46 S2: And her depiction of indigeneity in cyberpunk, like I said before, creates the possibility for tribally specific cyberpunk shoppers. Like I'm going to mention or talk real quickly about Cherokee cyberpunk. So this is a still from Skawenatti's machinima, TimeTravellerTM. And I picked the still because Hunter and [10:16] ... I'm mispronouncing that I'm sure. But I did practice it like Hunter said. He needed to... They're watching the depiction, the movie depiction of Snow Crash, of Neal Stephenson's Snow Crash. And I bring this up because I'm gonna go real quickly through the genre that I'm seeing of Cherokee cyberpunk almost as quickly as Hero and Raven racing through the meta-verse. If you remember that from Snow Crash, they're going impossibly fast speed through the meta-verse so almost as quickly as that but not quite that quickly.

11:00 S2: So this is my timeline. I start with Misha because she is the beginning of indigenous cyberpunk; the rest of this text are what I would categorize as Cherokee cyberpunk texts. And so, if one of the main questions that cyberpunk literature can help us answer is "How does our idea of ourselves as humans change in relation to technology?" Cherokee cyberpunk can help us answer the question "How does our idea of ourselves as Cherokees change in relation to technology?" So I begin with William Sanders who is to my knowledge, the first Cherokee sci-fi author and his 2001 short story from his collection of short stories "East of the Sun and West of Fort Smith." All of Sanders' stories and some of his novels have really long titles. So I'll preface that. And here's the title of his story: He Did the Flatline Boogie and He Boogied on Down the Line.

12:07 S2: This, I would say, is the first Cherokee cyberpunk short story, even though it might not be recognized as such. It's about a guy who hires a man to help find this woman who is a Necrodone junkie. Necrodone, in this story, as one character puts it, provides a shared hallucination. So they shoot up. They are in this space between life and death, and you can actually interact with people who are also on Necrodone. I think Sanders took this straight from the movie Flatliners and adapted it into his story. At first glance, the story might seem to have nothing to do with cyberpunk until you remember that William Gibson, or cyberpunk author Zero, defined cyberspace as a consensual hallucination in Neuromancer. So, shared hallucination in Sanders' text, consensual hallucination in Gibson's. And the link is strengthened when we learn that the protagonist at the end of the story wants payment for finding this woman, or information about this woman, in the guitar that the protagonist is using. So, I'm sorry, the protagonist wants payment in the guitar that the person who hired him has. And the guitar model is nothing less than a Gibson Les Paul. So Sanders is definitely pointing towards Gibson and saying, "Look. I'm doing something cyberpunk-ish," but that would be the first Cherokee cyberpunk short story that I'm aware of. And that was back 2001.

13:46 S2: We move on to 2011. We have a much more Cherokee-focused novel that's very much cyberpunk called Riding the Trail of Tears by Blake Hausman. It's also cyberpunk in the way that Snow Crash is cyberpunk because I believe it's very infused with satire. The premise of this novel is, I believe, satirizing the commodification of Cherokee culture. The idea is there's a virtual Trail of Tears, and everyone comes all over the world to North Carolina to go participate in the Trail of Tears. They put this bodysuit on. They dial in to this particular digital system, and they have levels

of comfort that they can choose. So, if you wanna go walk the Trail of Tears with the Cherokees, but you don't wanna experience too much discomfort, you can choose Level 1 and it'd be kind of a happy jaunt through the forest or whatever. If you want to dial it up and feel the suffering and see some horrific sights and have an authentic Trail of Tears experience, you choose Level 4. And what happens in this novel is there're glitches in the software and things start messing up. And the protagonist, Tallulah, starts questioning her role as the tour guide for the virtual Trail of Tears. What I would say about this novel is it certainly explores what it means to be Cherokee in the near future with the inevitability of virtual tourism in Indian country.

15:27 S2: Next, in our very quick skim across Cherokee cyberpunk, I would say Daniel Wilson's *Amped*, which is 2012, is certainly cyberpunk. The premise of this novel is that people are getting implants in their head to fix disabilities, but that it makes them smarter than all of their peers, and those people are discriminated against. And while the protagonist in this novel isn't Cherokee, the man who helped one of the people who was integral in creating the technology was a Cherokee man. And I would argue this text is very Cherokee because it really is an allegory of removal. These amped individuals who have implants in their head are moved into stockade systems. You can read it as a future allegory of removal. Coincidentally, I'm Facebook friends with Daniel, and when the Google Glass stuff came out and people were getting kicked out of bars for wearing Google Glass and getting beat up, I said, "Look. Your novel's happening."

16:46 S2: The next text that I would say is Cherokee cyberpunk is Zainab Amadahy's *Resistance*. In this novel, we have someone who is mestiza, who is African-American, Latina, and Native. She's also a nanobot engineer. And the main conflict in this novel is against a large corporation who wants the protagonist's talents also as a nanobot engineer, and the more communal modes of living that she believes, or that she is influenced by in the people that she's fighting with. This hotel is like the last bastion of hope of communal living against the large corporation. And I would also categorize this as Cherokee cyberpunk, although all three of these texts, I think, are different aspects of Cherokee cyberpunk. Like I like to tell my students, there are many ways of being Cherokee, and these texts prove that there are many ways of articulating Cherokee cyberpunk.

17:53 S2: So, it was with... The idea of all of this literature, this genealogy of Cherokee cyberpunk literature, but also influence from indigenous cyberpunk of Misha, Skawenatti's *TimeTraveler™* that made me start thinking about how I want to contribute, if I can, to the literature. And so I'm not anywhere near as famous as these people that I've just mentioned, but I see myself as trying to contribute to that same genealogy of literature. And I did so with a short story I've published in *Lightspeed* called *Digital Medicine*. The premise... It's actually not in the future. It's in the late 90s. But the premise is that a young Cherokee woman ends up teaching her elder how to hack computers. And I was definitely inspired by mainstream cyberpunk, specifically Neal Stephenson's *Cryptonomicon*, but also all of this indigenous cyberpunk that I'm seeing.

19:00 S2: I used to be a programmer before I came back, went back and decided to go back into academia. So I got to use all of my knowledge from programming in the late 90s and working at Creative Labs as a phone tech in the late 90s. And remembering all of this stuff, how the internet looked back then is really interesting to be able to do that. I also do plan to project this protagonist. Her name is Spider. 'Kaneski' is the way to say 'spider' in a broad way in Cherokee. I'm projecting I'm gonna use this protagonist in stories that actually are set in the future so I'm going to move with her from the late 90s into the future eventually.

19:46 S2: So what I'm arguing is that all of these texts, these Cherokee cyberpunk texts, are only possible because of Sequoyah's original cultural hack. One of the ways we can think about how all of these texts and the genre of cyberpunk inform how we think of ourselves as Cherokee is that it's not antithetical, our culture is not antithetical to technology. A lot of popular representations of indigeneity attempt to portray us as antithetical to technology. And even Stephenson's Raven is wanting to blow everything up. Although, we have to keep in mind he's satirizing cyberpunk. Even texts in which characters are not explicitly Cherokee, I argue, if the authors are Cherokee, we can read it through the lens of Cherokee cyberpunk. So I'm not only talking about Cherokee cyberpunk in fictional texts though, but in actual literally.

20:49 S2: So this is a page from the Language Technology Department for the Cherokee nation. And as you can see, it gives us several terms for how to use computers. And from hearing the presentations, I guess a lot of nations are working on how do we depict computers and computer language again in our tribal languages. So the Cherokee Language Technology Department has worked with elders to create these technical terms, but they've always worked with, like I said, Google, Microsoft, and Android to get Cherokee added, and made native to the system. And they've created cartoons and video games and still are for the Cherokee immersion language programs in Northeast Oklahoma. So what I'm arguing is that we can see that the code Sequoyah began writing 207 years ago is still thriving figuratively through the sub-genre of Cherokee cyberpunk digitally and literally. And I'll go ahead and leave it at that. Then I'll say good-bye in Cherokee. And if you know how to say good-bye in Cherokee, it's not really good-bye, it's until we meet again. So, dodadagohvi. Thank you.

[applause]

22:10 S1: Hello.

[background conversation]

22:17 S1: That was so cool. Thank you. I enjoyed it very much. I should have mentioned before the talk, I had planned to tell you that David Hudson is not Mandy McDonald, who was supposed to speaking at this thing. So Mandy couldn't make it. And so we decided to move everything a little bit earlier. That was it. Are there any questions?

[vocalization]

22:50 S1: Don't forget to say your names.

22:52 Speaker 3: Thank you. It's good to be in the room with maybe another hacker. My name's Cristobal Martinez. I'm from the Indigenous Artists Collective Post Commodity. And I'm the hacker of the group. So I can relate very deeply to your discourse and your ideas. There's a lot of debate in post commodity about digital media and emergent media, notions of technology, because these are things that we're constantly using. And we're up against lots of very powerful discourses around what is technology and what is valued as technology. And of course, technology is a part of what it means to be human. Meaning that since the beginning, we have always had relationships with tools, we have created tools.

24:08 S3: And so, the Cherokee syllabary and it's now become part of native to operating systems

by several corporations at this point. And so here's the debate, one of my colleagues in post commodities, Kade Twist, his perspective is that... And he's a citizen of the Cherokee Nation, as well, his perspective is that, "When we get down to machine code and something has been compiled, it's being compiled for a series of ones and zeros. And so we get right back down to a binary world view, we get back down to this idea of Cartesian philosophy, that's sort of at the very, very foundations of how this system of the logic works. Can you respond a little bit about that particular dilemma, and what it means to be a native cyber punk?"

25:29 S2: Yeah. That's a great question. I wasn't a hacker in the 90s, because I didn't know hackers existed in the 90s. If I knew BBS has existed, I would probably 've been a hacker. I was a coder though. So I made a bunch of video games, really cheesy, low quality video games, because I was obsessed with them. I had my first computer at 15, and that's all I did was play on the computer. And AOL, at the time if you remember, was over sold.

26:01 S2: So, you couldn't log in, even if you bought it, and so it was just me and the computer really. But, I do look back fondly of the 90s and wish that I were a hacker, and that so I think that's where some of this comes in. Your question, your deeper question about the technologies and binary logic, is something that I had been thinking about particularly, because I've read Jason's work where he mentions, "The idea that we need to think about," well, I'm paraphrasing here, "think about indigenizing the technologies that we're building on, more than just adding Cherokee to the operating systems." I thought I was talking to Jason about this earlier, because I've been thinking about this as a project too. And this is a very long-term project, but what would it mean if to say, if me and people who are much more fluent in Cherokee, got together and created a Cherokee version of Linux? Cherux or something, I don't know what it would be called. But, where you would actually use command line... Your command line operators would actually be in the Cherokee syllabary. What would that look like? Would you just translate, for example, the list command in Linux? Would you just translate that into Cherokee and it does the same exact thing, or would you think about the logic of Cherokee language and how that would infuse the logic of the operating system itself?

27:35 S2: But when you get down to the core, if we were really in a fantastical universe, there would be a type of electricity that had seven different ways of... Well, it'd be more then on or off, so you would have a way to represent seven different modes and you would have, instead of a binary system, a system set up on seven. I don't know what the word is for that, but if that were possible then that would be the ideal to create a Cherokee digital system from the ground up. I think we have to take small steps, and one of those is getting the Cherokee language in operating systems, the second step would be doing something like creating a Cherokee version of Linux, or a Cherokee programming language where those kids who were raised in those emergent schools can sit down and code in their own language. We have to think about languages in general. Programming languages need to be loops and they need to have traditional modifiers, and a few other things, but that's about it. Can we create something like that, so the kids will be able to code in Cherokee and not only learn programming skills, but to learn how to program in their own language? That to me is where we need to be in the future, and we're a long ways off, but I'm glad that people are discussing that.

29:03 S3: Thank you.

29:10 S1: Does someone... Oh.

[background conversation]

29:18 Speaker 4: Oh. Crystalline [29:18] [redacted]. I really, really loved your talk, Brian, and I'm so glad that you brought in Zainab Amadahy, who is Cherokee along with being an Afro-Canadian as a writer, and also the question that was just posed. And I'm thinking of Fox Spears who is at Georgia Tech University, who also is [29:44] [redacted] along the afrofuturistic lines with disrupting that one, zero basis. And, his playground with in particular, Samuel Delaney's sense of algorithms and that sort of thing. So I know that there's a lot of experimentation going on. I know Beth is working on that, you are. It sounds Crystal like you are too. So I'm very, very excited about that. Because I think our skin thinking does make a difference, and I think of skin thinking as, not in a playful eroticist kind of way that Joy Harjo and Robert Warrior talk about it, but rather skin thinking in terms of actually knowing our language. Since I grew up with mine and lived in my community speaking that along with Finnish and English and a few other languages, I could really, really see the difference. Even the concepts of writing and drawing. We would be using the same verbs, the same nouns, the same ideas to encompass both writer and artist for instance, just as a quick example.

31:01 S4: And those kind of things that kind of skin thinking I think can be very much wielded into another form of hacking, because when you start bringing in those ideas, and sometimes you go ahead and describe it like [31:19] [redacted] does, where he will give our language and then comma, give the idea, comma. Or even in one of our clubs, if we get away with publishing our book chapter on Ray Bradbury. I was very uncomfortable about writing about Ray Bradbury, because we grew up and my grandmother announce their niche, they would read him and quote him and thought he was just the greatest thing. And as I grew up I started realizing, "Oh there was a lot of colonial stobes that are still in here," [laughter] but his wife was actually Cherokee. And so I thought, "I'm going to write most of my article in my own language and I'm not going to translate it."

32:10 S4: And at first you could see that reviewers were in a panic, and even the publishers were and then I said, "Well, it's interesting that in scholarship we're just expected to, if it's in Hebrew, or Greek, or Latin, to just go ahead and figure it out." That's a given, like you just figure that out yourself, and with Google, with the internet, with these kind of possibilities, the hacking of, slaughters of the Cherokee or the hacking of Ishamalam words, we have the ability I think to go ahead an truly infuse our language without explanation. And let others, if they're really interested in it, they will dig it out and in the process they'll really learn deeper levels of meaning that could not have been expressed by a current quick translation. Or so I hope.

[chuckle]

33:12 S2: Yeah, you mentioned Afrofuturism and Delanian algorithms, and I was reading a piece by one of my colleagues about... She's a CRL scholar and she was writing about learning about Linux and deciding to adopt Ubuntu Linux, which actually comes from maybe a Yoruba word, I'm not sure, but it means "humanity towards others", but one question I didn't get a chance to ask her was: Is this kind of just an appropriation of the word and just a surface level thing? What is really in not carrying that philosophy into, I don't think they changed much of the structure of Linux although there is a pretty good user community around that. So I think the humanity towards others maybe manifest itself in the user community. But I was thinking about that, it being kind of a surface, if we had Cherokee Linux, it would be a nice name but would it actually be in syllabary? That's gonna take a lot of work. The other point... Oh no, go ahead.

34:27 S?: I was just gonna say that I was thinking very much of Christopher Teuton, with his Deep Waters, and how he suggests that it's really important to think of it in terms of oral and then kind of a visual, not just writing but a hieroglyphic kind of sense, which encompasses that [34:48] [REDACTED]. And then a final one, is then the critical interpretive; which is that if we're really really going to deeply investigate or understand this stuff then we have to be, each of us as Native persons critical and looking at it very carefully and then making decisions.

35:06 S2: You mentioned Chris Teuton, and I think he did, it was Chris or Shawn, no it was Chris, he did a book called Turtle Island Liar's Club where he would talk to Hastings Shade and Sequoyah Guess, and some Cherokee Elders from Northeast Oklahoma, but what stuck out in my mind now that we're having this conversation is that Hastings, who's now passed on, had a bunch of Cherokee language stuff on an old computer. And he writes about this. He had to go find this old computer that was compatible with the disc that Hastings had to be able to pull some of this Cherokee language stuff out, some of these stories out. To me that was fascinating that it was digitized but on outdated technology.

36:00 S?: No no, I didn't have a question. Probably last question.

36:05 Speaker 5: I'm sure you guys have all thought of this. Actually, when I first meet Jason, it was back at [36:13] [REDACTED] on Cyber Con four, where I was asked to organize a panel. And so I invited the late [36:20] [REDACTED] and Leroy Little Bear. And Leroy Little Bear, at the time, people were talking about cyberspace. And Leroy said, "Well, we've always had cyberspace, because we've always been exist on living young. [36:38] [REDACTED] we exist in other dimensions. And we kinda thought... Leroy's kind of been one of my teachers. He doesn't want more teachers ever since. In any case, recently in the developing of this children's series called Coyote's Crazy Smart Science Show, which is basically about indigenous science, he's one of our advisors along with Amethyst First Rider, who is his wife. And we had a gathering in Vancouver, and we all talked about this. And one of the things that Leroy keeps going on about is this idea of energy waves. And how that's why he was so attracted to quantum physics, because basically he saw in quantum physics what he saw as a block of a person as far as energy waves go. And when I think about binary, I always think of Leroy, because I always think of him talking about energy waves. And basically energy waves is saying that it's always on.

37:34 S2: Yeah.

37:35 S5: So there isn't on and off.

37:36 S2: Yeah.

37:38 S5: And I know that Leroy got very excited, and Amethyst, because we were talking about Minecraft. They have called qCraft which is basically teaching quantum physics to kids in Minecraft.

37:53 S2: Oh wow.

37:57 S5: In any case, that's sort of what I always think of, and I wanna know about that idea of being able to happen in quantum physics.

38:05 S2: Yeah. Yeah.

38:06 S5: But in [38:07] they steal everything.

[chuckle]

38:09 S2: Sorry.

[chuckle]

38:10 S5: He already had and then they called it quantum.

38:13 S2: Right.

38:13 S5: But it's alright, because basically, this idea of energy waves and I'm wondering, Leroy worked for many years with quantum physicists and elders, looking at... One of the things he always said was... He always says, "Learn the language, and the language of teaching, because you are not thinking in binary."

38:30 S2: Right.

38:31 S5: But interestingly, I asked him about all those quantum physicists he worked for 10 years with at MIT and someone around this work that he's doing, and he said, "As with any of us, physicists have to learn the language," he said. But it's interesting... Have you guys thought of that, this idea of wave as opposed to binary in terms of?

38:56 S2: I hadn't until you mentioned that. [chuckle] To be honest, I know how computers work, I can translate binary by hand, but I have no idea, I can't even conceptualize quantum computing. I was watching something on Netflix about it the other night, and I still... I don't know how you can have a quantum computer if you don't have a one or a zero. It just doesn't make sense to me. But, when it finally does, I think you're right, that there's something about the relationality there, that makes it possible to think in native languages in relational terms rather than just on/off terms or binary terms. Yeah, if someone could, maybe not right now... But if someone could...

39:38 S?: Over lunch?

39:39 S2: Over lunch! If someone could teach me quantum computing over lunch!

[chuckle]

39:43 S?: Quantum machine right now.

[laughter]

39:46 S?: Okay, that's our lunch time activity. The quantum computing people can gather by the door.

[laughter]