Jennifer Rhee and Katherine Behar in Conversation

Conversation between interdisciplinary artist and writer Katherine Behar and writer and scholar Jennifer Rhee, who discussed artificial intelligence (AI), digital culture, and art on November 20, 2024.

This transcription is provided as a record of the live conversation, for educational use. Read more about the Wexner Center for the Arts' Mission, Vision, and Values.

Transcript

Emily Haidet (00:00:01):

Hi, everyone. Good afternoon. We're going to get started. Welcome to the Wexner Center for the Arts. I'm Emily Haidet. I'm curator of public programs here at the Wex. Thank you all for being here today for our conversation with interdisciplinary artist and writer Katherine Behar and writer and scholar Jennifer Rhee for a discussion about AI, digital culture, and art.

(00:00:25):

Before we begin, I do want to invite our students in the audience to take out your phones for just a moment. Please scan the QR code that's up on the screen and take a moment to answer just a couple questions about how the Wex can better serve you. Maybe it's more free artist talks. Maybe you prefer a different time for programs. Maybe you want studio or study space in the Wex. Whatever it may be, please share with us. We are listening.

(00:00:54):

So this talk is part of the Arts, Technology, and Social Change series and is an initiative conceived by Ohio State's Department of History of Art, Department of Art, Wexner Center for the Arts, and the Translational Data Analytics Institute. The residency program is a cross-department platform that involves public engagement on campus and around Columbus to explore questions on technology and social change in our contemporary moment.

(00:01:22):

This series is sponsored by the Global Arts + Humanities Discovery Theme at Ohio State. Learning & Public Practice programs at the Wex are made possible by the American Electric Power Foundation, CoverMyMeds, and Huntington.

(00:01:37):

And of course, special thanks to all our teams at the Wex who've made this event possible and to the group that pulled together these artists, Kris Paulsen and Amy Youngs. I'll now turn it over to Kris, associate professor of history of art and chair of undergraduate studies to introduce our guests. Thank you.

Kris Paulsen (00:01:58):

Hi, everyone. Thanks for coming out tonight. Before I even start, I want to thank our friends at the Wex for hosting us this evening and for the whole series that we've been running over the last few years. Thank you to director Gaëtane Verna, and especially to Emily Haidet and the whole Learning & Public Practice team, Dionne Custer Edwards, Sarah Robison, and David Pierre.

(00:02:21):

This series began as a collaboration with the former Wex curator, Kelly Kivland, and I'm really so thankful that we get to continue on in this with a new set of people. And so tonight, this is the fourth installment of this lecture series that is Art, Technology, and Social Change. It's a microresidency program.

(00:02:42):

So we hold events about once a semester and this has been funded by the Global Arts + Humanities Discovery Theme to bring together artists and scholars who are working on the edges of their disciplines, examining how art can be a site for rethinking and reimagining our technological and social futures.

(00:02:59):

Also I must thank the whole Got It team, especially Wendy Hesford and Puja Batra-Wells and Breanne LeJeune, for making this program and really countless other ones on campus possible.

(00:03:11):

This program is also supported by the Department of History of Art's new Contemporary Art and Curatorial Practice certificate program. This program launched just this year with the aim to educate the next generation of curators focused on hands-on practice, art historical training, and critical engagement with visiting artists and thinkers such as those that are with us tonight. If any of you are interested in this program, you can check out the information that's on the History of Art website.

(00:03:36):

As Emily already mentioned, the Art, Technology and Social Change series is an initiative that's conceived across several departments and units that aims to extend and deepen the campus community engagement around pressing social issues through the lens of artistic interventions in technology.

(00:03:54):

And we've envisioned it as a set of what we're calling microresidencies, which we bring in artists and scholars who are working at these intersections of art and technology to campus for a few days to show their work, to engage in classrooms, and to run workshops, performances, or other public events. And so this microresidency program acts as this way of bringing together lots of different units on campus and to having close contact with students while here.

(00:04:26):

We've already hosted a set of really incredible pairs, including artist Zach Blas and artist historian Pamela Lee who spoke about queer AI a few years ago, Sarah Rosalena, and anthropologist Elizabeth Povinelli on indigenous futurisms, deaf filmmaker Allison

O'Daniel, and Vera Brunner-Sung, another filmmaker who was here at Ohio State talking about the aesthetics of accessibility and radical forms of captioning.

(00:04:55):

And we have a few others that are coming up. We're going to have Jennifer Johung and Kathy High talking about biotechnology and the ethics of messing with life next year, next semester, excuse me, and Mimi Ọnụọha will hopefully be here in the fall. And we have others in development.

(00:05:15):

So our desire with this series when it was launched in early 2023 was to bring back marquee in-person events with major thinkers and artists, but also bring back those small, intimate, high-impact encounters that, at least for me, was what really defined Ohio State in relationship to the arts.

(00:05:31):

And so, with these residencies, we bring the artists and thinkers to campus for a big public event like this, but also these smaller events. And we kept our guests busy with studio visits and such all day, and they'll be visiting classrooms tomorrow. And so, I want to thank them for their willingness to participate with these high-engagement events.

(00:05:55):

Tonight's guest artist Katherine Behar and media theorist Jennifer Rhee will be talking to us about automation, a topic that's been on most people's minds over the last few years, especially with the sudden public access to generative AI systems and the creeping of automation into creative industries.

(00:06:12):

Dr. Jennifer Rhee is associate professor in the Department of English and the media art and text program at Virginia Commonwealth University. She's the author of a really incredible book that I've gotten to read alongside my students this week, which is called *The Robotic Imaginary: The Human Price of Dehumanized Labor*. And this really, I think, phenomenal and impressive book—if you've not read it, please pick it up—examines the coevolution of cultural and technological humanoid robots and artificial intelligence to show how anthropomorphization and dehumanization are twinned processes through which the human is made noble through these very acts of dehumanization.

(00:06:53):

She's in conversation today with Katherine Behar. Behar is an interdisciplinary artist and writer who explores gender, race, and labor in digital culture. She's a professor of new media arts at Baruch College in CUNY, and this year she had a solo exhibition at the Beall Center for Art + Technology at the University of Irvine. Was presenting kind of survey of her most recent work and it was called *Ack! Knowledge! Work!* the catalog for which Rhee contributed an essay. And so, this gives us an occasion to kind of talk about this new body of work while it's still very fresh.

(00:07:31):

This exhibition examined how digital technologies of automation are reforming the future of labor and invited viewers to acknowledge the crucial labor that automation makes invisible, and to question the supposed intelligence of knowledge work as artificial

intelligence encroaches further onto traditionally white-collar jobs. Simultaneously, the exhibition gives a nod to the conflicted idea of "ack" that so many of us feel about work and automation, as she says. We understand that automation could lead to unemployment, but even so, we wish tedious work could be automated away.

(00:08:06):

Behar will be talking about this body of work tonight and you can see works from this series here on campus this week at Hopkins Hall. One of her videos is showing inside the Hopkins Hall, kind of, hallway right outside the gallery. And then we're also using these big, new billboard screens that are on the north side of Hopkins Hall. So if you walk by on Annie and John Glenn Drive, you will see it there.

(00:08:36):

And I want to really thank Mila Gaijic, Merijn van der Haijden and Koen Vrij for facilitating having this work up on campus this week.

(00:08:45):

Behar has shown her work in solo and group exhibitions around the world in really too many places for me to name, but recently including the Pera Museum in Istanbul and Trinity College London. She's a creative capital grantee, a MacDowell Colony fellow and the editor of *Object-Oriented Feminism* and a second edited collection called *And Another Thing: Nonanthropocentrism and Art.*

(00:09:07):

And so without any further delay, I want to introduce you Katherine Behar, who's going to talk about her work and then be joined on stage by Jennifer Rhee after.

Katherine Behar (00:09:35):

Hi, everyone. Thank you so much for being here. Thank you for these wonderful introductions. I'm going to try to keep this in front of my face. Okay, so here we go.

(00:09:51):

I'd like to, before we begin, just take a moment to extend my thanks as well. I'm grateful to Kris Paulsen and Amy Youngs for facilitating this microresidency and the Arts, Technology and Social Change series, as well as the Wex team, especially Emily Haidet for the hospitality. And I'd like to thank the Hopkins Hall Gallery and the Emerging Technology Studio for facilitating the videos on campus.

(00:10:18):

Most of all, I would like to thank Jennifer Rhee for agreeing to this conversation in the first place and for our dialogue over the past several months. I've already learned so much from our preparatory conversations, so I'm really looking forward to this.

(00:10:33):

I have been a longtime admirer of Jenny's important work on racial capitalism and robotics and her book, which I'm glad that Kris has just sort of given us a little insight into. Her book, *The Robotic Imaginary* was a key text that I thought about when I started building new robotic works for my exhibition, *Ack! Knowledge! Work!*, which as Kris mentioned, appeared at the Beall Center for Art + Technology earlier this year.

(00:10:58):

So this is an install shot from that show, and I want to plug that there is a catalog forthcoming next year, and Jennifer and Kris, as well as Scott Richmond, have contributed what are, in my totally unbiased opinion, truly brilliant essays. And this triangulation is part of what brings us here tonight.

(00:11:18):

So as an artist, it really is an incredible luxury whenever I have a chance to hear what others find in the works that I've made. Sometimes I think, "Yes, I got it right. That person said exactly what I was thinking." But for me, it's even better when someone's takeaways teach me something new, something that I was not necessarily thinking about when I made the work. But once it's pointed out, it seems inevitable. I benefit from the deepening meanings that others bring to my work. And these insights really stay with me forever. They become part of the work, and often become issues that I try to address head on in subsequent projects.

(00:12:01):

So, tonight is really going to be an open conversation informed by the things that Jenny has observed and contextualized in my work. But before we move into that conversation, we thought that it would be helpful to start with a quick overview of my practice. So I'm going to share a lot of images, some are from *Ack! Knowledge! Work!* and some are from other projects. And rather than sort of delving deeply into all of them, my aim is going to be to introduce you to some of the key concepts that I work with.

(00:12:31):

So, Jenny and I will unpack these ideas further and we will definitely have time to hear from you, so if you see something that you want to know more about, flag it, and we can circle back to it. So, if you'll indulge me, I'm going to speak for about 15 minutes now and then we'll get down to it. So, here we go.

(00:12:52):

I work across a number of different media, but whatever particular form I'm engaging, my work consistently deals with gender, race, class, and labor in digital culture, all of which I approach through a dynamic of resistance.

(00:13:07):

So I think about resistance sculpturally in terms of the unyielding material resistance of objects that confront us, as well as performatively in terms of performances of political resistance or resistance as a kind of performative action. So this is resistance as something we do.

(00:13:27):

This is why, as far as my work deals with gender and labor and digital culture, the politics that my work promotes is specifically grounded in anti-racist feminism and workers' solidarity.

(00:13:40):

My practice spans sculpture, robotic installations, single- and multi-channel video, and live performance. And I move quite fluidly between making art in all of these kinds of

media and also writing. So somewhat inevitably, this means that my art ends up embodying three main theories that I've been working on.

(00:14:02):

These are object-oriented feminism, decelerationist aesthetics, and artificial ignorance. So I'll get into what I mean by each of these. But most important, these theories are the main working methods that I apply in making my art.

(00:14:19):

They are often also collaborative theoretical projects. And these are some of the books that have resulted. Object-oriented feminism or as we like to say, OOF for short became an edited collection and led to the exhibition *And Another Thing: Nonanthropocentrism and Art.*

(00:14:37):

So what is OOF? In a nutshell, object-oriented feminism is a way of thinking feminism outside of the strictures of human subjectivity. And we do this by cheekily embracing human objecthood. I developed decelerationist aesthetics in an essay chapbook, *Bigger Than You: Big Data and Obesity.* And you'll notice that there's a move toward a kind of decelerated slowness in that idea of resistance. For me, it's a kind of friction that's both physical and political.

(00:15:15):

This slow frictional resistance is at the core of my work. So I want to explain a bit more about this concept. Decelerationist aesthetics combines a theoretical idea, namely OOF's cheeky embrace of human objecthood with a sculptural idea, namely the realization that objects themselves can cause physical friction. This leads to a political idea, that is the notion that our objecthood can be radically resistive.

(00:15:48):

Decelerationist aesthetics describes how the aesthetic properties of objects provide a means to work against capitalism's imperative for every object to be of value. By aesthetic properties, I mean how an object feels, tastes, looks, sounds, and smells. These are all properties that can resist. Here, artificially intelligent robotic office chairs move very, very slowly, avoiding each other and blank sheets of printer paper. So a slow object can grind work to a halt like quiet quitting, and a slow AI can expose its thought process, demystifying algorithms that have increasing power over everyday life.

(00:16:36):

Taking this further, we might think about other aesthetic properties. For example, this big object can take up space like a sit-in protest. Here, the heft of 6,000 QWERTY keys thwarts the clouds in materiality. Swollen or sticky objects can gum up the gears of capitalism like industrial sabotage. Here, I perform as an obese data body clicking away, locked into the overproduction of personally identifiable data through obsessive online actions.

(00:17:14):

Encrusted or calcified objects can persist, refuting erasure like evidence in the fossil record or perhaps like "Nevertheless, She Persisted." This series of fossilized USB devices imagines a post-apocalyptic future. Only always-on gadgets and the planet itself

remain so the earth comes forward to hug these little devices doomed to perpetual work, since after human extinction, there's no one left to turn them off.

(00:17:46):

Perplexing objects can defeat logic, perhaps short-circuiting bureaucracies. Here, a Rubik's Cube shows a puzzling reCAPTCHA that requires negating race to qualify as human. You can see it says, "To prove you're not a robot, type the words Not from Asia."

(00:18:06):

Charming objects can gain entry to our inner sanctums, infiltrating like a Trojan horse. Here two rumbas bearing rubber tree plants dance to the karaoke backing track for "High Hopes," a song about an equally hardworking ant.

(00:18:23):

Frictional resistance highlights how we can be on our own terms despite capitalism's demand that we make ourselves constantly valuable. Our value takes different forms. We may be made desirable as sexual objects, otherized as racialized objects, or leveraged as economic objects, like commodities bought and sold or tools made to do work. All of these are present in this very early piece from 2007, where a pole dancer is trapped cleaning Microsoft's 3D pipes, performing the same maintenance work as the screen saver.

(00:19:00):

In keeping with the spirit of object-oriented feminism, it's not my project to resist being an object, but rather to cultivate solidarities with the object world on the basis of our shared objecthood. So I've been witnessing that objects are being especially harangued right now around the value of smartness in the recent boom in AI. It seems like everything is made to be smart right now, and by made I mean manufactured to be smart, but also made like forced to be smart. What happens when an aesthetic property like smartness is mandated? Where does that get us? Here, a human's expectant hand triggers a hand sanitizer dispenser to talk back against endless servitude.

Presentation Audio (00:19:54):

Are you in good hands with me, and I in good hands with you?

Katherine Behar (00:19:59):

I respond to this fetishization of intelligence through the third theoretical framework I mentioned, artificial ignorance. The gambit is that ignorance in AI is a feature, not a bug. So I want to resist the presumption that intelligence has anything at all to do with what's going on in AI tech.

(00:20:18):

Artificial ignorance is another collaborative theory project I'm honored to think alongside many brilliant people, including Jenny, who has been involved since the beginning. It's also an umbrella for a number of art projects and the context for *Ack! Knowledge! Work!*. And as you've probably noticed across my art, my approach is to return our focus to the laboring body in settings of work. And *Ack! Knowledge! Work!* is explicit about this,

because work is frequently where human and non-human bodies end up colliding in often absurd ways that can be unexpected, confounding, and, I hope, rebellious.

(00:20:55):

So, *Ack! Knowledge! Work!* seeks not only to acknowledge work, but also to explore this resistive gut feeling of "ack" in knowledge work. The show aims to upend hierarchies of mental and manual labor, in particular by showing the physical automation of cognitive labor. Each work explores this tension between mental and manual and how the human is absented or not when machines take on human work.

(00:21:22):

So, since Jenny and I will be focusing our discussion around many of these projects, I'll briefly walk you through them.

(00:21:30):

Viewers first encounter a hand-sanitizer dispenser much like one might find in the entry of an art gallery or office. As you just saw, when they place their hands under the dispenser, it speaks, reflecting on their gesture. Thanks to a parametric speaker, only one person hears the voice at a time, and it sounds like it's speaking directly into your ears.

(00:21:51):

At a customer feedback kiosk, positive or negative ratings will change the dispenser's mood, affecting subsequent statements. However, much like for service-sector employees, there's not a linear relationship between mood and rating. So, is the dispenser being really nice or fake nice?

(00:22:12):

Dispensers automate care work. We approach them with cupped hands as though begging, but take their work for granted. *Indispensable* empowers the dispenser as an oracle who talks back instead of working silently in the background.

(00:22:26):

Also in the front room is *Autoresponder.exe*, a single-channel silent 4K video. It begins with a black screen and slowly scans down to reveal a photographic image line by line. The image shows an executive desk standing on end in an office overrun with symbols for masculinity and bureaucratic power. Like an automated out-of-office email that gives the illusion of efficient personal attention, this scene reveals managerial power for what it is: impersonal, ineffective, and tone-deaf.

(00:23:03):

In the centerpiece of the exhibition, robotic office chairs move very slowly over a black dance floor, avoiding sheets of blank white paper. Using simplified versions of autonomous vehicle technologies, the empty chairs behave like driverless cars. *Anonymous Autonomous* explores workplace depopulation through automation in both blue-collar and white-collar settings. It connects automation and trucking and rideshare industries to automation of creative class knowledge work.

(00:23:33):

Behind the chairs, a series of sculptures is hung absurdly high on the wall. It floats above the chairs' heads like a thought bubble. They daydream while they work.

(00:23:44):

Shelf Life is a series of QWERTY keyboard sculptures created from salvaged keys rescued from e-waste. Their lively, irregular forms imagined discarded designs from before keyboards evolved into the black boxes of today.

(00:24:00):

Leading into the third room is a large, malleable QWERTY sculpture. It was inspired by the first instance of the word “data” in English in the phrase, “a heap of data,” and the etymology of the word “cloud,” which comes from old English “clúd,” meaning a mass of rock or a hill. We often imagine cloud computing and data as immaterial, but *Data Cloud* renders them physically as a mound of over 6,000 QWERTY keyboard keys. Each key represents a single data point or input.

(00:24:33):

In the back corner two Alexas wage a guessing game. Like the children’s game “I’m Thinking of a Number,” only with extremely long 64-digit SHA-256 encrypted numbers, their cheerful banter slows down an adversarial, brute-force attack the same as is used in mining Bitcoin.

(00:24:54):

Finally, beanbag chairs invite viewers to watch a video in which five dancers wearing motion-capture suits stoically perform in a green-screen space filled with floppy foam straws. Their actions are difficult to decipher until halfway through the video, when it is revealed that each dancer is a finger, so that the five collectively embody a hand grasping at straws, the basic first step of weaving a basket.

(00:25:23):

Basketry is considered the oldest technology, but currently robotic basketry is a technical impossibility. So every basket in the world is made by human hands.

(00:25:34):

We Grasp at Straws engages robots’ limited dexterity as an opportunity for close-knit collaborations between humans and machines. This is the first component of a new project called *Inside Outsourcing* that combines robotics and basketry as a way to explore human and machinic interdependencies, mutual aid, mending, and repair. So this is a long-ish video, but I will just play a short trailer, and then we’ll start our discussion.

Presentation Audio (00:26:03):

[music 00:26:06]

Katherine Behar (00:27:49):

Okay.

(00:27:56):

So, I'm going to start. We have a little background loop with some more images that we can play while we're chatting. And thank you.

Jennifer Rhee (00:28:17):

I want to quickly say thank-you to everyone here for coming, especially to Kris and Amy for inviting me, and everybody at the Wex, especially Emily Haidet. And thank you to Katherine so much for this incredible presentation. I've been kind of thinking with Katherine's work well before this occasion brought us together. So I'm so excited to have this conversation with you.

(00:28:43):

Now I just remembered, I realized I forgot to tell you that my parents used to live in Nashport, Ohio, which is in southern Ohio, maybe some of you know it, which is also the home of the famous Longaberger Basket Company. And they have a huge—

Katherine Behar (00:28:59):

What? Field trip!

Jennifer Rhee (00:29:01):

They have a huge basket-shaped building structure in that.

Katherine Behar (00:29:06):

Oh, wow.

Jennifer Rhee (00:29:07):

Yes.

Katherine Behar (00:29:08):

Amazing.

Jennifer Rhee (00:29:08):

Yes.

Katherine Behar (00:29:09):

That's amazing.

Jennifer Rhee (00:29:10):

Okay.

Katherine Behar (00:29:11):

We're going tomorrow.

Jennifer Rhee (00:29:13):

So, yes. So, I wanted to open this conversation by asking, inviting you to talk a little bit more about your three theoretical frameworks, which you laid out. And we see all of these frameworks very much reflected in the artworks in your exhibit. For example, we see object-oriented feminism and its decentering of the human and its creation of solidarities with non-human objects in pretty much every artwork in your exhibition. We see deceleration aesthetics in the slowness of the robotic chairs in *Anonymous Autonomous*, The long durée enacted by the Alexas in *Knock Knock*, and *Autoresponder.exe*'s achingly plodding temporality, which I think is just so poignant.

(00:30:04):

And we see artificial ignorance in, for example, *Knock Knock*'s defamiliarization of machine intelligence, reframing that as a game or a joke or even a way to waste time or slack off at work at scales that humans could not even begin to imagine. So, I think there's something very profound about the lack of usefulness of machine intelligence in that particular work.

(00:30:30):

So, I wanted to invite you to say a little bit about how you see the connections between these three theoretical frameworks, as well as perhaps any divergences, if there are any between them, and if you've encountered any productive limitations of these frameworks as you've been developing and engaging them.

Katherine Behar (00:30:51):

Okay, amazing. This is such a great way to start the conversation.

(00:30:56):

So, in terms of the way that these frameworks play out in my work, again, I'm somebody who does both things in a way. I consider myself to be primarily an artist, but I also write. And for me, I was speaking about this in one of the MFA studio visits earlier today. I'm somebody who I often get more inspiration from things that I read than things that I see. It's just sort of how it tends to play out for me. And so, as I approach writing, I'm really trying to write in a way that will be useful to artists and that is useful to me as I work in my own practice.

(00:31:49):

So, with object-oriented feminism, for example, that idea came about because I was thinking about, at the time that we started this conversation—it was around 2010—and there was a sort of movement in philosophy that was called speculative realism, and a kind of offshoot of speculative realism was object-oriented ontology.

(00:32:20):

And the idea was basically that the whole universe is composed of objects. It's objects all the way down. It's a flat ontology, so no object is more or less important than another. And this was really being posed as a kind of radical idea in the field of philosophy. And I thought, "Wow, this is amazing language that is better for talking about my work than, for example, the language of art history or the language of art criticism." I felt a real ... It spoke to something in my work.

(00:33:00):

At the same time, I thought, “Well, hold on, this is less of a new idea because we have a whole history of feminist performance artists and feminist body artists who have been doing exactly this, putting their bodies into a gallery setting where their body is an object like any other object in the gallery or working with their own bodies as a sculptural material, for example.”

(00:33:31):

So, I was really interested in how I, as an artist, could rethink this philosophical idea with the benefit of feminist practice and material practices. At the same time, I felt like at that time a lot of feminist discourses were sort of, they didn’t speak to me, it felt like they didn’t have teeth in terms of what I could use in my art practice. And I think that it had to do with this insistence on subjectivity on the subject position of always trying to elevate a group to the position of subjecthood where I felt that the subject position is a fraught one. I’m not sure I want to be elevated to being a subject. I’m not in great company when I’m a subject.

(00:34:30):

So I really wanted to approach these ideas from a way that I could use them in my own art practice and that also were setting up a kind of continuity with other art practices that precede me and that are the intellectual friends of art history that are in my mind when I’m making.

Jennifer Rhee (00:35:01):

No, I love that. Thank you. And I’m curious then if you might kind of draw some connections then between the way that you talked about object-oriented feminism and artificial ignorance, which I ... Yeah.

Katherine Behar (00:35:16):

Yeah, absolutely. So artificial ignorance… I think the phrase is meant to be a bit provocative. And on some level, you could interpret that phrase as being about the forms of human ignorance that are produced by the use of AI technologies.

(00:35:38):

I’m more interested in a kind of more materialist read, which is very much in keeping with object-oriented feminism. So, I’m particularly interested in how ignorance is a technical way that these technologies work. So, to put this in simple terms, when an algorithm is learning or when an algorithm is sorting data or something like this, that learning happens by ignoring shades of gray. So you have to decide it’s like this, or it’s like that. It’s not somewhere floating in the middle because the learning has to be a positive or a negative. So it’s quite binary in that sense.

(00:36:30):

So on one level, there’s technically these technologies are requiring ignorance of the gray area because it requires resolving the gray area into something definitive. And that kind of materialist read I think is quite related to object-oriented feminism.

(00:36:53):

There's also kind of an underdog position, I think, in both of these to say, actually, let's think about how we're all objects rather than how we're all subjects. With artificial ignorance, I also want to say, let's think about how we're all ignorant. Rather than sort of prioritizing human intelligence, let's think about the ways that ignorance can be productive and can be actually quite sensitizing to our relationships with the world at large.

(00:37:34):

So, for example, Katherine Hayles writes in her book *Unthought* about the ways that technologies—and she calls them technical cognizers and human cognizers—are sort of looped into these feedback loops, and she thinks of this as a really recursive relationship. And she says that actually the interesting thing is that the higher level of cognition that humans are good at is not necessary for technical cognizers.

(00:38:16):

So we don't need machines to be good at the things that humans are good at because we're already looped together. So humans are providing that level of intelligence, and humans have also had to filter out the low-level sorting that technologies are very good at.

(00:38:33):

So if I took in all of the sense data that is happening to my body right now, I would go crazy. My cognitive system filters out, or we could say ignores, a tremendous amount of sense data that's coming in all the time, but that I have to filter out that low-level sense data in order to function, basically. Right? Does that kind of make sense? Yeah.

Jennifer Rhee (00:39:05):

Absolutely.

Katherine Behar (00:39:06):

So, I want to prioritize also these, sort of, underdog positions as well in both.

Jennifer Rhee (00:39:10):

Yeah, I love that idea of the underdog. And that brings us to my next question about resistance. And you talked beautifully about the way that your work and your writings have engaged the idea of resistance or the concept or the practice of resistance. And so, I think that concept kind of resonates throughout your theoretical frameworks that you developed in all of your artworks and your writings, for example. And the exhibition itself really kind of challenges the invisibilization of human labor that sustains AI automation. And in your chapter on artificial ignorance, you inhabit this energetic manifesto-y style to enjoin readers to ignore or reject AI hype and to reconceptualize intelligence, with all of its colonial baggage, as itself a mode of ignorance. And that goes for human and machine intelligence. That's an incredible chapter, Katherine, that you all should read.

(00:40:13):

But I'm also thinking about your artwork *Not from Asia*, which you also talked about, which sardonically enacts this forced choice between kind of Asian-ness and human-ness that structures racist stereotypes about Asians as robots or Asians as robotic.

(00:40:33):

So, in our conversations, we've talked about resistance, but you also mentioned that you are somewhat resistant to the idea of resistance or really slightly resistant to the idea of talking about your work as resistance or in relation to resistance. So I wonder if you could say is that still the case? And if so, I wonder if you could say a little bit more about that.

Katherine Behar (00:40:59):

Yeah. So, it's funny, I've had conversations. I mean, I do think about resistance as I was just explaining earlier. I think about resistance as a pretty core dynamic in all of my work. At the same time, I'm skeptical of resistance, right? Because I think resistance, it is always putting one in dialogue with a power. And on some level, we might want to speak on our own terms or not have to be in relationship to something hegemonic.

(00:41:42):

I also think a lot about, and this is kind of related to decelerationist aesthetics. With decelerationist aesthetics, I'm trying to think about ways that just being, that an object's being is enough, right? It's enough to be in a certain way and the ways that being manifests through the particularities of a given object. That being can work against something hegemonic, can work against some greater power structure. So, when I think about resistance, and I had an interesting conversation with Tung-Hui Hu about this, he has an amazing book called *Digital Lethargy*, and he actually writes about modeling big data, which was that pink and red video in that book.

(00:42:39):

And his idea of lethargy is actually to be even. So it's related to deceleration, it's slowing down, but he felt that resistance is too active, that resistance is too ... There's too much energy in resistance. How could we be even more lethargic or even less willing to exert?

(00:43:10):

So I have this kind of ... I don't have a resolution for this. This is one of the things that I'm always playing with in all of my work, but I do have this sort of ambivalence around resistance, even while I want to say yes, every one of these projects is dealing with resistance performatively, if not materially, right?

Jennifer Rhee (00:43:37):

Yeah. I see that so much, that kind of ambivalence in so many of your works. I think particularly for me in *Shelf Life*, I think those objects, which I interpret as so indifferent, perhaps really embody that sense of lethargy rather than resistance. So, I love that.

(00:44:07):

Switching gears for a second, I wanted to talk about one of the things that I so appreciate about your work, which is how deeply you engage the historical and kind of historical contexts.

(00:44:21):

So, there's a real temptation to think about AI and robotics and everything about them from a very presentist perspective, as if everything about them, how they work, how they impact society, all of that is completely new. When in fact, everything about AI, how they work, how they impact society, how they devalue and displace human labor, how they consolidate power in a handful of big tech companies, all of that is reproducing historic dynamics and power relations and inequalities around automation and technology and labor and racial capitalism. And we've talked about how your work really, oh thank you, engages historical contexts and makes reference to them at the same time that it kind of takes up contemporary AI and robotics often from a kind of perspective, not just of the present moment, but often from the future.

(00:45:27):

So, I would love to hear you say a little bit more about the role of the historical in your art practice.

Katherine Behar (00:45:33):

Yeah. Well, first of all, I want to say that for anyone who has not had a chance to have a look at *The Robotic Imaginary*, these histories are so beautifully spelled out. I've learned so much from that book. In terms of the historical in my work, I have a couple of other images that I want to pull up here for a moment. Give me a minute here.

(00:46:00):

Okay. So this is an image that is of women computers. And this was one of the things that I was also thinking about in terms of Object-Oriented Feminism. And we talked a lot about the solidarities between people and machines. So, in the 1940s, being a computer was a job. It was something that you did. It was not a machine. Typically, computers were people who performed computation. These were typically women. This is both because there were more women available to work during World War II, but also because of cultural assumptions that women were especially suited to basically mindless tedium. So kind of like *Knock Knock* with the Alexas.

(00:46:56):

So, this is a slide of women tabulating data, and this is two women computers working on the ENIAC, which was the first general purpose electronic computer. I'm really drawn to these images because they show this direct connection. So, when I talk about being an object, or a computer as being of the same continuum as human work, I mean, this is what it is. And I think in particular, this image is especially interesting because this one is a male programmer issuing commands to a female computer. So we have this… we can see where the feminist ideas come in here. We can see these histories in work that link the labor of women, which is often invisibilized, the labor of people of color, which is also invisibilized. I'm going to go ahead. This is basically the same thing, a male programmer issuing commands to a female computer. And then this more recent one is showing the racial dynamic here. This is from the film *Hidden Figures*, which shows also how these jobs were divided also on lines of race as well.

(00:48:19):

So, I'm really interested in how these material histories connect working bodies, both human working bodies and machinic working bodies over time. And for me, these are the reasons why object-oriented feminism also makes sense for me when I talk about how do we create solidarities.

Jennifer Rhee (00:48:46):

That really connects to my next question about affective labor and affect itself, which I think we can… very much connects to, I think, the production of solidarities. So, I think for me, one of the most poignant aspects of your exhibition is the way that it takes up affect. And I think with AI and robotics, these technologies are often characterized as cold and unfeeling and emotionless. But in your exhibition, AI and robotics are suffused with all kinds of affects, especially affects that we wouldn't normally associate with these technologies. For example, *Indispensable* is exasperated and to be honest, a little snarky at times.

(00:49:41):

Shelf Life with the sculptural forms, to me, they're very both cheerful and indifferent at the same time. And *Anonymous Autonomous*, the robot chairs are very tentative and wary.

(00:49:56):

So, there's such a sense of not just affect but of tenderness in the affective scenes that you stage in your exhibition in ways that really evoke care and the need to be cared for. So I wonder if you could kind of extend this conversation about labor and the human bodies of a full labor to think about affect and labor and care in your artwork.

Katherine Behar (00:50:28):

Yeah, thank you. One of the things that I was thinking about a lot with this exhibition that's sort of bringing together the specific body of work was, on the one hand, it seems like the human is absented from almost all of the works. But on the other, I'm trying to elicit care from ... It's clear that someone will come into the gallery. I mean, one hopes, right? One does an art exhibition, one hopes someone sees it. So, there's a sense that someone will come.

(00:51:10):

And then, I want someone who comes into the gallery to try to understand where they fit in a system that is, or a space that is both for them and not for them.

(00:51:27):

The *Shelf Life* sculptures are really out of reach. They're quite high on the wall. So, these are things, when I was making them and people would come in to see the work in progress, they would immediately pick them up. People just want to touch those things. I don't know why. Well, I do know why, because keys are things that we touch. So, they seem like they should be touchable. And there's a way in which I'm setting them so high that they can't, they're out of reach, and you kind of want to touch them or maybe you want to touch them, but they are sort of not… it's as though they're not for you. They're there for some other purpose.

(00:52:18):

And with the chairs, the chairs are also kind of absurdly high. We did this on purpose because we really did not want anyone to try to sit in them because they will crush all of the electronics that are hidden in the seat. So we intentionally made them high for that reason, but also we made them high so that they felt like a person, they're like nose level for me, they're tall. And I wanted them to have a way to sort of elicit my sense that I'm one of them, but I'm also not one of them.

(00:53:00):

So they're scaled to be like a human, but they also, because they're intentionally engineered to really expose their thought process. So rather than there are other ways that you can make things move in robotics. And oftentimes in particular, there's something called SLAM, which I can't remember what it stands for now, but it's basically things zipping around. And that's not what I wanted. I wanted these chairs to be very tentative and very sort of meek in a way, because I think it elicits a kind of care from the audience.

(00:53:44):

I mean, the funny thing with the chairs is that in early iterations of this and work in progress showings, people are allowed to move the paper around in the installation. And we were initially really encouraging people to move the paper around. But the weird thing is that in the work in progress showings, inevitably people wanted to trap the chairs. They would put a circle of paper around the chairs, and that's just ... It happened every time within 10 minutes or something.

(00:54:22):

So, we kind of steered away from that. People can move the paper around, but it's more about interacting with your body because the chair will come up to you and then wait very patiently for you to move and then back up and go away and things like this. So, there's something about that.

(00:54:47):

On the one hand, I mean, I like to think that it elicits a kind of care. It also sometimes can do the opposite. It can elicit a kind of sadism. And I think there's a way in which this is the relationship with robotics. This is that ack feeling, which is also, like you were saying a little bit with *Not from Asia*, that Rubik's Cube. There is a way in which that sadism, I think, is also a racialized, also a gendered dynamic.

(00:55:23):

When you think about people, there are all of those videos of Boston Dynamics, which is this big robotics company that makes robots for the military. Some of them look like people, others look like dogs, and there are these videos of them kicking the dog robots to prove that the robot is resilient. But you also think, "Who's doing that? Why would you kick a dog?"

(00:55:47):

So, there's a way in which this is kind of animalized, racialized, gendered way of relating to these machines. The slowness of all of the work, for me, is hopefully creating space to not just leap into those culturally prescribed or culturally, subliminally present ways of interacting with technology.

Jennifer Rhee (00:56:19):

Yeah. I think one of the ways that your work does that so effectively is through defamiliarization, I think, to try to create scenes of robotic vulnerability as opposed to robotic dominance.

(00:56:41):

I think, Emily, do we have time for one more question, or should we go to the audience? Oh, okay. Well maybe one more.

(00:56:51):

So, for this final question, I wanted to check in about this ongoing conversation that you and I have been having about your work. As you know, I've always thought of your work as quite hopeful in the ways that it enacts the technological limitations of AI with great tenderness and vulnerability. That's not how you see your work, and from what you've told me, you actually see your work more as a kind of… through a sense of skepticism and perhaps even cynicism.

(00:57:31):

So, I wondered if you could talk about skepticism and hope, which we concluded cannot be kind of mutually exclusive or oppositional. But if you could talk about those two things and perhaps how they relate in your work.

Katherine Behar (00:57:52):

So, yes, this is an ongoing conversation that we've been having, and I was really surprised actually to hear that there was this sort of hopeful interpretation of my work, because I think that I often feel like the way that I'm addressing some of these large systems is at a very small and quotidian scale, because I think that makes those systems graspable for us. But my general sense of some of these systems is that they are ... The decisions that are being made about AI, it's in the hands of just a couple of extremely powerful companies. It's not in the hands of governments. It's not in the hands of you and me, despite all of this, the phrase of democratic or democratizing AI. This is meaningless phrase to me. I don't know what PR person came up with that, but that's not really happening.

(00:59:11):

So, I often feel like the futures are a bit bleak when I think about what happens when ginormous, multinational capitalist companies that are only beholden to growth, they're beholden just to keep growing. And this is exactly what the decelerationist idea is, slow down the growth.

(00:59:46):

When I think that those companies are making the decisions, I don't think that that leads to a positive place. So, I tend to have a kind of cynical or pessimistic outlook.

(01:00:03):

But I do feel that the ways that ... If I had to find a kernel of hope or something like that, the ways that I would try to solicit that hope would be in everyday interactions that are not ... Increasingly everyday interactions are tracked. The data is harvested. But when

you're having an interaction with an object in a gallery and it's a chair, it seems like that's a point where you can have a more uncensored moment of interaction. And I think the defamiliarization that you were talking about is exactly what I'm hoping will happen in those moments, where the thing that we take for granted, which in my case may be a negative trajectory, is something that I might be taking for granted. And it doesn't necessarily have to be that way. I could defamiliarize my own cynicism. Right? Yeah.

Jennifer Rhee (01:01:16):

I think that makes so much sense because I think when I do, my sense of your work is more hopeful comes from my own, in my own research, looking to local contexts for places where people and communities and organizations have successfully pushed back against AI and its kind of various harms.

(01:01:42):

So, I think I look to local contexts, to quotidian contexts for successful examples of when people decided, "No, AI is not going to exist in our communities in this way, regardless of what this company said." So I think there's something, yeah, that makes a lot of sense that we're thinking of the same thing and the same questions of scale, but coming from them from different directions.

Katherine Behar (01:02:10):

Yeah, I absolutely think so. And also just hearing you phrase it that way makes me think that the other aspect of this is to circle back to what we were talking about with object-oriented feminism and artificial ignorance, this idea of the underdog position that a lot of these objects are ... These are kind of like the downtrodden objects. No one is really thinking that the chair is this heroic object or that the keyboard is a heroic object. So, these objects that are specifically in the peripheries or neglected, I think, those become the local contexts.

Jennifer Rhee (01:02:53):

But also so central to the work, just like the invisibilized human laborers who sustain AI, right? Similarly, kind of so central, but peripheral.

Katherine Behar (01:03:03):

Yes, exactly.

Jennifer Rhee (01:03:05):

So should we maybe stop there? Okay.

Katherine Behar (01:03:20):

I think there's someone here.

Jennifer Rhee (01:03:21):
All right.

Katherine Behar (01:03:22):
I think there's a microphone. Yes, okay.

Catalina Bode (01:03:24):
Yes. I have a microphone here. Just raise your hand and wave and I'll bring the microphone to you.

Audience 1 (01:03:36):
So, you named Object-Oriented Feminism. The first thing that comes to mind is object-oriented programming and whatnot, and object-oriented programming suggests if anything like computers, objects can hold data and value and whatnot and all that.
(01:03:54):
When you came up with Object-Oriented Feminism, was that a factor into that? Is there relationship between the two? Because you talked about object, you talked about computers of course, a lot. I mean, that's just my question. Do you see those two coexisting or you see them similar, but they're a little bit different in your mind of the philosophies?

Katherine Behar (01:04:17):
Yeah. So, I was naming this object-oriented feminism specifically in, sort of, contrast to object-oriented ontology, which was this philosophical movement. But it's interesting because someone did ask this question of some of the philosophers saying, "Well, did you call object-oriented ontology that because of object-oriented programming?" And they said, "No, it's not. It's not related."
(01:04:48):
There was also… briefly there was a phrase object-oriented philosophy, which has the same initials as object-oriented programming. I think actually that this is a weird Freudian slip because I think that the only way that you get to the place where everything is an object and everything is equally distributed is through a culture that is so suffused with programming and programmability.
(01:05:26):
So, for me, I think that it's really at a very particular, I mean, this obviously when I say that this is historical, in other words, it only happens in this moment in this culture, that is definitionally the opposite of ontology, right? Ontology is saying, "No, no, no, this is how the universe is. It's not historical." But I think that that's a weird Freudian slip that I hope that object-oriented feminism is able to recuperate.

Catalina Bode (01:05:55):
Thank you.
(01:06:01):

Other questions?

Audience 2 (01:06:13):

Hi. So, when you're talking about object-oriented feminism and talking about the sort of characteristics that these devices, computers have when they're in a space and you see that kind of empathy that we can have with them, have you dealt with work in and what are your thoughts on those incredibly anthropomorphized robots that people are working with? And when you start to really see gender on the nose expressed in robotic form, how do you relate to that?

Katherine Behar (01:06:43):

Yeah. I was realizing as we were talking that I didn't fully respond to one of Jenny's questions, and you just used the word that was in my mind. So, Jenny had asked about what are some of the pitfalls? And for me, I think anthropomorphism is one of the pitfalls in my work. And I don't know how I feel about it. There is a really amazing writer, Jane Bennett, who has a quote. She says that sometimes you need a little bit of anthropomorphism to get to non-anthropocentrism, which I think is a really interesting idea and is sort of what ends up happening in a lot of my work.

(01:07:23):

But what you're talking about with these extremely high-fidelity, kind of super-, hyper-real, uncannily real robots, I think is something else. There's an amazing book called *Racist Love* by Leslie Bow, which has a chapter on these sort of hyper-realistic sex robots actually, and specifically the trend for those sex robots to be Asian women.

(01:08:01):

And I think what is interesting, I'm borrowing from Bow on this. I think what is really interesting, her idea of racist love is that we think of racism as being about hate, right? When we think about racism, it's typically hating the other. And she's interested in unpacking aspects of racism that are about some other affect, an affect like love. So, the sex robots kind of fit into that… that there is some weird dynamic that is happening. And in particular what she talks about with these robots is that there is a way in which the non-responsiveness of these robots, because when I look at them, I think any of these, the super humanoid robots, sex robot or otherwise, they really strike me as uncanny, and therefore they seem less real. The more closely they hew towards realism, this is the theory of the uncanny valley, the more unreal they seem.

(01:09:14):

But what she says, which is particularly disturbing, I think, is that the fact that these robots are Asian plays with the idea of Asians as super stoic. So the non-emotiveness of the robot actually contributes to the realism, which is extremely perturbing in terms of thinking about all of the sort of psychology involved and the sort of cultural, typically I would say, harmful cultural stereotypes involved.

(01:09:51):

So, I think that the question of realism, it cuts both ways. The thing that makes it more real might be the thing that makes it also less real.

Catalina Bode (01:10:03):

Other questions?

Kris Paulsen (01:10:11):

Before getting to my question, I was wondering if Jennifer, you had anything to say to this last question about kind of these super anthropomorphic robots and ... ?

Jennifer Rhee (01:10:25):

Yes. I think as Katherine mentioned, I think a lot of the super anthropomorphic robots are kind of in the, I guess, industry of sex robots. So I think right there, gender, race, all of these things come into play.

(01:10:45):

I also think that for me, I have a slightly different take on the uncanny valley, and I know, I think one thing we didn't mention is that Kris also has an essay in Katherine's catalog, and it's really excellent, and Kris talks about the uncanny valley in this.

(01:11:08):

But for me, the uncanny valley is less about, kind of ... So if you don't know, as Katherine mentioned, that the uncanny valley is a theory that as robots get closer and closer to kind of human likeness, then humans kind of start to get more and more kind of uncomfortable with the robot to the extent that at a certain point when the robot is very, kind of, human-like, then it's almost a, kind of, repulsive kind of affect.

(01:11:41):

For me, the theory is really a kind of indexing of what a culture or society's kind of normative vision of a human is, right? So I think for me, the concept of the human itself is very, kind of, racialized gendered. It's always been in this very exclusionary category that has kind left out so many people who didn't fit the dominant norm.

(01:12:08):

So when I think about this, kind of, questions about, kind of, hyper-real anthropomorphized robots, I always think about the ways that the uncanny valley, maybe we can mobilize it instead as a tool that can identify, oh, here's when our definition of the human is too narrow and we need to expand it, as opposed to this is too real and I'm feeling uncomfortable. And one thing that we might think about is the way that the original theory of the uncanny valley all revolved around this hypothetical scenario in which somebody had a prosthetic hand. So disability and ableism was built into the theory of the uncanny valley in ways that I think we want to interrogate.

Kris Paulsen (01:12:57):

If there's time for a final question, I wanted to ask you, Katherine, to talk a bit about the basket- weaving project. I found this really fascinating. I'm very interested in the moments when art practices or crafts become industrialized and become automated in the way that changes their cultural significance, the value, the histories, the way that people work with them. And you bringing up basket weaving as this holdout to automation, it's fascinating to me. And you cite this, that there's this assumption that it's already automated because of the scale at which we see Easter baskets or whatever, and the cheapness in which they circulate. And that that can make sense to us culturally

because we imagine they are automated, but really these are just underpaid workers who are making these disposable objects in many ways. And how this relates to kind of ghost work, how so much of our automation we think is operating without human intervention, but is supported by lots of low wage human workers pretending not to exist or something.

(01:14:15):

So, I wanted to ask you about where you're going with that project. We see *We Grasp at Straws* is this really funny kind way of engaging with basket-making, but I wanted you to maybe talk a little bit about where that work is going.

Katherine Behar (01:14:29):

Yeah, absolutely. So, *We Grasp at Straws* is part of this larger project that's called *Inside Outsourcing* and right now ... So, the idea is that although contemporary robotics, every roboticist I've spoken with, says, "No, we cannot do that. Robots do not have the dexterity now," I found some roboticists who are game to try. So we're going to try it and then work with the failures.

(01:15:02):

But the first step in this is that, and this is sort of where the project is right now, is I need to learn how to make baskets. So I've been taking a bunch of basketry courses and, in the process, I'm really learning about not only how to make a basket, but also learning about the ways that basketry is the interesting thing. It is both sort of universal, like baskets appear all over the world, and this is the claim that basketry is the oldest technology.

(01:15:45):

The thinking is if you're a hunter-gatherer somewhere at some point you're like, "It would be helpful if I could put these in something." So you would maybe try to make something out of things that are around you. So, it's very universal, but it's also super local because the things that are around you are so specific. So it's really dealing with specific indigenous plants wherever you are.

(01:16:16):

That said, there are, and somehow all over the world these things emerge. There are only a certain number of kinds of basketry. There's twining, there's stake and strand, there's coiling. So, there are just a few things that are the techniques and these techniques somewhat some of these techniques migrated with people, but they were also invented in different places over and over again, which I think is incredibly interesting. And right now I'm at the stage where I'm just trying to learn a lot of these techniques myself.

(01:17:00):

The goal will be to do two things: One is once I've learned, I will try training robotic hands with my hand gestures, and then we'll see what happens. I think a lot of the materials—my initial impression from what little I've done so far—is that a lot of the materials will need to change. The plant material in particular is often extremely fine, and that's just really hard to pick up. Most robots do not have fingernails, for example. So I will probably end up using some alternative materials.

(01:17:45):

And then, the other thing that we'll try to do is you saw that there was this motion capture that we did as part of the video shoot. We also did motion capture at two facilities, one at UC Irvine, and one at Cal State Long Beach. So we have all of this data, which we used to make the animations.

(01:18:06):

I'm also really interested in using that data to drive some sort of a kinetic sculpture, call it a robot perhaps. The thing that was really great that came out in doing the animation is all of the ways that these things don't line up.

(01:18:30):

The way that a dancer can bend their head in 360 degrees is not the way that my finger joint moves. So there's a lot of, there's a big math problem here, like how to crunch the numbers to make something that looks like a hand. And I think that that will get even more demanding when we're working in the physical world.

(01:18:59):

And the thing that is interesting to me about that math problem is that one of the things that I've learned in my basketry workshops that I've been taking so far is that even though baskets look… when you see a basket that is made by a real weaving expert, they look mathematically perfect. They look like every stitch is calculated. Some of them will have these sort of sunburst patterns from the middle where it looks like these stitches are absolutely perfectly done. And I just took a workshop with a woman, Lynette Youson.

(01:19:49):

She is a fifth-generation, sweetgrass basket weaver. Her work is in the Smithsonian. Her mother's work is in the Smithsonian. She makes perfect baskets. And she was saying to me, "You can't count it. You just add a stitch." Because as it gets bigger, the radius changes. And to make it regular, she just adds a stitch whenever she needs a stitch. And I was like, "What do you mean? How could this possibly be?" But it's not mathematical.

(01:20:21):

And another basket weaver, who's also, she's a master basket weaver who works primarily with Willow. This woman Annemarie Sullivan, O'Sullivan, excuse me. She was doing this large installation with pieces of wood, like a room-sized installation, and she had all of this math for how these pieces of wood needed to intersect. And she said, the math didn't work. It just doesn't add up when you're doing it. So, she basically had to use her knowledge of working with these materials, tacit knowledge to adjust the math basically.

(01:21:02):

So, I'm really interested in where these things won't work or what kinds of material interventions have to happen or fudging of math will have to happen to make something convincing.

Emily Haidet (01:21:20):

Thank you so much. I think that's all the time we have, but what an incredible conversation. Thank you so much, Katherine and Jennifer. Thank you all for being here tonight. Maybe you guys can stick around in the Wex lobby for a little bit and we can continue the conversation outside. Thank you so much. We'll see you next time.