[JAVI BELTRAN & JORDAN GREENBERG, "TELEBOT"]
JORDAN GREENBERG: Welcome to season 6 of the *Prodcast,* Google's podcast about site reliability, engineering, and production software. This season, we met with SREs in person to hear what's on their minds, to explore the importance of psychological safety, and to learn what's coming next for SRE. And of course, the most important part is the friends we made along the way. Happy listening, and may all your incidents be novel.
SPEAKER: You missed a page from Telebot.
Welcome to the *Prodcast,* Google's podcast on site reliability engineering and production software. My name is Jordan Greenberg, and with me is my host--
MATT SIEGLER: Matt Siegler.
JORDAN GREENBERG: And today, we have an awesome guest who has worked on things that you've probably used if you're based in the USA. Would you introduce yourself?
MIKEY DICKERSON: Sure. My name's Mikey Dickerson. Thank you so much for having me. I worked at Google from 2006 to 2014. I left in 2013 temporarily to work on healthcare.gov, was a US-- it was part of the Affordable Care Act, the Obama administration's kind of signature effort. And then that led to me leaving permanently from California in 2014. I worked at the White House for two and a half years till the end of the Obama administration. Since then, until now, I have a company called Layer Aleph, which is just four of us. Three of us are former Googlers. So you had Carla. Carla Geiser was on your show.
MATT SIEGLER: That's true.
JORDAN GREENBERG: Yeah.
MIKEY DICKERSON: It's a little while ago. She's one of the business partners. She's better at these interviews than I am, so you should probably watch that one instead. And Matt Weaver, who's our--
JORDAN GREENBERG: Both, both.
MIKEY DICKERSON: Both, yes. That's what I mean to say. Watch both for sure. And Matt Weaver is the other former Googler who is part of our company. And then the fourth partner's name is Marina Nitze. She's the one who did not work at Google.
JORDAN GREENBERG: OK. And where do you currently work?
MIKEY DICKERSON: That's all we do for money is the consulting company. We do short-term jobs. We ended up specializing in crisis situations, appropriately enough, and that was the next step that seemed to make sense after we had spent 5 to 10 years in SRE at Google. And then the role we did in the federal government was similar-ish. It was interventions in situations that were in crisis. Government. really hates to call it that, but that's what we would call it.
MATT SIEGLER: Go ahead for our audience to help us define what you're calling a crisis in your own vernacular.
MIKEY DICKERSON: So--
JORDAN GREENBERG: Tornado?
MIKEY DICKERSON: --right. So if I get to define it, the way we use it and go and define it in our book is we're trying to-- no, right. So no, not necessarily like tornado, although that would qualify, or wildfire or those kinds of things. We've worked in that kind of situation, but it's not common. We're mostly people that fix computer problems. And for the most part, if there's a wildfire, computer problem, it's not high on the list, although--
JORDAN GREENBERG: Unless the computer is in--
MIKEY DICKERSON: Yeah. I mean, yeah, I won't go on a whole tangent, but the fires in Palisades in Altadena in California a year and a half ago, we didn't do much. But I did hang around with the state government for a couple of days trying to help them figure out how to put the pieces back together. That was in a later stage, so at that point, it was distributing aid. It was

trying to set up temporary offices so people could replace lost, burned documents, that kind of thing. Because if you've lost everything all at once and you don't have your credit cards or your passport or your driver's license or your birth certificate, now you got a problem.
So like that part, yeah, computers got involved. But anyway, your question was, how would we define a crisis? So we would like to kind of strip it of the panicky, negative connotations. And the way we use it means more like a short window of time in which dramatic change is possible. And we go to great lengths in the book to talk about what makes that true. But I guess a capsule version would be that most of the time, you are running on autopilot. Most of the decisions you make are automatic. They're just based on surface impressions and habits and ingrained behaviors.
And that's how we get through our day almost all the time. And it's only rarely when something is very disruptive that you're forced to find new scripts and roles and habits, because if you don't, something unacceptable will happen. That short period of time is what we would call a crisis. And it works the same for a big organization as it does for an individual person, because you got to overcome everybody's ingrained habits all at once. And that's why you usually can't do it. It doesn't work most of the time.
JORDAN GREENBERG: I see. So I'm still thinking of making this analogy here, so forgive me for that. But in one of the crisis situations where you've been called in to help somebody make a change that will affect the way that their business runs, how their software works, a person who is an EMT might have triage tools or a multi-tool or something like that. And you talked a bit in the past about some of those tools for you, maybe sensemaking is a tool. What are some of the tools that you have to combat these crises?
MIKEY DICKERSON: Yeah, I mean, you're right to be thinking about those comparisons. That's the kind of very early discussions that eventually became our company, became this book. We're sitting around at Google and SRE, and I haven't been there in a long time. I don't know. In those days, we noticed it was really conspicuous how very many of the people that showed up in this job had this assortment of oddball backgrounds.
There were a lot of EMTs. There were a lot of volunteer firefighters. There were a lot of people who did theater tech, for some reason. There are a few things that were-- there you go. So there were a few things that were overrepresented in the data. And we wondered why that might be and decided that it's because a lot of that mindset, it generalizes. It isn't specific. If you like to work on that kind of thing as an EMT, if you like to be a first responder, then you probably will like being a computer first responder, which is kind of what SRE was once upon a time.
So you said, what are some of those tools? There's a lot, obviously. There's a lot that you develop over time. A thing that we didn't particularly cover in the book that I think is probably at the foundation of all of them, is honestly, just learning to listen will go a long way. We do consulting work now, and we charge a lot of money for it. And two-thirds of what we do is just listen to what people are saying.
Oftentimes, things that they've been saying a lot of times for a long time and not being heard. But also underneath the surface of that, there's always a lot more that they would say if they felt like there was any place to say it. So for consulting, that goes a long way. And then you mentioned sensemaking, and that's most of the book ends up organized around actions you can take. So we're starting kind of from the premise that you are in or at least imagining a situation like this where nobody knows what to do. Like, what is the concrete set of things that you do to get out of that, since that seemed like the most useful thing we put down in a book?
And that ends up organized around-- I think this is Weaver's words. This ends up organized around what we call the Crisis Engineering Center, which you would recognize as the war room or various names. People don't like to call it a war room. So we change it to Crisis Engineering

Center or whatever, which are also words that we made up, but it's a recognizable structure. And we have a bunch of specific tactics that make that more effective.
MATT SIEGLER: I'd like to hear a bit about your engagement with an organization. So something quite wonderful about the allegory, if you will, of treating an organization like a human that has a crisis of their own. And you do in the book discuss this allegory at some length. And it is quite relatable that you have an identity crisis of sorts. You encounter a situation that is unchangeable using the methods that you've been employed. And this is the opportunity to learn something new.
And so you, an outside consultant, come in, say, as a teacher. Here is some new methods. And the way you've been working, as you say, autopilot isn't going to happen. It's not going to work this way. You can't use your own methods to solve them. They are clearly not working for you right now. You're faced with outside changes that are affecting you. And it's all broken, or it's on fire, as they say. And here's what we're going to do. We're going to ask you a lot of questions, and we're going to listen. And we're going to help you take it apart, and we're going to triage all the things that you can't change and help you make some changes that you can do.
And you, the outside, have this wonderful moment of clarity that they haven't had themselves. So I have so many questions that I want to ask you right now, but let's talk about the way you approach the problem from the assessment. Let's just talk about assessment. How do you do that assessment vertically and horizontally at the same time, whether they're a small or large organization?
MIKEY DICKERSON: Yes. Can I talk about that human allegory for just a second?
MATT SIEGLER: Yeah, please.
JORDAN GREENBERG: Yeah.
MIKEY DICKERSON: Yeah, you may know it or not, but kind of in the deep background of the book, another influence on us as we put this together is the really obvious. And whether we wanted to or not, we learned a lot about crisis in individual people's lives. Without getting into anybody's business too much, some of us are close to people who have struggled with addiction, for example. And a lot of the words you just said would be extremely recognizable in a 12-step program or--
MATT SIEGLER: Yes.
MIKEY DICKERSON: --as you're aware. So it all starts with, I think, the lines from the AA manual or something like, our lives had become unmanageable.
MATT SIEGLER: Unmanageable,
MIKEY DICKERSON: Yep. And whether you are interested in that specific sequence of steps, which is pretty effective for making dramatic change in somebody's life, whether you're interested in that specific set of steps or not, it starts in exactly the same place, which is nothing's going to work until you have yourself decided to find willingness to make changes. And for almost everybody, that won't happen until you have no other choice, until your old script unambiguously has stopped working. The so-called rock bottom.
And so our extension of that to organizations is very similar. It's organizations do not change until they are forced to. And then when they're forced to, it's not super pleasant. And now to what your question actually was, what's the assessment process like? So our favorite time to show up is in that moment of total disintegration when people are not sure what to do next, because you have the most opportunity to get something done.
JORDAN GREENBERG: Right. There's the motivation in there that's like, we know things aren't right. We want to make changes, and we're open to making these changes. So being in that position as kind of a guiding force is basically how you then are able to see this problem. Now, just echoing that question, when you do go into these businesses and you see their team being

out of sorts, and they describe to you their problems, what are some strategies to see the horizontal and the vertical? And how do you lay them out in a way that makes sense for them to understand?
MIKEY DICKERSON: So Carla specializes in this. And the section of the book about so-called mapping the system is a lot of her work. She probably talked about it on the podcast, too, where what works for us is to get as many different points of view as we can. So we're going to start with a meeting where the customer, which means whoever the executives-- the CIO, CTO, CEO, or-- in government, all have different titles, but it will be the same-- division head, I don't know, deputy secretary, whatever.
The executives will get their version of the story first. We can't not, because they're the ones who had to decide to hire us. And so we've met with them. We're going to the first day of meetings is always going to be with them. They're going to tell us everything that's wrong with the whole department. Say, OK, interesting. Very good. Write all this down. There's a lot of grief processing. One of you mentioned one of the things that--
JORDAN GREENBERG: Oh, definitely.
MIKEY DICKERSON: Yeah, one of the things that was implied in that like, we've reached the state of dissolution where we don't know what we're supposed to do next. There's going to be a lot of frustration and what ultimately is just plain grief over the job I used to do, stopped working. Maybe it isn't a job anymore. This is everybody's fear right now is this AI, blah, blah, blah, everything--
MATT SIEGLER: We'll get there.
JORDAN GREENBERG: Oh, yeah.
MIKEY DICKERSON: Oh, great.
MATT SIEGLER: We'll get there.
MIKEY DICKERSON: I thought we might.
MATT SIEGLER: We were required to.
MIKEY DICKERSON: Yes, that's my experience, too. It's against the law to talk without including AI at this point. Anyway, so the executives will give us their point of view. And we'll say, that's interesting. Now we would like to talk to somebody who opens the mail and reads the applications. And the executives never like this because they don't talk to the person who opens the mail. They don't know what they're going to say.
They're already losing control of the situation, which is why we have to come when they have already lost control of the situation, or else we'll be dead in the water right there. But when they're desperate, when they're grasping at straws, they'll be like, — do we use, can we use profanity here? you can edit that part if you want — the executive is going to say, I don't know why the fuck they want to talk to the person who opens the mail.
But they're expensive, and we hired them so that we could say we did something, which is more or less the process in their head. So like, fine, whatever they say. And we'll go talk to the person who opens the mail, and we will, within five minutes, learn a completely different set of problems of what is wrong with the organization because the person who opens the mail-- I'm making this up. This is not a real example, but it's not very different from a real example.
The person who opens the mail has for 10 years been getting this form, and the form doesn't have a space on it for the thing that the person was trying to express. So they will include a written letter, or they'll cross out part of-- whatever. There'll be some sense in which the form didn't accommodate the situation, and the person who opens the mail is the only one who knows that because they just look at that. Their job is to type it into the computer.
The computer doesn't have a space for you to put the handwritten note that was written in. So the note goes in the trash. And that's been happening for years. The executive had no idea that

it was going on.
JORDAN GREENBERG: That's how noisy alerts feel.
MIKEY DICKERSON: Yeah.
MATT SIEGLER: [LAUGHS]
MIKEY DICKERSON: And we'll do that five more times with the people at different levels of the organization. And there are all these organizational boundaries that are always all screwed up, where a similar thing will happen at the handover between the first adjudication and the appeal. For us, there's a huge number of things that are structured that way. It's like a decision and then an appeal.
MATT SIEGLER: Oh, so there are legal things that show up of--
MIKEY DICKERSON: Always.
MATT SIEGLER: OK.
MIKEY DICKERSON: Yes. Yes, yes, yes.
MATT SIEGLER: I don't even know how to ask questions about that.
JORDAN GREENBERG: You can skip that.
[LAUGHTER]
MIKEY DICKERSON: It's not that different. It's just always entangled with-- it's always entangled in the same kinds of ways. And we're not lawyers either. Our contract has all these disclaimers that are like, we don't give medical advice, legal advice, cybersecurity advice, investing advice. Anything that is regulated, we don't do. We do all the-- we fill in all the gaps.
MATT SIEGLER: But you're effectively giving psychosocial advice and counseling to a body of individuals.
BOTH: Yes.
MATT SIEGLER: Interpersonally, in a way, a cultural kind of refactor.
MIKEY DICKERSON: Yes, yes. This--
MATT SIEGLER: And you're analyzing them. They're open because they've had this crisis happen to them. The way you pose it in the book is very effective in the way you-- this is your moment of clarity. Here we are. And we're ready for-- if you're ready, we're ready. That's the way you're posing it here.
MIKEY DICKERSON: Yep.
MATT SIEGLER: And you're saying, well, can we look at your whole organization and all of its dysfunction, why you got here? And the way you just presented is you're running on autopilot using your old methods, and they're not working. And then part of why it wasn't working is why you got here, perhaps. Or there's just new things on the ground that you weren't ready for.
MIKEY DICKERSON: Yep, yep. I mean, it's--
MATT SIEGLER: So how do we-- OK, so you've introduced new things. Now my follow-up here is, great. You're going to do these new things or introduce some new behaviors or a new role. How is that going to continue after you've left, or how is the new factor is going to suddenly not just go right back to where they were before?
MIKEY DICKERSON: Our kind of premise is things won't go back to the way they were before because they can't. If they could, then this wasn't really an existential crisis.
JORDAN GREENBERG: They weren't ready yet.
MIKEY DICKERSON: Or they weren't ready, or they just fail. We do the best we can, and we think we're reasonably good at it. But not every organization-- we wouldn't call every crisis outcome a success that we've worked with.
MATT SIEGLER: There's a quote in your book of the Marine quote, "all bleeding stops eventually."
MIKEY DICKERSON: Yes, exactly. That's right. That's the right model is like, if the disruption

was enough, then there's only three things that can happen. You have the organization adapts. And there are good adaptations. There are maladaptations, since we're talking about psychotherapy a minute ago.
And what we pitch ourselves as is giving you the opportunity to steer in the direction of good adaptations that will serve you better in the long term, because you're going to adapt. That's case 1. That's if you survive. Case 2, the organization may just not survive. That's easier for a private company than it is for a public sector agency because they--
MATT SIEGLER: Fair point.
JORDAN GREENBERG: Yeah
MIKEY DICKERSON: --kind of can't just go out of business because they're not making money anymore. It turns out, nature does eventually adapt around you even if you don't. So anyway, that's case 2 is the organization doesn't exist anymore. And that's most corporate bankruptcies, whatever.
Case 3 is kind of the most common case by far. And it's the one that you just kind of muddle through, which means that you maybe have some kind of half-implemented, half-thought-out adaptations that survive. But mostly, the crisis burns itself out. All bleeding stops eventually, yes. The wildfire will not go on forever. Even if we do absolutely nothing, even if we're so bad at fighting the wildfire that we're pouring gasoline on it, which is the equivalent of what a lot of organizations do, the fire still won't burn forever. It will eventually stop.
And the memory of it will become this fossilized organizational-- it'll become this massive scar that never really heals. And we see those, especially in government customers and government organizations, because many of them have been around for so long without really any serious corrective pressure, like we were saying a second ago.
Many agencies we go to, we will find things that are nonsensical. This entire division manages a backlog, which is infinity long and will never go away. And it's been doing that since before I was born. And we're like, how, why? Like, nope, that's just how it is. We're not touching it. When you hear a story like that, that is the evidence that there was a crisis about 50 years ago that we did not win.
JORDAN GREENBERG: I see.
MIKEY DICKERSON: And it's still here.
JORDAN GREENBERG: This is actually very interesting because I'm thinking to myself, in business, what are the things that are crisis-shaped that I saw? How did they resolve? So one thing that maybe we could give to our listeners is sort of like detection skills. What are some signals that you could see that are like, this is heading in a way that, without some abrupt and thoughtful change, might make it difficult for us to continue operating at this rate?
So I'm thinking like bug bankruptcy. You have so much stuff in your backlog. And should you not say, we just can't prioritize all of this work? This is our framework criteria of how we made this change. We're going to go about it this way and say, this work we can do. This is what we can't do. All of a sudden, this improves the overall health because then some things have been closed. Some things are still being worked on.
So if we have scenarios like that in business for smaller scale or bigger scale for teams that are like, I see something, I feel something is wrong, what are tools or thoughts that they can tap into to know a crisis is coming, we should be prepared?
MIKEY DICKERSON: The bug bankruptcy is a good example and I'm sure will be very relatable to a lot of people that will hear us. And I know you're a TPM, so that probably has left you in a situation more than once where it is your job to care about something like a bug backlog that nobody else seems to care about.
JORDAN GREENBERG: So hard.

MIKEY DICKERSON: That is an extremely common circumstance for people. And one thing, it's kind of a side effect of our book and our speaking tours and whatever. We didn't intend this, but it's still gratifying sometimes to hear. Sometimes people find our book kind of just a comfort as far as we're just saying that, yes, this happens to everybody all the time. And sometimes there is nothing you can do about it because it depends on conditions that you can't control.
I was an SRE middle manager in my glory days, and I had any number of teams with infinitely growing bug backlogs. And what we would offer that you probably have figured out on your own, but it might help to hear somebody say out loud, is, one, there is no power on Earth that can make somebody care about something that they don't care about. This goes to the 12-step program again.
If I can see-- and it will be easier for me to see standing as an outsider outside the frame-- if I can see that your whatever, your coping strategies, your life, your organizational practices are unsustainable, but you don't think that yourself, then what I think will not matter. I could be a therapist. I could be a preacher. I could be a coach. I could be a cop. I still cannot make you care. You have to decide to care yourself.
And to your question about when you might see that the opportunity for people to care is coming, we have this list-- and I think it's mostly Marina and Weaver's work as we put the book together. We have this list of the indicators of a useful crisis. And some of them, you can-- well, I guess I'll get to that question when we get to it. But the indicators that we put down in the book are, there's an external shock, a surprise, a fundamental surprise, which, to skip another lengthy thing in the book, just means something has happened that you didn't think was possible to happen, basically. It's different from everyday surprise.
There's a deadline. That's really where we fall down on bug bankruptcy a lot of time, in my experience, is because there isn't any deadline, not really. Like, I can make one up, but now I'm telling people to care again. And it doesn't work. There has to be a deadline that is not just something I made up, that everybody can see is there really is a meteor coming or whatever it is, and we can't avoid it. So--
MATT SIEGLER: This is what release dates are for.
MIKEY DICKERSON: Yeah, release dates are that. And even that--
MATT SIEGLER: Public release dates.
MIKEY DICKERSON: Right, and even that, I'm sure you guys, in your roles, know how to do this. But even a release date is a little bit made up because the company could change it if it wants to. But in order to make the engineering team treat it as real, you have to be like, there is nothing we can do.
MATT SIEGLER: Like, a paycheck is always payday.
MIKEY DICKERSON: Yes, exactly.
MATT SIEGLER: Payday is not changeable.
MIKEY DICKERSON: Right, precisely. And tax day is not changeable. So for the IRS, if things aren't working and April 15 is coming--
MATT SIEGLER: Wow.
MIKEY DICKERSON: An election is even less changeable than tax day. Like, I could imagine a set of circumstances. And in fact, the pandemic was a set of circumstances in which the IRS was able to say to some people in some circumstances, like, oh, the deadline's just moved. It's going to be in--
MATT SIEGLER: Yeah, we found out that was--
JORDAN GREENBERG: And extensions.
MATT SIEGLER: --something was off deadline.
MIKEY DICKERSON: Yes.

JORDAN GREENBERG: Yeah.
MIKEY DICKERSON: Yeah, it turns out that can be moved. Like, an election, even less movable. That's in the actual Constitution when that is.
MIKEY DICKERSON: But the pandemic is something that was like natural forces that you have to squint a little bit to say that for the last 100 years, the field of public health did have a hard deadline that was immovable. It didn't know when it was.
JORDAN GREENBERG: Right. Nobody told them.
MIKEY DICKERSON: Because, right, they didn't get informed that the release date for COVID-19 was like November 2019, right?
JORDAN GREENBERG: Hey, we're patching this. Just like, I mean, we're going to test your crisis systems, your response. And it's not going to be good. No postmortem on that one, by the way.
MATT SIEGLER: I have a question about-- you said especially about can't make you care about things. You have a remarkable insight about when you interview all these people in these organizations. Do you find a disorderly level of care about non-overlapping cares in these organizations? Like, this person thinks this is the most important thing. This person thinks this is the most important thing. And organizationally, they've distributed the values so poorly that no one cares about the right things in the same direction?
MIKEY DICKERSON: Yeah, absolutely.
MATT SIEGLER: And can you help fix that, or is that not fixable? Can that be fixed by anybody?
MIKEY DICKERSON: The crisis is what fixes that, is my claim. And this, yes, the starting condition that you described, that is absolutely normal operations in any big organization of any kind. Talk to 10 different people, ask them what's the most important thing. And to give them a fighting chance, ask them, what are the three most important things?
JORDAN GREENBERG: Yeah.
MIKEY DICKERSON: And you'll get-- if you're lucky, everybody will include one thing the same-ish. When Google was smaller-- I don't know, you can tell me what it's like now, but when Google was smaller, it was people really believed in a few of the things like focus on the user, don't be evil, blah, blah, blah. You would get-- if you asked randomly selected 10 people out of the 5,000-person company what the three most important things were, there's a good chance you'd hear 30% overlap, something like that. And that was a very good case.
In an older company, in a company that doesn't face what they perceive as intense competition. And I'm saying that in order to not just be only talking about government organizations, because they for sure exhibit this, but companies where there isn't a lot of sense of urgency or this too, if you ask 10 randomly selected people from the 20,000-person company, you're very likely going to hear that the things on the top of everybody's mind is the standing war with the other division, which is across the hall.
And that's what they're spending all their energy on. It's what they've been spending all their energy on their whole careers. They've never seen it any other way. Can that be fixed? There may be a different book somewhere that talks about some extraordinarily effective leader that can just walk in cold and make that happen, but I can't say I've really seen it with my eyes. And I've worked for people that I think are pretty strong leaders. I've worked for President Obama and his chief of staff, Denis McDonough. And I didn't-- Weaver did more than I did, worked with General McChrystal, who ran-- I may screw this up, ran JSOC, Joint Special Operations Command, in Afghanistan.
So like, I feel like probably there aren't just a better tier of leaders out there that I haven't ever run across. You probably have worked with the kind of top shelf and the middle shelf and the bottom shelf. But what we see is really effective leaders are those that can take something that

has the potential to kind of-- I don't have good words for this analogy. Kind of like a magnet becomes a magnet because all the domains are aligned, right? And that only happens when an external field of overpowering strength happens. Otherwise, they point in random directions. That's the company in normal times.

If a crisis is the external field that lines everything up, at least temporarily, and leaders can now take the organization they want it to go if they see that and know how to exploit. I mean, I don't mean exploit in the usual negative sense-- take advantage of, make use of, not waste the opportunity that is presented to them. But I don't know, my claim is that the crisis is a necessary ingredient. I don't think it happens otherwise.

JORDAN GREENBERG: Gotcha.

MATT SIEGLER: So let's tie this back to where we started a bit about SRE. You said SRE seems to be an organization that's natively the right ladder, if you will, for the kinds of people who seem to be fit for this mission.

JORDAN GREENBERG: Mm-hmm.

MATT SIEGLER: Our audience is SRE, SRE adjacent. Why do you think this is true? If you say it is true, do you have any idea of why? What's drawing them into this field?

MIKEY DICKERSON: That's a good question and not one that I prepared for. So let's see. I'll do my best. I guess the first thing that comes to mind is SRE as I knew it-- I hinted at this before-- tended to attract all the people that didn't quite fit in anywhere else. And even when you put them all together in one room, it's not like they now all fit in with each other either. There's still a bunch of weirdos and oddballs. And there's--

JORDAN GREENBERG: Us?

MIKEY DICKERSON: As I say, that's how I experienced it. Your listeners', viewers' experience may be different now.

MATT SIEGLER: That came out of your mouth, by the way.

MIKEY DICKERSON: All right, yes. So I'm the one saying that it used to be a bunch of oddballs. And that is a valuable role for the organization to have, even though it is a tough one to play for the person experiencing it a lot of the time, because it is one of these people that is going to say when the emperor has no clothes. And boy, are there situations like that in the tech industry right now.

And people who have a little bit of a contrarian streak-- and I'm projecting some because I perhaps have a little bit of a contrarian streak myself, I've been told-- that's necessary. And thinking of things, one of our favorite ancient holy textbooks is this thing called *Inside Bureaucracy.* It's by this guy Anthony Downs. It was a RAND Corporation publication from 1960, 1962, I don't know, something like that.

And he neatly categorizes all the bureaucrats in the government into there are statesmen who mostly just want everybody to get along. There are conservers who just want everything to stay the same way it is. There are climbers who want their career to advance. And then there are zealots who care about something for some reason, God only knows why. And yes, you're laughing because you know these characters inside SRE, inside Google, inside every-- and tell me if I'm wrong, but an unusual concentration of zealots who care about something that God only knows why ended up in SRE. I know you--

MATT SIEGLER: Productive zealotry can be a force for good if it doesn't overlap too much.

MIKEY DICKERSON: Yes, yes.

JORDAN GREENBERG: If the thing that they care about is keeping the lights on?

MATT SIEGLER: Yeah.

JORDAN GREENBERG: Oh, that is a perfect fit.

MATT SIEGLER: And customers can access your thing.

JORDAN GREENBERG: Yes, yes.
MIKEY DICKERSON: And when that is the thing that they latch onto as their oddball value system, that's why it delivers real value to the overall engineering company, because somebody has to care about keeping the lights on.
MATT SIEGLER: At all costs. Well, at most costs.
JORDAN GREENBERG: Some costs.
MIKEY DICKERSON: At most costs.
MATT SIEGLER: At measured costs, like specific number of nines costs.
MIKEY DICKERSON: Right, right. I mean, yes, in a tech company, we're talking about keeping a website up for the most part. It's not like flying a plane, but nobody's going to die to keep the web search availability above a certain number. But they probably are going to stay up all night to keep web search availability above a certain number. They probably are going to miss family obligations. And like, we don't love that. We try to plan around that, but somebody has to care that much, or it won't happen.
JORDAN GREENBERG: Right, absolutely.
MATT SIEGLER: So in the book, you suggest that we can't really automate human behavior just yet. And we're now seeing, as you said, a role reversal in some cases where we're having humans work for a machine with some AI introductions. How have you seen any of that in your first-hand experiences?
MIKEY DICKERSON: I mean, it seems to be impossible to talk about anything even remotely technology related, which is most of what I do. So it seems to be impossible to talk about anything remotely technology related without talking about your opinions on AI these days. So do we see it everywhere? Yes. Do we get that question everywhere? Yes.
I have a project besides the book which comes out today. I have a project that's more about preparing for a future presidential administration that I don't want to be about AI. And yet the question is, every room that we go to is, what about AI? What about AI? I mean, I'm going to talk with way less confidence about the future than I can about the past, which, as we covered, is how sensemaking works. It's retrospective, but where I'm at, I can only give my opinion. So here it is.
Where I'm at is I think we are learning interesting things that are not fully articulated yet and will probably be more clear in 10 or 20 years about what the limitations of what we're now calling AI still are and what makes that interesting and different from what humans can do. I have a whole talk which I won't subject you to right now, but I have a whole talk where I try to get government people to understand the context of changes that are happening now.
And one of the points that I make is that AI isn't two words that were invented three years ago. People were talking about it since before they built the computers that could even run the algorithms on. Alan Turing and people in that generation were asking these questions. What about when machines can think? And one interesting fact about the last 70 years is that we can't build a machine to replicate how people think, because we have no idea how people think. We don't know what intelligence is.
So we keep making up a definition out of thin air. For a long time, all the serious people agreed that if we could build a machine that could play chess, that would prove it was intelligence. And if you're sitting around in 1955 or 1960--
MATT SIEGLER: It's plausible.
JORDAN GREENBERG: Yeah.
MIKEY DICKERSON: This is what people agreed on. I wasn't there. I don't know what I would have said if I was there, but no one would ask me, is the reality. But everyone who thought about these things could not imagine a situation in which you could build a machine that could

play chess and win and wasn't thinking.
MATT SIEGLER: Right.
MIKEY DICKERSON: But then we did that. We built a machine that plays chess. And when we saw that solution, we were like, this is not interesting. This machine is not thinking.
MATT SIEGLER: Whoops, that was wrong.
MIKEY DICKERSON: Right, that was the wrong problem. Like, we just all agreed. There wasn't really an argument about it. When Deep Blue finally won, like 1994 or whatever it was, '96 maybe, no one had a big philosophical debate about whether this machine was sentient. They knew it was just doing a brute force search of a red-black tree, basically. And they're like, well, that's not-- all right, wrong problem. Now, if a machine could have a conversation--
MATT SIEGLER: Aha, voila.
MIKEY DICKERSON: And then we went through other stages too, but I'm abbreviating. The Turing test, which we thought up a long time ago. Everyone agreed that if a machine could have a conversation that could speak English so well that you couldn't tell it wasn't a person, then that would definitely be thinking. Well, now we've built that. It's called an LLM, and it does, in fact, fool a whole lot of people.
JORDAN GREENBERG: That's true.
MIKEY DICKERSON: Famously, one at Google earlier than it was cool who quit and made a lot of noise--
MATT SIEGLER: That's true.
MIKEY DICKERSON: --believing that one of the very early DeepMind models was conscious, was thinking. And it does fool a lot of people, but I think-- we're speaking here in 2026. I think the consensus amongst AI researchers, everybody is that no, Claude and ChatGPT and the models that we have right now, they're not conscious, they don't have feelings. They don't have a reasoning process. We can see exactly how they work. They're just really big.
It's a matrix. It does a big multiplication. It does some fancy sauce on top, and it produces a string of words. But that's not really thinking either. So I think the most interesting thing that we're learning about 70 years of AI is we're learning how little we understand how humans think. And I won't be the one to do it because I'm not expert enough in this, but someone eventually will connect the kind of core ideas that we think are important in our book, like sensemaking and the so-called System 1.
I think I mentioned this in passing, but Daniel Kahneman has this book *Thinking Fast and Slow,* which is very famous. He says that we think-- he finally threw up his hands and said, we just have two different machines, basically, running in our head. One of them is called System 1, and it just makes decisions on autopilot based on impressions and habits and so forth. And the other one is really slow and expensive, and it's the one that can do matrix multiplication by hand and can learn an algorithm and can reason. That's your System 2 brain, and it burns a ton of calories. And we really hate using it, and we'll do anything to avoid using it if we can.
JORDAN GREENBERG: That's true.
MATT SIEGLER: Is that the system that an organization needs to use in order to improve itself?
MIKEY DICKERSON: Well, that's a good question because it gets kind of paradoxical. I would claim that what the crisis does is temporarily gives the System 1 brain-- disables the System 1 brain because it's got too many-- it can't work. Your habits are no longer functional, so you have no choice. That's why I say, we really hate doing this, and we'll do anything to avoid it. But you have no choice but to think and find new ways to get things done.
And AI, as it's been imagined up to this point, as far as I know, is almost entirely trying to replicate that System 2 brain. Like, it's never even thought about that first thing. Nobody anywhere that I've ever read about is building a machine and trying to start with getting it to feel

unhappy or--
JORDAN GREENBERG: Certainly.
MATT SIEGLER: Like, we're trying to get it to think and reason and talk and blah, blah, blah.
JORDAN GREENBERG: I think kind of what you're saying is people now are using AI for the System 2 thinking, but they want it at System 1 speed so that the decision that their System 1 brain wants to make, they can do that gut check against an LLM and say, am I right, or is this right? Am I going to do this, this, or this? And then a machine will do the System 2 thinking, a billion calculations a second, a shortened amount of that, put it in front of you. And then you can continue your System 1 thinking-- what am I going to do next?
MIKEY DICKERSON: Yeah, that's right. I think the point that I was very slowly making my way around to is what people want and what would actually be able to replace so many jobs and cause all this disruption, all the doomsday prophecies, what people really want is a machine that can do all the things a human does. We can't define artificial general intelligence either, but it's approximately what I just said-- we want a machine that can do everything that a human does. And I suspect that the path we're on, which is only attempting to re-implement the calculator part of a person, will never do that, because that other part of a person is no less important in the fact that it's embodied in an--
MATT SIEGLER: Interesting.
MIKEY DICKERSON: I'm not the first person to think this up, but it's the embodiment hypothesis, I think, which is to say that it's not actually the case, that I could scoop your brain out, put it in a jar, hook up a bunch of Elon Musk's Neuralink wires to it, and still have a recognizable person. It's just not true. You aren't a person without all of the rest of your central nervous system, your sensory organs, everything else that makes you a person. That's also a non-negotiable part of the package.
MATT SIEGLER: There's a lot to chew on here.
JORDAN GREENBERG: It is a lot to chew on. And--
MIKEY DICKERSON: I know.
JORDAN GREENBERG: --while we do that, maybe we can talk about where we can find you on the internet. And what is this? Something that you referred to a couple of times.
MATT SIEGLER: Yeah, there's a book.
MIKEY DICKERSON: This artifact you're holding is a book called *Crisis Engineering* and is by me, Matt Weaver, and Marina Nitze. It is available today. This is April 7 we're taping, I assume I can say.
MATT SIEGLER: Yeah.
MIKEY DICKERSON: And today is the day that it is released, which I assume means that if you go to any bookstore in the country, you will see a huge pile of them at the front table.
MATT SIEGLER: Every airport.
MIKEY DICKERSON: Every airport, yep.
JORDAN GREENBERG: Yeah. For some light airport reading, yeah.
MIKEY DICKERSON: I am going to write some very angry letters if I don't see it at every airport bookstore I walk by on my way home.
JORDAN GREENBERG: You heard it here first.
MIKEY DICKERSON: Yep.
JORDAN GREENBERG: Where else can we find you on the internet?
MIKEY DICKERSON: The most consistent place-- I don't like this answer, but the most consistent place where you can keep up with what I'm doing is on LinkedIn. It's just Mikey Dickerson. I don't think it's hard to find. And then from there, I occasionally put things on Medium. I have a couple of other newsletters that I'm connected to. And our company website is

layeraleph.com, where aleph is A-L-E-P-H.
MATT SIEGLER: Cool.
JORDAN GREENBERG: Sounds good to me. Any other last questions before we go?
MATT SIEGLER: No, if I ask any more questions, I think I'll start too many things.
JORDAN GREENBERG: It'll be a seven-hour episode.
MATT SIEGLER: Thank you.
JORDAN GREENBERG: So with that, we have been Jordan and Matt, co-hosts of the *Prodcast.* Thank you for listening. This has been--
MIKEY DICKERSON: I'm Mikey Dickerson, and glad to have been here.
JORDAN GREENBERG: Thank you so much for coming.
MIKEY DICKERSON: Thank you.
JORDAN GREENBERG: Have a great day, everybody.
You've been listening to the *Prodcast,* Google's podcast on site reliability engineering and production software. Visit us on the web at sre.google, where you can find books, papers, workshops, videos, and more about SRE. This season is brought to you by hosts Jordan Greenberg, Steve McGhee, Florian Rathgeber, and Matt Siegler, with contributions from many SREs behind the scenes. The *Prodcast* is produced by Paul Guglielmino and Salim Virji. The *Prodcast* theme is *Telebot* by Javi Beltran and Jordan Greenberg.
SPEAKER: You missed a page from Telebot.