

Masters of Scale Episode Transcript – Rana el Kaliouby

“How to be the steward of your idea, w/Affectiva's Rana el Kaliouby”

[Click here to listen to the full Masters of Scale episode featuring Rana el Kaliouby.](#)

REID HOFFMAN: I hope you're wrapped up warmly because we're about to travel to a remote vault buried in a snow-covered Norwegian mountain encased in permafrost.

HANNES DEMPEWOLF: It's located in the Svalbard Archipelago, which is quite, quite far away from mainland Norway, well beyond the Arctic circle. So you actually can take commercial flights to a town called Longyearbyen. When you land and you sort of look out through the snowy landscape up the side of the mountain, you can see this bluish glimmer that is emerging there, and this vast field of snow and rocks. And especially when you land in darkness during the winter, it looks magical. It looks mysterious.

HOFFMAN: That's Hannes Dempewolf, director of external affairs and a senior scientist at the Global Crop Diversity Trust, or Crop Trust for short. He's describing the approach to the Svalbard Global Seed Vault.

DEMPEWOLF: So there's this winding road going up the mountain side, and ultimately you see this wedge that's protruding out of the ground. And that is the entrance portal of the seed vault.

HOFFMAN: The vault was built in 2008 to protect something far more valuable than bullion or bitcoin. It's a depository for millions of seeds, accounting for thousands of varieties of the world's most important food crops.

DEMPEWOLF: Once you enter, you enter this long entrance tunnel, that's going way down into the mountain. When you're down in the mountain, there's this big hall, and from there, there's three big chambers that are hewn into the rock. Those are the storage chambers where the seeds are stored.

HOFFMAN: The vault is designed to be an impregnable backup should disease, war, or some other calamity ravage our ability to grow our food.

So when the vault flooded, headlines made it sound like a failure of cataclysmic proportions. Hannes has a more down to earth version of events.

DEMPEWOLF: First of all, there was no flood, that is a complete mischaracterization. There was a water intrusion in the entrance tunnel of the vault. So the seeds were never at risk, but of course something had to be done.

HOFFMAN: I guess "flood" makes for a more catchy headline than "water intrusion," which I believe is a fancy term for a leak.

But while the water intrusion was far from a disaster, it was an example of how the watchful eye of the steward can never stray.

DEMPEWOLF: The Arctic is being impacted by global warming or climate change way more than other parts of the world. And so the hydro summer temperatures combined with higher rainfall...

HOFFMAN: Ok, so Hannes gets technical here. Basically the seed vault was waterproofed, but the entrance tunnel wasn't – the builders didn't think that it needed to be. Ironically, this was because they had underestimated the pace of climate change – one of the main threats to the biodiversity of the world's crops.

While the urgency of that flood may have been overplayed, the urgency and importance of the seed bank mission can not be.

An international treaty signed in 2001 paved the way for the Svalbard Seed Vault. That treaty makes Hannes and his team the latest in a long line of stewards stretching back to the first humans to cultivate crops from wild variants.

DEMPEWOLF: When you go down there and you see these seeds, those boxes from all around the world, from warring nations sitting next to each other on these metal shelves, it's a very moving thing to see and to witness. That gives you sort of confidence that we as the world can actually come together and tackle global problems.

HOFFMAN: Committing to being a steward is easy to do. Following through is difficult. But the benefits far outweigh the costs.

That's why I believe you're not just responsible for scaling your world-changing idea. You're also responsible for stewarding its development and wider use.

[THEME MUSIC]

HOFFMAN: I'm Reid Hoffman, co-founder of LinkedIn, partner at Greylock, and your host. And I believe you're not just responsible for scaling your world-changing idea. You're also responsible for stewarding its development and wider use.

There's a fine line between being a "thoughtful steward" – nurturing your idea, and being a "cranky custodian" – making sure that people only use your product in the way YOU want. I wanted to speak to Rana el Kaliouby about this because she is one of the deepest thinkers when it comes to projecting – and stewarding – the possible uses of her product. Rana is the

co-founder and CEO of Affectiva, a software company that uses AI to read people's emotional states by analyzing non-verbal cues in our facial expressions and voices.

Rana's software has just started to scratch the surface of its capabilities. Just some of the avenues she and her team at Affectiva have explored include: helping people on the autism spectrum; analyzing reactions to marketing campaigns; and creating personalized interfaces and safety features for cars.

As you would expect of someone who has taught machines to recognize emotion, Rana has what is known as a high EQ – something that was obvious from her early childhood.

RANA el KALIOUBY: One of my earliest memories is this blue plastic chair. My dad would pluck me on there as a toddler, and he had these very early video recorders, and he would just have me give these speeches, right? Just record all of that.

I remember standing on this chair as if it were my throne really. I always joke, my dad was my first audience of one, because I would just practice all my spiels on him. But I think it made me realize the importance of human connection and being able to be in front of an audience and be animated and use your hands and your voice and your expressions, which of course ended up being what my career was all about.

HOFFMAN: Rana's father also helped her learn another important lesson about reading emotions, although this time he wasn't as conscious of his role.

KALIOUBY: He would ask me to do all sorts of chores. So he would say, "Rana, go fetch the polish for my black shoes." I figured out, if I got him the wrong color of shoe polish, I would stop getting asked, and he would ask my middle sister or my youngest sister. I guess you can think about it as being emotionally intelligent.

HOFFMAN: Well, it's certainly predicting the incentives and the reactions, and these same things which are part of the emotional fabric.

KALIOUBY: I thought of it as actually more of a silent rebellion, because in the Middle East, you don't say no to your parents ever, like ever. And I felt like that was my way of saying no.

HOFFMAN: Rana's fascination with human interaction and emotional behavior grew through her childhood and adolescence – and she decided to make it the focus of her post-graduate studies.

KALIOUBY: So the year was 1998. I had just finished my undergraduate at the American University in Cairo, studying Computer Science. And at that point, I had already realized I was really drawn to human-machine interaction, more so than computer architecture or hardware. I was really intrigued by the intersection of humans and machines and that discomfort area.

HOFFMAN: That discomfort area Rana is talking about can take many forms. It could be the elderly relative trying to use the internet for the first time. Or the avid Mac user trying to get their head around Windows.

We often forget how much we as humans have changed to accommodate the technology we use. For most of us, using a mouse is second nature. But if you hand a mouse to someone who has never used one before, you'll see that in fact it isn't as intuitive as you think.

It was during this time that Rana read a book about these issues that changed her life. Its title was *Affective Computing*.

KALIOUBY: Professor Rosalind Picard, who's the author of the book, posited it that for computers to be truly intelligent, they didn't just need to have cognitive intelligence or IQ, they had to also have emotional intelligence. I was just so fascinated by that, that I pivoted my entire career to focus on that.

HOFFMAN: Rana not only pivoted her entire career to focus on what she read about in the book, she would eventually co-found Affectiva with it's author. Here is Professor Picard herself, describing what got her thinking about the subject of human-computer interaction.

ROSALIND PICARD: Affective computing is computing that relates to, arises from, or deliberately influences emotion. When I framed the area, many... actually decades ago now, the idea was that the most important tenant was to show respect for human feelings, that all of the technology we develop needs to honor and show respect for who we are as human beings. And that means if there's some technology that annoys us or irritates us or frustrates us, we should think about how to redo that so that it gives people a better experience.

You'd hear of stories like this guy in Texas who pulled out his gun and shot his computer three times through the monitor and two times through the hard drive. Or this chef in New York who was so mad at his computer, that he picked it up and threw it in the deep-fat fryer.

HOFFMAN: It's rare to get so aggravated by your computer that you fling it into a pot of boiling oil. And it's rarer still to come across an idea that resonates so much with you that you pivot your whole life towards it.

And when something resonates with you this much, you're in a good position to not only be its creator, but it's steward. This is something I discussed with my producers.

HOFFMAN: Well, there's character and there is competencies for being a steward. The character actually doesn't have almost anything to do with a CV; it has to do with more of a mindset and a disposition. For example, say, you own an asset. It's not that, "Oh, I own

the asset. I can do whatever I want," but actually, "I am the custodian of this asset." And a central part of that character, even if you're the entrepreneur and even if you're the person who created it is, I've created something that is beyond me that is an important ongoing and public asset, and how I hand that off and how that plays in the world and how that plays in society is the important thing. And the way that I should be judged and benchmarked, and everything else, is how I play against that.

HOFFMAN: Rana was not only driven to help realize this new idea of emotionally-aware interfaces, she wanted to make sure that the idea was used in the best possible way. And she turned her life upside down to pursue it.

KALIOUBY: I started applying for PhD programs and centered my application around building emotionally intelligent machines. I really didn't know how to go about it, but I wanted to build that, and got accepted into Cambridge University to pursue that idea, and actually left my family. I was a newly wed bride at the time and essentially moved to the UK to start on this journey.

HOFFMAN: This would be a hugely unsettling move to make at the best of times. But this was certainly not the best of times.

KALIOUBY: That was just around September 11th. It had just happened. There was a huge backlash against Muslims. I moved to Cambridge, and I was wearing the hijab, and I recognized that I had to accentuate my expressions. In fact, I remember using my smile as a superpower because it was like my, "Hey guys, I come in peace." And so, I would just smile all the time.

I think that ... I don't know. I guess expressions can bring us together, and empathy is really powerful. I actually think the hijab accentuates and it amplifies these expressions. In the same way that now wearing a facial mask, I mean, it's like really interesting, because I find myself exaggerating my expressions when I'm wearing a mask because I want people to see through my eyes that I'm saying, hello.

HOFFMAN: As well as finding her way around a different culture, Rana had to get herself up to speed on a new area of study.

KALIOUBY: I'm a computer scientist by training, but I had to delve into the science of emotions. Right? I had to really get up to speed on how do humans communicate? And as it turns out, the majority of our communication is nonverbal, split equally between your expressions, your body language, but also your vocal intonation. As you can tell from this Zoom call, I'm a very expressive human being.

HOFFMAN: I can concur – Rana is very expressive – even via Zoom. And these times of pandemic have made us acutely aware of the importance our expressions, intonations, and body language play in communicating.

KALIOUBY: Basically, I locked into or I decided to focus on facial expressions as an expression of social and emotional signals and dove into that. Then I had to figure out, okay, how do you build computers that can quantify these facial expressions? And that became the basis of my doctoral work.

HOFFMAN: That work focused on creating software that could use a camera to track the expressions on a person's face, and then assess them to determine the person's emotions. As humans, we have been wired by years and years of evolution to pick up on the tiniest nuances in each other's facial expressions – the furrow of a brow, the narrowing of the eyes, or the blushing of a cheek – some of which last a fraction of a second. But getting a computer to recognize even the most obvious of expressions was painstakingly difficult.

KALIOUBY: I spent the whole year building this, and it wasn't going anywhere. And then I remember this one time, I trained a head nod detector, I can see you nodding your head. That was my very first algorithm because it's a dynamic, it's a temporal signal, it happens over time. And the very first time my algorithm detected a head nod correctly, it was amazing. Right? It was like a real success.

HOFFMAN: With the nod detector finally cracked, Rana could move on to more complex signals.

KALIOUBY: There's this obsession with what we call the basic emotions: joy, sad, surprise, disgust, fear, and anger, and contempt. Everybody was obsessed with those expressions, and I really wanted to focus on what we call complex emotional states, ones that manifest more in our every day-to-day lives and maybe are not exaggerated as much. They're subtle, they're nuanced. So I was really just intrigued by that space.

HOFFMAN: And this led to an even deeper insight.

KALIOUBY: I also had this aha moment midway through my PhD program where I realized this isn't just about human machine interaction, it's really about human connection. That was a turning point in my research because I started to recognize that the applications of this can really help people. It wasn't just about making our machines smarter, ultimately it was about making people more humane.

HOFFMAN: It was still a super early stage in Rana's research. And this is where scientific discovery and entrepreneurial invention parallel each other: your early idea is not fully formed, but your passion for its potential won't let you rest.

That's why at this early stage, you're probably not worried about how the world may use – or misuse – your idea. You're focused on making that idea into a real thing, rather than stewarding its future applications.

For Rana, that real thing was the first working model of her technology, the distinctly un-scientific sounding but very scientific “Mind Reader.”

KALIOUBY: So mind reading is the scientific word for analyzing and understanding people's facial expressions and then inferring a person's emotional or cognitive state, like whether you are happy or angry or surprised or tired or interested. And so, I built this software that used a webcam, like the big fat blurry webcams from 20 years ago, and it used computer vision and machine learning and mapped these video frames into a probability score of a number of emotional and mental states. That was the very first system that could demonstrate that you can quantify this type of data.

HOFFMAN: Rana was deep into this research when professor Rosalind Picard came to Cambridge to give a talk. Unsurprisingly, Rana was among the researchers who jumped at the chance to meet her.

KALIOUBY: And I was like, oh my God, this is my opportunity to meet with somebody who I thought of as a role model, and I really wanted to meet her in person.

And so, I prepped like crazy for that. The idea was she was going to spend 10 minutes with each of us. We ended up spending almost an hour, and I made sure I had a demo of my work, so it would be live and interactive. And there and then she said, "Why don't you come work with me at MIT?" That was like a dream come true.

HOFFMAN: It's a clear example of how there will be other people just as enthused by your idea as you are; and if you can connect with them, they will be your allies in bringing your vision to the wider world, and ensuring it is used in the ways that align with your values.

Professor Picard invited Rana to join her at the MIT Media Lab. The pair weren't just united by their fascination with the technology. But a fascination with how it could help people.

KALIOUBY: We focused on autism as one kind of extreme case of that. Individuals on the autism spectrum really struggled to read and respond to people's faces and nonverbal cues and it affects, as kids, it affects their ability to make friends. As adults, it affects their ability to get jobs and keep jobs and have relationships.

HOFFMAN: They developed an idea for a piece of hardware that could bring their ideas to bear on the problem.

KALIOUBY: So we proposed to the National Science Foundation this idea of a Google Glass-like looking device. This was way before Google Glass. The idea was to implement a camera that would help the child in real time, get real time feedback on your different social and emotional cues.

So imagine I was wearing these glasses, it would say, "Rana, Reid doesn't look very interested in what you're saying, how about you change up the topic or ask a question?" Right? So it was this real time feedback device. And when we first applied, NSF said, "Amazing idea, impossible to build," and they turned us down.

HOFFMAN: For the pair of academics, this was an unexpected test in entrepreneurship. It's one that most entrepreneurs have to contend with. And like any pair of driven founders-to-be, Rana and Rosalind passed with flying colors.

KALIOUBY: So Ros, of course, being the gritty person she is, she called me and she said, "You know what? They said they liked the idea, but they said it's impossible to build it. So let's build it first and then apply again and get the funding." Which is exactly what we did.

HOFFMAN: Although this funding was essential, it was not the only way that Rana and Rosalind leveraged the unique environment of the Media Lab.

KALIOUBY: We would host this event, it was called Member Week, where we would invite all of the different partners and sponsors of the lab. The Media Lab is interesting and unique in that the majority of the funding comes from industry, not from government. Twice a year we'd have this event. You actually had to show your technology or your prototype working.

All these companies would say, "Oh, we want to use this to detect driver distraction." Or Pepsi wanted to use it to test their latest flavors. Bank of America wanted to test customer experience. I literally kept a log, company name, why were they interested. And when the list got to about 20 of them, I was like, okay, something's wrong here, we're ignoring all of these industry sponsors.

Ros and I went to the Media Lab director at the time, Frank Moss and we said, we need budget for 10 more PhD students. He sat there and said, "This is not a research problem anymore. This is a commercialization opportunity you guys ought to spin out."

HOFFMAN: Those MIT events had not only allowed Rana and Rosalind to quickly build their product. They had also rapidly built anticipation amongst a range of potential clients, eager to use the technology.

KALIOUBY: For me, the tipping point was realizing that something I'm so passionate about, I could bring out to the world at scale, right? Because in academia, you're usually doing this at small scale, and now we could bring that to the whole world globally. That was very exciting to me.

HOFFMAN: Rana and Rosalind had to get right out of their comfort zones – into raising finance.

KALIOUBY: Ros and I had both raised millions and millions of dollars for MIT, right? But we quickly learned that it was so different raising it from the investment community. We did a whole Sand Hill Road show, where I would say 100% of the VCs we met were super intrigued and fascinated by our technology because we would walk in with our demos, of course. But I think we looked so different than what these investors were used to seeing.

We were two women, scientists, I used to wear the hijab at the time, so I was very clearly Muslim, and we were pitching an emotion company. I think we quickly learned that this was not going to be easy, which is fine. I also think we were so naive, which I actually think is a blessing. If you look at our early pitch decks and our roadmap, we literally had, in Q1, we're going to figure out the ad tech market. In Q2, we're going to move on to the ed tech market. In Q3, we're going to do health. It was just so naive.

HOFFMAN: We had the exact same experience at PayPal. We didn't even know what a charge back was, when we're going and doing this. And so, you're like, we don't know but we have an idea that we could do something, and that precise innocence, naivete, which allows you to dream big and go for it. Then of course, which both you and Ros are, is you have to be fast learners.

KALIOUBY: Right. I have a story about that, can I share it?

HOFFMAN: Yeah, please.

PICARD: When we were first raising money for the company, one of the investors we were courting, emailed me, and he literally said, "Send me your BS." Ros and I sat there and we were like, what's a BS? The only BS we know you can't really email, right? We sent it to some of our mentors at MIT and they were like, balance sheet. And I was like, oh, balance sheet. That was the kind of learning curve we were on. Right? It was ...

HOFFMAN: Exactly.

KALIOUBY: ...Pretty steep.

HOFFMAN: With their first round of funding raised, Rana took on the role of CTO at the spun-out Affectiva. One of the first things they did was to further explore the ramifications of their technology.

KALIOUBY: We really see ourselves as the custodians of this new tech space. We created the term emotion AI or artificial emotional intelligence. We seeded the category. We envisioned what this would look like in the future. What are the use cases? How do you build it? And we realized very quickly, that this could unlock all sorts of applications in many industries. And we had to draw a line, right? Draw a line where we felt this application was being used for good or where it was being abused.

HOFFMAN: Before they had even won their first customer, Rana and Rosalind spent a great deal of time thinking about how to be good stewards of their idea. Here's Rosalind Picard again, on why.

PICARD: The CEO is the most powerful person for creating an example of great stewardship. They really need to not just say that the technology is neutral, and we'll let society find good ways to use it, and we'll of course try to use it in good ways, but they really need to step up and be responsible for good use. And that means more than just putting out a technology and an application that's good. It really means watching out for ways people might abuse it, not just ways that compete with your company, but ways that you should just be responsible for if you really care about people.

HOFFMAN: Set your criteria for stewardship early, instill them across your company, and be firm. This will help you down the line when you face difficult decisions about what might be right; and will also send a strong message to your customers and partners.

PICARD: So I think it's very important when you're coming up with your optimization function as a CEO to think about that big picture. It's not an infinite length picture, it's just maybe the years left of your life and what really matters in this world.

HOFFMAN: This is something I believe all companies should do as early as possible when it comes to their culture. And when it comes to setting out the direction of your product – to guide its uses and avoid its misuses – it's doubly important. Rana and her team made the importance of stewardship central to their company culture from day one.

KALIOUBY: We decided on a number of core values that became our North Star. So one is privacy, respecting people's privacy. This data is so personal, sometimes it's as personal as it gets, and we wanted people to feel that they could trust us with this data. To date, we've not done any work without people's explicit opt-in and consent. And so, that also meant that there were some industries we weren't going to apply the technology, like security, surveillance, lie detection.

And then we also wanted to make sure that if you're sharing this data, you're getting some value in return for it. So this power asymmetry, in terms of who gets access to the data and value out of that data, we wanted to rebalance that. So that's always been top of mind for us.

HOFFMAN: And they made sure this was instilled in every new hire – and every new customer.

KALIOUBY: I would say the vast majority of our team is passionate about the good uses of this technology, that's why they're on our team. Do you know what I mean? So self-selection in terms of people who are passionate about doing this right.

HOFFMAN: Note how Rana is explicit in saying that her team is passionate about the GOOD uses of the technology. This sense of "good" is defined by those early guidelines. And it is hardwired into the company culture.

At every stage of scale, and with every element of your business, you need to be intentional about your stewardship. If you're not, it can be all too easy to lose sight of your values as you grow.

[AD BREAK]

HOFFMAN: We're back! Before the break, Rana and her team had set clear ground rules that would help ensure their technology was used in the right way. But at the same time they were a struggling, early-stage startup.

KALIOUBY: It was 2011. We had, at that point in time, raised a few million dollars of seed funding, and we had, I want to say, three to four months of runway. I mean, we were starting to talk about, what if we don't make payroll in the summer? How are we going to manage that?

HOFFMAN: Then they were thrown what might have seemed like a lifeline. But there was a catch.

KALIOUBY: We got this cold call from the venture arm of an intelligence agency and they said, "We've been following the company, we're very interested in this technology." But basically, we would have had to pivot to focusing on surveillance and especially, deception detection.

I mean, it was compelling because it was going to be a lot of money at the time. The number was \$40 million. We were trying to raise less than 10. Right? That was categorically a lot bigger.

But I also remember, kind of playing it out, like visualizing in my mind, what will the world look like if we took that money in? I just felt it was so not in line with our core values. We're the trusted partner for this type of data, will people continue to trust us? Yeah. And so, we turned it away. We turned it down, not knowing if we were able to raise money elsewhere.

HOFFMAN: You'll need to make tough decisions that may mean the end of your company to protect the vision you have for your product.

KALIOUBY: We just put together a website and asked people to watch video ads while turning their webcams on. And thousands of people did it, and the data was fascinating. It was the first time we could crowdsource people's responses to video content without bringing people into a lab and without doing all of that, it was just online. And we quickly

got a call from WPP, which is this big MarTech, AdTech conglomerate. And they said, "We've been following you guys. We want to partner and we want to be investors."

HOFFMAN: By 2015 Affectiva was a huge hit in adland. But Rana realized something.

KALIOUBY: It's very profitable because once we got the system in place, you can crank out these ads, right? There was literally almost no human in the loop. But our mission when we spun out was to humanize technology by bringing emotional intelligence to our devices. I remember waking up and realizing, we're not quite doing that. And I wanted to get back to this world where we are really affecting what a human machine interface looks like.

HOFFMAN: Losing sight of your original goal is something that happens gradually – and is easy to do when you're trying to get through the early stages of scale. It doesn't necessarily mean you've been a bad custodian of your idea, or sold out in some way – but you do need to take your bearings and be unafraid of making course corrections – which is why it's important to have that rock solid custodian culture we spoke about earlier.

KALIOUBY: We were getting a lot of inbound interest from the automotive industries. We had like the Japanese and the European luxury brands emailing us. They were basically asking us to fine tune and optimize our technology for the automotive industry.

We took a step back, evaluated the space. There's a lot of disruption happening with cars and emphasis on AI, on software. And so, we decided to take that on as our next markets. And it's been a number of years now. Again, in cabin sensing and human perception AI for the cars has become a thing. Right? We were at the forefront of that, and we're leading that industry.

HOFFMAN: But right at the outset they set limits to make sure that the tech was used according to their ethics.

KALIOUBY: First of all, we decided very early on that all the processing has to happen on device, so nobody's videos are leaving the car. We're not even recording any video, it's all happening just in time.

HOFFMAN: Their data collection was based on live footage streamed through their AI algorithms. And although this meant they could assure no one's videos were leaked or misused, it threw up some shocking insights.

KALIOUBY: We had this internal debate at the company as we get live footage of people driving their cars, is there even going to be any interesting data, right? Like behaviors. And we were shocked. Obviously, we ended up with a lot of footage of people being tired and falling asleep at the wheel, unfortunately. A lot of texting while driving.

In fact, there was this one woman who had two phones in her hands while she was driving. That was scary to see. I mean, we asked these people to put cameras in their dashboards, right? So they knew they were getting recorded yet we saw teenagers drinking while driving. It was just scary stuff. So we ended up with really interesting data, but it also underscored how important this technology can be to affect road safety.

HOFFMAN: Companies from many industries were eager to get their hands on the Affectiva tech. And most of them weren't as ethically murky as security agencies.

KALIOUBY: I really do see a lot of applications of this technology across industry, but I also recognize it takes a lot of work and a lot of focus to make it successful in one industry. And so, I've got this yin and yang between, "Oh, I want to go explore these different markets, let me do that." And at the same time, I need to focus on our key markets and make sure that these are successful.

HOFFMAN: Overwhelming interest in your product is not the worst problem to have. But it is an extra challenge when you want to see your product out there helping as many people as possible, but you also want to make sure it's being used in the right way.

So while Affectiva has had to rein in the open platform for now, they are still extremely interested in collaborating widely. This is because being the sole custodian of an idea is arduous. Far better is to make sure EVERYONE is invested in looking after the community resource. You can scale your custodial efforts by leading the way in thinking about the future ramifications of your idea.

KALIOUBY: So we're part of the partnership on AI Consortium, which is this consortium of tech companies and startups, but also Amnesty International and ACLU. We just wrapped up a project, very focused on emotion AI, where we outlined all of the possible use cases.

HOFFMAN: Affectiva also set up a think tank called "Emotion AI."

KALIOUBY: We wanted to create an ecosystem of like-minded people who are interested in the technology, but also wanted to see it being applied right. We signed on a number of advisors. Some of them are AI thought leaders and innovators. Some are business professionals and practitioners. Some are academics and ethicists. We have this think tank, we meet once a year, but I'm also able to tap into them individually. We bring together, mishmash of people from very diverse backgrounds and the ideas to advance the state of the field in a very thoughtful way. I mean, we even invite our competitors to attend.

HOFFMAN: All these initiatives are important because any kind of guidelines you set for the use of your product will only survive if they are part of an ongoing conversation with your users, your industry, and society. And you should also keep having that conversation with yourself.

HOFFMAN: Obviously, you say, look, these are the things that can make society better, but you could say some deception detection is good. You guys are super smart. What's your thinking about what these lines look like within the application of the technology?

KALIOUBY: Especially in the last few years with public safety becoming top of mind, we've had internal debates where we asked ourselves the question, should we revisit our decision? Should we reconsider doing business in surveillance if we're able to detect suspicious behavior? Which, we could.

And we still landed on no as the answer, because I think the state of the technology, it's not there in terms of robustness and accuracy. And also, I worry about bias against particular populations of people, because if you're not very careful with the data distribution for your training set and your validation set, you could very quickly end up with these biased algorithms that you're now deploying at scale.

So I still think the time is not right to do this. But I do appreciate that there is a counter opinion that basically says, well, you ought to really partner with the government to bring this technology to our communities. I'm not there yet. I'm not.

HOFFMAN: And do you think it's a technology or a data problem?

KALIOUBY: I think data more than the technology, but I also think there's something around policy, right? What are the policies around deploying this, so that there's transparency, that the average consumer really understands when they're being tracked or not? Who has access to that data? How is it being used? What other systems is it being tied to? And all of that is currently opaque. And I think we have an opportunity to bring consumers into the conversation with a lot more openness.

There's an argument to be made, I guess, why would I spend my cycles as a CEO doing this versus taking a few extra sales calls? But I just believe in this broader definition of a stakeholder, and our community matters. And I want us to do this right.

HOFFMAN: The really great entrepreneurs aren't just product obsessed; they're impact obsessed. They're the ones who aren't just concerned about creating jobs or providing a service that people love. No, the truly great entrepreneurs are the ones who constantly ask, "Am I making a net contribution to society – not just right now, but for future generations?" The scale of your impact is not just the number of people you touch or the depth of the engagement for those people, but the impact over time: over years, over decades, and perhaps even centuries.

I'm Reid Hoffman. Thank you for listening.