

2022 Spence Award Mini Episode: Human to Nonhuman Interactions with Kai Chi (Sam) Yam

April 14, 2022

The winners of the [2022 APS Janet Taylor Spence Award for Transformative Early Career Contributions](#) represent some of the brightest and most innovative young psychological scientists in the world. In a series of mini-episodes, [Under the Cortex](#) talks with each winner about their research and goals.

Today, Kai Chi (Sam) Yam (National University of Singapore) tells us about his research on human-nonhuman communication.

Learn more about our sponsor by visiting <https://macmillanlearning.com/psychsessions>.

Transcript:

Charles Blue [\(00:12\)](#)

This is Charles Blue with the Association for Psychological Science. And over the past few weeks, I've had the pleasure of speaking to the 2022 winners of the Janet Taylor Spence Award for Transformative Early Career Contributions. Now, the people I've spoken to have been doing some fascinating research, expanding our boundaries, and diving down new areas in the field of psychological science. Today, I'm speaking with Sam Yam with the National University of Singapore, and his research is going a little bit more into our understanding of how humans and nonhumans, particularly electronic devices communicate. Thanks for joining me on Under the Cortex.

Sam Yam [\(00:55\)](#)

Thank you for having me.

Charles Blue [\(00:57\)](#)

Before we get too in-depth, can you just start by telling us a little bit about your current field of research? What are the most interesting things you're looking at? What really excites you about your work?

Sam Yam [\(01:08\)](#)

Of course, unlike most psychologists, I have deliberately taken a very experimental approach to new research ideas and topics. So, for example, I'm leading a team of colleagues on a study on animals in the workplace and its impact on employees. There's an increasing trend in allowing employees to bring in animals and their pets to work. For example, Google jokingly said that their employees should not bring cats to the campus because they have too many dogs on their campuses. In this research, we find that animals can have surprisingly positive effect in influencing our emotions and behaviors towards our colleagues, specifically in processing and threatened sense of compassion and prosocial behaviors

toward our human colleagues. As a different example, I'm currently on Sabbatical in Kyoto, Japan, to study new robotic applications in very unique context. Most recently, I partnered with two temples in Kyoto in which they should deploy robotic priests and monks to attract visitors. It's very interesting because we all thought that robots will first take over manual labor and tasks that can be easily automated. But in reality, robotic applications normalization suggest that robots can actually take over jobs that are previously thought to be unique to humans to begin with.

Charles Blue [\(02:17\)](#)

So there seems to be quite a lot of overlap between human-to-human interaction and human to nonhuman. How innovative is that? That's not something that I hear a lot about.

Sam Yam [\(02:29\)](#)

That's absolutely correct. Psychological research, I would say, in the past century, since the dawn of psychology research has focused on how humans interact with humans. More recently, there's a new field research called mind perception, in which I'm part of that very proudly. So we look at how humans interact with other living entities such as animals, as well as nonliving entities such as robots, technology, and algorithms. It's also very timely, as we know that in 2022 we have more robots than ever produce. So it's really timely for psychological researcher to look at how we interact with other nonhuman entities in this era.

Charles Blue [\(03:05\)](#)

That's really curious. Would that include things like a digital assistant like Siri or your Alexa or any other smart speaker in the house? Have you looked into how that might apply in this circumstance?

Sam Yam [\(03:18\)](#)

Not in my research, but I've known colleagues who have looked into those systems in their research. In my research, I kind of focused on embodied robots. Essentially, the robots that we see in movies and films. So, for example, in my research in the Japanese firms, we look at the hotel in which they should deploy actual robot assistance to help you check-in and move your luggage and so on and so forth.

Charles Blue [\(03:40\)](#)

So what inroads have you made in these areas? Essentially, what do we know now that we didn't know a few years ago?

Sam Yam [\(03:47\)](#)

I think what's interesting in my work is that I'm not trying to contribute to any existing areas of research, right? I'm opening up new research areas. So the work with animals, the work with robots, for instance, these are areas that we actually have no research on for the past ten years or so. This is very new stuff. So I see my goal and mission as a psychological scientist to actually open up these new avenues for research for future generation, to tackle them in the next few years.

Charles Blue ([04:13](#))

Well, then let's look a few years down the road. What are the main challenges in your field? Do you have any major roadblocks or hurdles that would stand in the way of making additional advances?

Sam Yam ([04:26](#))

I think the biggest challenge that we see in my field is that a lot of psychologists and other researchers have a difficult time to gain access to real companies, real firms in the field to look at this phenomenon. So, for example, a lot of my colleagues are doing scenario-based study to look at this phenomenon of how people interact with robotics, agents and other technologies. That's a good first step. But I believe that in the near future we should actually go in the field to look at how consumers, for example, introduce agents in real-time. And part of this reason is that there are fewer firms now that have actually used this technology. But hopefully in the near future, there will be more firms that use this as a psychologist scientist will take a serious effort to reach out to these firms and to conduct this research in the field.

Charles Blue ([05:12](#))

Okay, I have one final question. It's more of a personal interest of mine. What can be done to better bridge gaps between human and nonhuman entities? Particularly, I realize we're going to be interacting more and more closely with digital technologies and robots. What are the ways that we can help make that seem more natural?

Sam Yam ([05:36](#))

I think one interesting insight generated by my research and other research by other colleagues is that, surprisingly, the general public seems to have absolutely no problems adopting technologies and using robots in domains in which that's kind of immoral there's no moral relevance. So, for example, if you're asked to adopt an algorithm to help you set your portfolio in the stock market, most people are okay with that. What's interesting, however, is that in moral domains, ethical domains like medicine, for example, that's really hard for people to accept. And some of my work suggests that we'll try different interventions to ensure that people actually don't become aversive towards robots in those domains. And so far, those interventions have failed miserably. So I just tell you, one finding which is quite interesting and impressive for me is that in the US, for example, there's empirical research suggesting that there's racial inequality in the medical system, that Black patients, for example, receive less quality care and as well as dying at a higher rate than white patients for the same disease. Now in the study, we find that algorithms can actually help reduce that racial biases among doctors and patients.

Sam Yam ([06:45](#))

But, even when we tell Black patients if they want to be seen by an impartial algorithm, they still don't want to do that because they still feel very aversive to what the robots making decisions for them, medically speaking. So I see that psychologists in the future, one major goal of us is to ensure that the public would be more accepting of robots and robotic technologies in ways that would have to benefit their lives and quality of life.

Charles Blue ([07:09](#))

Fascinating. Well, I will be discussing this with my Alexa device tonight to get a little more insights, but I would like to thank you. I've been speaking with Sam Yam and he is one of the recipients of the APS 2022 Spence Award. Thank you for joining me.

Sam Yam ([07:24](#))

Thank you, Charles.

Feedback on this article? Email apsobserver@psychologicalscience.org or comment below.