



INSIDE THE GALLERY PODCAST – SERIES 4 EPISODE 10 (Late October 2022)

SHerobots

LIAN LOKE

DEBORAH TURNBULL TILLMAN

Curators

Tim Stackpool:

SHE Robots: Tool, Toy, Companion can be seen until the 10th of December, and it features the work of 21 participants and their collaborators presenting experimentations with new robotic forms and applications, questioning the nature and processes of contemporary robotics from a distinctly female perspective. It's put together by three curators, one of which Dagmar Reinhardt, who is an architect researcher, and associate professor at the School of Architecture, Design and Planning at the University of Sydney. She can't join us, but here today is Lian Loke, Associate Professor in the School of Architecture, Design and Planning at the University of Sydney. Her research explores how to design embodied and movement based interactions and experiences with emerging technologies that support human agency, creative expression, skill, and vitality. And she joins us here on the podcast as well as Deborah Turnbull Tillman. She's a lecturer in media, arts and curatorial, and currently also leads the research stream for culture and technology across the Creative Robotics Lab and the National Facility for Human Robot Interaction Research. Welcome to your both.

Deborah Turnbull Tillman:

Hello.

Lian Loke:

Lovely to join you, Tim.

Tim Stackpool:

Lian, let me start with you. I'm kind of finding it difficult to describe what this exhibition really is, but before we get to that, let's go back to how it all came about.

Lian Loke:

I think the idea for the exhibition probably came about only a couple of years ago. It did emerge out of work that I've been doing with my long term collaborator, Dagmar Reinhardt, who's also one of the curators in the show, and she has been working in robots in architecture for at least the past decade. And she did host a big conference, an international conference in Sydney in 2012, Robots and Architecture, that did bring a lot of international researchers to Sydney and she published a book out of it. So she's been looking at that area of robotic fabrication, tools for architects and designers to use. I'm an interaction designer, an artist and a performer, and Dagmar is an architect and designer, and we both do research in creative practice so in bringing together our different fields and interests we're now working very strongly in the area of collaborative robotics.

Lian Loke:

So looking at what happens when robots become in very close contact and proximity to humans, and we're bringing a variety of methodologies and thinking to that. So it's also very practical ways of thinking about tools and what you can do with them in your context, but also looking at more artistic approaches where we might look at how you, like, for example, one of our works, which is a lipstick drawing robot, how you can actually sort of unpack that action of a very feminine ritual of putting on lipstick that's almost universal and what do you do when you put a robot into that particular repertoire.

Tim Stackpool:

There are three curators across this and you seem to have broken up or demarcated your exhibition, I guess, in three different areas. So design architect, as you just mentioned, an artist performer and a media curator. Has it been a challenge working together, collaborating in that fashion?

Deborah Turnbull Tillman:

I think that in this way it hasn't been difficult. So I've worked with Lian and Dagmar for probably the last 15 years. I've known Lian since she was doing her PhD. We've never had trouble working together. It's always been collaborative. It's always been kind of this riffing off of each other for ideas and with the different specialisms that we all embody and all kind of radiate to the community and draw back to us and to our research centres, it's really easy to pull together quite a disparate group of practitioners and a multidisciplinary exhibition. And I don't think anybody that we asked said no. Everybody that we asked said yes. So I think that's kind of a testament to the way that we work together. And when they asked me to work with them, I just said yes right away.

Tim Stackpool:

There's so many different facets to the exhibition. I mean was it, did you start off with hundreds of concepts and then have to whittle them down? How did you work that out between yourselves?

Deborah Turnbull Tillman:

I was invited kind of in a more production and gallery liaison role because that's kind of what I did before. I was a curator at the Powerhouse Museum and an independent curator for about 10 years with researchers in these disciplines. And Lian and Dagmar, I think kind of conceived it together out of the work they had been doing together, like the artworks that they had been doing together. And then they came to me and said, "What if we had a show that embodied the way that we're making artworks together and other people that are working in the same way and what if it was all women?"

Deborah Turnbull Tillman:

And I have to say that got my attention as well because for a very long time it's really been important to me to work with women and to platform women, especially in these quite traditionally male roles like male materials of coding, interaction design, the materials of robotics. So the hardware and the software has typically been a male domain. And for Lian and Dagmar are two quite strong forces in our community, our research community, to then come to me and say, "Do you think we could bring enough people together for an exhibition?" I just went, yes. And in fact, one of the younger women in the show said to me, with you, Lian and Dagmar curating there's no way I would say no.

Tim Stackpool:

So Lian, I mean basically then we move further up the tree to you, going back in time, you get together with Dagmar and think about this, you have to reach out to somebody like Deb. How do you make that kind of decision as to who to choose from out of your pool of experts and academics to decide who you're going to liaise with?

Lian Loke:

Okay, that's an interesting question, Tim. I think there's two aspects to it, of course there's actually working with Deb and Dagmar, and I think as Deb's already alluded to, we've had a really creative and productive relationship over the last decade working on various kinds of shows and exhibitions that have often actually come out of student teaching at a studio practice. I've done things with Deb before

and other exhibitions that I think especially in our school of architecture design and planning, we have the Tin Sheds Gallery. It's a really great platform for transitioning either practice or student work into an exhibition setting. And that's really exciting.

Lian Loke:

I think about a lot of, often it can be work that might be considered technical or that you then sort of re-present it in a gallery setting and offer the audience new ways of engaging with that work. The Tin Shed's Gallery has recently relaunched and has an open call for programs. And so they do offer a lot of resources in terms of helping us produce the show and we're hoping this will be the first, this is the first iteration of SHErobots, and we're already thinking much bigger than just this show in Sydney, which of course is really an experimental form of how we can bring together this incredible network of women from around the world. Part of what we're doing is the network of women is as important as the works themselves.

Deborah Turnbull Tillman:

Yeah.

Lian Loke:

I think in that too, you could say that's a more feminist approach in terms of approaching this exhibition and networks that we are trying not to be competitive. We're trying to create opportunities for younger women, opening up, I think career opportunities for girls in high schools who might not have thought about robotics in this particular way. And so we're trying to, I guess to spell the sort of myth of what robots are that we see in popular culture that tend to be, you've got the movies and all those kinds of humanoid robots, but then you've got a lot of the past probably 50 years of research have been in laboratories. It's really hard engineering work and all that kind of stuff. So we're looking now at this moment in time when I think in the next decade there will be robots, we'll be living with robots. And so that's the big question we're also asking, what's that going to look like and how can women bring a very sort valuable perspective to that.

Tim Stackpool:

So Deb, are we looking at an exhibition of art here or is it a display of technology? Where does this sit this show?

Deborah Turnbull Tillman:

Well, I'd say it sets kind of in with three disciplines as a guide, but the actual conversation across the space and across the disciplines is that there really is no one way to display this. We have to display it in a multiple approach way. We have to show it in its different key forms. So we thought about actually our disciplines and we thought what are we good at? Dagmar obviously is going to do tool and industry. Lian's obviously going to do the creative performative works that her own practice embodies, and then I'm probably going to look at my relationships with artists and see who I can bring to the table in terms of translating that companion or that relational aspect that the audience might have when they encounter the works. So you have to keep in mind, Tim, when you go in, you're not going to find a robot building a car, for example.

Deborah Turnbull Tillman:

You're not going to see a robot lifting a human in and out of bed or changing their drip in a hospital bed. You're going to walk in and you're going to see different building materials arranged in certain ways. You're going to see films that are speaking to each other over thematic relationships. You're going to see questions around domestic care and should robots be looking after babies. And then you're going to see a seminal work by Mari Velonaki where she uses iconography like wheelchairs. They're not wheelchairs, but they look like wheelchairs and they perform a kind of romantic dance with each other and write poetry to each other. So two people at a time go in there and they move around with the robots and the robots learn how they move around and start to engage with the audience members. So when you go in, it's going to look like probably a lot of different things.

Deborah Turnbull Tillman:

It'll look like films, it'll look like building materials, it'll look like wheelchairs, it'll look like Sisyphus Sweeping is another work of Lian and Dagmar's where they have a robotic arm doing this gentle sweeping motions or doing constantly all the time. So it pulls on an ancient Greek myth, but it's in a contemporary context of what will robots be doing when they are living with us in our homes. So it will kind of look like a lot of different things, but we hope that what the audience might take away is engagement with a range of robotics practice, creative, social and industrial.

Tim Stackpool:

Deb's just given us quite a shopping list of perhaps what we could expect to see, particularly from her side of the curatorial aspect of the exhibition. But Lian, what are you bringing to the show? What have you created for the audience to enjoy?

Lian Loke:

I think one of the unique things about this exhibition too is that it goes beyond the works in the exhibition and we have this concept of the Living Laboratory and that is something we've been carefully curating or sort working to thread it throughout. So we do have a couple of the Kuka industrial robots that we have in our DMaF (Design Modelling & Fabrication) laboratory at the school, and we've been able to move those up into the gallery. And so they will be performing certain kinds of movements and actions in there that we hope will intrigue the audience and they'll get to actually see industrial robotic arm up close, which usually you don't, they usually in factories or they're cordoned off behind safety fences and things like that. So that's quite exciting to have those actual robots in there. But then one of the things I really love is the idea of performance.

Lian Loke:

So doing performance by robots and by humans and so the work of Petra Gemeinboeck, Rob Saunders and Rochelle Haley is a wonderful piece that we're having at the closing. It's on the 9th of December where they'll be two dancers and their cube robot. We'll be doing a performance work with Rochelle, also doing some gestural drawings. So you'll see a very different kind of robot. It's a cube. We don't normally think of robots as cubes, but they're really interested in exploring, I guess the shape, the form, the morphology of robots and how you get these unique languages that emerge out of humans and robots interacting.

Tim Stackpool:

21 participants in this exhibition. However, not all the works that you want to include actually can be here in person, if I can put it that way. Is there a significant online component to this exhibition as well?

Lian Loke:

Tim, yes, that was one of the challenges we had actually with the show. There was all this amazing work from around the world, but most of it we couldn't actually get here because it was either a robot, like a large robot that would cost thousands of dollars to transport or large works and structures. So some of the show does have quite a few videos of process works, so we can actually see how these women are working with robots, how they're creating them and creating different kinds of materials and things. But we do have a really active online program. So there are a number of panel talks that are both going to be in the gallery and also bringing in some of those women around the world to talk on panels.

Lian Loke:

And then there's a couple of workshops as well that are both in the gallery and remote, so you can actually learn. We're inviting practitioners, students, other researchers to come in if they want to join these workshops where they can actually learn about new robotic techniques. It might be about doing cloud controlled, remote controlled robotic fabrication, or it might be about using an interesting interface to be more creative in terms of how you design structures. And so people actually get to learn those tools which are not really available at the moment and really sort put them on the cutting edge of also their professional practice.

Tim Stackpool:

But do you have a particular focus in order to ensure that what you're presenting is that balance between art and technology?

Deborah Turnbull Tillman:

Yeah, I think so. I think because all of us are involved with the arts and in creative practice as part of our disciplines, one of the talks that go with the companion theme is about gender, sexuality and ethics of robotics. So that's like what do the robots look like? What rights are they due depending on the way that they look? Are they in their infancy or are they quite an established type of robot? So all of those kind of topics will be discussed in some of the public programs. So for example, on the 17th of November, we've got a talk on gender sexuality and ethics, which features a panel of artists, three of whom are in person, and one of whom is Elena Knox coming in from Japan via live feed.

Tim Stackpool:

I want to come back to the concept of art and how this is an art form. Look, we do have, and we featured extensively in the podcast series, works at the Powerhouse Museum because it is a museum of applied arts and sciences. Is this an applied arts and science or it more than that? Is the art form in the design rather than the product?

Deborah Turnbull Tillman:

Well, I'll tell you a story. I used to be the design and technology curator for the Powerhouse, and I had to look after things like good design, design tech, which was the HSC exhibition and then I did kind of all of the short term exhibitions that would come through an ISEA, which is an international symposium of electronic arts where we took over four levels of the museum with interactive art. And normally the museum can't keep up with an emerging technology like that, but my relationship with the Powerhouse started in an experimental way with a small theatre at called Beta Space. And we looked at that exact question. We looked at where does the art start and the technology start and how do they work

together and what is actually the effect on the audience? Who is the third material in that kind of trifecta? So you've got the design, you've got the technology, but you've also got the intent of the artist.

Deborah Turnbull Tillman:

So what is the creative person involved in their relationship intent? Do they intend for it to be like a creative output? Are they building a robot to build a car? So there's always been this crossover, even though the Powerhouse Museum is science design technology, they articulate or they recognize that a huge part of this is creativity and how do we capture with an experiment creativity in a way that's really interesting, intriguing, and different to the audience? And I think that's the beautiful thing about the Powerhouse is they really understand those delineations and how they work really well together.

Deborah Turnbull Tillman:

And they invite research groups in, they invite people in to explore that. They don't say, "Hey, we know how to do it best." They say, "Who knows how to do it best?" and they bring them onto the floor. So I think they do it well. I think the Powerhouse does it well, and I think it's not any one thing. So that's the point of the multidisciplinary is it's many things. What we're doing at Tin Sheds is exploring the creativity aspect, platforming it as creative experimental practice. This is emerging. So what Lian was saying before about it being a great space for students to cross over from learning into applied practice is that emerging practice, this is where you can experiment, it's safe to experiment, it's encouraged.

Tim Stackpool:

With your focus, Lian on arts and creativity, was there any point in you putting this show together where you said, this is too technological, there isn't enough artistic merit in this. Were you torn at all internally in that respect?

Lian Loke:

I think all of the works in the show, we can interpret them in different ways. And I personally have a very fluid relationship to art and design. I sometimes call myself an artist, I sometimes call myself a designer. I also have a very technical background. So for me, I don't actually like those strict categories. And I think you can always find art or find design in any of the works actually. There's always an aspect of that. So whether you are designing a piece of software to make a robot do something particular or the robot itself is then creating something beautiful, some beautiful structure with a biomaterial, there's an aesthetic also in the output, the result.

Lian Loke:

But we're also looking, I guess at robot movement as well. So is there something in the expressive motion of the robot, the way it communicates, the way it makes you feel, like that aspect is also kind of kinesthetic relationality is very interesting in a lot of the works as well. So in terms of those, I guess those categories of tool toying companion, they're quite slippery and we have grouped works in them in the catalogue, but really as a point of departure. So it might be you might traditionally think of this as a tool, but actually there's all these other ways of thinking about it and if you start to look at it as a toy, where does it take you?

Deborah Turnbull Tillman:

Or a companion, where does it take you? I think the really interesting thing that what Lian's talking about is that we are really trying to de-silo definitions of what robotics is. So is it male led? No, not

always. Here's all the women that are doing similar things or expanding the understanding of what robotics has been until now. And they're doing it in the same way, they're in the research labs or they're working with industry or they're making artworks, but they're not generally platformed at the front of those industries. So that's what we really wanted to do. I think when we came together, we really saw the importance of bringing women to the forefront in a creative and expressive way.

Deborah Turnbull Tillman:

And I think even if you look in the industrial category, in Dagmar's category, it's incredibly creative, what she's getting the robots to do. These are really strong robot arms that can lift cars and things. Like they're so strong and typically considered quite dangerous. They need to have a technician with them at all times. Dagmar's programmed them to do these really beautiful things, like beautiful sweeping or the twirling of a honey spoon or something that you wouldn't even think of. And she slowed it down and made it gentle and choreographed it in a way that you understand the machine in such a completely different way. And Lian, I wonder if you could talk to the Galath3a Girls Idle Hands because that's another project that I'm really excited about.

Lian Loke:

Yeah, the work Deb's alluding to here is by this fantastic duo, Gili Ron and Irina Bogdan from Europe and they go under the name of Galath3a and we invited them, they have a film in the show, but we also invited them to respond in a sort of cross-contamination of this work called Sisyphus Sweeping where the robots sweeping in an endless loop. And they had this really beautiful idea of looking at the secret life of robots. What do robots do when humans are not around? If you did have these industrial robots in the show, when the humans disappear from the gallery, what do they get up to? Are they or are they striking? Is there a sense of robot rights? Are they just slaves to humans or do they have their own agencies? So we're really interested that will be developed during the show. We haven't seen what their response yet, but it's a really exciting form of intervention in the Living Lab category.

Tim Stackpool:

Interesting how you talk about robot rights because looking through the catalogue and reading some of the essays that have been presented in the catalogue, there seems to be a certain level of sentimentality towards the robots, like a sense of protection. Do you get that feeling as well?

Lian Loke:

I think there are some of the works, especially from some of the artists that have a feminist, very strong feminist approach they're bringing where they are really looking at, well there's that, the Pygmalion myth of man creating woman or creating a gynoid or female robot that maybe a man would like. I think there's a few of the artists that are really contesting that and a lot of those assumptions that get built into robots, and particularly female gynoid robots. And then Elena Knox, who's a Australian artist now working in Japan, she's been doing incredible work, are looking at these gynoids that are usually taking on female service roles or servicing in the hospitality industry, or they might be sex workers. So she's doing this incredible work where she's really critiquing that and looking at the rights of gynoid robots usually through film work. So she creates, she actually employs, I won't say employs, she uses...

Deborah Turnbull Tillman:

That's a funny one.



Lian Loke:

The actors are gynoids.

Deborah Turnbull Tillman:

Yeah. Yeah.

Lian Loke:

I don't know whether she pays those gynoid actors, but they are actually-

Deborah Turnbull Tillman:

Extra oil that day.

Lian Loke:

Yeah. So there's a fantastic film called Pathetic Fallacy in the show that is an elderly human woman and a gynoid having a conversation together and the older woman is brushing the younger woman's hair. So you can't tell when you're first looking at the film that it's actually a robot. And that's part of her critique as well. And what is the way that gynoid robot carries herself? Is she demure? Is she at the service of humans or men in particular? What's governing the way she conducts herself and the sort of virtues that the robot has are of interest?

Deborah Turnbull Tillman:

I think for me, I do feel an empathy or a closeness with a lot of the works because many of them were developed in the Creative Robotics Lab. So the Fish-Bird of Mari Velonaki is a seminal work for her, was created at Australian Centre for Field Robotics at the University of Sydney. So in a way it's coming home after 20 years, it's coming back to where it was created, but it was developed all over the world in different iterative exhibitions and has done a lot of development at the Creative Robotics Lab. Petra Gemeinboeck's work, which is the moving with non-humans now was originally Machine Movement Lab also developed at the Creative Robotics Lab and Elena Knox's work, Pathetic Fallacy was also created at the Creative Robotics Lab.

Deborah Turnbull Tillman:

So I have seen these works grow over the past decade and I do feel really close to them, to the elements, to the people who made them, the women who made them, to the output, to what they've become. So there is a lot of care in putting them forward, in putting them forward for the world to then consume and kind of feedback on what they think. I think that there is a risk and there is a vulnerability about putting these things out there that aren't fully formed yet. And I think that that's probably the risk and the inherent thrill of it.

Tim Stackpool:

Well, it sounds like a terrific exhibition and I certainly recommend anyone to come along and take a look at it whether you have an interest in art or technology or a mixture of both and I really thank you both for your time on the podcast today.

Deborah Turnbull Tillman:

Thank you, Tim.

Lian Loke:

It's a pleasure, Tim.

Deborah Turnbull Tillman:

It was fun.

Lian Loke:

See you at the show.