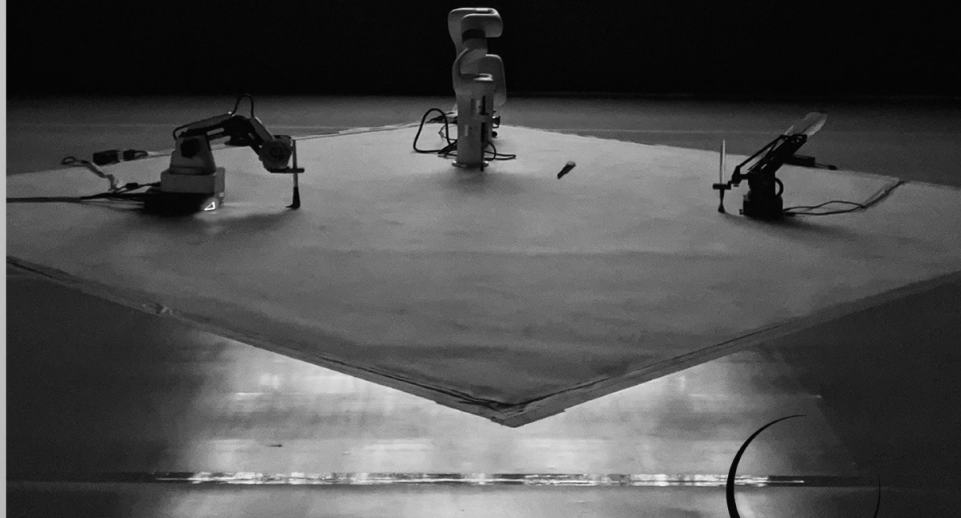
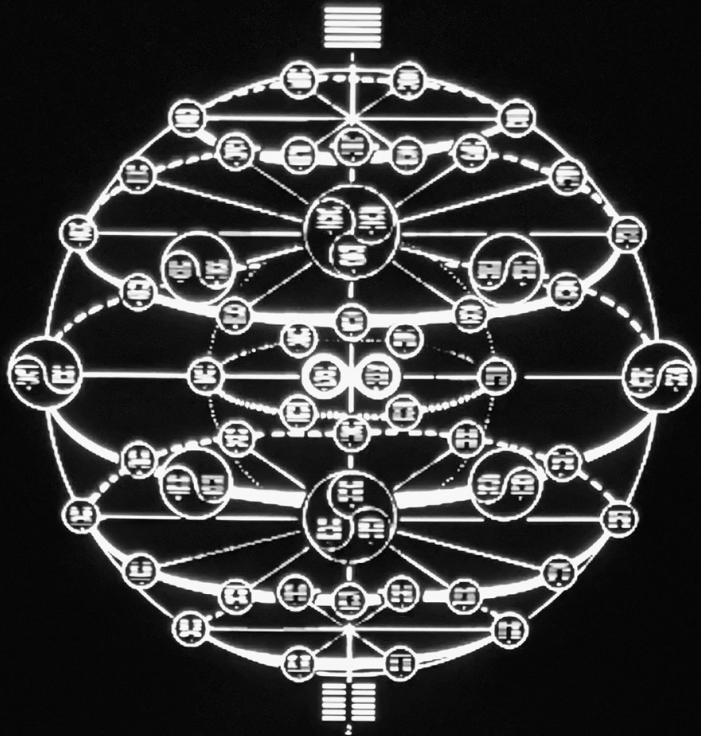


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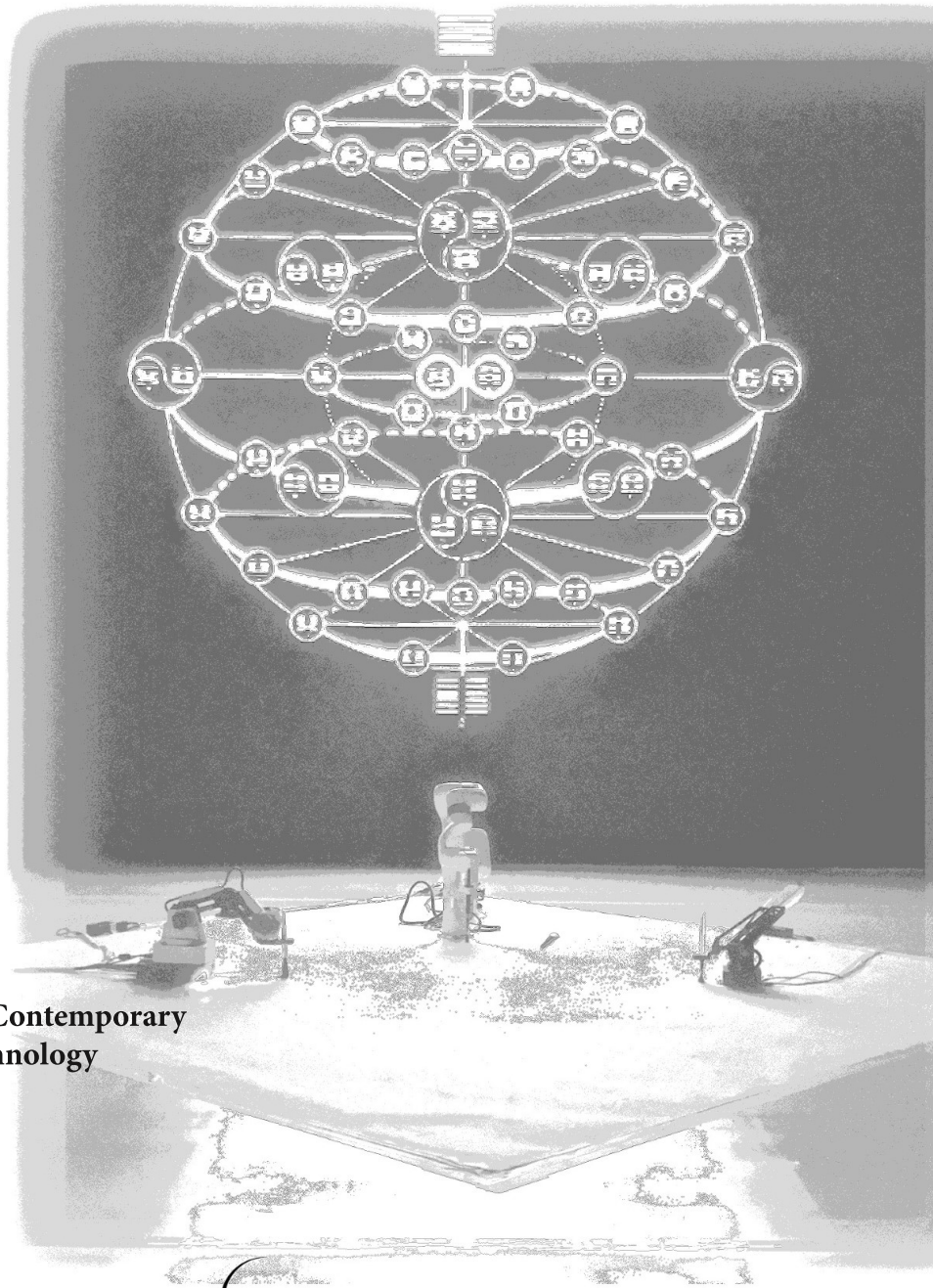
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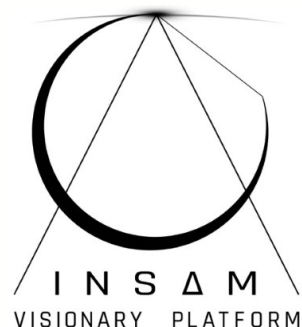


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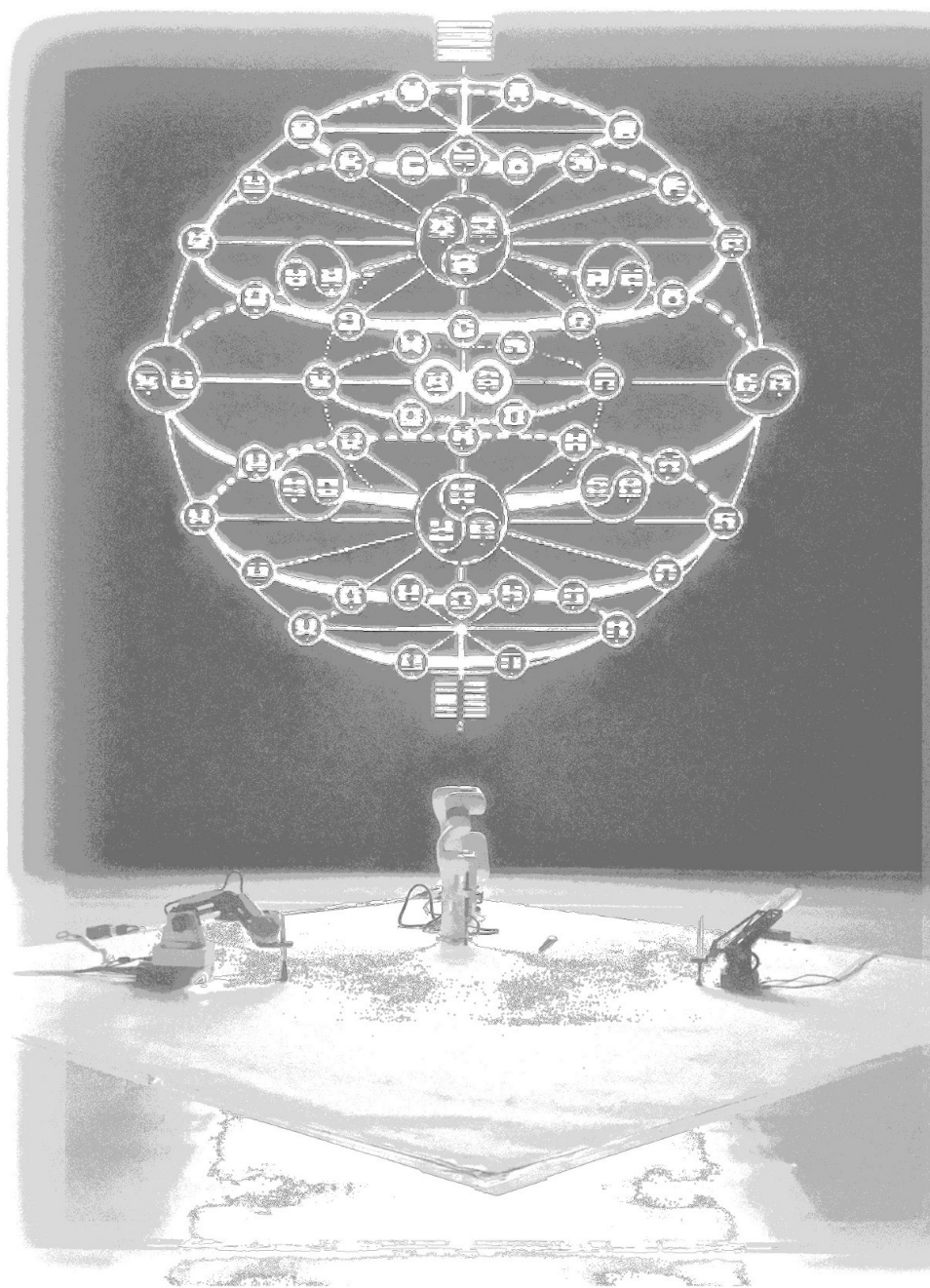
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(INTER)VIEWS



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Belgrade, Serbia

COLLABORATION, AT ITS HEART, ISN'T ABOUT CONTROL: Interview with Sougwen Chung¹

As highlighted in her biography,² Sougwen Chung is an internationally renowned multi-disciplinary artist, who uses hand-drawn and technologically-reproduced marks to address the closeness between person-to-person and person-to-machine communication. She is a former researcher at MIT Media Lab and current Artist in Residence at Bell Labs and New Museum of Contemporary Art in New York, working in the fields of installation, sculpture, still image, drawing, and performance.

Chung received Japan Media Art's Excellence Award in 2016 for her project *Drawing Operations*. She has been awarded Artist in Residence positions at Google, Eyebeam, Japan Media Arts, and Pier 9 Autodesk. In 2014, she was selected as one of the Top 20 New Visual Artists by Print Magazine. Her multidisciplinary work has been exhibited internationally, including the Museum of Contemporary Art in Geneva, The New Museum of Contemporary Art in New York, the NTT Intercommunication Center (ICC) in Tokyo, and The Drawing Center in New York. Her work has been featured in *The New Yorker*, the BBC, *The New York Times*, *Fast Company*, *Wired*, *Endgadget* and *USA Today*.

In this interview, the artist speaks about the poetics of her collaboration with robotic systems, as well as the development of D.O.U.G. and her latest projects.

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¹ This interview was done within the Institute of Musicology, Serbian Academy of Sciences and Arts, the scientific research organization funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

² Chung's biography is available at: sougwen.com.



Sougwen Chung, Photo by Michael George

Doing this work has taught me a few things. It's taught me how embracing imperfection can actually teach us something about ourselves. It's taught me that exploring art can actually help shape the technology that shapes us. And it's taught me that combining AI and robotics with traditional forms of creativity -- visual arts in my case -- can help us think a little bit more deeply about what is human and what is the machine. And it's led me to the realization that collaboration is the key to creating the space for both as we move forward.

Sougwen Chung, TED, 2019.

I've highlighted this quote of yours from your recent talk at TED. It seemed like an excellent introductory snippet to our conversation about your art, which inspired the main theme of this issue. The relation between humans and technology is something that is continuously challenged and explored in your work. Would you introduce us to the main ideas and inspirations that lead you throughout your career?

First off, I'd like to say that it's an honour to have had the work inspire the main theme of the issue. As we are continuing to contain the COVID-19 pandemic on a global scale through social distancing, initiatives that connect practitioners across sectors are needed now more than ever. I'm excited to explore, be inspired by, and discover the work of like-minds through this issue.

The main ideas and inspirations for my practice to-date began as a response to a provocation. It was a provocation I stumbled upon by following a story about a prodigious Wei-Chi player losing a series of games to an AI system in 2016. Instead of despairing, he experienced a changed awareness about the beauty of his craft. I was incensed by the idea, the provocation of uncovering the potential beauty of a non-human creative gesture.³ It excited me as an artist, technologist and researcher all-at-once.

Over the years, this interdisciplinary pursuit has brought me to places, ideas, and communities I couldn't have imagined. It's driven a critical practice that reveals the malleability of what we consider human and machine.

We tend to define humans and machines as distinct from each other. Through the work, I've found that definitions of separation, of either-or, are outmoded. To move forward, I develop forms of collaboration that explore processes of becoming-with.⁴

Your project Drawing Operations started in 2015 as an "ongoing collaboration between an artist and a robotic arm." D.O.U.G., the robot you've designed and built, is your collaborator. Can you explain how the process of development of D.O.U.G. and the various stages of the project unfolded?

In 2015, I was interested in creating a robotic unit programmed to draw with me. That could not only evolve alongside my own development as an artist and programmer, but alongside developments within emerging technological fields.

It's taken the form of 4 different generations of robots, spanning multiple

3 Metz, Cade. "The Sadness and Beauty of Watching Google's AI Play Go." *Wired*, Conde Nast, 3 June 2017, www.wired.com/2016/03/sadness-beauty-watching-googles-ai-play-go/.

4 Haraway, Donna Jeanne. *Staying with the Trouble: Making Kin in the Chthulucene*. Duke University Press, 2016.

technologies, design processes and interaction models. Our research topics cover mimicry and spontaneity, memory and data bias, swarm intelligence and surveillance, biometrics and interplanetary feedback, and so on.

Generation 1 explores mimicry and was my first foray into designing custom systems for a robotic unit. It started out as a computer vision system that tracked the color of my pen and then relayed the lines on to the other side of the page. It was rudimentary, like drawing with crayons.

Generation 2 explores memory. I designed a robot that was trained on two decades of my artwork to see what patterns would emerge. I was curious about what it would be like to relay a drawing model from a recurrent neural network with a personal and bespoke data set into a robotic unit that would draw with me. It created a feedback loop of gestures between my line input and what my robotic drawing collaborator outputs, and back again.

Generation three explores swarm robotics linked to the vibrant and remarkable movement of New York City, where I was based at the time. It is the first city in an ongoing series of collaborative landscape paintings and exploratory robotics. The research involved the linking of urban flow extracted through public cameras to a custom-designed kinetic sculpture -- the expanding of the robotic form in the work. It broke out of the binary framing of human and robot arm to pursue a collaboration that explored swarm intelligence. It was the first time I started that co-creative negotiating on such a broad physical and environmental scale.

Generation 4 is currently in development and explores bodies – the invisible systems that govern them. Brainwaves, electromagnetic frequencies, and interplanetary readings.

These generations of robots conceptualize new models of research through critical and embodied investigation. What does it mean to extend the human sensory apparatus through research that replicates synthetic sensing in various technical objects?⁵ In my case, collaboration through robotic systems.

By regarding artistic and scientific research as complementary practices throughout my work, I've been developing approaches to how models of knowledge can reinvent themselves through the uncertainty of artistic practice. In a sense, to work towards a form of learning that charts its own path across disciplines, and is not so easily held captive by dominant cultures of evaluation and prediction.⁶

I hope that it offers a view of artistic practice that is beyond individual expression and a view of scientific practice that is inhabited and felt. These complementary views held in creative practice and research are part of the development of a new, collaborative imagination – of radical new intersubjectivities.⁷

5 Hui, Yuk. *On the Existence of Digital Objects*. University of Minnesota Press, 2016.

6 Rogoff, Irit. 2018. Becoming Research. In: Choi Jina and Helen Jungeon Ku, eds. *The Curatorial in Parallax*. Seoul, Republic of Korea: National Museum of Modern and Contemporary Art, Korea, pp. 39-52.

7 Chung, Sougwen. "Only Human." *Mana Contemporary*, 2018, www.manacontemporary.com/exhibition/onlyhuman/.

What are the postulates of your collaboration with D.O.U.G. as a non-human agent? D.O.U.G. is mimicking the way humans learn (with the decades of your own art as its primary source of information), and that it also has the ability to make mistakes. With that in mind, can you observe, discern, and explain the line between human and non-human in your collaborative art? We can imagine it being more complex given that you are “feeding” the machine parts of yourself – and maybe even more in some of your recent projects we will delve into soon.

We are social animals. As humans we naturally anthropomorphize to facilitate connections with that which is unlike us. It's a continuation of our cognitive evolution as a species. That being said, we should be mindful of words like “ability” when referring to machines, and consider what purpose the agency and intent it ascribes to them might serve.

The “mistakes” my drawing units have “the ability” to make are found in all systems. In my work, the “mistakes” are actually the differences that catalyze creative decisions I wouldn't have arrived at otherwise.



Within the collaboration, the differences between human and non-human are questioned within the space of a canvas. The work asks, “where does my artist’s line end and the machine’s lines begin?” It becomes a philosophical question that exists simultaneously as a research prompt, I really like when the two coincide.

I have learned through art-making how expansive our engagement with machines can be. Machines as creative catalysts, as speculative objects, as interactive reflections of that which is in us, across the realms of the creative, personal, and political. In that way, the practice feels like it’s just scratching the surface of these ideas, and there’s so much more to explore.

Did drawing with D.O.U.G. change your perspective on human (and machine) creativity and how?

Drawing with D.O.U.G. as collaborator helped me see that perhaps the future of human creativity isn’t in what it makes, but how human and non-human alike can come together to explore new ways of making.

Initially it began with the thinking that though art, we can shape the tools that shape us. With a background in art and engineering I have been acutely aware of how interdisciplinary approaches can shape the development of one’s own tools and systems-of-making.

By doing so I’m interested in producing methodologies that resonate, with my own practice and with others. For me, it’s an exciting part of working with emerging technologies – how they can catalyze new approaches to traditional media and ways of thinking. Technologies like but not limited to computer vision, ai systems, and custom robotics have deepened my own engagement with drawing, image making, sculpture, installation and performance. It’s motivated by asking what it means to develop an artistic practice within a technological landscape that impacts so much of our daily life.

Project Exquisite Corpus (2019) stems from various strains of thought on human/non-human collaboration, indeterminacy in the basis of the artistic work with robots, bodies, and ecology/economy. What are the main questions you’re trying to answer or, what is it that you want to explore in this ambitious “performance installation”?

Exquisite Corpus came at an interesting time, in 2019, before the pandemic. So, it at once feels like yesterday as well as a long time ago.

Exquisite Corpus was named as a reference to the surrealist drawing game *Exquisite Corpse*, in which two drawers collaborate on the drawing of a single figure without seeing the contributions of the other. It’s meant to stimulate the

subconscious through an activity that demonstrates how different perspectives can come together to create something unexpected. *Corpus*, latin for Body, references biological, technological, and ecological bodies in collaboration, an interaction of exquisite unknowing.

What do we know about bodies? The work endeavours to create an immersive sense impression of bodies at a micro and macro scale through synthetic sensing captured through electroencephalogram measuring devices (eeg headset) and satellite data. The micro scale being the cognizing body and the macro scale the interplanetary body.

How can our senses become heightened by an awareness of both, extending the human *umwelt* and mediating it through technical objects like robots?

How do your biological/bodily processes provoke or initiate response from your environment?

The work instrumentalizes the feedback loop of humans-machine-ecology through the layering of my brain-waves while drawing, electro-magnetic field readings from the robotic unit and satellite data from space during the collaborative painting. I wanted to explore the co-creative process and inhabit the multi-sensory backdrop of the data being fed into the drawing.

The work foregrounds the interconnectedness of the biological, the mechanical, the ecological. As humans on the planet, we make and work within this layered nested system. These data points are poeticised and returned to the *Exquisite Corpus* project.

The work extends my research in human and machine collaboration into an exploration of ecologies. It moves “beyond the simplifying binaries of real and artificial, human and machine—urges the poetic promise of mechanical and artificial systems to imagine forms of closeness in an increasingly estranged world. A result of the human sensorium through and through, her works double down on the entanglement of all bodies (biological, mechanical, and otherwise), never really disembodied but always becoming.”⁸

What is the place of theory and philosophy in your research?

The place of theory and philosophy in my research is complementary. The work stems from the desire for a wide engagement with world-building through a variety of sources (cited in this interview). Philosophy and theory is a component of a broader wealth of engagement across cultural sectors, including current and

⁸ Voon, Claire. “A Language for Intimacy: On the Work of Sougwen Chung.” *Corpus*, Boston Center for the Arts, 2020, alanguageforintimacy.com/projects/sougwen-chung-claire-voon.

historical developments in technology, science, sociology, and the humanities... It all informs the thinking and making of the work.

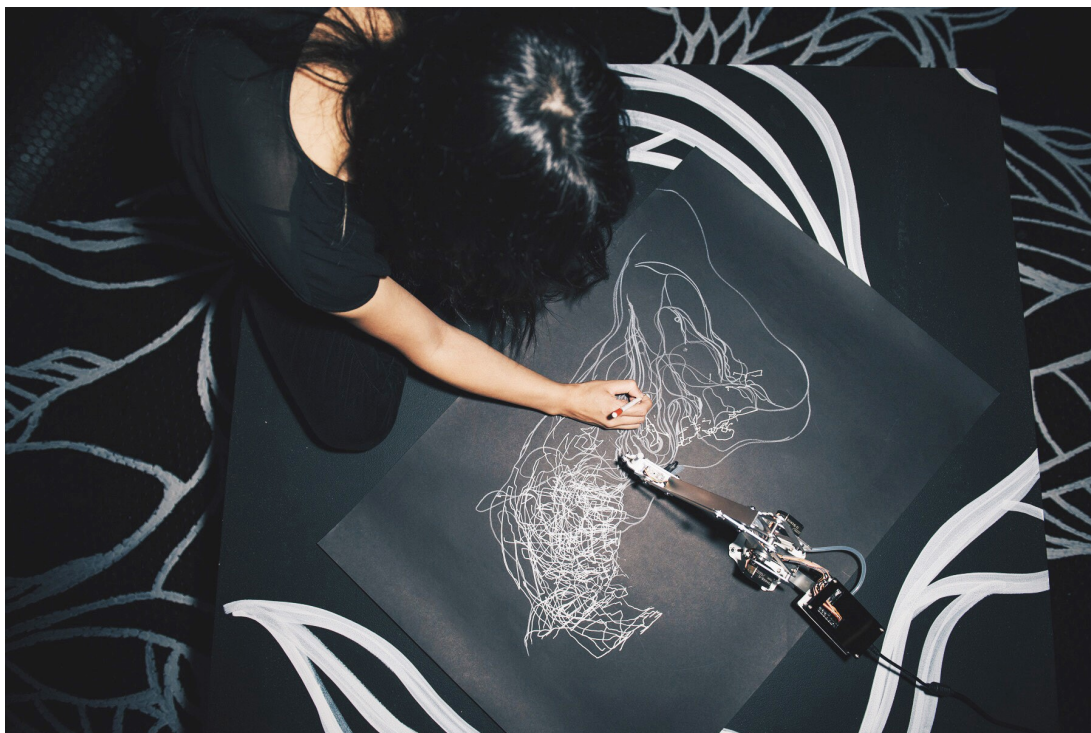
In your opinion, what can D.O.U.G. (or any other robotic units you use) teach us?

In my opinion, I'm less interested in what robotic units can teach us inherently, but what we can learn from an honest interrogation into the values and perspectives that feed into collaborative robotic systems.

Beyond the human-machine dynamic, collaboration is a universal idea. Collaboration, at its heart, isn't about control. And the recognition that what defines the best collaborations are one in which both parties are empowered, and necessarily changed for the better.

How can broad engagement with the evolving nature of collaboration locate us in a renewed sense of our collective humanity? More than ever, we are observing an urgency across all disciplines to recognize and commit to the building of an entangled perspective – to invent quickly, to imagine brazenly, to commit boldly to new approaches for creating connection.

A multiplicity of interests and approaches, which issues concerning collaboration like this issue curates, helps us to remember, to construct meaning from that which is *nameless and formless, about to be birthed, and already felt.*⁹



⁹ Lorde, Audre, et al. *Your Silence Will Not Protect You*. Silver Press, 2017.