



ARACHNID JAM

TOMÁS SARACENO WORKS AT THE INTERSECTION OF ART, SCIENCE, AND ENGINEERING. HIS EXHIBITION *ARACHNID ORCHESTRA. JAM SESSIONS* AT THE NTU CENTRE FOR CONTEMPORARY ART (CCA) IS NO DOUBT THE GALLERY'S MOST EXPERIMENTAL – AND RISKY – UNDERTAKING TO DATE.



Top: A view of Tomás Saraceno's 2014 spiderweb sonification experiments with Prof. Dr Hannelore Hoch and Roland Mühlenthaler, Museum für Naturkunde, Berlin. Image © Studio Tomás Saraceno, courtesy of the artist

Bottom: A detailed view of a spider in action during the 2014 Berlin experiments. Image © Studio Tomás Saraceno, courtesy of the artist

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ARGENTINEAN-BORN, Berlin-based artist Tomás Saraceno has transformed the CCA exhibition space into a pitch-black laboratory-cum-theatre in which the star players are a group of living spiders. Entering the room from behind a pair of curtains, our perception is re-oriented as collections of delicate glowing spider webs lit from above pierce the velvety darkness. Saraceno's projects are never self-reliant. They are the result of an energetic collaboration between many different parties: sociologists, cultural theorists, curators, architects, philosophers, cosmologists, and in this case, arachnologists and sound artists. Saraceno has been exploring the complex structural properties of spiders' webs for many years and for his first project in Southeast Asia, he attempts to understand spiders' communication methods by translating their vibrations – imperceptible to the human ear – into music.

Trained as an architect, Saraceno is inspired by utopian thinkers such as Buckminster Fuller and Yona Friedman. His innovative projects attempt to present ways of sustainable and alternative living for a better future. He is perhaps best known for his highly visible and participatory works of inflatable and airborne spheres inspired by soap bubbles, clouds and spider webs. *Cloud City* (2012) for example, saw the artist construct a large-scale habitat out of interconnected modular structures on the roof garden on the Metropolitan Museum of Art. Also in 2012, the Hangar Bicocca gallery in Milan housed an installation of multi-layered plastic membranes hanging more than 20 metres above the ground and offering a weightless dwelling for temporary inhabitants.

The research-based, open-lab nature of the exhibition at the CCA might seem a far cry from these previous playful and immersive structures, but it follows a trajectory he has been engaged with from the start: translating macrocosmic structures onto a micro level in order to reinterpret the way we might live.

Spider webs have indeed been a long-term research interest for Saraceno. When asked what ignited this interest, he explains that cosmologists always use the analogy of the spider web to represent the origins of the universe. In 2009, he embarked on one of his most pioneering works titled *Galaxy Forming Along Filaments, Like Droplets along the Strands of a Spider's Web* for the Italian Pavilion of the 53rd Venice biennale – a show-stopping, lacy form of interwoven elastic rope that stretched to the floor, walls and ceiling.

The exhibition at the CCA shifts his exploration from the architecture of the web toward the realm of sound and interspecies communication. The show is divided into two parts, the first of which might be called the 'sculptures' – a number of spider webs encased in pristine glass vitrines, which were produced in Saraceno's Berlin studio. Like crystalline galaxies hovering in space and shimmering with a hologram-effect, these hybrid creations are the result of one spider building upon what was previously created by another, responding to the pre-existing form and lines.

By mixing different species – as well as social and asocial spiders – Saraceno attempted to envisage new models of cohabitation. He says, "Sociability is a huge strength [in order] to survive in the world. To share the same web is the highest form of it. By mixing [the spiders], I want to understand how they might become more social." Adding to the experimental nature of the exercise, the cubes were rotated during the weaving process to disrupt the force of gravity.

In the second part of the exhibition, a series of spider webs and silks have been turned into actual musical instruments to explore the sonic and communicative capabilities of not only the web but also the spiders. Recording and capturing the spiders' vibrations through high-tech equipment such as laser-Doppler vibrometers and contact microphones, Saraceno worked with a team of sound engineers to render them into textured acoustic rhythms that fill the gallery space. In reference to the traditional orchestra, in one corner of the room an 'Aeolian harp' is made up of spindly threads that softly float overhead, moving with the air flow generated by the heat of the spotlights below and the movement of people. Visitors can strum and pluck a 'guitar' made from silk threads, while a percussion set has been created with a group of spiders housed in miked containers that translate their stamping and tapping into noise.

And the process goes two ways. In order to send messages back to the spiders, three Singapore-based sonic artists – Brian O'Reilly, Bani Haykal and Joyce

Beetuan Koh – were invited to respond to the spiders in three live performances. Curator of Exhibitions Anca Rujoiu says: "They all have very different approaches. Brian is interested in how the spider's vibrations will change and alter his own sounds. Bani is most interested in feedback and how he can send vibrations back to the spider, and Joyce, who comes from theatre, is interested in the relationship between movement, choreography and sound." The experimental and unpredictable nature of the project – even Saraceno himself had no idea if it would work – is at the heart of his approach.

While the exhibit defies what we might traditionally understand to be art, Saraceno prefers not to be limited by the constraints of science or engineering. The art world suits his wildly imaginative and speculative thinking. He says, "I like that art allows many doors to be opened. If you go to a science or architecture museum, it's clear that there is something to say or a mission to communicate. But at an art exhibition, it's open to interpretation. There are still some spaces where we can exist without having such a deterministic idea."

The way Saraceno weaves together the different elements and fields of knowledge in his projects can be likened to the spider web itself – each node a connecting point between multiple people and multiple readings. "Each of us has a different sensitivity and we live in a world that is very confined, affected by our own limits of perception. I'm interested in how we can expand this perception towards a larger conversation." He adds with a smile, "But also, the show is about how the spiders convinced me to do a show about them! Maybe they have something to say."

Arachnid Orchestra. Jam Sessions runs at the NTU Centre for Contemporary Art from 23 October to 20 December 2015.

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» TOMÁS SARACENO

Top: A crowd gathered in the CCA gallery for a live performance titled *Variations on hello* by artist Bani Haykal on 7 November

Bottom: Installation view of Hybrid musical instrument *Cygnus A: built by a solitary spider Nephila kenianensis and two semi-social spiders Cyrtophora citricola* (spider silk, carbon fibre and glass, 2014).

