Emergence in Art
RL Cutler and Ingrid Koenig

> *To arrive at the edge of the world's knowledge, seek out the most complex and sophisticated minds, put them in a room together, and have them ask each other the questions they are asking themselves.*
>
> artist-philosopher James Lee Byars

Working with the umbrella topic of emergence, this second LOoW production phase seeks to explore collaboration between artists, scholars and physicists. As we have already learned, emergence can have many potential meanings. A standard dictionary definition offers us an opening.

e·merge əˈmərj/ verb
1. move out of or away from something and come into view.
2. become apparent, important, or prominent; to become known.

e·mer·gence əˈmərjəns/noun
1. the process of coming into view or becoming exposed after being concealed.
2. the process of coming into being, or of becoming important or prominent.

And yet these definitions point to a vague and generalized sense of emergence with the idea of something coming into view that was previously hidden. There are other aspects that might provide us with more fruitful possibilities, interpretations and representations. An etymological explication offers the following:

emergence (n.) 1640s, "unforeseen occurrence," from French émergence, from emerger, from Latin emergere "rise up" (see emerge). Meaning "an emerging, process of coming forth" is from 1704.

Economist Jeffrey Goldstein provides a current definition of emergence in the journal Emergence: "the arising of novel and coherent structures, patterns and properties during the process of self- organization in complex systems". (Wikipedia - Emergence)

The common characteristics of emergence are:
(1) radical novelty (features not previously observed in systems) (2) coherence or correlation (integrated wholes that maintain themselves over some period of time) (3) a global or macro "level" (i.e. there is some property of "wholeness") (4) it is the product of a dynamical process

(it evolves); (5) it is "ostensive" (it can be perceived). (Wikipedia - Emergence)

Related to its root word of emergence is emergency (n.) "unforeseen occurrence requiring immediate attention". From Latin emergens, present participle of emergere "to rise out or up" (see emerge). Or from emerge + -ency. As an adjective by 1881.

What follows are four examples of emergence in art that suggest ways in which this topic might inform discursive and artistic production. These examples show four different contexts of the process of emergence from generating chance operations in the studio (Roy), to the interplay with audience (Eliasson), to cross-species collaboration (Saraceno), and to social practice involving history and community (Narratives in Space + Time).

The artist Marina Roy participated in the first LOoW production phase with a response to the topic of antimatter. Roy generated a painting series that might tell us something about emergence in art.

In the first instance Roy's work was process oriented and responsive to materials. Informed by our historical moment and her research into resource extraction she produced an emergent process of making, reflecting and making. Being in the studio, she responded to painterly materials (oil pigment, bitumen, etc.) while simultaneously drawing on the historical influences such as alchemy literature and imagery. She also wove her engagement with current events with her own dream imagery. Like many artists, Roy cannibalizes her past work revaluing subject matter and techniques, themes and strategies.

Marina Roy *Dirty Clouds*, 2017 (studio documentation)

Roy was part of our first production phase that curated artists in a three-person relay where all three artists worked with the same physicist. Here she responded to Giorgio Magnanensi, the first artist in her relay's response to antimatter and his work "SOUND CRYSTALS / -H" made with maple wood and audio resonators. Magnanensi asked the question: "What is 'knowledge transference' about when inscribed in and inspired by a process of artistic transformation?" In response Roy folded conversations on Antimatter with her physicist Carla Babcock with her selection of wood panel as the substrate for her paintings. Over the course of several months, Roy considered the emergent properties of bitumen coupled with oil pigment through a range of influences. Each day she would return to her studio to discover what the materials generated in her absence. The process was so generative that she made numerous paintings in response to materials, antimatter and other subjects that haunted her imagination. What was produced was a surprise to all of us, capturing an idiosyncratic response to the subject of anti-matter and making a painting installation of 80 works.

Marina Roy *Dirty Clouds*, 2017 (LOoW Step One exhibition)

The second artist we would like to highlight are the work and words of Olafur Eliasson from his essay "The Emergence of an Artwork" 2016. (This essay is available on our LOoW shared google folder.) Eliasson "describe[s] the process of emergence that an artwork undergoes, from the first hunch to the final artwork, which is, in fact, never final, since on its own it is only ever partially there…I see an artwork not as a passive object but rather as an experimental setup of sorts, which anticipates the arrival of the visitors, their expectations, dreams, thoughts, and senses. It also communicates with its surroundings, with other objects, and with the conditions that may have an impact on it – these are all agents with which the artwork negotiates; agents that co-determine it. An artwork is really a meeting-up of trajectories. Only at this intersection does the artwork become what it is..." He continues: "I have confidence that this process of emergence is relevant not only to artists but wherever creativity is involved, even in everyday life."

Olafur Eliasson *The Weather Project*, 2003

In *The Weather Project*, Eliasson takes this ubiquitous subject as the basis for exploring ideas about experience, mediation and representation. In this installation representations of the sun and sky dominate the expanse of the Turbine Hall at the Tate Modern Gallery in London. A fine mist permeates the space, as if creeping in from the environment outside. Throughout the day, the mist accumulates into faint, cloud-like formations, before dissipating across the space. A glance overhead, to see where the mist might escape, reveals that the ceiling of the Turbine Hall has disappeared, replaced by a reflection of the space below. At the far end of the hall is a giant semi-circular form made up of hundreds of mono-frequency lamps. The arc repeated in the mirror overhead produces a sphere of dazzling radiance linking the real space with the reflection. Generally used in street lighting, mono-frequency lamps emit light at such a narrow frequency that colours other than yellow and black are invisible, thus transforming the visual field around the sun into a vast duotone landscape. (www.tate.org)

Olafur Eliasson *The Weather Project*, 2003

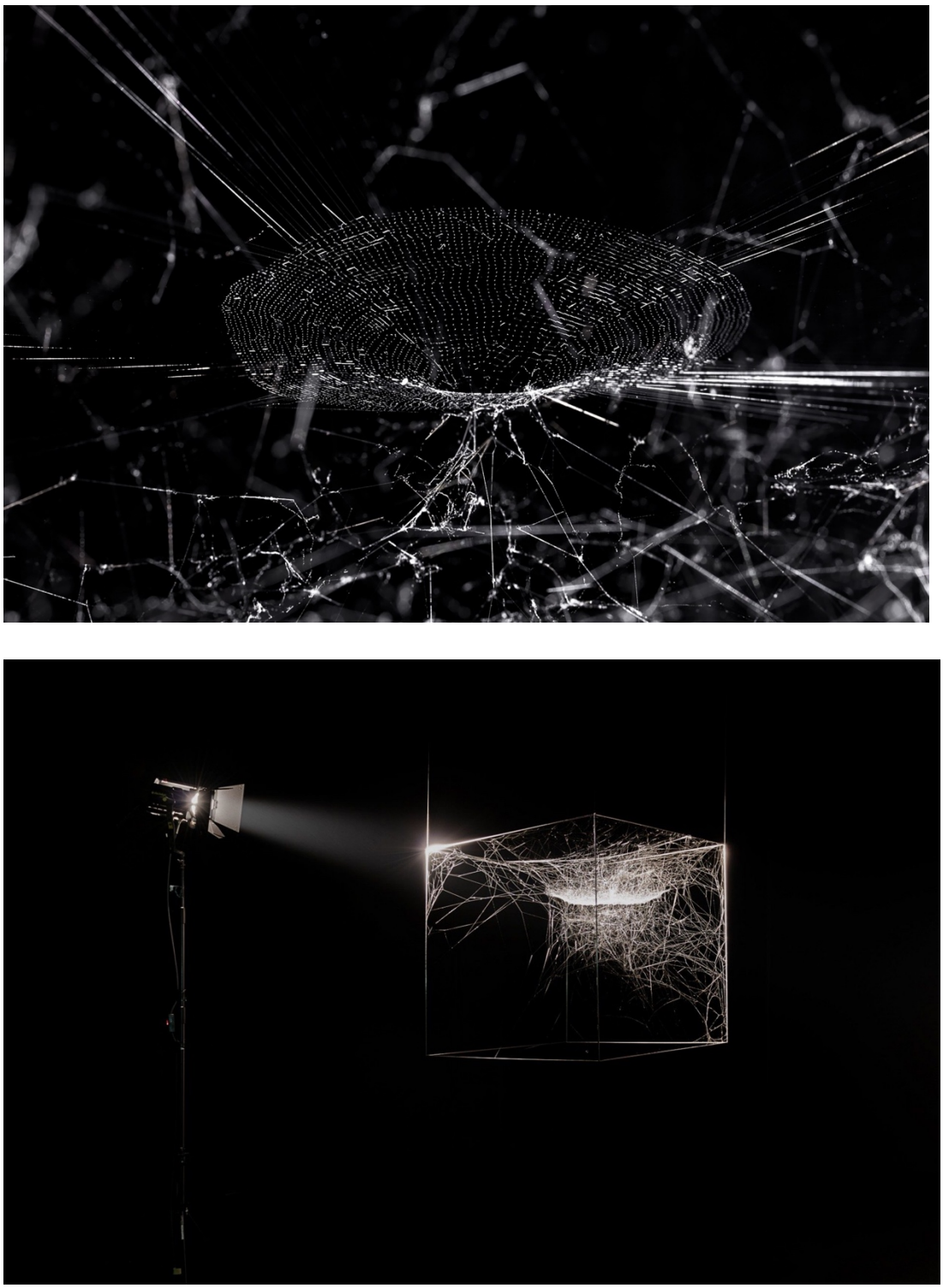
"Usually, when I make an artwork, I begin by developing the idea. But, actually, before the idea arrives, there is also something. Let's call it a space. This space resides just above the wilderness of the subconscious. It is the space out of which the idea emerges, where the idea is still hovering as a possibility on my horizon, not yet fully materialised. The space is not static. It is indeterminate, unstructured, open. It harbours clusters of memories and feelings, recent or faraway. There is a sense of atmospheric density, of attunement. Progressing from this space of uncertainty, you approach the horizon on which the idea is hovering. The horizon is not actually a line, but a space where the known and the unknown meet, where reality and dreams

intertwine. This is a space where negotiations take place, where you realise that reality is relative – that you can change what is real.

The next series of steps include Sketching and modelling and then Feasibility studies. And a leap: Finally, we arrive at the moment of sharing. The artwork leaves my studio and makes its way out into the world. It is open for interpretation, and this involves a lot of unpredictability...The artwork belongs as much to the person who meets it as it does to me. It belongs to you; it takes shape in your presence. Just like a building, an artwork is, essentially, a relationship. It is reality-producing. It has no end. The intuitive gravitation towards a particular subject, the sense of doubt and feeling of uncertainty, the experimentation – these apply across a wide field of activities."

Argentinean artist Tomas Saraceno is interested in arachnology and astrophysics. His studio in Berlin also houses the Arachnid Research Laboratory. The collaborative networking in this area attempts to "open up potential ways of reconnecting and recalibrating our attention and senses to nonhuman kin, often unnoticed." This presents an example of artmaking that can enable new hybrid encounters and relationships, involving multiple entities: from spiders to humans, from gravitational waves to particles of dust.

Saraceno's installations are a social construction integrated by arachnids, the artist, the curators, the professionals from different museums, the scientists, and the thinkers from different disciplines who have worked on these projects. The spider web is considered an extension of the spider's sensorial and cognitive systems. In the project *Hybrid Webs* the architectures of interwoven networks arise from interspecies encounters between different spider species weaving in the same space. This project allows for the entanglement of different arachnid webbed ecosystems. (Saraceno says that of the more than 40,000 types of spiders, about two dozen of them are social and without hierarchy, meaning that rather than destroying existing webs, these spiders build new structures on top of existing ones, and live there.) Their floating galaxies made of different silk and web types collide, and foster the emergence of new kinds of vibrational environments. Sometimes the vibratory movements produced by the spider in its web, are amplified through a loudspeaker that is positioned below a beam of light.



Tomas Saraceno, *Hybrid Webs*, 2008 ongoing

Thus, the web sometimes becomes a musical instrument through a related installation *Quasi-Social Musical Instrument IC 342 built by 7000 Parawixia bistriata – six months*. Interconnected threads in the museum are woven by thousands of quasi-social spiders from the South

American species Parawixia bistriata. The teams working in the project have adapted to, and learned from, the temporalities of the Parawixia: from the way it weaves, to the way it groups and expands. The Head of Arachnology at a Frankfurt university says these spider web installations have enabled much needed comparative studies in mathematics, engineering and arachnology, opening new fields of studies.

Narratives in Space+Time Society (Barbara Lounder, Robert Bean, Brian Lilley, and Mary Luka) is a Canadian interdisciplinary creative research group promoting the use of mobile media by artists and members of the public in combination with other modes such as walking, talking, psychogeography, and making objects in interactive explorations. Beginning in 2014, they have created public walking events that explore the ways in which the Halifax Explosion of Dec. 6, 1917 continues to shape our experiences and understandings of the city. The Halifax Explosion (caused by the collision of 2 military ships) was the largest human-made explosion until nuclear weapons were used to annihilate Hiroshima and Nagasaki in 1945. The explosion, tsunami and fires killed almost 2000 people and injured 9000 more, with dozens blinded, and destroyed thousands of homes.

Barbara Lounder and Robert Bean, "Walking the Debris Field: Public Geographies of the Halifax Explosion" (Turtle Grove (Mi'kmaq land) Walk)

Barbara Lounder and Robert Bean, "Walking the Debris Field: Public Geographies of the Halifax Explosion" (A backyard garden of a house reveals chunks of molten metal, part of the "black rain" that fell after the Explosion.

Walking the Debris Field: Public Geographies of the Halifax Explosion demonstrates how the past and present haunt the future, and asks what is learned through a contemporary practice of exploring interdisciplinary methods for creating historical knowledge and understanding. The themes of destruction, reconstruction, urbanism, and community continue to circulate from this disaster. The underlying stories, themes and traumas reach back into settlement history, including African Nova Scotian, Mi'kmaq, and immigrant narratives. All of these networked factors carry emergent properties.