

The w(e)aves of complexity: Relational ontologies within the Symbios Art Exhibition

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Abstract

The works included in the Symbios art exhibition spread through various disciplines and mediums: painting, weaving, interactivity, sculpture, Bio Art and even A.I. Its transdisciplinary condition does not originate in the multi-mediality of its constituents exclusively, but in the intentional implementation of an ecology of meanings once the pieces, characteristically polysemic, are made for and placed in the gallery. The physical division of the two rooms that conform the exhibition space becomes what defines the type of interaction that the art works included will deal with, each area taken as a subcategory of the general symbiotic relationships. I proceed to find a correspondence of the symbiotic process in the social realm, more specifically, in the cultural process known as syncretism, that is also a distinctive aesthetic quality of the art works exhibited. Such a web of relational ontologies goes beyond the legacy of Conceptual art, now taken as a product of a Western paradigm that is based in dualism, classification, and exact definition. Instead, the show embraces the diverse narratives behind its components as a net of meanings and diverse cultural references, so to achieve a complex yet holistic approach to art making and curating simultaneously.

Keywords

Symbiosis, Natural Science, Social Science, Art, Philosophy, Aesthetics, Syncretism, Culture .

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Introduction

The “Symbios”⁽¹⁾ art show was a transdisciplinary exhibition presented in November, 2022 in Tegen 2 gallery in Stockholm, Sweden. It included three bio-textiles, one puzzle sculpture, a big interactive loom (including one of the bio-textiles mentioned before), an introductory video⁽²⁾ recorded during my stay in the Finnish Tuo Tuo art residency where I started working with lichens¹, a textile painting, a 3D printed object, and two videos generated using the Neural Radiance Field method that converts a set of 2D images in 3D renders.² The broader idea of the symbiotic process—that of long-term interaction among living organisms—was taken as a starting point so to manage the relation among the works, the narratives behind these, their aesthetic qualities, and their physical place in the venue. This paper pertains the strategies I applied to put up a complex art show in just a couple of weeks, consciously undertaking various roles, that of technician, curator, and artist, and the relational ontologies incorporated both in such tasks and in the artworks themselves. What I discuss here might be a common occurrence for us artists that still exhibit in gallery spaces, yet I am proposing a different way of managing both art creation and curation, and its relation. Regarding such matters, the introductory text placed in the exhibition was nevertheless co-written with gallerist and artist Gunilla Sköld-Feiler, while other works were implemented jointly with the support of Jonas Pajari from Artificial Ingenuity⁽³⁾ and some came to be in the interaction with unknown people. This is relevant to mention as I want to recognize collaboration as an inherent part of both production and the creative process itself.

Layout and artworks

The *Symbios* exhibition sprouts from my work with the *Usnea* lichen,³ a symbiotic organism that is part algae and part fungus. Some of the pieces exhibited were presented as a series⁽⁴⁾ and each was considered a *Sincret* (*Sincret* in English) a neologism to describe a *syncretic thing*. The word is meant to link symbiotic and syncretic processes, the former, a term used in the natural sciences, and the latter in the social sciences. Symbiosis becomes a term that would allow different knowledge systems to coexist, even “mutually exclusive conceptual categories and frameworks” that in turn allows the distancing from the Western tradition of seeing only its logics and doctrines as universal.⁴ The name of the show becomes another node from the invisible semiotic networks that I imagine as back-up, as

support for the visible part of the exhibition, nodes from which other branches unfold. I will elaborate on the idea of thinking the art object as inherently syncretic later. The two rooms adjacent black and white respectively, and it was this color/structure binary, what permitted me to make yet another conceptual subdivision, this time related to the type of symbiotic interaction that the works included in each room would deal with.

Mutualism

Lichens are complex organisms living in a symbiotic relationship with fungi and algae (and/or Cyanobacteria). The *Usnea* lichen grows its photobiont, the algae. In turn, the photobiont gathers resources from such exchange. These associations give rise to a great number of secondary metabolites, the majority of which are unique to these organisms too. As both are benefitted from the interaction, it falls in the category of mutualistic relationship. Hence the name of the first room. The *Usnea* lichen belongs to the family Parmeliaceae and contains salazinic and usnic acid. These are said to have several possible biological activities, among these antibiotic, antiviral and anti-inflammatory.⁵ They also form “close and long-term interactions” from its constituents (a mycobiont, the fungi and a photobiont, the algae) and are known to develop cooperative molecular mechanisms between the symbiotic partners, for then to develop new functions as symbiotic entities. In lichen symbiosis, mutualistic relationships between lichen-forming fungi and algae and/or cyanobacteria produce unique features that make the organisms adaptive to a wide range of environments.⁶ For the show, this cooperation among two organisms is taken now as inherently social phenomenon, hence the mapping to the cultural process known as syncretism. In current usage in anthropology and religious studies, it generally refers to a mixing of elements from different religious systems or traditions.⁷

Sincret I (To weave a garden) - Interactive Sculpture.

This loom became an interactive piece once I used it to weave the *Usnea* lichens along electronics, and then applied the capacitive sensing method whose code and files were stored in a dedicated Raspberry Pi microcomputer, so to emit sounds when touched. The created living textile considers the sensor quality of the *Usnea* lichen as a marker of clean air and expands it towards the development of a bioelectric textile synth.



Figure 1. "Sincretio I (To weave a garden)" as part of Sound Performance, 2022, photo by Paola Torres Núñez del Prado

The created living textile takes into account the sensor quality of the Usnea as a marker of clean air and expands it into the development of a bioelectric textile synth. Similar D.I.Y. synths are popular now,⁸ yet the *Sincretio I* biosynth is different as it depends on how humid the Usnea lichens are, due to external factors. By touching the Usnea, sounds originally recorded in the Finnish forest and the Amazonia are reproduced, and, in a next iteration, modulated.

If it gets too hot without airflow, or too warm and dark, these lichens die. Another interesting thing is that they immediately turn green once becoming humid, which adds an extra layer of reactivity. The lichens can live long if proper conditions are kept, which brings notions involved with care. Maintenance implies monitoring and making them humid frequently, in a space like a gallery, which is not in the open and does not have a constant flow of clean air. One must say, their dependency on the stability of climate conditions that are currently changing, make them particularly exposed. Its relation to ecology is then put forward, parallel to the starting of a discussion related to practical conservation of artworks in cultural exhibition set-ups.

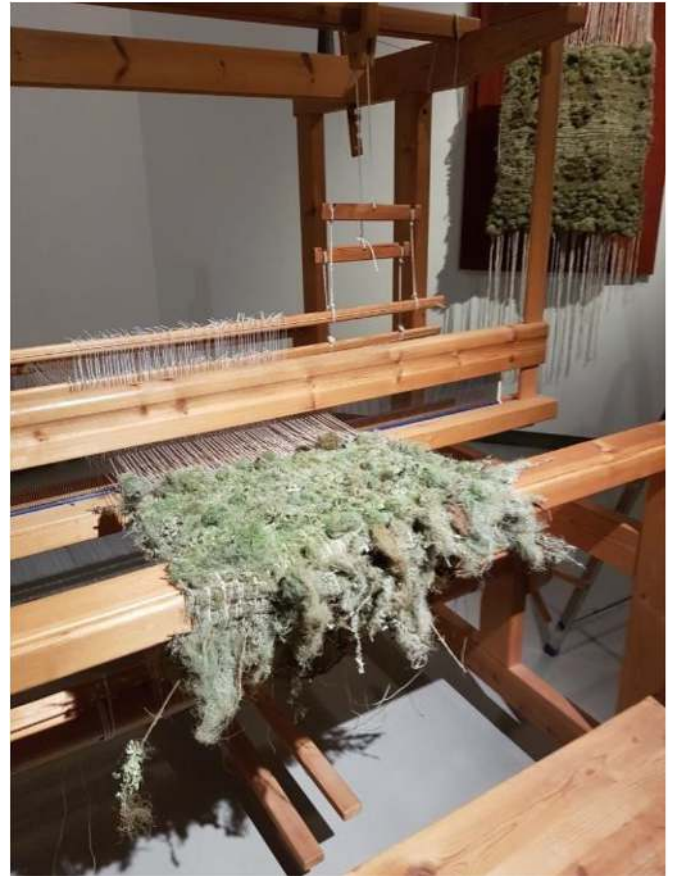


Figure 2 Close up of woven Usnea Filipendula

The technique I used for the weave is taken from a traditional one used by Andean inhabitants from my country of origin, Peru. I decided to apply this weaving technique as it allowed me not to damage the lichens. This living textile was woven on a Swedish loom, an important cultural tradition among older women in Sweden. The sounds triggered had been mostly recorded in the Finnish forest, but they also included samples from the Amazonian Forest. Due to the intermixing of diverse traditions, this installation is considered syncretic.

Sincretio II (Tupicochan knot) - Living sculpture

This lichen-based sculpture portrays a Khipu tied up as if it were a snake curled onto itself, the Tupicochan style placing of Khipus. A khipu is a knot-based technology to store information, that originated in the Andean region in pre-Hispanic times.⁹ Tupicocha is a town in the highlands of the Lima region, and this is relevant as they keep the Khipu tradition as part of their civic ceremonies. They have a particular way of placing the Khipu, different of what we know from the Incan Empire and previous Andean civilizations: they tie the Quipu onto itself, then becoming a knot of knots. I took this as a representation of self-consciousness and its recursive nature, now taken as tied up on a knot itself.¹⁰



Figure 3 The Tupicochan Knot

Sincretio III (The living textile)

This piece consists of woven lichens as living textile placed over a portion of Swedish-style wall painted in the traditional falu rödfarg (red paint). The paint is relevant in the history of Swedish technological development: designed in the 1700's, it not only became a traditional symbol (most countryside farms and houses are painted in such a color) but its chemical composition has the characteristic of penetrating the wood these buildings are made of, in turn, making it more resistant.¹¹ This interaction of components evoked yet another level of symbiosis, and the fact that a portion of what it looks like a wall of these red-painted houses is part of this installation, onto which another lichen-based living textile is placed, in turn, woven using Peruvian textile techniques, makes it aesthetically syncretic as well.



Figure 4 The Living Textile

Sincretio V (Liquid Identity)

This wall-like structure is a puzzle that can be taken apart in pieces. Also painted in the traditional Falu röd paint, it continues referencing Swedish traditions. The syncretism, in this case, lies in the process: the cut is not handmade, but computerized (laser cut), and the fact that it looks that these structures are melting, refer in turn to a more globalized, contemporary aesthetics.



Figure 4 Liquid Identity



Figure 5 Andean Glitch

Andean Glitch (Textile Painting)

Part of Holly Grimm's Aikphrasis project that consisted of "prompting" artists (in the manner of CLIP-based image creation commonly prompted by text)¹² with A.I. generated paragraphs, this textile painting was inspired by a text written by the machine (GPT-3).

Parasitism

Parasitism is a symbiotic relationship that consists of an organism that ends up harming another one, called the host, while in a relationship that, unlike mutualism, only benefits the former. This interaction can not only end up killing the host, but the parasite itself, when the organism it depended upon dies.

In early 2022, I was hired by an artist to do a 3D character model based on the standard ones generated by crowd simulation software, so to be 3D printed by a machine and shown as public art. The aim of the artist was to represent a generic, androgynous, seemingly standard digital *Persona*. The final 3D printed, slim, young yet bald, androgynous character was set up, arms extended, in the middle of a public square in Stockholm,

place where we both live. Some days after a controversial Swedish election, the arms were found to be ripped off from the huge final sculptural 3D print exhibited in the square: this is notable as the main party that won the elections is considered to have origins in the Far Right, and in this context, the extended raised arms could have been seen as evoking an initially unintended reference, one that, after the elections, came to be considered a problematic symbol by citizens. Using Artificial Intelligence, more specifically, the Neural Radiance Field method, the physical manifestation of public intervention onto the so-called "generic" human sculpture is reconstructed and made into a new artwork, so to address how symbols change alongside the social milieu, the impossibility of neutrality within the digital realm, and ultimately, analyzing both artists' and citizen's ethos and practices within Public Art. This particular work consists of the 3D reconstruction using Nvidia's Instant Neural Graphic Primitives implementation (Instant-ngp NeRF) ¹³ of a realworld 3D printed sculpture recorded with a hand-held mobile phone.



Figure 6 Reconstruction of the Unseen

The lost right arm has been reprinted and placed in a position indicative of a narrative I present as speculation, as possible explanation for what passers-by could have seen in the now missing arm. This is, in turn, is accompanied by a drawing of another one of these speculative interactions with an unseen audience, this time taken from an image of a graffiti drawn nearby an art space where I organized an A.I. art show in August, also in Stockholm.

In the case of the Parasitism installation, the question then becomes: who is the host and who is the parasite? Is it the artist originally hiring me as designer of the work, using my labor for her needs, the parasite? Is it me, when repurposing images taken from a real-world vandalized sculpture to make a new artwork? Is it the

people that ripped it apart, or is the pre-trained A.I. doing the virtual volumetric reconstruction based on the data sets it has been trained with?



Figure 7 Parasitism Installation

Sincretio IV (Reconstruction of the unseen)

Thinking about these subjects: the author, collective creation, A.I. models/datasets, and the parasitic relationships within all of these, I came up with this work, that I called *Sincretio IV*. This video was generated by using the NVIDIA Instant - NGP Neural Radiance Field method, a Machine Learning method (A.I.) that allows the generation of novel 3D scenes based on 2D data. This method was used to generate novel view scenes from an original low-quality video, so to be presented as an artwork that implicitly recognized the violent transformation of a real-world sculpture after people intervened it. The act of bringing back the sculpture to the digital realm, after being transformed by people and being taken away from public view, was an act that would recognize their gesture as a potential protest. The reconstruction aims to harness such action for posterity, as the sculpture has been removed from the public space by now. Thus, the video attempts portraying a moment in time when the sculpture was still public, after its arms were ripped off. The video recreated a dreamy scene out of glitched generated virtual figures, with artifacts forming out of the lack of data: I had used images with lossy compression to train the model. This is a collaborative work and it is presented as such: Jonas Pajari had his role in it, I had my role in it, the artist had its role in it; the public witnessing and intervening the real-world sculpture had its own role in it, and the A.I. also had a role in its creation, all in a feast of parasitism now presented as the commonality of art creation.



Figure 8 Reconstruction of the Unseen

Sincretito VII (Armlängds avstånd)

The right arm that was taken from the sculpture has been reprinted in 3D and it is exhibited next to the critical graffiti addressing A.I. issues.

The term "arm-length distance" (Armlängds avstånd) is now widely used in Sweden by journalists and politicians in areas such as cultural policy, but also media policy and research policy, where "arm's length" is used as a metaphor for the appropriate distance between those in power in different roles and against mutual intervention.¹⁴

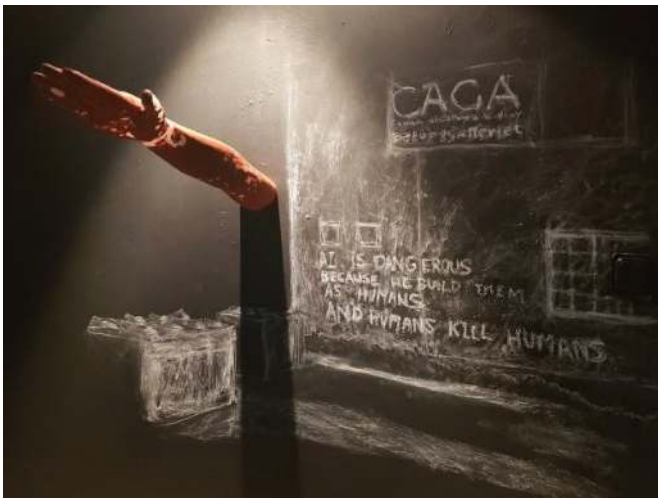


Figure 6 Armlängds avstånd

Discussion

I came back from the art residency in mid-Finland at the end of September 2022, to be offered the exhibition space. In the middle of such Nordic Forest, I became familiar with the Usnea lichen growing in the area and had already made two works with such living organism, the Tupicochan Knot and The Living Textile (Sincretito II and III respectively) before I was offered the space. All

the other works, except the "Andean Glitch" painting, were developed in October 2022, mostly in the days before the opening day itself. As I was familiar with the space beforehand, a gallery that consists of two adjacent spaces, a white room of around 6 m x 6 m next to a black one of 4m x 6 m, I embraced such format, working around it but keeping the art gallery without many changes.

The aim was not to convert the space for my needs but think of the work *for* the space. By the naming of the lighter room as the "Mutualism," and the darker room as "Parasitism," taking the binary condition of the space as starting point, I reflected on this type of interaction in between organisms, now also applied to human society and culture. The presentation of the white room was similar to that of a formal *installation*, which in turn made the main white space to look more like a (weaving) studio. Nevertheless, there are other factors to be taken into account when describing this exhibition from the operational side, practical issues linked with curatorial aspects beyond the arrangement of objects in space, and that has to do with the time given to me for preparing and setting up the show: I was informed that I could use the space just around a month before the opening, and I would lack much of the support usually given by the gallerists, as one of them had to travel. This in turn pushed me to design an efficient strategy that took into consideration both the time and the space factor, so to be able to effectively show all the works holistically, in a manner that would permit raising complex sociopolitical and aesthetic subjects that I considered relevant, as they were related to the particular societal situation we were experiencing in Sweden at the time. So my method could be described as symbiotic on itself, and of fractal nature, related to its multiplicity of meanings: some works took shape in the midst of human-human interaction, others came to be among a human and a non-human agent, such as the lichens and the forest, and other works were generated in the area in between humans, machines, and other living organisms, such as the Usnea lichens. These interactions in turn shaped the reasons why and how I established them, and these also include aesthetic ones: in the syncretic process itself, with visual, tactile and sonic characteristics that allowed people to recognize the cultural references that the works included without having to read a text or receive an explanation (something that I did anyways). As such, the works are not only about one or various concepts, ideas, or narratives, but about the connections behind their polysemic nature.

Beyond the Western paradigm

According to Gloria Schaab, relational ontology is the philosophical position that what distinguishes subject from subject, subject from object, or object from object is mutual relation rather than *substance*. Ontologically, substance refers to the essence or nature of a being.¹⁵ The concept of “substance,” is treated commonly within philosophy as that of object, or thing, when this is contrasted with properties, attributes or events.¹⁶

In this exhibition, such a substance, related to the art works presented, would be inherently syncretic, and this in turn emphasizes in the mutual relation of the combined cultural properties, attributes, and, in the case of the generated videos, referring to an event that could also be placed within a syncretic framework. As mentioned earlier, I am doing an explicit parallel between the syncretic process (and its products) within the social realm and its cultural expressions, and that of the symbiotic relationships in the natural world.

By framing it this way, I do not mean to separate the social realm, culture, or the human sphere, from that of the natural world. On the contrary: if anything, my approach aims to (re)conciliation. But the Western paradigm of thought has characterized for its tendency to dualism, based on a binary logic (true/false) and this has been reflected in such a division (culture vs. nature) as well as in the division of (human) knowledge into various disciplines. While Interdisciplinarity refers to the collaboration across differences – in turn embracing such differences – Transdisciplinarity is characterized for its holistic approach¹⁷. In order to transcend such tendency towards dualisms, embedded in the history of conceptual art (where ideas had been clearly defined) and by taking each of these works as polysemic (having multiple meanings and cultural references) I present the show as framed within an ecology of meanings but also of aesthetics, processes and events, as the substance of these “cultural products” (the *Sincretos* or *Syncretets*) are now taken as the product of not just one, but the amalgamation of various cultural traditions and thought systems. The thinking of the art object as inherently syncretic needs to be taken as an open gesture towards real universality. As mentioned before, there is a fractal quality in the way the works have been both developed and presented, not only because I am talking explicitly about an ecology of meaning, but due to its network and its connected pattern (of cultural references, symbols, and materials) that also reflects in the works themselves and that can be described as (inter)woven: such a

pattern is found as a theoretical framework (framed upon a relational ontology), but is also materially perceived in the works themselves.

In what relates to the value of art, the lichen works pose an interesting question. Due to the condition of such symbiotic organisms, decay is a constant possibility. This implies that the works are always threatened if conditions for their survival are not met. In turn, this means that they can actually cease to exist as such, as temperature and humidity has a direct impact on the structure of such works, as, depending on environmental factors, they would turn brown when the photobionts die in cool and dry conditions, yet the weaves would be kept structurally the same. Under warm and dark conditions and in a storage space that is not extremely dry, they would lose all structural characteristics, and become a mushy black substance with no major reminiscence of the original piece. The artwork, and in turn, its value, would become nonexistent because of this transformation that destroys all original aesthetic qualities. As such, the maintenance of the artwork not only becomes an act with an ecological impact (the saving of a threatened species) but the maintenance of its value thought under an art market shaped by capitalism, taken here as the implementation of the Economics of Parasitism.¹⁸ Symbiosis would be posing another way to approach the “Science + Art” realm, where it is common to find artworks characterized by a type of aesthetics that has the tendency of bonding the two disciplines together through what it could be called an aesthetic mapping of the Sciences onto the arts through what I call “aesthetic bridges” that can have reminiscences of Sci-Fi (futurisms, etc.), mapping the scientific laboratory in the art gallery itself (as a white, sterilized environment) with its test tubes and petri dishes, or displaying documentation of a research. For artist Hito Steyerl, “artistic research” has even become a new discipline, one that normalizes, regulates, and ensures the repetition of protocols.¹⁹ Extending this idea, Claire Bishop considers that Research art (another branch of the Art and Sciences), that is, “its techniques of display, its accumulation and spatialization of information, its model of research, its construction of a viewing subject, and its relationship to knowledge and truth—cannot be understood in isolation from contemporaneous developments in digital Technology.²⁰

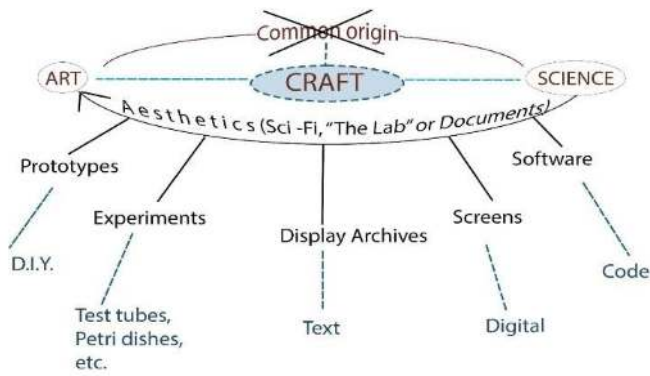


Figure 8 Graphic portraying the “aesthetic bridge” as Science shaping the Arts

In this way, and by working with digital technology alongside living beings, both the Natural Sciences and the Technosciences are addressed in the gallery space. *Symbios* goes into the actual etymology of the words *ars* and *techné*, the origin of the term “art” and the term “technology”, which in both cases, originally meant craft. Craft becomes the proposed “aesthetic bridge” of this exhibition, going against the hierarchy of knowledge-as-discipline reflected in the evident aesthetic domination of the Sciences onto the Arts.

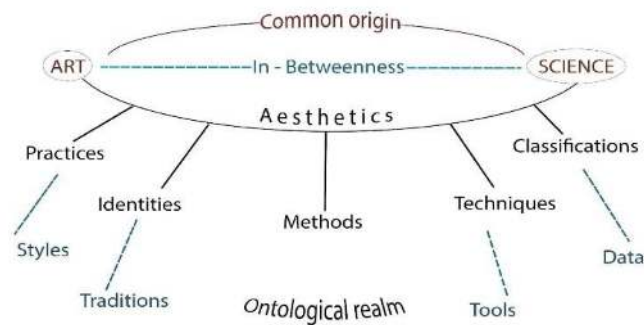


Figure 8 Graphic developed by Inés Moreno, Nitouche Anthousi, Olivain Parry and me at a workshop in ISEA2023

Conclusion

Through the mapping of the process of *symbiosis* with that of *cultural syncretism*, taking the latter as a social expression of non-human origin, I go beyond the realm of the animal kingdom to think of other living forms as social too. By doing this, I go beyond anthropocentrism. I also discuss the connection in between the Social Sciences and both the Natural Sciences and the Technosciences in a transdisciplinary historical framework by referencing an approach to understand human society as part of the Social Sciences originating in the West: the phenomenon known as Social Darwinism ²¹ that I perceive still shapes Western society

under Capitalism. This approach to study human culture is assumed as something from the past, yet we can still find it in extremely hierarchized societies, particularly in Neoliberal regimes where the idea of freedom is very much linked to the imperative of growth-as-development (and strength), and where domination can be justified in such meritocratic framework as the “survival of the fittest.”²²

I propose another conceptual extrapolation from the Natural Sciences, this time not framed within such hierarchic evolutionary theories, but more of communal nature exemplified by mutualism, with a more positive outcome for the symbionts, and parasitism, closer to the structure of Social Darwinism.

The ontological relations in the show are presented as an ecology of meanings, of cultural references, and of aesthetic qualities. The fractal nature of the show initiates from the physical division of the two rooms that conform the exhibition space, a white room called “Mutualism” and a room with black walls called “Parasitism.” These are sub categories of the general symbiotic relationships the Natural Sciences have defined. As syncretism is also a distinctive stylistic quality of the art works exhibited, they could be split into smaller semiotic particles too, that come to be in the intermixing of various cultural traditions reflected both in the artworks techniques, and in their aesthetics as well. We can then go deeper to find even smaller particles, those related to historical referents and their relation to memory, or personal narratives, or the artworks’ own interactive or digital condition, their biological processes, their material design and its symbolism etc. Through such a web of relational ontologies, the show intends to go beyond the legacy of Conceptual art, now taken as a product of a Western (Scientific) paradigm that is based in dualism, classification, and exact definition. In this case, all works were conceived as multilayered in what its meanings, function, and appearance refer to. By working with digital technology, I openly addressed both the Natural Sciences and the Technosciences, and by going to the actual origin of the concept of art and technology as science-as-craft, proposed now as the “aesthetic bridge” that would go against the hierarchy of knowledges reflected in the common aesthetic mapping of the Sciences onto the Arts, as well as Western traditions over non-Western ones.

The works of the exhibition are taken as polysemic (i.e. the *Tupicochan Knot* is both a cultural artifact and a model of consciousness), that is, as having multiple readings and possible interpretations. These various narratives are embraced as a net of meanings as well as

physical properties that are signs related to materials, to techniques, to their looks and their history, so to achieve a complex yet holistic approach to art making and curating simultaneously.

- (1) Symbios is the Swedish word for "Symbiosis."
- (2) Made by Renzo Signori from Koyne.org
- (3) Collection or sequence of art works
- (4) "This survival of the fittest, which I have here sought to express in mechanical terms, is that which Mr. Darwin has called 'natural selection', or the preservation of favoured races in the struggle for life."

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