Bees and bacteria in art making: an interview with AnneMarie Maes

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by Valentina Bianchi

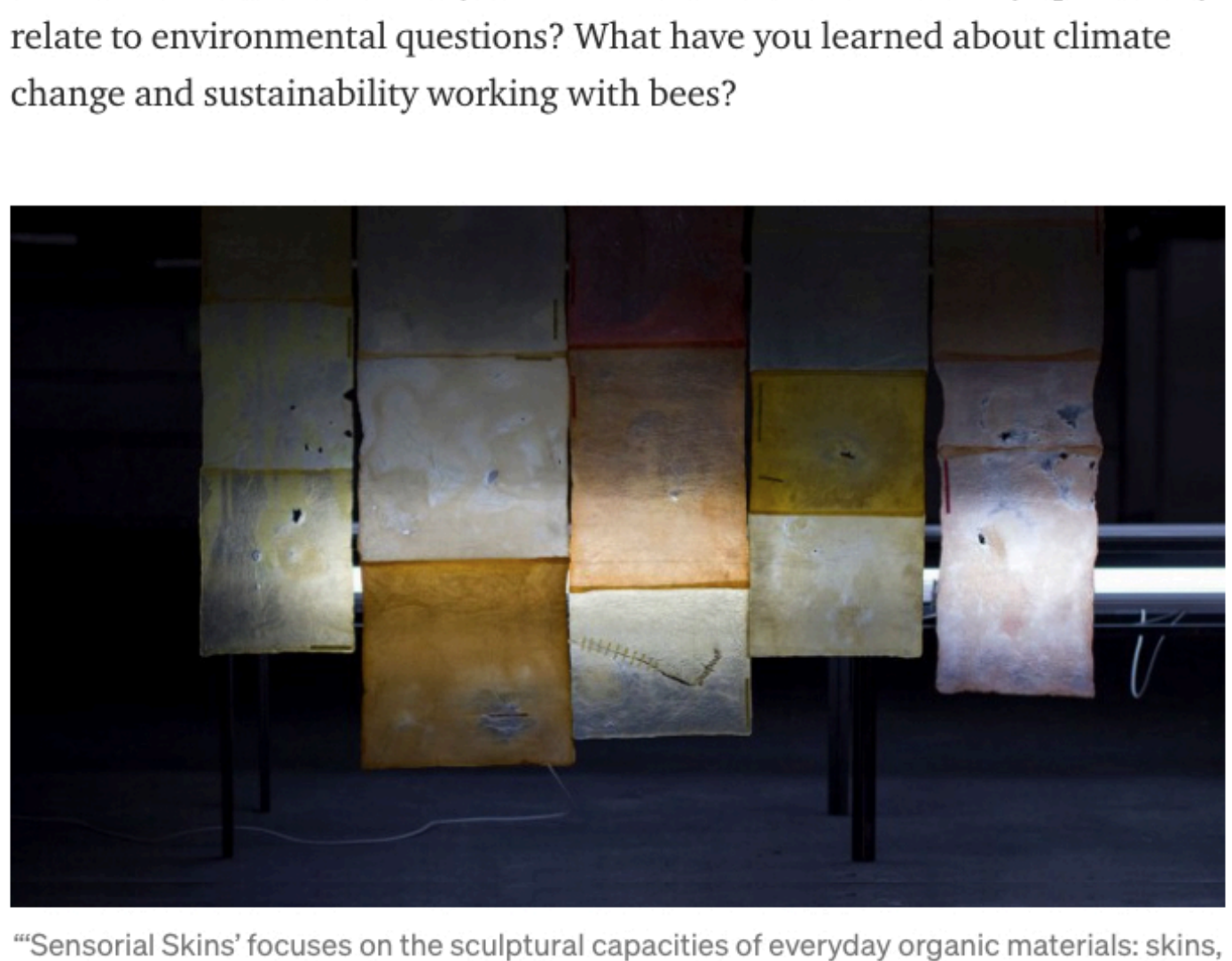
AnneMaire Maes is a renowned Belgian artist, particularly involved in art/science projects, often participating in fruitful collaborations between scientists and artists, but also with more unusual co-creators such as bees, bacteria, and algae. AnneMarie welcomed us in her Brussels home and showed us her marvelous urban garden, a beacon of lush biodiversity in the middle of the city. We talked about her experience with cultural institutions and the general public in relation to environmentalism and her daring hybridization of techniques, her groundbreaking work with communities (human and non-human ones), and the effectiveness of art as a teaching tool.

"'The 'Transparent Beehive' is a living sculpture in the form of an observation beehive made from plexiglass, wood, aluminium and steel. It was installed for the first time on a Brussels rooftop connected to an urban garden laboratory and has since been shown in various art contexts. The 'Transparent Beehive' has helped to produce a variety of art works including sound works, visual images, and bee artifacts". (from AnneMarie's website)

Ki Culture: Hello AnneMarie, thank you for giving us a bit of your time! I know you are very busy at the moment and have recently been to Venice, with which you have a strong connection. Was there something interesting you found there for your own work?

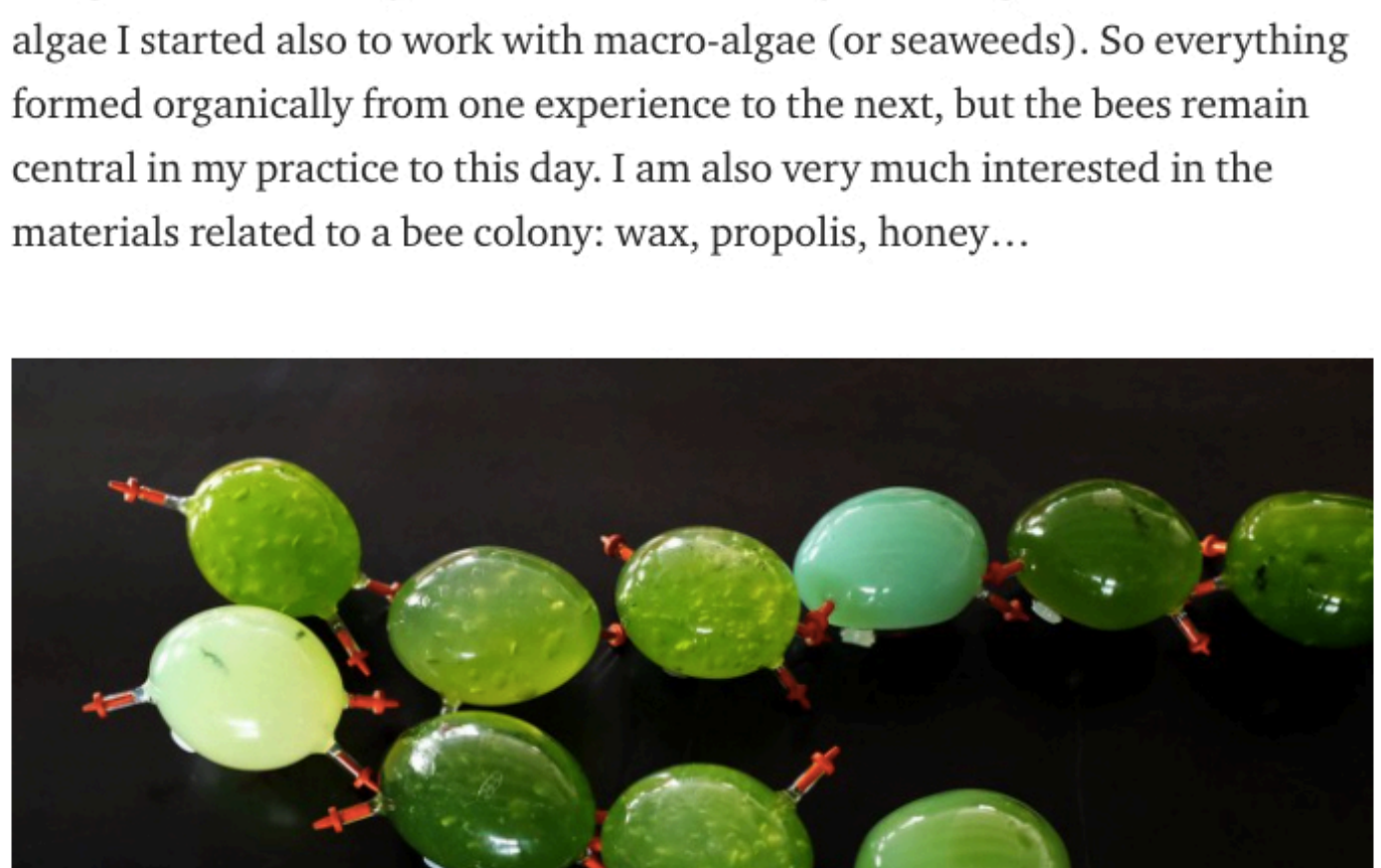
AnneMaire: I went to a workshop organized by Science Gallery Venice. I was very interested in the problems Venice is facing because I am frequently there. Aqua Granda is a Science Galley project related to climate change, so it is important to all of us. The workshop was the final action of a 4 year long EU project in which artists and scientists were involved. During this Aqua Granda workshop they were able to show and discuss the results of their research, and the artworks were also made public in an exhibition with a trajectory (with Augmented Reality) through Venice. A number of artists and scientists that worked as artists were so involved. And they were all under 30! They could show the results they came to and try to convince people of the urgency of the matter through their art. Another workshop series I was involved in, was organized by the organization Ocean Space. We were introduced in the fauna & flora of the laguna, and we learned how this lagoon-ecosystem is important to protect Venice from floods. I am interested in these issues because I am creating a project that compares marine ecosystems, the Mediterranean, the North Sea, the Baltic, the Atlantic Ocean, and so on, making a website with pictures to compare algae found in these different sites. I am also working on a durational performance with the sea and the algae, *Theatrum Algaerium*.

KC: You have collaborated with bees in many different, long-lasting projects like the *Sound Beehive*, the *Transparent Beehive*, *The Guerilla Beehive* (a sculpture whose "content responds to the nest-needs of a bee colony living in the wild, easily deployable on different spots in public space") and the BUBL (Brussels Urban Bee Lab) as a spin-off from the collective OKNO. The various ventures tackle many different themes, but how do they specifically relate to environmental questions? What have you learned about climate change and sustainability working with bees?



"'Sensorial Skins' focuses on the sculptural capacities of everyday organic materials: skins, membranes and biofilms. Sensorial Skins are complex surfaces of contact. Some of these fabrics are grown by bacteria, others are the result of transformative processes reminiscent of an alchemical practice but now grounded in fieldwork and scientific methodology". (from AnneMarie's website)

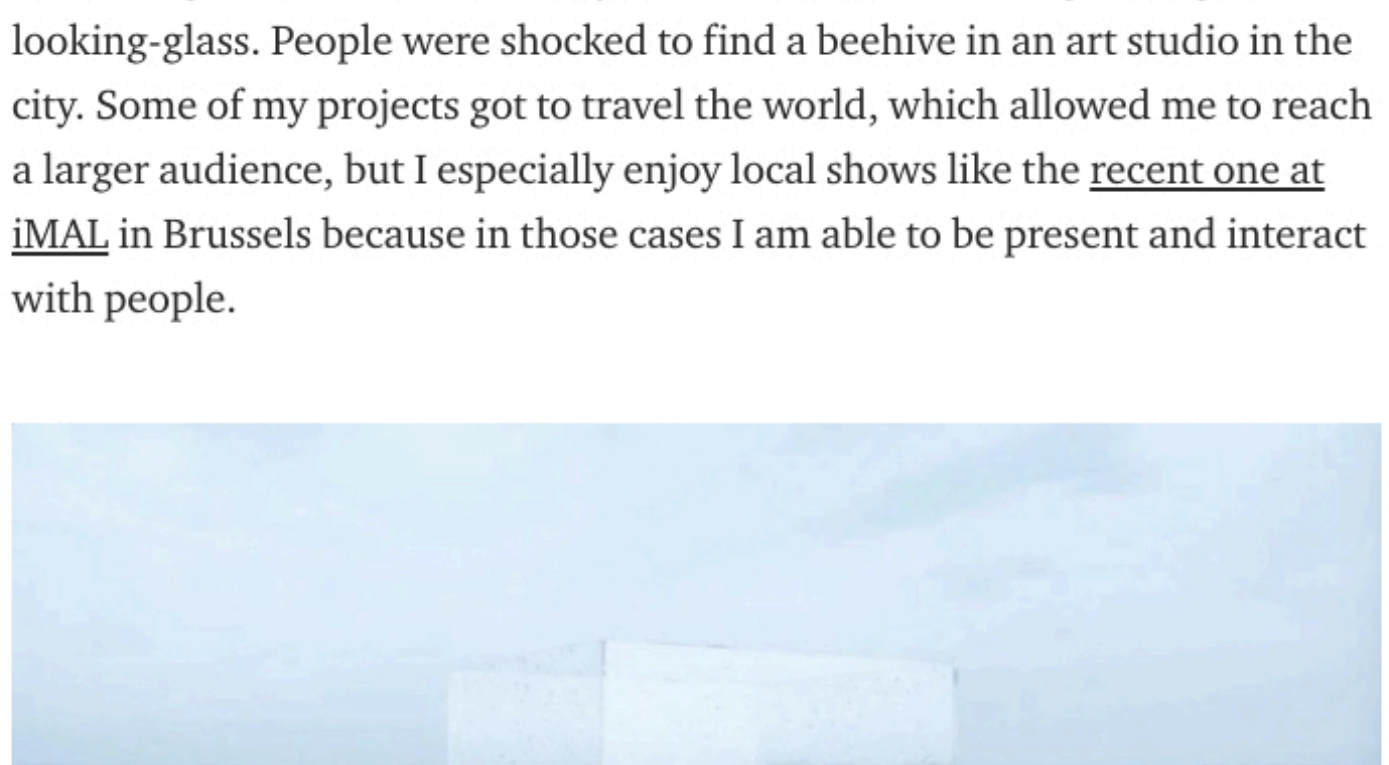
A.M.: The bees taught me everything. Of course, as an artist concerned with contemporary problems I was preoccupied with environmental questions but it was only when I began working with bees that I got so connected and so deep in it. I mean… I am sure a lot of people have an interest in bees, but for me, the bees truly showed me that everything is interconnected. Of course everybody knows that, but not everybody is conscious of it everyday. Working with bees really discloses how, if a certain thing happens, it has repercussions on other things. Into the microscopic. So much so that you can finally see the macrostructures of the universe and the connections of this dynamic network that we call nature become apparent. We are such a small aspect of it, even if we think we are so important. That's probably why all my work started with the bees. For the moment, I am especially interested in the aquatic world, but it was because of the bees that I went back to the European University to study botany to learn where bees go to forage and what they like. It's because of the bees that I started working with urban agriculture, organized workshops on permaculture, and built a food forest. These experiences help people become much more conscious, for example, of toxic agents in the fields and aware of problems like monocultures. You even start paying more attention to which clothes you wear. And in the different art projects you mentioned I tried to bring these arguments to the general public. The bees are a very gratifying subject to talk about. Not many people know how bee colonies live and they are always excited to learn how they function and how everything is intertwined. I started with the *Transparent Beehive* to show and explain how colonies act in the different seasons. The *Sound Beehive* (an experiment that monitors the development of a bee colony on the basis of the sounds it generates) came in different versions and it was more an observation for research purposes than a public event. A rather technological thing. It asks for a lot of energy because working with fewer resources compared to similar research projects at universities, you have to rely on low cost material that breaks easily. And you need a technical person you can work with that can repair it if it breaks. Then I thought "I need to go further with what I have learned from the bees". One of the things I learned is that you don't always need technology. The world is already full of it and employing a lot of electronic components can be quite a wasteful way of working. I directed my attention to bacteria as a monitoring system, for the bees but also for the environment at large (Ed. like in the artwork *Sensorial Skin*). So, I started working on collaboration, cohabitation, coexistence, first in the beehive, with bacteria and other beings that are favourable for their activities, and then taking it forward and opening it up to humans, biotopes and ecosystems. I started working with cyanobacteria because I wanted to make a biological pollution sensor to visualize the link between the bee colony and the environment in which the bees forage. From there I came into the aquatic world with artworks like *L'origine du monde*. Cyanobacteria are actually micro algae, so from micro-algae I started also to work with macro-algae (or seaweeds). So everything formed organically from one experience to the next, but the bees remain central in my practice to this day. I am also very much interested in the materials related to a bee colony: wax, propolis, honey…



"'L'origine du monde' is composed of a metal structure on which glass cells, filled with cyanobacteria, are growing as they were young, sprouting buds on a tree in springtime. They consume CO2 and they release oxygen, exactly as plants do. Cyanobacteria have been an important element for forming the earth's oxygen atmosphere". (from AnneMarie's website)

KC: About the educational purpose of art/science: do you think the public is particularly reactive to artistic presentations? Is it easier to convey awareness about sustainability through art projects? Which project was the most rewarding in terms of pedagogic results?

A.M.: I think art is very important in conveying a message. Of course this is not the sole purpose of art but when a concept is packaged in a nice way it is certainly more convincing to the public. But it's not always that easy; to me my art/science projects are very attractive, but to someone who is more used to traditionally beautiful art, like a painting, they might feel more difficult to appreciate. That's why it's crucial to have good mediators and illustrate the background of certain endeavors: I even do it myself sometimes. When I observe visitors interacting with my works I notice they seem to be attracted by the form, but it's only when I get to talk to them and explain what's behind the artworks that they get visibly attentive and curious. It really adds to the experience. When the spectator can feel how involved you are it's like they are accompanying you in the discovery. For example the *Transparent Beehive* was very rewarding. It felt like taking something from nature and in my studio, almost like seeing through a looking-glass. People were shocked to find a beehive in an art studio in the city. Some of my projects got to travel the world, which allowed me to reach a larger audience, but I especially enjoy local shows like the recent one at iMAL in Brussels because in those cases I am able to be present and interact with people.



"'Theatrum Algaerium' is a durational performance with the sea. Early in the morning and late in the evening, between low and high tide, the Theatrum Algaerium rises from the sea. Metal frames hold fluttering weeds and algae-carrying jars filling up with tidal water create 'narratives woven from the threads of past, present and future', while a team of performers prepares and offers ocean delicacies". (form AnneMaire's website)

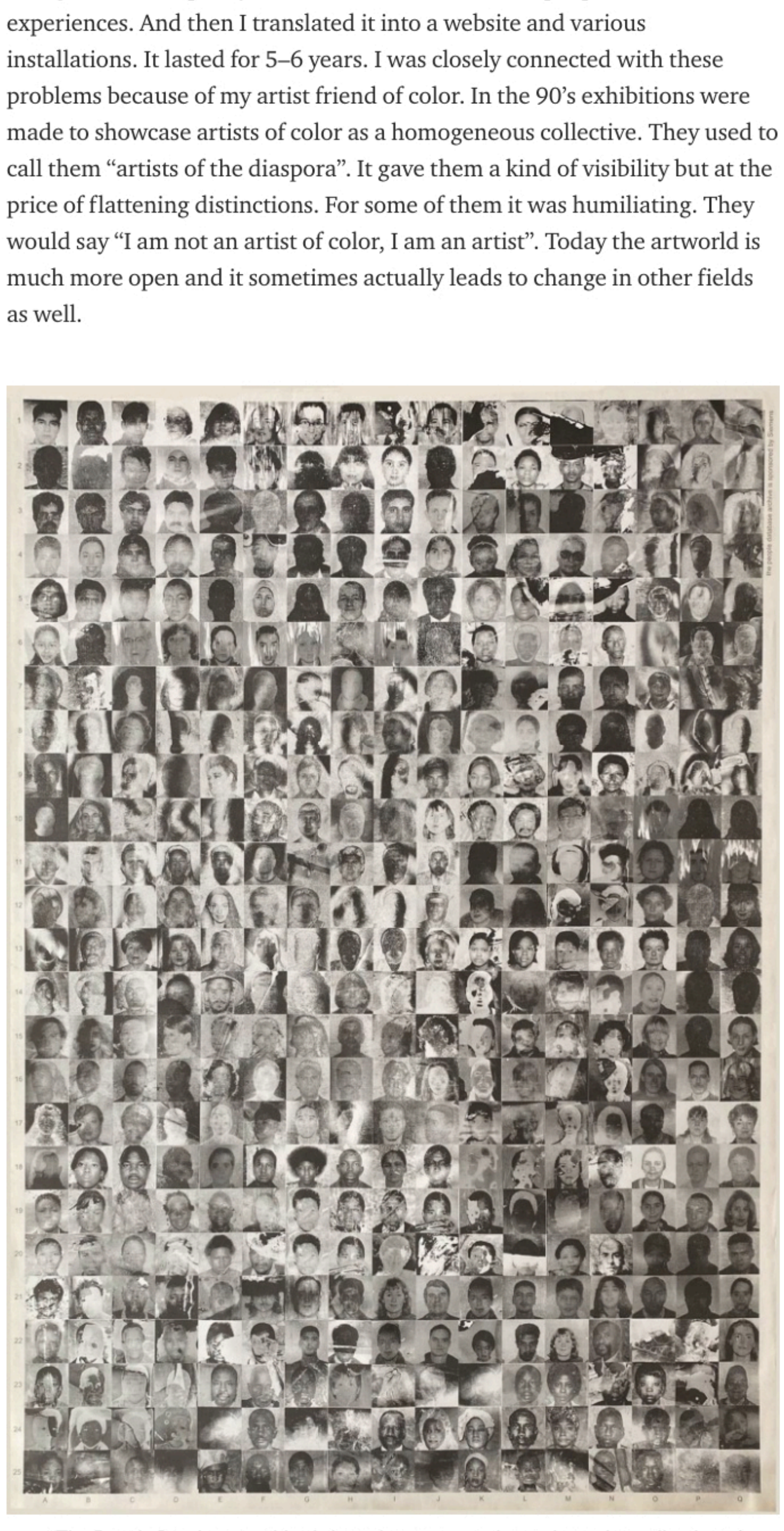
KC: Do you think you managed to change some minds with your work?

A.M.: I am sure. Of course someone who walks into such an exhibition already has some kind of interest or sensitivity to these topics. Many of the collaborators to my projects, as for example the technicians with whom I worked, started beekeeping themselves afterwards, because they were so impressed by the bee colonies. Especially people that were close to me and saw me work with bees. You can never be certain of what people will do when they leave your exhibition, but I am sure someone must have changed their habits because of what they have experienced there.

KC: At the beginning of your career your research was linked to anthropology and (human) communities (I am thinking of projects like the *People Database* and *Politics of Change*). Can you tell us about your efforts in the empowerment of communities and the importance for museums and institutions of including minorities and indigenous people in the cultural discourse and activities? Have things changed since you started working with these concepts?

A.M.: In recent years I think that a lot has changed. I am not part of a minority and I can only speak from my own personal perspective, but I do think that a real, drastic change happened in the last three years or so. Thanks especially to young people. I hope it's not just the young people I happen to know and that is something more widespread. For example I remember when visiting South Africa as recently as twenty-odd years ago I saw people experience the remainders of the appartheid that had formally been dismantled.

My work on the collective subconscious comes from there. You needed to have an ID with you to do anything there, so there were photo stands in the streets where you could get your picture taken for the documents. There's where I would find many negatives of portraits left on the ground . So I started collecting and scanning them to build the *People Database*. For me it was a confrontation with otherness. But then I expanded the project and brought it to Europe. By then it contained also white people and their experiences. And then I translated it into a website and various installations. It lasted for 5–6 years. I was closely connected with these problems because of my artist friend of color. In the 90's exhibitions were made to showcase artists of color as a homogeneous collective. They used to call them "artists of the diaspora". It gave them a kind of visibility but at the price of flattening distinctions. For some of them it was humiliating. They would say "I am not an artist of color, I am an artist". Today the artwork is much more open and it sometimes actually leads to change in other fields as well.



"'The People Database' archive is based on an extensive and ongoing collection of passport Polaroid backflaps, gathered from [AnneMarie's] journeys throughout the world. The People Database Archive profiles itself as on open system, a laboratory to experiment and exchange. In collaboration with other artists it explores the varied and provocative presence or artistic alliances in our culture". (from AnneMarie's website)

Politics of Change was more educational. You can see it on two levels: an attempt to change the mindset of western white people, and a physical and practical change for people in India, where I made anthropological movies and documentaries. In early of 2000 I was in an organization working around technology and producing art projects with straightforward technologies as physical computing. At that time, I attended a lecture where I first became aware of Barefoot College. It was an organization that wanted to do something for impoverished people in Rajasthan. Climate change was already so serious there that a lot of people had lost their jobs as farmers. The organization helped the villages reorganize themselves by teaching solar engineering to the women of the village. They were illiterate, so they used drawing and design-based educational material to teach them how to build basic circuits and connect solar panels to appliances. They signed an agreement to give the women the responsibility of providing energy for their village and sending them to take lessons for six months. I interviewed them and made installations with the outcome of the conversations and objects like the solar lamps they created. This non-profit then expanded in other continents and is now working in several communities to empower women and reduce poverty.

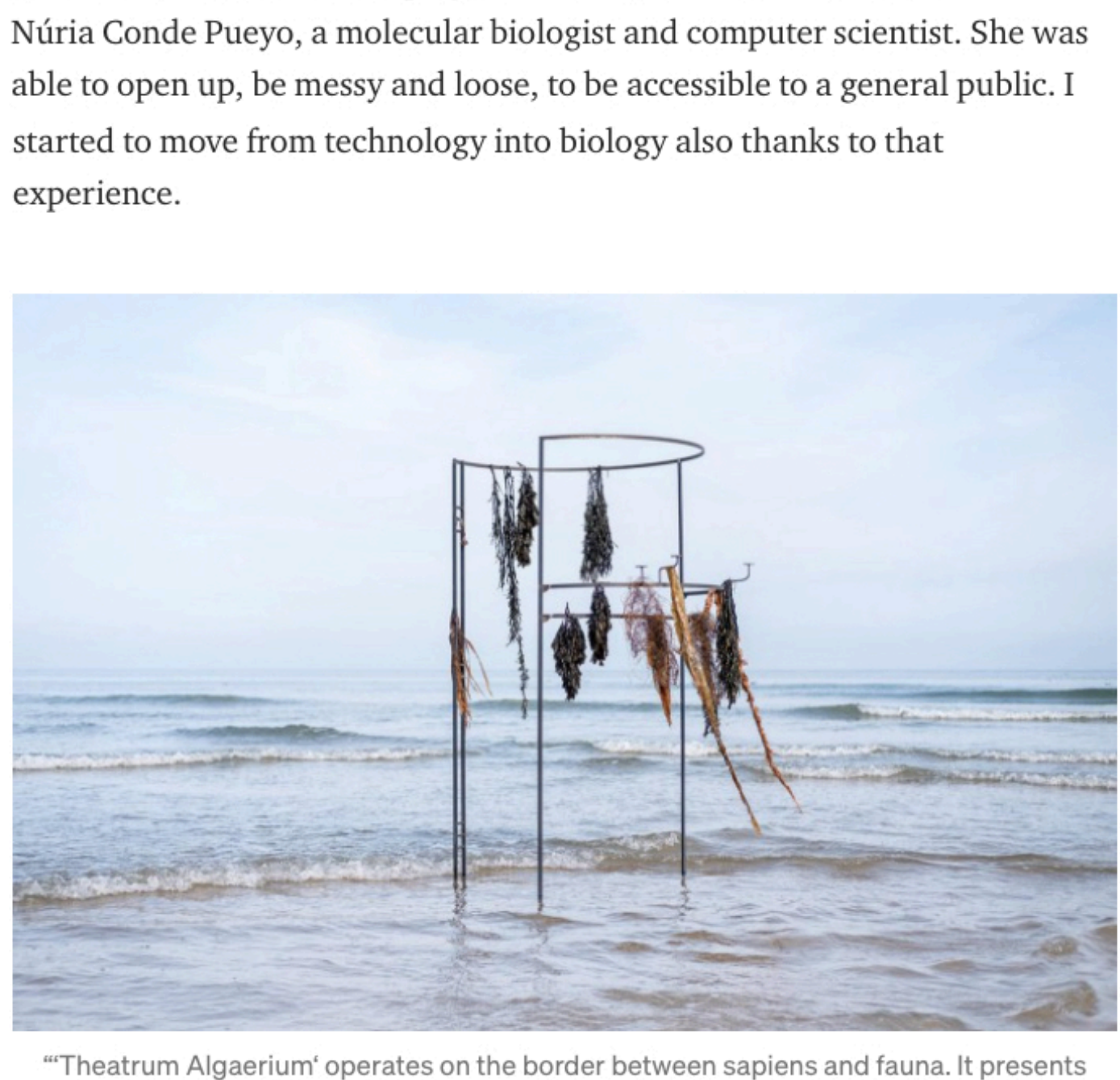
KC: You are a central figure in the world of collaborations between art and science. What are the necessary conditions for prolific art/science cross-pollination? Which collaborations would you say were the most successful in your career?

A.M.: There are many aspects to consider, but at the center of everything there are people. Everyone involved has to be interested in the topic that will be tackled and everyone should feel equally important. It's easy to say "let's make art/science" as in a 50/50 collaboration, but in reality a lot of the time the artist is doing most of the work while the scientist is less active. And that's understandable, but in a successful project it should be avoided as much as possible. For it to be a real collaboration everybody involved should also have the opportunity to gain something from the experience.

Then there's the involvement (or lack thereof) of some sort of institution. In a lot of cases a scientist or an artist who has obtained a grant from an institution then has trouble taking the project to completion, because the authority doesn't show any real interest in the execution of the plan they previously approved. This might depend on the lack of expertise of the administrators who assign grants: they don't really know what the process should look like and seem to only care about the result. And of course they want to make sure you are not wasting the money you were given. In those cases usually the weight falls on the artist. When people have a drive to change things and are highly motivated everythings falls into place more easily.

I don't think scientists and artists necessarily have difficulties communicating within their different frame of references, but in my experience the real art/science is made by scientists who make artistic installations. I never studied science, and I really think that If you want to become an artist, art school is not necessary. If you have the need and drive to become an artist you can learn the basics by yourself. It's more useful to learn biology or physics and then do art starting from that knowledge.

One of the most successful projects I worked on was in Barcelona with Núria Conde Pueyo, a molecular biologist and computer scientist. She was able to open up, be messy and loose, to be accessible to a general public. I started to move from technology into biology also thanks to that experience.



"'Theatrum Algaerium' operates on the border between sapiens and fauna. It presents possible futures in a new bio/techno/natural world, a universe that is at once terrestrial and aquatic, a prerequisite for future coexistence. In this garden of marine delights, our ecological consciousness explores the speculative time that occurs in the form of a loop". (from AnneMaire's website)

K.C.: You work with algae, bacteria and other unconventional co-creators. Does this make your practice sustainable? Do you ever think of your materials as "green"? Do you choose them for that reason, or do they just happen to be sustainable?

A.M.: I am obsessed with learning about natural materials and all their possibilities. I always jump from one to the other. Which means I don't risk falling into the trap of repeating myself, but it also means I need to spend a lot of energy in the practice. Because some experiments take a lot of time, but might then lead to nothing. And a lot of these materials are not everlasting. Which poses a conservation problem, especially when you need to show, lend or sell your art. But I'm still interested in all of these possibilities like growing a leather-like substance from SCOBY* and dyeing it with natural dyes from the plants that I grow in my rooftop garden. I also employ algae, mainly to produce textiles or in combination with other materials to make artworks. To me working with sustainable materials is a conscious choice and a specific interest. Sometimes I am forced to add materials like plexiglass for preservative reasons but I am creatively more attracted to these substances. Maybe sometimes they are natural but not sustainable? Some things that are naturally sourced could require a non sustainable process to make them usable, for instance. Or even cyanobacteria and algae themselves could start to bloom and take up too much light and nourishment, like in Venice where they are completely overgrown. When I decided to work with the different actors I didn't go about it as "bacteria sound interesting , I want to try making something with them". There was always that invisible thread that took me from one thing to the other. It's all in the same realm of natural things that also are sustainable.

K.C.: What responsibility do you feel artists have in the world as actors of sustainability? How has the opinion and behavior of the art world changed since you started working with ecological questions? What do you think will happen in the future?

"Bees exhibit very original solutions to the challenges that social insects face, e.g. on the level of communication and collective decision making. They are an endless source of visually stunning images and sounds and their remarkable collective behavior provides inspiration and metaphors for the functioning of human society". (from AnneMaire's website)

A.M.: I think it's up to the artist to work around sustainability. I don't think it's the task of every artist, because some of them want to be different and work in an exclusively aesthetic way. I also know artists who are completely against the idea that art should do anything about social issues. I personally believe that, especially if like me you treat ecology as your main subject, it's your role to bring it out, to talk to people and make them more conscious with your work. It's not an obligation but if you create good work it will raise awareness automatically. Don't do it because it's trendy and a buzzword.

The approach of the art world has changed in the sense that they are making exhibitions on the subject of ecology, and that's already a good start. But I think it's mainly the smaller institutions who are truly aware. The bigger you go the more difficult it becomes. I worked with bigger art centers and a few of them seem to be more socially conscious, and for instance consistently pay artists that work for them. They are also starting to feature topics that they wouldn't have even acknowledged ten years ago. But the way they set up exhibitions and organize lights and transportation hasn't really changed. The problem is that institutions tend to fear change in general. I have frequently found resistance to exhibiting my artworks, not because of the message they promote, but for the logistics. Many curators want to show a live bee colony but their museum doesn't allow it. There is always some issue. These kinds of artwork ask for additional care and can sometimes raise worries about safety. To welcome these works in the institutions a change of mindset on every level is needed. I think one of the most radical but effective solutions to make the art world more sustainable would be to reduce transportation and limit long relocations of people and artworks. We need to make things more local. Travel more by train and make them more affordable and frequent. I don't own a car and move mostly by train. It's perfectly possible, at least living in the city. Of course it means that it's more complicated to attend evening events outside my own city. But I do think this could be a good start.

AnneMarie's work resonates with Ki Culture mission in many ways. From her socially involved research of the beginning of her career to the more recent sustainable practices. With the help of artists like her we can effectively bring about change in the artworld, through communion and collaboration with the natural realm, all the while raising awareness in the public.

*SCOBY: acronym for Symbiotic Culture Of Bacteria and Yeast. Cultures of this kind can be used to produce various kinds of food or, as in AnneMarie's case, biofilms that resemble leather.

All images courtesy of the artist.