

HYBRIDIZATION OF ART AND SCIENCE TO ADDRESS BIODIVERSITY CRISIS



INTRO

On July 2022, Quo Artis organised a working group to reflect together about of the hybridisation of arts and sciences, and in particular on the ways in which such hybridisation can help us to address the crisis of plant biodiversity.

The assignment was structured into four sessions, with each session assigned a rapporteur responsible for tracking the conversation and subsequently composing a text that would authentically capture the key ideas presented during the working session. The intention was to allow for a candid expression of thoughts, without attempting to conceal personal perspectives or biases.

1ST SESSION

24TH OF MAY 2022

RAPPORTEUR:
NÚRIA SOLÉ
BARDALET

PARTICIPANTS:
TATIANA
KOUROCHKINA,
ANOUCHKA SKOUDY
& PEP VIDAL

DEFINITION OF ART:

1. skill acquired by experience, study, or observation
2. A. a branch of learning
 - (1): one of the humanities
 - (2): arts (plural): LIBERAL ARTSB. (archaic): LEARNING, SCHOLARSHIP
3. an occupation requiring knowledge or skill
4. A. the conscious use of skill and creative imagination especially in the production of aesthetic objects *also*: the works so produced
4. B. (1) FINE ARTS
 - (2) one of the fine arts
 - (3) one of the graphic arts
5. A. (archaic): a skillful plan
B. the quality or state of being artful
6. decorative or illustrative elements in printed matter

DEFINITION OF SCIENCE:

1. A. knowledge or a system of knowledge covering general truths or the operation of general laws especially as obtained and tested through scientific method
1. B. such knowledge or such a system of knowledge concerned with the physical world and its phenomena: natural science
2. A. a department of systematized knowledge as an object of study
B. something (such as a sport or technique) that may be studied or learned like systematized knowledge
3. a system or method reconciling practical ends with scientific laws
4. the state of knowing : knowledge as distinguished from ignorance or misunderstanding

I begin this rapporteurship with the definitions of art and science to try to understand, beyond what intuition tells me, what is the specificity and nature of each discipline. Reading the generic definitions it is clear to me that both science and art study, observe and know. Science does it with accuracy. Art does it through expression. Art uses aesthetic principles and science has systematized knowledge. I appeal to the dictionary to separate. I can debate concepts like accuracy or expression but they serve me to draw a line and a simple base from where to start talking and remembering the things we said and thought together on Tuesday, May 24, 2022. So what is this space of encounter between the two disciplines if we accept these differences? Why can we talk about art and science and/or even consider looking for a word that breaks this duality and allows us to think of the two disciplines as a whole?

The starting point shared by the two disciplines is a question about the world. A utopian question, as chimerical and unattainable as the horizon, which aims to give an explanation about the immensity of the world of God¹ and the world of men and, in short, which asks about the meaning of life. To name is to give reality to things, and both science and art have a formative character, that is, they construct reality because they give it a name.

Since the Modern era, I will not go back further because we owe the separation as such between art and science to Humanism and, above all, to the Enlightenment, questions about life have been raised from different standpoints. And in this sense that we can understand the cooperation between art and science as a path of unlearning. It is necessary to transform the worldview and look for the rupture in the thinking of our

1 The rapporteur names God from an atheist position in an attempt to embrace the immensity not only of the world of things but also of the world of men and all that can be thought by us and, ultimately, constitutes our world.

ancestors who already understood the world from a holistic² point of view. Doesn't it make sense for us to collaborate and find answers if we share common questions? Wouldn't it be beneficial to establish and develop a shared meeting area if we collaborate?

The poet Gabriel Ferrater said to Baltasar Porcel on one occasion:

"But this means that a culture that has its strongest point in poetry is turned upside down, as Paul Valéry said in a series of lectures he gave in Barcelona in the twenties. Poetry should be the tip of a pyramid and not the base. Then it would be necessary to ensure that Catalan culture would be made up, not of novelists, but of mathematicians, physicists, geologists: this is the basis of a culture, physicists, geologists: this is the basis of a culture".

Ferrater presents a perspective on the interplay between art and science that operates through multiple layers. It is obvious that the starting point of this meeting wants to escape from this point of view, but the quote helps to understand well the correlation and necessity that exists between the two disciplines. The essence of this idea is best exemplified by the notion that a robust scientific culture is fundamental to the foundation of a strong overall culture. In a somewhat imprecise way we could say that first comes knowledge about the world and then reflection on this knowledge.

Throughout history, art has consistently incorporated scientific knowledge in its creative process, whereas the realm of science tends to reactively respond to the knowledge generated by art. Although my knowledge on this subject is limited, the group is in agreement, and my intuition strongly suggests that this is indeed the case. I am acquainted with artists who possess knowledge and avidly engage with scientific literature, but I have yet to encounter scientists who draw inspiration from art. It concerns me that there may be a certain ignorance

2 There are words that the author does not rely on and holistic is one of them, because she dislikes trendy words. Let's say that the idea is to define a systemic thinking that tries to approach the world from the whole and not from the parts that make it up.

in this regard. In fact, it would be a captivating narrative to explore and highlight the scientists who have discovered art as a wellspring of inspiration.

Galileo Galilei, a medical student in Pisa (a city which was then part of the Duchy of Florence), attended a lecture on mathematics given by Ostolio Ricci, professor of geometry at the Accademia del Disegno in Florence. From that moment, a pioneering figure in the realm of modern science joined the drawing academy in Florence, and the subsequent events of this story have already become widely familiar.

There exists no singular approach to conducting science, much like there is no solitary approach to practicing art. Although there may be a direct line connecting two points, we are fortunate that we can traverse the distance by walking, bridging the gap between them.

About the institution:

Throughout the discussion, a persistent question has revolved around the necessity of implementing certain measures, of institutionalizing, to delimit a field of action, an outline within which to project art and science in a space of freedom. The tension between conceiving a new institution or creating bridges between existing ones. The challenge lies in establishing a space or bridge that possesses the potential for a systematic framework. It involves considering how to shape this space as a hybrid entity rather than a distinct and exclusive domain.

The scientific establishment appears to have limited openness to this process of hybridization, while the artistic institution, by its inherent nature, is more receptive. Art is inherently penetrable, drawing nourishment from diverse sources. It readily welcomes external elements and influences.

The potential for collaboration between art and science already exists, but what is necessary is to formalize and structure it. To establish institutions and create a space for legitimization

and recognition³. We engage in discussions about the imperative to establish standards and validation mechanisms for this "work." This entails instituting calls for participation, establishing a system of awards, magazines, scholarships, and universities that validate this field of study. The aim is to create tools of recognition, unlocking opportunities and facilitating interdisciplinary pathways.

According to Wikipedia, an institution is comprised of a collective of individuals confronted with a situation that requires resolution. Consequently, they must establish norms, rules, and a coordination mechanism to regulate their actions and collaborate collectively. This definition aptly encapsulates the ideas we are conveying regarding the context that should be cultivated.

There is, however, a contradiction between some of the ideas that we are putting on the table. What do we do with words like performance and result? Under what logic should these validation standards be created? What are the factors that define the boundaries or criteria? Those of art? Those of science? Neither of the two options? We oscillate between the hacker/activist and the need for recognition and validation of the institution. Between the freedom that the margin allows and the imperative of becoming a focal point for exerting influence on society. Art, science and politics.

Art receives validation from the market and critics, while science is also validated through the market and academic papers. Both domains rely on regulated institutions like museums and universities, which confer value upon them. A comprehensive set of rules operates effectively within both disciplines. When they are no longer contemporary, history plays a crucial role in highlighting and contextualizing them. Ultimately, time serves as the final link in the validation process.

3 The rapporteur is uncertain about whether or not she agrees with the idea, but she acknowledges the underlying necessity. She has not given it sufficient thought, or rather, she is aware of the risks associated with institutionalization. However, she also recognizes the advantages. In fact, she believes in the importance of institutions, yet she is uncertain about how to ensure their robustness and avoid their potential pitfalls.

History is a science:

The rapporteur needs to make a paragraph about this non-discussion that happened at the meeting. In fact, I will be assertive and not question it. History “is the science that deals with the study of historical events as a set of people’s actions in the past, and the narration of these actions”⁴. History has its methods of verification, it has its sources and it needs research to validate or deny hypotheses. It answers questions and, like science, cannot aspire to the truth.

Art and historical science have perpetually coexisted, forming a symbiotic relationship where each discipline nourishes and relies on the other. To ignore it is to remove depth from the debate and to have a limited vision of what science is and to deny a discipline that has been contaminating artistic practice from history painting to archival art. The latter, in fact, has not used history so much as its sources and methodologies. Additionally, my thoughts turn to an essay penned by Perejaume, titled "Ludwig Jujol," in which the artist establishes a remarkable and captivating connection between the architectural fantasies constructed by Ludwig II of Bavaria and the imaginative, whimsical architecture of Josep Maria Jujol. I also recall that Tàpies, in one of his articles, advocated for the importance of fostering a close relationship between art and science as distinct yet complementary methods of understanding the world.

Pandemic times:

The COVID pandemic has emerged as a prominent theme in our contemplations, which is only natural given the significant crisis we have collectively experienced, wherein science has played a crucial role. Crises have often been regarded as moments of potential, and this line of thinking reminded me of Francesc Tosquelles, the psychiatrist from Reus who seized upon the traumatic backdrop of war and concentration camps to pioneer a subversive form of psychiatry known as

institutional psychotherapy. Tosquelles held a profound belief in the potential of institutions and their capacity for healing. He spearheaded a transformative movement within the asylum setting.

While the pandemic has created opportunities for collaboration, it is evident that the scientific community has had limited dialogue with other disciplines when making critical decisions to mitigate the spread of the virus. Regrettably, a singular criterion prevailed, overshadowing the consideration of other factors that significantly impact people's lives.

About Education:

I insisted on the idea of unlearning.

The division between science and artistic disciplines is a learned concept. Hierarchies concerning knowledge have been ingrained, leading to a period where the scientific paradigm has been revered as a dogma. To truly establish a meaningful connection between the two, we must exert the effort to unlearn what we have been taught. It is essential to relinquish the notion of an antagonistic separation between art and science and reclaim the mental space that fosters cooperation and collaboration between these disciplines. Initially, I had considered using the word "enrich," but we should avoid framing it within the confines of capitalist language. Instead, we need to approach this from a perspective of dissension. We must engage in critical thinking, embracing the concepts of thinking alongside, challenging, thinking within, and thinking for.

Reminder:

I conclude this account by emphasizing the objective of these meetings: to establish protocols, in other words, to draft a document that captures the discussions and resolutions brought forth during these encounters. The aim is to formulate a convention and fundamental principles that govern and define this collaborative space between science and art that you are in the process of creating.

4 Definition by Institut d’Estudis Catalans

“Our business in living is to become fluent with the life we are living, and art can help this.”

John Cage

2ND SESSION

31ST OF MAY 2022
NÚRIA GÓMEZ
GABRIEL

PARTICIPANTS:
CATERINA
ALMIRALL,
GABINO CARBALLO,
JORGE CARRIÓN,
ALEXANDRA LAUDO
& ANOUCHKA
SKOUDY

A FIRE IN A TREE¹

*Here you will always be an outsider, a stranger,
a tree of nothing, looked down upon
for all supporters of symmetry and uniformity.*

Jacint Verdaguer

Sitting around the work table, the protagonists of human bodies. Below, his restless feet. Outside, the leaves of the lime trees.

| — I am a botanic criminal — he declares.

Of all the crimes against vegetation that he has committed under the regime of the public administration of parks and gardens of the city of Barcelona, there is one that he cannot forget. The killing of an immense, old and precious tree due to the stabilization of a wall in the public space of the city. Yes, a wall. A signature on the paper, and on with the execution. Enormous amounts of trees are uprooted for reasons such as, for example, comfortably guaranteeing the opening of our world's infrastructure. As he wonders if our bonds with vegetation are nothing more than the mirror of our interpersonal relationships, while pondering what the fragility of these bonds turns us into, he decides to share another anecdote with the rest of the group. Proudly, he explains that, just a few months ago, he himself was able to save a hundred sixty-year-old trees rooted in the ground where a railway was to be built. The life-saving

1 I have been invited to write some notes about the working session of the project Roots & Seeds XXI. Biodiversity Crisis and Plant Resistance held last May 31, 2022 in the modernist complex of Hospital de Sant Pau in Barcelona. The starting point for the working group is to think, collectively, and from different fields of knowledge, if we can have a greater capacity to respond to face the current crisis and the degradation of biodiversity of the plant world with the tools, methodologies and practices that are set in motion when art and science meet. The work session was convened by Lluís Nacenta, Caterina Almirall, Alexandra Laudo, Gabino Carballo, Jorge Carrión and Anouchka Skoudy. This text is written, therefore, through their words.

action consisted, quite simply, of moving its route a few centimeters.

THE IMPOLITIC LIFE OF THE GREEN

The survival of the hundred trees that today shade the train tracks today depended on what the technician calls “personal factors”. Rather, we would say that the reason for its survival was strictly biographical. As was also the old oak on Encarnació street in the Gràcia neighborhood of Barcelona. A story mobilized by the *Salvem l’Alzina* (save the oak) platform and starring the neighbors in action. An epic story in which the human community that shared territory with the bicentennial tree managed to preserve its life. An operation of expropriation, conservation and compensation by the city council that entailed an economic cost of 7 million € out of the total budget of 55 million €. The singular case of the old oak in Gràcia also entailed a review of the district’s heritage catalog by the city council in which, for the first time, green was included in the institutionalized notion of historical memory. This neighborhood mobilization process, however, rather than a properly articulated discourse, what it produced was a collection of lived sensations, cultural practices and emotional memories of the common that were recorded in the documentary “Com una alzina” (like an oak) in 2019 by the director Oriol Díez, himself a neighbor of Gràcia.

Honestly, all these anecdotes make me think about life. The general idea of life. But the truth is that I don’t know much about the life of trees. What I do remember is that to name life, Aristotle used two words: *zoé* and *bios*. The the first term refers to the simple fact of living, to the metabolic life that is common to all living beings. The second, to the type of life proper to an individual or a group of humans. In the old philosopher Politics every meaning of life is related to a space: “while the city, the polis, is the space of the bios, where the human being, being endowed with language and reason (*logos*), relates to others and decides on the common good, the home, the *oïkos*, would be the space where this life called *zoé* would be reserved for feeding, reproduction or resting. The life that would develop, therefore, in the political sphere would be that life

endowed with a political supplement linked to language that would make the human being one species different from any other living being, and which Aristotle qualified as *Politikon zoon*”.² For this reason, Giorgio Agamben, a few centuries later, will place this distinction between two (or more) kinds of lives as the exercise of power par excellence, and he will say that power is that which practices the split that distinguishes one politically valuable life from another, relegated from the political space: the impolitical life of the green.

— Perhaps, what happens to the trees that we decide to preserve is not so much a process of humanization but a process of objectification — he asks the rest of the group.

The technician uses the term “personalization” to refer to the phenomenon that justifies the existence of trees based on human biographies that are intertwined with vegetable life, an existence that would become political through the use of memory, the word and the reason. The curator, on the other hand, considers this operation something similar to the process of singularization done by the museum institution when it gives a certain value to some specific objects that would be worthy of being separated from the rest.

— We save an individual in relation to others, we objectify them to make them part of a collectable minority — she adds.

2 Valls, J. E. (2018). *Giorgio Agamben: Política sense obra*. Barcelona: Gedisa. Page 16. In this essay, where Juan Evaristo Valls Boix analyzes the post-foundational political thought of the philosopher Giorgio Agamben, the author develops a critique of the political machine of the West, which has exercised power by shaping and dividing life between a political life endowed with meaning, and another naked, absurd and contemptible one: town and crowd, citizen and immigrant, Aryan and Jew; Agamben allows us to go beyond these schemes and think about a politics of being, without work, and a life that finds its politics in the dismissal of the forms of domination and in the disabling of the devices of subjectivation.

Trees, however, are not individuals. Trees are colonies. Technically, from one single cell it is possible to reproduce the entire colony. That's why all the trees in our city are clones, the same cell of a body that we have displaced. Single-cell eugenics in hands of technique and efficiency. A postnatural selection criterion that ends with the green metabolism of the city to maintain control over its wildlife, its life in freedom. In this way "they are more predictable", says the technician. The fact is that we select the individuals who, according to the administration's criteria, have those particularities that for us urbanites would be an "advantage": they are tall, fat and beautiful, they grow straight, they don't drop branches, they don't generate seed, they produce prettier flowers, withstand the drought better... And therefore all power relations with our environment that used to be given holistically would now develop under utilitarian criteria. The only way to give way to the birth of a new colony would be through its own reproduction system.

— We ended its sexuality — he confesses — one day they called me because there was one fire in a tree.

STORIES ABOUT CHANGE. UNEXPECTED ENCOUNTERS IN THE MANNER OF SPECULATIVE FICTION

I hang around for a while thinking of the city as a museum of trees. Before arriving at the modernist premises of the Hospital de Sant Pau, I have decided that during the work session I would dedicate myself to being silent and listening. So far so good.

— What defines the vegetal subject? The age? The colony? Will we give the forests the territory that belongs to them? —adds to the rhetoric— The History of Humanity is the history of gradually recognizing subjects to whom we have denied rights. First the animate beings. Next the cemeteries of abandoned objects. To restore their rights, to regulate these rights legally, socially and philosophically should be done in the manner of speculative fiction.

As they discuss the importance of regulating the rights of life forms from the law, but also from art, literature, philosophy, science and speculative fiction, as they imagine the wild paths to a biocentric perspective of our coexistence with the environment, I repeat to myself, in a low voice, that to do it from-and-with language and reason would always be bullshit. In fact, it is already completely Kafkaesque to think any non-human political agency with our human faculties. I am one of those who think, certainly very lightly and with little scientific rigor, that this exercise genuinely paternalistic would hardly escape what I have decided to call "the Lion King Effect". What happens when the arts and technologies rooted in the tendencies of posthumanist thought move with the desire to "give voice to the other", to confer logos to the non-human subject. A bit like when I sing, mountains dance³. The *Hakuna Matata* of the Copernican turn.

Clearly, whenever we do the "imagine you are..." exercise to "become more empathetic" the result places us in the impossibility of escaping human subjectivity and our limitations when it comes to understanding, perceiving and reasoning about what it could lead us to recognize the rights of non-human entities. So while I wonder if it is from this impossibility that we should embrace the wild, that which has not been captured or domesticated to remain in the metabolic freedom of the simple fact of living, they reflect on the question of whether it would be necessary to know better the ways of being of the plants to stop seeing them as something that can be replaced or regulated in terms of efficiency, and they wonder if they should abandon the fable of the hero and live with lice on their heads and cockroaches in their shoes.

— Let's go deep: completely renounce the moral superiority that we have granted ourselves as a beings endowed with self-awareness is a very radical position — they exasperate.

3 Reference to "When I Sing, Mountains Dance" by Irene Solà, Graywolf Press, 2022.

The group tries to think about the romantic turn of art a state of emergency like that we are currently going through. It doesn't bother me at all that art is romantic. Art also has its own metabolism. And deep down science is also romantic, but apparently that doesn't bother us that much. At this point I get distracted by remembering a conversation I had held, a few days ago, with the science fiction writer Manuela Buriel on the terrace of the bar Mendizábal in the Raval district of Barcelona. Buriel told me about the difference between the concept of "reflection" and that of "diffraction" that she had learned in a workshop taught by Hellen Torres⁴ based on the work of speculative thought by authors such as Donna Haraway and Ursula K. Leguin. Writers who write many beginnings but no ending. They do not write endings because the end would be the Apocalypse, and they write change, mutability, adaptation, collaboration and unexpected encounters like the one we experienced with the COVID. Writers who narrate in the contact zone and in the search for balance. Authors who write stories that embrace conflict, struggle and death but do not nurture them of the hero's success or control of destiny. In fact, if we think about it, when we narrate the current climate crisis we often postpone the possibility that life can continue its course any longer beyond human existence.

To deepen the metaphor of diffraction, Hellen Torres starts with the dialogue between the texts by Donna Haraway and Lynn Randolph's painting entitled *Diffraction* (1992). One image where the figure of an all-powerful man stands behind a central feminine figure that incorporates the multiplicity of beings and that has two heads and an extra amount of fingers

4 On June 6, as I write this text, I ask Manuela Buriel if she can remind me of some of the ideas she shared with me a few days earlier. At 5:50 p.m. the same day, she answers me with some attached materials related to the workshop "Érase una vez... y otra vez... y otra vez" by Hellen Torres. Based on these materials I synthesize some of the ideas to prepare this report. Hellen Torres has been teaching literature and speculative thinking courses since 2016 under the conceptual umbrella that she herself calls "SF Workshops. Thinking about the possibles to make them probables". You can access information relevant to their workshops at the following url: <https://helenatorres.wordpress.com/talleres/>

on her hands. The metaphysical space between the two, Torres tells us in the words of Randolph, is the space of diffraction: "the thread of the future facing the abyss of the unknown". To understand this aphorism it would be necessary, however, to take a step back.

Diffraction is an optical phenomenon that Haraway introduces in an article entitled *The Promises of the Monsters: a Regenerating Policy for Other Inappropriate/bles* (1999) and that she approaches as a metaphor, as a figure to talk about thought. Later in the book *Modest_Witness@Second_Millennium.FemaleMan@Meets_OncoMouse™: Feminism and Technoscience* (2004), the thinker will expand the notion of diffraction as one alternative to the concept of reflection and will say that we reflect when we think, that a reflection is a subject who confronts the mirror that returns his own image, fact that Haraway will call "the sacred image of the identical". An image where the reflection would be a copy or an imitation of the original, the myth of creation in the image and likeness or Plato's cave. Diffraction, on the other hand, occurs when, in front of an obstacle, a diversity of frequencies, of life vibrations, combine and overlap each other producing patterns of interference. Diffraction, in the field of thought, therefore, would allow us to combine the difference because it would deal with heterogeneous history, and not with the originals. In this manner, unlike reflections, diffractions could be a metaphor for another kind of consciousness, committed to the creation of difference instead of the repetition of the sacred image of the identical. According to Torres, what Haraway would tell us is that "diffraction would be oblique to the Christian narrative and the Platonic perspective, both in the technoscientific stories and in the most orthodox manifestations". Diffraction would then be "a narrative, graphic, psychological, spiritual and political technology for the creation of consequential definitions". And from this perspective, Hellen Torres explains, "diffraction would no longer be a metaphor for material thought but an onto-epistemological tool and a pedagogical practice".

— They talk about quantum physics with narrative structures from the 1980s like Powerpoint — she dropped. Then she reminds the rest of the group that

art always integrates science and technology, whatever the era; that artists, curators, programmers work in search of patterns, perverse motives; and that the challenge would be that both science and technology also integrate the forms of contemporary art.

The truth is that to me, the image of retro scientists explaining the cutting edge of physics quantum with curtain effects makes me smile. But then, I think maybe it is necessary to go further, that perhaps the question would be that both the forms of integration of the science and technology, like those of contemporary art - whether romantic or not - would break at once the mirror of the sacred image of the identical to embrace the patterns of interference in current ways of life.

THINKING FROM THE ARTISTIC-SCIENTIFIC POINT OF VIEW. LEAVE THE OBJECTIVES ASIDE TO EMBRACE RELATIONSHIPS

— Do we think then that we can face the biodiversity crisis with the tools, methodologies and practices that are set in motion when art and science meet? — he asks recapitulating.

Karen Barad would say yes. Her feminist physics has conjugated the optical metaphor of diffraction on several occasions, because the ways of knowing would be, according to her approach, always entangled with the forms of life. But the question of how to get out of human existentialism when thinking together with non-human entities would consist —according to the diffractive thinking of feminist speculative criticism— in “think-with” and not “think-as”. That is to say that in no way our task as human beings should translate what the other says. The reflective thinking of the Western ocular centrist society believes that the observed reality is stable. However, we also know that the gaze makes the world. Therefore thinking-with would not consist in giving the word to non-human lives, nor in translating their communication systems, even less in valuing the ways of life of the most cute above those that have been relegated to the category of the monstrous. Rather thinking-with

would help us to detect what forms of what we call thought do set in motion those entities we share the world with, to open up the possibility of being able to change our own idea about who thinks and what it is to think. Then, from this perspective, the material body of the biosphere would not be a blank surface waiting to be written by the biography, culture or history, waiting to be given meaning and open to the exchange. The body of the forest is not situated in the world, Barad tells us, but is of the world. So the green world of the forest body would ultimately challenge the limits of our own corporeality while asking us about the responsibility to live as an embodied being.

The human body must die in order to live. We are denying that life is also death and that our experience of the world takes place in transience, not only as a place of passage but as a living space. Despite the fact that the net of relations on planetary scale of the capitalist system want us to believe that it is not such, while tattooing on our foreheads the tautological motto “No Limits to Growth”, our experience of the world becomes contingent and impermanent. We trace the course of our lives very close to the abyss of the unpredictable and unknown. Perhaps it is this concern, the ambivalence between growth and barbarism, that has led us to deal with the life and death of objects with arrogance and self-sufficiency. It is not surprising, then, if we think about it, that so many processes of patrimonialization of forests and objects of art respond to desire of saving an individual above others. A single one that represents the rest. And if we pay attention to how objects of art live and die in the artistic space of the Museum, we will discover the place where the institution stabilizes a certain knowledge above others.

We don't trust progress or apocalyptic tales. We don't know where to hold on so as not to fall into the abyss. We have lost the great stories and we lack new ones that can accompany us in leaving aside the epic of the objectives (where we are going) and being able to embrace relationships (when and where we walk, how we do it, with whom). Stories where care and justice would always go hand in hand: the fable of responsibility. That which Haraway would call “the ability to respond to those who suffer from consequences of our actions”. Then, maybe here,

the state of exception would mean to stop thinking about art as a “form” and to see it as a situated possibility. In other words, to stop thinking about “making art” to be able to “make art”. To do with art even something that could not be considered art. Asking ourselves what we can think-with from the artistic-scientific perspective in a situated way, in a here and now that takes into account the relationality and the networks that are being woven (economy, market, history, culture) between the human and non-human life forms of the world.

In fact, ethnographic studies usually focus on an object and erase what was left out of its range. But things change a lot if we study it in a situated way, with its networks and relationship systems. If we were to approach, for example, the emergence of the coronavirus from this perspective, situated and relational, we would see how the ferocity of the Anthropocene spreads through distribution networks where industrial stowaways circulate. It would be through the distribution of long-distance goods that new living things would be introduced into local ecologies. In the same way, the great density associated with the phenomenon of crowds, human and non-human, would create a kind of uncontrollable “wildlife effect”. High saturation of carp and eels in ponds, commercial chicken farms or a subway station at rush hour produce the optimal conditions for the incubation of undesigned toxic combinations and new forms of virulence. Therefore, following Barad’s sentence, it would be nice to never lose sight of the fact that our body is not located in the world, rather our body is of the world.

— How can we think-with the biosphere from an artistic point of view today, here, us? —they ask.

— And about the interrelationships between freaks and geeks? — he insists.

— New funding structures would be necessary — he answers — but, above all, to have a new space for institutional art-science coexistence, because the impetus for scientific and artistic research could be the same, but what is rarely shared are the contexts of professionalization.

— We could also think of a non-existent name for a new entity that would not, in any case, be what is known as an art-science hybrid — he adds.

— Or we could start by recognizing art as a form of scientific knowledge —he exclaims— art is the vanguard of meaning. It is precisely for this reason that, sometimes, art is so absurd... Art would be something like the zero degree of our sensitive experience.

— It would be necessary to strengthen the situated conversation — he adds —. Make a fire. Cut out our tongues. Start a finite movement in synchrony. Maybe then we could, after all, resume the eternal journey back home. The Oïkos. The home: metabolism of the world or the simple fact of living. In front of us. Behind us. Tekné. Fable.⁵

5 Free association of ideas and own translation of the publication *Things Said Once* (2015) by the artist and researcher Esperanza Collado. Retrieved from: <http://www.esperanzacollado.net>

3RD SESSION

21ST OF JUNE 2022

RAPPORTEUR:
NÚRIA GÓMEZ
GABRIEL

PARTICIPANTS:
PAULA BRUNA,
ANDY GRACIE
& MONICA RIKIC

THE ROOM OF THE EXTERMINATING ANGEL¹

There is nothing worse than panic.
Luis Buñuel

2201.62 kilometers from Barcelona, their voices. On the other side of the ocean, time and clock. At these hours even the color of the lips fades.

— Now, all of a sudden, must art come to save us? NO FUCKING WAY — he exclaims.

The diagnosis seems obvious. Biodiversity crisis. And crisis, also, of the disciplines of the knowledge, that look at each other like lovers who have decided to break up. From all the questions that are put on the table, there is one that worries them. Science seems to be guiding the world in an indisputable way. Art, for its part, has always participated in the construction of new perspectives in crisis situations. OK. Art, then, in front of this diagnosis, would be necessary because we understand that it is a form of knowledge experimental that would allow us to unlock, that would help us understand, communicate, acquire sensitivity, open new spaces for thinking and prototyping ideas, to get out of the box, think differently. But the doubt here is about his responsibility at the time to offer messianic answers. In fact, if we stop for a moment and do an honest exercise to position ourselves in the current situation, surely we all change our minds three times a day.

1 I have been invited to write some notes about the working session of the project Roots & Seeds XXI. Biodiversity Crisis and Plant Resistance held last June 21, 2022 in the modernist grounds of Hospital de Sant Pau in Barcelona. The starting point for the working group is to think, collectively, and from different fields of knowledge, if we can have a greater capacity to respond to the current crisis and the degradation of biodiversity of the plant world with the tools, methodologies and practices that are set in motion when art and science meet. The work session was convened by Lluís Nacenta, Paula Bruna, Andy Gracie and Monica Rikic. This text is written, therefore, through their words.

About a year ago, I read an interview with the playwright Pablo Gisbert in which he quoted one sentence by Albert Boronat that said: “In front of the problem of the independence of Catalonia I can change my mind three times in the same day”². Probably the bombing media of emotional and perceptive inputs linked to the hegemonic narrative of chaos have something to do with it. The interview continued along the lines of a discussion about the erratic politics of our lives and about the need to deny what we do in order to shed our responsibility. Michel Houellebecq, for example, confessed publicly that he takes no responsibility for everything he has written. Religion and science they need the truth. Also politics and the mass media. But the artists, on the other hand, can dispense with their responsibility because they have no truth.

POINT FOR FANTASY. THE ART OF GRAYS OR THE POWER OF THE UNEXPECTED

— I’m bored with the art-science relationship — he declares — I often see projects that are neutered because they have a “solutionist” will...

The group agrees on the fact that it would be more prospective to think of what art can do rather than what effect art might have. Unlike other disciplines such as architecture or design, contemporary art does not exist to offer solutions. Although it is true that both art and science are forms of understanding the complexity that crosses us, the power of art will always be that of the unforeseen. The processes of artistic creation can surprise with new perspectives, opening doors that can have consequences —rather than solutions—, and bring about change. This would be an art without end. A game that undoes structures. A change of frame of mind.

2 Gisbert, P. I Beyeler, T. (22nd of February 2018). Interviewed by Nogueira, R. R. El Conde de Torrefiel: La libertad de expresión lo abarca todo. [Blog]. Retrieved from: <http://www.fuga.es/2018/>

— The emergency that summons us is hypocritical — she asserts — as Ayuso already said: “freedom or communism”. Everyone wants bars³.

They confess that they all arrived at the site by motorbike. And they assure that “everything is one balance”. They reflect on manichaeism and the reactionary morality of our time; about how art is, more and more, in black and white; and, about the fashion of green and the fear that they feel when they see that tomorrow everything can turn around. Their concern to embrace the gray scale and emancipate themselves from the guilt and penance of our modus operandi, leads them to recover the idea that the conception of the individual is false.

— The colony surpasses us as individuals — she points out —. Observing other life forms, such as anthills, can be a source of inspiration. However, we must be careful not to romanticise them or attribute to nature a morality that does not exist in it.

— No one knows why one artist triumphs over another — she adds — no one has any idea what will be a success. An example of this is the market studies of the publishing world. Faced with such uncertainty, publishers who can afford to do so publish large numbers of new titles every year and thus maximise the probability of hitting the mark and having a bestselling title.

While they stretch their ideas and talk about the autonomy and ethics of art, I stop a moment the audio recording of the session, moved by the desire to consult words like “success” or “end” in the etymological dictionary as the philosophers of scientific rigor would do, and I am reminded of a beautiful book by the poet Pau Riba entitled *Al·lolàlia* (1999) which he himself described as a “collection of curiosities, vices, paradoxes, double entenders, impasses, stupidities and misunderstandings

3 Isabel Díaz Ayuso, president of the autonomous community of Madrid, was noted during the COVID-19 pandemic for lax and permissive policies.

that jump like loose hares as soon as we enter the fields of linguistics even if only with a BB gun”. I love this book precisely because it materializes the idea that art, literary poetry in this case, can transform the matrix of ideas-mother of cultural communication. A book that could be read as mere entertainment based on the curious or speculative etymology, in which he unfolds a catalog of ludo-linguistic resources such as, for example, the false derivative between “ethics and etiquette”. Well then, in entry number 55, which answers the question “Why is success so exciting?”, he says:

The success? Yes: this magic word; this word made up of four letters that express, if nothing else, what we all pursue – or better, we are forced to pursue – tirelessly, despite knowing that only some, very few, will achieve it. Success is exciting; causes an excitement that is difficult to suppress. However; does it mean excitement? No, not at all. Does it mean success, triumph, achievement? Apparently yes, but also not. Exitus is the past participle of exeo (the infinitive of which is exire, that is ‘to go out’). It is therefore a purely commercial expression - just look at how even today shopkeepers often say “this product has an outlet” before “this product is very successful” - not necessarily related to an intrinsic quality: More than what is well done, what is successful is what has an outlet, which is fortunate!⁴

This exercise shows how words open up potentialities, how art generates new neural connections, new imaginaries. Al-lolàlia would be a hack to philological dogmatism. And the publication would function as a toolbox, a field of meaning and possibility that remind us that, although a screwdriver serves to screw a screw, in the unforeseen place of art it could be anything else; as was, in turn, the symbolic object that lost its function as a potty.

— We must save the planet is a wrong hegemony

4 Riba, P. (1999). Al-lolàlia. Barcelona: Proa. Page 86.

— she points out — as if the planet depends on us. Make no mistake, we want to preserve biodiversity because we want to preserve our life. We don’t do it out of altruism. We have a continuationist will and we don’t tolerate suffering. We all know what goes wrong: the exaggerated wheel of production and consumption of Late Capitalism. We are in the exterminating angel’s room and we cannot leave it.

WINDOWS OF OPPORTUNITY. STRUCTURING STRUCTURES

Interestingly enough, one of the first thinkers to study the production devices of late capitalism (cognitive capitalism, capitalism of our attention) that have locked us in the panic room, revealed a fascinating case study on the relationship between the intelligence of migratory birds and the assault on our sleep. In “24/7: Late Capitalism and the End of Sleep” (2013), Jonathan Crary recalled how, every year, on the West Coast of North America, hundreds of birds migrate north and south of the same continental strip. One of the species is what is known as the white-crowned sparrow. A bird that stays awake throughout the 7 day flight that lasts from Alaska to northern Mexico. Well, what Crary explains is that over the course of more than 5 years, the United States Department of Defense, together with alliances such as the University of Madison in Wisconsin, invested large sums of their capital in the study of the “brain activity of white-crowned sparrows birds during their long period of wakefulness, with the hope of acquiring knowledge applicable to humans”. The aim of the operation was therefore to discover ways to make it possible for people to remain without sleep and, at the same time, to “work” in a productive and efficient way. In other words, his strategy consisted in the creation of an “sleepless soldier”. One new worker that would be created through technological devices responsible for alleviating discomfort through high doses of dopamine, the neurotransmitters responsible for producing the human sensation of pleasure. This would be the late stage of totalitarian biopolitics where, perhaps, art, another language, would

help us to get out. Or at least it could offer us a utopia to get our feet out of the exterminating angel's room.

— And what is the concept of sustainability in art? — she asks —. How to be sustainable in the practices of art itself? What is the price of originality? Should the art object itself be recycled? To understand that a two-year-old work of art is not something that has lost its potential? Definitely, the temporality of art is the temporality of neoliberal success and market.

— The division between art, science and technology is a window of opportunity —she emphasises—, a question strictly linked to cultural policies and to the politics of scientific research in its most vulgar sense.

At last, the key question is raised. Quo Arts, ISEA 2022. Windows of opportunity or structuring structures? Intersection networks? Money to reach? A medal? A Mini European Silicon Valley? In reviewing the statement of intent of the ISEA 2022 framework, the group reads that its “objective” is “to strengthen the digital transformation of society”. Wait a minute, so where is art without a practical purpose? His speech starts from the fact that we are a post-digital society. That is to say that digital media is considered settled, we have naturalized it. The truth is that, from my point of view, we would say that this society has been drawn by people of the West with resources and access to technologies (also pride); and, strange as it may seem, not everyone has access to the digital technologies in their world. Then, of course, from their point of view, the European Commission would say that, in front of the uncritical and sarcastic approaches and uses of digital technology by the big corporations, it would be necessary to invest a lot of money to know how we relate to the technology in relation to democracy, sustainability, education or health. And do so for a fairer social digitization. Oppose the belief that underlies the joke that technology is created in the United States, manufactured in China and criticised in Europe.

— If we want to promote the intersection, perhaps we

should not start from such specific objectives — she reflects — I, in this context, would exclude myself. I honestly question that this is the only question. The science-art-technology intersection would deal with many other issues beyond the post-digital. For me, it is not trivial that the question is this because, then, the tools that can be generated from here will be one and not the other. Do you understand me? The study of the transformation of the Mediterranean, for example, would be left out.

— I think this is a commercial strategy to get financial funds — she adds —, perhaps they use this discourse because they believe the digitization of the world is the most socially recognized vector. Now, what do they do? I do not know. Will this be a space opportunity? No idea.

— What do we need? — she insists — Let people do what they are already doing but with more means. We don't need new monstrosities, new borders or large conglomerates of entities.

A COLD WINDOW. A BLANK CALENDAR

After a long time dedicated to listening to the collective desire, share their needs and gather the topography of their field of possibility, they arrive at what I have decided call the “cold window”. It's very easy to understand: we need the resources that we don't have. We need access to the conditions of possibility beyond the wheel of fortune of the open calls. A window that we can open when we think it's necessary. A window that helps us ventilate the room, that accompanies us in the how, and that facilitates specific infrastructures. Concrete support in infrastructures for free use and access to funding channels at the various stages of a project and/or of a career.

— Mhhh.... I think we confuse objective with instrument — he clarifies — that's why people vote for Trump. Everyone needs what we ask for. To live in acceptable

conditions. But do we take it seriously? I know that I will continue researching with the means at my disposal, but if I want to carry out projects that have the capacity to question, to produce change, then I need to be taken seriously. I firmly believe that there should be, for example, a professional pathway for artistic research, just as there is for scientific research. If Barcelona really wants to commit itself to research, the working conditions of artist-researchers should be taken into account, like those of any other worker, providing them with work spaces and sustainable medium- and long-term working conditions. In fact, ours is a very strange situation of a legality, because, in any case, from that legality we are also within the institution.

— I would say, without hesitation, that the economy of art does not exist — he continues —. There is no work, there is no union. And this is because the artistic career is based on difference and singularity. I know what a writer does, he writes, but I don't know what a poet does. I know what a sculptor does, he makes sculptures, but I don't know what an artist does. Perhaps if we abolished the figure of the artist we would free all artistic intelligences... I often wonder if we artists are the buffoons of this party; why art and knowledge are invited to the party of power and money? Why we are admired and at the same time despised in that party? Why, if art is so close to money, money doesn't reach art? Precarity is then deliberately implemented. It is not a structural precarity. Or yes it is. Its structure would be that of "the money is elsewhere".

— Isn't it also a way of controlling what art says and questions? — he asks —. To be inside, but so precariously inside, would be a way of controlling the field of possibility. I, for example, would not want to participate in stuffing a research or a cultural activity based on participation over change and transformation. There are currently research centers. Ok. And we also have a scholarship system in which you spend half of your

life writing applications, for a maximum of 6 months of research. Ok. A new window would not be needed for art-science opportunities. It would be enough to expand the institutional framework for the arts and the sciences, so we could access it cold-door, with security and guarantees, with greater stability of our bodies and our lives.

— The self-designated "inter-institutional plus inter-disciplinary" networks can have one important role. Very often a node does not know that it can act from its multiplicity, from a quasi-quantum reality. Suppose an artist wants to create a project: he could approach the network and materialize it based on his unique needs, and this would also add a new intersection. Perhaps it would be interesting to move away from the institution as a node and support the artist as a node, as the spider-that-weaves-a-net. Then, the artist could be the substantial agent in the creation of networks and toolboxes because, knowing what their needs are, they would configure a situated fabric. But to achieve this, the institutions should put aside their "ego", since what usually happens is that each institution works for its own benefit. Once again, competitiveness is placed above competence. The ethics of etiquette. It is very difficult to find networks dedicated to confluences devoid of hierarchy.

We reach now the core of the matter under discussion. To create a box of tools it would be important to think in a generative form (the what-how). Let's consider an example: if you were invited to participate in an academic symposium, most likely you would rush to write and publish a paper. If, on the other hand, the invitation was to give a workshop, you would surely prepare thematic content, methodologies and activities. But... what if you were invited to be a part of a structure instead, and they offered you, with total confidence, a blank calendar? Imagine what would happen if you arrived at a blank site with a blank calendar through a cold window. I'm pretty sure the forms emerging from this opportunity would surprise us all.

Let's remember that table that the German artist Agnes-Meyer Brandis installed in the woods next to the meteorological station where she held her artistic residency, so that the meteorologists of the same station could take tea quietly and recognize themselves outside of their normality. That is it. The scale of art. The what-how of power-form. Let's ask ourselves, in the end, what would happen if instead of building things from the outside (transcendence), we built them from the inside (immanence). Let's ask ourselves what would have happened if instead of having met to reflect - with ideas and words - sitting around the work table, Quo Artis had gathered us in a remote location because we all wanted to do something. I wonder in my heart if this could be the minimal and most honest form-power for change and transformation. What happens when we become aware of the space they take part in but that is not given as a structure? Something like a speech of people who do not speak.

4TH SESSION

28TH OF JUNE 2022

RAPPORTEUR:
MICHELE
CATANZARO

PARTICIPANTS:
MARTA DE MENEZES,
AGUSTÍN ORTIZ,
MIREIA C.
SALADRIGUES,
CLAUDIA SCHNUGG
& ROBERTINA
SEBJANIC

ART AND SCIENCE IN TIMES OF EMERGENCY

BEYOND RAISING AWARENESS. TOWARDS A DIFFERENT,
COMPLEMENTARY KIND OF KNOWLEDGE

How should art and science interact in a time of health and environmental emergency? What can they learn from each other? Is art just a loudspeaker of scientific messages, or does it have its own role to play?

Those were some of the questions tackled in a debate among artists and art scholars that took place online on 28 June 2022, within the framework of Roots&Seeds, a European project that explores the interface between art, science, and sustainability.

“The first thing art is invited to do in the context of the biodiversity crisis is raising awareness”, said Lluís Nacenta, professor, writer, and curator. Nacenta said he believes art can do much more than that: an art-driven approach to crises can make a substantial difference.

1. BEYOND RAISING AWARENESS

The participants agreed with this view and pointed out several ways in which art and science have much more to do in combination.

1A.

Art is not about mainstreaming; it must have a critical approach to science.

Scientific insights and technological advances are usually cast as given in the news. “Art can raise questions, and go beyond this sensation of mainstreaming of technology. It can reflect on what we need and what is the system that is reproduced [by technological advances]”, said Claudia Schnugg, curator and researcher based in Austria.

1B.

Art should be present in the scientific process, rather than communicate results post-factum

Scientists see an opportunity in artists because they are oriented towards communication. Artists see an opportunity in scientists because they have many more fascinating insights than those that reach the public sphere. However, the relation should be much deeper than bartering each other's talent, according to Agustín Ortiz, an artist based in Barcelona's area. "We still live in this binary world. Sometimes the matter is [reduced to] showing the final production, rather than being in the process: trying to work together, influencing each other, losing time...", he said. "It's so important to try to get closer. We are not really that separate. Sometimes I see that the experimentation [scientists and artist do] goes so much closer", he pointed out.

1C.

Art is not communication, it's communicating

Scientific knowledge that is relevant in times of crises is often so complex that it does not permeate society. "We have too much information, that does not cause any impact. We have learned that what stays is what has close emotional impact", said Mireia C. Saladrígues, an artist based in Rome. "I cannot communicate, I cannot produce any honest output, if it [what I am communicating about] does not touch me. People understand that there is a big concern when you work on something that worries you. We [artists] can create awareness, but in a different way", she said. "Knowledge is not only a rational argument, it's also connected to our body and our senses. And art is also about experiences and the senses.", said Schnug. "Arts is not communication, it's communicating", she summarized. As an example, Schnug mentioned Citizen Science as a first step that goes beyond simply transmitting information, towards creating connections and engagement. Adding art in that context creates a whole new layer that connects with subjective knowledge, values, culture, and social dynamics.

2. TOWARDS A DIFFERENT, COMPLEMENTARY KIND OF KNOWLEDGE

Nacenta raised the issue of whether, in a context of emergency, all the sophisticated points raised by the participants may be deemed as less a priority than urgent decisions based on hard scientific knowledge. According to this attitude, artists should be involved only as helpers of scientists. The participants replied arguing that art is not only far from a secondary activity during crises, but on the contrary it is a key-tool to tackle them.

2A.

ART IS A KIND OF KNOWLEDGE

In the first place, art is not "at the service" of (scientific) knowledge, but it is an autonomous field of knowledge in itself, according to Portugal-based artist Marta de Menezes. "Art still feels that it needs to comply with what we understand as knowledge, which is an idea that today is strongly based on scientific knowledge. Society is biased towards this statistical form of knowledge", she said. "But art is a field of knowledge [on its own]: the only one where one's individual knowledge is as valid as everybody else's knowledge. It is the only field where individual knowledge produced by a person does not enter in conflict with knowledge produced by the majority or by statistics. Art does not fight with the issue of who agrees or does not. It does not care about statistical relevance", she pointed out. Other human activities, like philosophy, are recognized as a kind of knowledge that is different from the scientific one. Arts must still establish this recognition. In this perspective, "art is not a form of communication, but a trigger for knowledge [of both the artist and the public]", said de Menezes.

2B.

ART IS USEFUL KNOWLEDGE IN CRISES (SCIENCE IS NOT ENOUGH)

The pandemic crisis has shown that making decisions based only on scientific knowledge is not the best way to go, de Menezes pointed out. "Statistical knowledge points to what the majority sustains, but society is not made only by the majority. There are always extras that allow the majority to be a majority", she said. Art, as a mode of producing knowledge, becomes

relevant in emergency contexts. Ortiz also agreed that it would not be wise to lay art aside, for the sake of acting as quick as possible. “The techno-scientific approach may have created or propelled the problem [we are trying to tackle]. Is producing more [techno-scientific] knowledge the best way to find a solution to it?”, he asked. Ortiz pointed out that another possible way would be stopping and changing our ways. Art may play a role in this. “If we are running out of time, it makes even more sense to say stop”, he said.

2C. KNOWLEDGE MUST BE PRESERVED DURING EMERGENCIES

Both art and curiosity-driven science may be deemed as a useless waste of time when an emergency is ongoing. “But if you don’t have basic research, you lose the possibility of finding new ways. If you don’t pursue knowledge for the sake of knowledge, you get to dead ends”, argued de Menezes. “The fact that basic research is not promoted as it should be, even if the system would get so much benefit from it, is because the system is focused on the short term”, said Ortiz. “We need to safeguard basic knowledge in all fronts, even within the arts. Artists must focus on basic knowledge so that some of us can do things that move society forward”, said de Menezes.

Keeping art and science as radically separate categories and activities is a sort of division that is coming down, concluded Nacenta based on the thoughts of the participants. “When you approach an artistic or research project, the specificity of what you are doing does not have much to do with categorization: you don’t really know whether that is science or art.. When you do fundamental research, you are not 100% sure of what you are doing. Things get established later”, he pointed out. In this perspective, it is important to provide the time and money for that uncertain, exploratory phase: a lapse of exception where everything can happen. However, identifying this phase as an exception is also problematic, because it becomes something different and important, but not something that takes part in everyday life.

3. APPENDIX: INPUT ON ROOTS&SEEDS’ GUIDELINES

The participants also suggested proposals for the successful drafting of the Roots&Seeds guidelines that will emerge from a series of debates, including the one covered by this report. Here is a summary of their input:

Art is not logocentric. Reducing it to words requires a poetic language that keeps things open.

Start by assuming nothing. Or question your assumptions.

Scientific projects need money to buy time for interactions with arts, otherwise these interactions end up building even more pressures on people that are already under pressure.

It’s hard to create guidelines when you don’t know what will come next. They may easily become obsolete quickly. Using questions instead of statements is a good way to get better guidelines.

A key-aspect in science-arts interaction is finding ways to share work and creating a framework to communicate. Often, this is not about the content of the conversation, but about its language, its connotation, the shared feelings and the common interests.

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