

# BIO FRIC TION

INTERSECTIONS BETWEEN ARTS,  
SCIENCES AND TECHNOLOGIES



# Index

NARRATIVE	<u>5</u>
FRICTIONS	<u>14</u>
GLOSSARY	<u>27</u>
PROTOCOLS	<u>47</u>
MIT_SEIN( )	<u>60</u>
QUALITATIVE DATA	<u>70</u>
CREDITS	<u>79</u>



BIOFRICTION

NARRA  
TIVE

It all started by chance in 2006. It is curious how “everything”, the totality, starts from *pure chance*.

One random day in a random month, I [agent L] got up to go to my new job: museum guard at the Santa Monica Art Centre. At the time I was doing a master’s degree in Aesthetics and Contemporary Art Theory at the Joan Miró Foundation. That part-time job allowed me to have a salary and, simultaneously, “proper” time to read the class texts. Mostly because the percentage of visits was very low, especially in the mornings. My expectations were pretty simple: easy work and a part-time job that gave me the opportunity to read and survive. Well, it must be said that besides being simple, they were also completely wrong. Why? because I forgot to pay attention to the variant of chance.

On my first day at work, I arrived at what I thought would be a random exhibition, an exhibition to which I would devote some attention but certainly no more attention than to Arthur Danto’s books. Again, a mistake. I could have worked on any of the exhibitions that were divided up on each floor of the building, but (guess, by chance) I was assigned to the second floor exhibition. Who would have thought that many years later, fifteen years to be precise, I would think that I got the second floor of three. That *in-between* place which represented my own conception of the similarities between Philosophy and Artistic practice-research. The metaphors of chance, I suppose.

## It is curious how “everything”, the totality, starts from *pure chance*.

To my surprise, on the second floor I found an exhibition entitled “Days of Bioart”, curated by Capsula collective, formed by Mónica Bello and Ulla Taipale. Days of what? What was that? As someone trained in philosophy I thought: it must be something to do with Foucault.

And well, in part I wasn't so wrong. Suddenly something happened to me that, unfortunately, doesn't happen very often in art centres: I came across a multiplicity of totally unknown practices that addressed questions and worked with weird, strange and biotechnological "materials":

I remember the strangeness and amazement of the first day, I didn't understand anything at all. And just at that precise moment of experiencing estrangement, my simple expectations were dashed. I would no longer have that qualitative time of reading class texts, but would invest each and every second in those rooms to read absolutely EVERYTHING. I spent the next few weeks reading and searching for information on the artists. I was still absorbed by the strangeness, but combined with the fascination of being in front of something you have no idea about. I read about biotechnology, synthetic biology, molecular biology, cells, butterflies, tissue culture, workshops and conferences. Who were these people, and how had they come to develop these kinds of practices and projects? I literally forced all my fellow master's students to visit the exhibition by asking them "do you understand it? because I don't". For the vast majority it was relegated to a rare art and science exhibition, but I got caught up in it. I read everything I could find on these practices under the term *Bioart*. It was clear that at some point Foucault would appear, because no matter how strange I felt, I hadn't completely lost my philological-sophical bearings.

Gradually, I began to enter into a multiplicity of truly contemporary practices. Projects that addressed questions related to the powers and problems of biotechnology, patents, the intersections between the arts and sciences, both in the plural, but above all that generated knowledge from the artistic practice itself. Rigorous knowledge generated from experimental practices, and not always logocentric. It was then that I decided that my master's thesis would be on *Bioart*. It was hopeless, those strange artists had trapped me with their *bio magical* spells. Then came the Ph.D. with the corresponding dissertation on *Bioart*. And that achievement was, well, to a certain extent, plausible. What was unimaginable was that I would end up working with the artists I had read and written so much about and who had challenged me so much, pushing me out of each and every one of my comfort zones.

In May 2015, after having obtained my PhD in philosophy, I applied for a research residency at Hangar. My project (guess, on *Bioart*) was a finalist but not the winner, but the former director of Hangar, Tere Badia, told me that I should get in touch with the artists who had won

the call: Pechblenda. Pechblenda's investigations would later give rise to Prototyp\_ome, a collaborative and interdisciplinary laboratory on Biology DIY/DIWO. An initiative by Hangar and the Barcelona Biomedical Research Park that gathers artists, scientists, hackers, makers and different social collectives which aim to re-visit, re-think, co-design and develop biological exploration's processes, tools and technologies. Prototyp\_ome was the condition of possibility for the current Hangar wetlab, for "my" research to stop being *about* and start being *with, from* and *in*, but above all, it was the main condition of possibility for Biofriction.

The project ended in 2017 and about a year later, the new director of Hangar, Lluís Nacenta, invited me to prepare a proposal for a European project whose main lines of research would be the intersections between artistic practices and biotechnologies. And although the conception of the project was pretty different, Prototyp\_ome opened up each and every one of the cracks that made the idea(s) of Biofriction possible. At this point, it is perhaps important to note that we started from an important complexity: I had some experience in academic research but none in European projects. However, I simply set about projecting desires: from the very first moment I had a clear idea about who the project partners should be; now all that was left was for them to accept. Well, actually, there was one more little detail: I had to learn how to use written language technology to write a European project. It should be noted that this learning would never have been possible without the advice of Josep Seuba, an expert consultant in European projects.

Learning to write in the terms it was meant to be written in was not an easy process by any means. There was a lot of friction, very tense moments, pressed by a chronological timeline that was upon us, but above all because our uses of written language were radically different. Josep Seuba begged me not to "do metaphysics" and I replied that I was not going to change a single one of the terms I had written. Perhaps whoever is reading us now may consider this information irrelevant, but it is not at all. Because each and every one of those dissents, each and every one of those discussions, each and every one of those frictions, made the writing of Biofriction possible, because learning is processual and does not work solely through consensus. However, we certainly reached a consensus: to attach a small glossary explaining the specific use of key terms. A small glossary to serve as a guide for those who would read and evaluate the project. So, we had a first draft, we had a glossary and now we had to get our

particular *dream team* proposal accepted by the partnership.

In 2018, Spring, there was a conference/meeting in the south of Portugal organised by Cultivamos Cultura. The name of the meeting was FEMeeting and it was built upon an idea to bring individuals working in the field of art, science and technology together to exchange experiences, to meet each other and to get a chance to talk seriously, but informally, about their work, their interests, their life experiences. It was an event that had no big ambition, but that resulted in an impact that went well beyond the simple intentions of its organisers. This FEMeeting and what it became was a big surprise to me [agent M] and to my dear friend Dalila Honorato, and also a great achievement.

During the FEMeeting we heard about the work of about 70 women. Among them was Laura Benitez Valero, whom, until then, I did not know personally. It was a pleasure to see what she was researching, what her interests were and what Laura was doing to develop her research, teach and support her community. By then, I already knew Hangar as an institution and some of the members of Hangar as well.

Moving forward in time a few weeks, Laura and I maintained contact and we shared a conversation about a project she was thinking about doing that would be a possibility to develop with some European partners. I am not aware if she was having similar conversations with what we now know are the partners of Biofriction, but I imagine so.

## Little did we know that more than simply partners we would become collaborative friends

Still a bit forward in time, and after Laura proposed a draft of the Biofriction project via email, we met in Linz, during Ars Electrónica, for the first time, with all the partners that were to become collaborators in Biofriction. It was morning, we went for coffee, sat down round a table and discussed Laura's proposal as well as what our inputs for the project could be as partners, what activities would make sense to achieve the objectives of the project and started talking about what kind of methodologies we could try to develop together to advance our shared research and practice ideas. Little did we know that more than simply partners we would become collaborative friends, we would find points of connection between each other that went far

beyond professional relations. We found out that we share principles, convictions, desires to do better, a belief in rigorous strategies, and a common ethics of work.

I must say that it was not a surprise *per se*. Cultivamos Cultura and me personally, we knew these partners already, we had worked together before. And I/we, were already profoundly impressed by the achievements of these institutions and the people that make them what they are. Without that pre-existing trust in these partners it would have taken longer to say yes to a project of this nature, about these issues.

I can suggest that there are several reasons why Biofriction was different from every other collaborative project that Cultivamos Cultura was involved in. Some external to the partnership, some internal, some coincidental and some purposeful. Biofriction was somewhat of a game, where some rules are made by the partners, the setting of conditions. But also the partnership itself was reactive, responsive, and deeply rooted in the conceptual premises proposed by Laura and Hangar.

It was a project where I saw the concept of epigenetics (the study of heritable phenotype changes that do not involve alterations in the DNA sequence) very present. Where the identity of the being that is Biofriction shows the strength of its "DNA" and the mutational effects of the environmental stress very present. It was, without a doubt, a truly multilayered project that challenged us to surpass our limits and our limitations.

The first meeting for Biofriction took place at Hangar, in Barcelona, in October 2019. I think most of us were visiting Hangar for the first time and we had a wonderful grand tour of all the facilities and spaces that Hangar occupies and facilitates. It was a meeting to get to know each other and set the tone for the project. We greeted each other like old friends, as mentioned before we have worked together individually and as institutions before, there was already a rapport between us. The tone was set at respectful, friendly and with trust. Also, very quickly the standards became clearly set on high or very high, as we all had very engaging perspectives, opinions and high ambitions combined with a will to do better.

Discussing the activities planned was easy, discussing the way those activities would be put into practice to achieve and develop the rigor of intellectual standards we set ourselves to pursue was the first very pleasant friction we experienced as partners. It became clear to me that I was where(?)

The kick off meeting was the first of many meetings to come. What we could not have imagined is that even the meetings would have to be rethought during the project and that the biological temporality would, to some extent, hack the institutional chronological temporality. We, who wanted to work around artistic practices as frictions that open up spaces of possibility, didn't know that Biofriction, by chance, would become the great bio-friction itself. Before the biological accident-temporality came knocking at our door, we had the opportunity to work on the call for residencies. At that time we (actively) reflected on what we considered fundamental in the framework of a residency programme and what we considered desirable. Among the desires, we outlined the possibility for the artists to be able to move between the different institutions. There were agreements and disagreements, as well as ideas that a priori seemed radically different but that, in practice, we ended up finding out that they were not so different. But perhaps the most important thing is that in order to launch the open call, we managed to reach agreements not only respecting the needs, wishes and conceptions of each institution, but also respecting the differences. Making the difference a *potency* and not allowing it to operate as a counterpoint, as that serves to impose or facilitate the operation, once again, of dualistic structures. We planned and agreed on a calendar of residencies with all these issues in mind, but, once again, our chronological articulation of Biofriction would be hacked by temporalities and non-human agents.

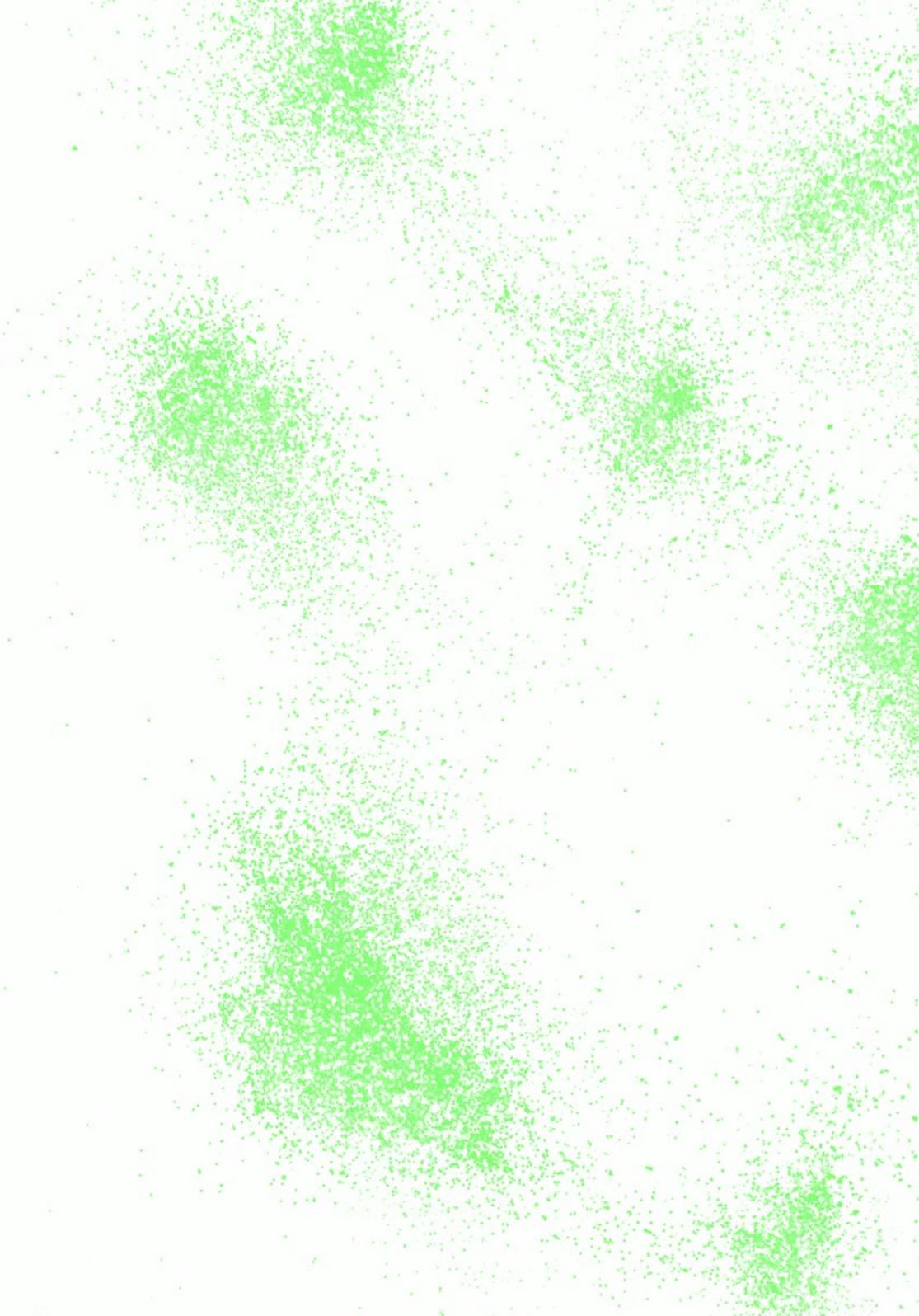
A few days after the resolution of the open call for residences, the World Health Organisation declared the pandemic. Suddenly we were faced with the necessary re-articulation of a project based on trans-

**Not only had non-human agents affected the configuration and temporality of the project, but we were also faced with the greatest possible friction: uncertainty.**

national mobility, a project that had to be re-thought in the framework not only of a pandemic but also of confinements. Not only had non-human agents affected the configuration and temporality of the project, but we were also faced with the greatest possible friction: uncertainty.

From that moment on, the efforts and dedication of the entire team were tripled in order to rethink not only the scheduled activities, but also the forced conversion of some specific activities into others, adapted to the material conditions of the pandemic. From having a very clear outline based on *what, how and when* we had to move on to *how* could we maintain that *what* and *when*? Since that (weird) time on, the *what if* vector necessarily went through all possible re-articulations, turning the whole re-scheduling into a speculative design exercise. Re-scheduling in the midst of absolute uncertainty and security measures that changed according to the territories. In addition to this, the drift that most of the projects went through, that the new meeting place would be a sort of metaverse, did not apply in our case. We certainly had to organise a multiplicity of online meetings, but we were always very careful not to fall into the tendency to “move everything online”, given that the kind of practices that articulated Biofriction were not only hardware and software, but also wetware. There was something in the practices of the project that had to do with the embodied encounter of bodies, something that could not be relegated to the *rectangularised* dimension of life through the mediation of the screen. And after many, many, many hours of conversations, consensus, disagreements, frictions, desperation and frustrations, we managed to gradually articulate activities on a totally uncertain time scale that tried to respect the initial conception of the project as much as possible, but above all that ensured the material conditions and care(s) that would accompany the artistic practices. And we were able to carry out almost all of them, thanks to the work of the whole team but also, and above all, to the commitment not only to Biofriction as a project but also to artistic and experimental practices as generators of situated and shared knowledge.

Curiously, by chance or not, microscopic non-human agents turned a project based on the intersection of arts, biology, biotech and critical thinking into the great friction of temporality, uncertainty and affirmative resistance.



BIOFRICTION

FRIC  
TIONS

What issues have run through Biofriction? How many frictions have articulated the project? How many paradoxes have we sustained?

Certainly, any project, whether institutional or autonomous, sustains a multiplicity of problems\_paradoxes and even, depending on the case, contradictions. In the vast majority of cases (specifically in institutional projects) there is a tendency to pretend that this does not happen, to *fictionalise a non-existent harmony*. Therefore, let's point out here some of the issues that have arisen during Biofriction. In the hope that they will help to demystify a conception of projects as a kind of static reality, neither as "blindly regulating natural material, with harmonics, mathematical rules of symmetry and the like"<sup>1</sup>, but rather as the [situated] stage of history [and stories].

## F1

# Mobility

Within the Creative Europe typologies, Biofriction is a project based on transnational mobility. As stated in Culture Desk Serbia<sup>2</sup>:

Cross-border mobility of artists and cultural professionals is of the key importance for encouraging meetings of creative people, as well as creation and exchange of cultural goods and services. Encouraging mobility affects the new business creation and work opportunities for artists and cultural professionals, consequently contributing to employment in the cultural sector and its economic growth. An important aspect of mobility development concerns providing clear and exact information on the mobility opportunities for artists and cultural professionals and its as intensive as possible dissemination. Such information refers to important regulations (visas, work and residence permits, Labor Laws, social and health insurance, taxes, customs, intellectual property and copyright, freedom of speech), business opportunities (organizations dealing with the issues of mobility, residence programs, cultural employment, edu-

1 Th. W. Adorno: letter to Ernst Krenek on 30.9.1932, en Briefwechsel, ob. cit., p. 39

2 For more information please [check here](#)

cation institutions, available sources of funding), source of information related to the mobility issues (practical information, administrative services at the national and European levels, info-centers, researches). The concept of mobility refers to artists and cultural professionals in all artistic, managerial and logistic vocations and professions, as well as to those cultural professionals whose professions are interdisciplinary set or connected to other areas of expertise (curators, managers and the staff working in institutions and organizations, technicians, public relations and marketing experts, IT experts, etc).

The first question that arises is who is allowed to cross borders? Certainly, there are clear regulations on who is not just supposed but allowed to cross a border and on what basis. A priori, both institutions and artists and/or cultural agents in general will agree on the need for programmes that not only facilitate transnational mobility, but also finance it with a budget. Allowing artists and other cultural agents to develop their projects in less precarious conditions. But in a project like Biofriction it would be irresponsible, as well as an onto-ethical-political-epistemological imposture, not to highlight the paradoxes and contradictions that underpin these proposals. How not to frictionalise how the fiction of mobility operates in the framework of a project under the typology of *transnational mobility*?

If you abolish my consciousness ... matter resolves itself into numberless vibrations, all linked together in uninterrupted continuity, all bound up with each other, and traveling in every direction like shivers. In short, try first to connect together the discontinuous objects of daily experience; then, resolve the motionless continuity of these qualities into vibrations, which are moving in place; finally, attach yourself to these movements, by freeing yourself from the divisible space that underlies them in order to consider only their mobility – this undivided act that your consciousness grasps in the movement that you yourself execute. You will obtain a vision of matter that is perhaps fatiguing for your imagination, but pure and stripped of what the requirements of life make you add to it in external perception. Reestablish now my consciousness, and with it, the requirements of life: farther and farther, and by crossing over each time enormous periods of the internal history of things, quasi-instantaneous views are going to be taken, views this time pictorial, of which

the most vivid colors condense an infinity of repetitions and elementary changes. In just the same way the thousands of successive positions of a runner are contracted into one sole symbolic attitude, which our eye perceives, which art reproduces, and which becomes *for everyone the image of a man who runs* — Bergson. *Matter and Memory*, 1896

Mobility has always been a fiction based on privilege, a compendium of material conditions that operate hand in hand with representation. Who are we and how are we recognised before a state or an alliance of states? Are we recognised as citizens? On the basis of what? On the basis of a labour residence? On the basis of *jus solis* or *jus sanguinis*? How are we (re)presented at the border(s) on the basis of the above classification? How do we move, and can we? Can we (co)inhabit or just temporarily transit? A given temporality and given (biopolitical) circumstances mean that we are recognised as those who are allowed to cross a perverse fiction: the border. Borders are fictions, temporary, historical, hegemonic, economic agreements (...) but agreements nonetheless. The border is a fiction of which we have forgotten its condition of fiction. A fiction that those of us who have the privilege of being recognised as citizens can name as such. For those who do not have that privilege, the border is a necropolitical and thanatopolitical reality. The border is often the perverse fiction that marks the end of their existence. Certainly, the fictions of mobility and border(s) friction with the ambivalence of the existence of European programmes that are committed to transnational mobility, as well as Frontex, the European Border and Coast Guard Agency. Taking as a reference the manifestation made by Fabrice Leggeri, executive director of Frontex, who states that “All our activities are in place and carried out with the safety and well-being of citizens in mind, and we are proud of our achievements. At the same time, we are aware of the many challenges ahead. In rising to meet them, we look forward to working together with the national authorities, EU institutions and our many partners for the benefit of the freedom and security of everyone in Europe<sup>3</sup>”.

3 <https://frontex.europa.eu/about-frontex/who-we-are/foreword/>

Without debating whether the assertion could be labelled Machiavelian, it would be interesting to rethink the trans prefix of transmobility. *Trans* could be “used” as a place-holder for the possibly productive political tensions to discuss, in terms of response-ability, what are the implications of talking about *well-being*, *security* and *freedom* to make the fiction of the border operate as a necropolitical reality. Can we think about mobility from *trans*? From a trans that refers not only to “the other side of” but as a prefix occurring in loanwords from Latin (*transcend*; *transfix*) used together with the meaning of beyond?

Could *trans* one day become the situated prefix that re-signifies its use in European projects and re-articulates the (necro)politics of border control?

## F2 Open Source and Authorship

We can easily imagine a culture where discourse would circulate without any need for an author. Discourses, whatever their status, form, or value, and regardless of our manner of handling them, would unfold in a pervasive anonymity. No longer the tiresome repetitions:

- ‘Who is the real author?’
- ‘Have we proof of his authenticity and originality?’
- ‘What has he revealed of his most profound self in his language?’
- New questions will be heard: ‘What are the modes of existence of this discourse?’
- ‘Where does it come from; how is it circulated; who controls it?’
- ‘What placements are determined for possible subjects?’
- ‘Who can fulfill these diverse functions of the subject?’

Behind all these questions we would hear little more than the murmur of indifference:

– ‘What matters who’s speaking?’

Michel Foucault. *What is an Author?* 1969

Returning to Foucault’s last question, it matters. Undoubtedly, quoting those who have articulated “something” is not just a formal matter, but a sign of respect and gratitude. We are never researching alone, isolated, we are always engaged in a dialogue with multiple voices that come across historical periods, cultural contexts and even the supposed limits of the species. Equally important is to pay attention to the material conditions of knowledge production and knowledge transfer.

Artists, researchers and all those who choose to work with open source make an ethical and political decision. They have a clear commitment to generating knowledge that can be shared without restriction. Does that mean we should not quote the source? On the contrary, as mentioned above, to quote them is also to thank them not only for their work but also for the choice of the material conditions for its generation. Certainly, in some proposals of experimental artistic practices, open source adds a layer of anti-authoritarianism. Added to this is the rejection, as a political statement, of how the accumulation of value in the production of knowledge works in so-called cognitive capitalism<sup>4</sup>. The problem, or friction, arises when the old values of authorship continue to operate, such as the archaic etymological relationship of authorship with authority [source of authoritative information or opinion].

Sometimes happens, and it has happened in the framework of Bi-friction, that despite the political-epistemological commitment that working with open source implies, contradictorily there is a kind of ostentation of truth. All those questions to which we are opposed, such as how regimes of truth production as knowledge have functioned historically, in some cases we end up reproducing them, without los-

4 The role of knowledge becomes fundamental. To the creation of value through material production is added the creation of value through the production of knowledge. Cognitive capitalism means that the production of wealth takes place increasingly through knowledge, through the use of those faculties of labour that are defined by cognitive activity (cognitive labour). Theorists of cognitive capitalism argue that it is the production and accumulation of knowledge that produces the greatest value.

ing sight of scale and infra-supra-structural differences. When we state that such an issue cannot be written about, or we turn dialogue into impossible, we are being authoritarian because we are making critical debate impossible. The moment we produce something, and hence Foucault's quote, it comes into play with a multiplicity of possibilities, with a multiplicity of communities that can re-signify what we have produced. To pretend that something has only and exclusively the meaning we have given it, or that it is used only and exclusively as we consider it to be, turns openness into restrictive. To assert that a question cannot be addressed by whomsoever, that it cannot be written about, or that it cannot be addressed in certain contexts, implies not only a hierarchical but also a moralistic conception of who is supposedly *authorised* to address *x* question.

Shouldn't we address the power [*potentia*] of the open as a meeting place without restrictions?

How can the aforementioned care help us not to generate endogenous contexts?

Without getting lost into deontological drifts, these questions aim to open up a space for critical reflection on our response-ability to ensure that these spaces do not end up reproducing the restrictions, hierarchies and layers of morality that are so present in some other contexts, whose *modus operandi* we aim to hack through open practices. In Lorde's terms, how to get out of the master's house?

## F3 Institutions as abstract entities

Institutionalized rejection of difference is an absolute necessity in a profit economy which needs outsiders as surplus people. As members of such an economy, we have *all* been programmed to respond to the human difference between us with fear and loathing and to handle that difference in one of three ways: ignore it, and if that is not possible, copy it if we think it is dominant, or destroy it if we think it is subordinate. But we have no patterns for relating across our human differences as

equals. As a result, those differences have been misnamed and misused in the service of separation and confusion.

Audrey Lorde, *Sister Outsider: Essays and Speeches*, 1984

To take up Lorde's words, we come from a history where the institutional framework has certainly been used to sustain difference as counterposition rather than power in terms of constitutive entanglement. However, it should be noted that not all institutions can be equated. There are art institutions whose functioning is radically different from, for example, academic institutions, even though both are in a neoliberal framework and are conditioned, on different scales, by the socio-economic dimension to which Lorde alludes. But it is important to point out that there is also an institutional framework that has been trying for decades to value difference as a power [potential], with certain art institutions being a driving force in this process. It is therefore important to always take into account the material, situational and institution-specific conditions. It is not only the aforementioned historical heritage that is perverse, but also when we reproduce the erasure of difference by referring to the institution as a kind of *abstract entity*.

The already hackneyed assertion that every project is de-potentialised per se the moment it enters an institutional context is problematic. The possible effects on each project in an institutional framework should be evaluated from a concrete and situated specificity. Certainly, every institution as an institution has multiple inherent problems, and many of these are linked to power relations. And not only is it important to be attentive to these issues, but it is also important to critically (and constantly) re-evaluate how not to reproduce or perpetuate those issues that seem to us to be the most problematic institutional issues. When we refer in generalist terms to the institution as a kind of abstract machine without taking into account its specificities, we fall into the trap not only of erasing *difference* but also of erasing the working-bodies that make it possible for the institution to function. And then is when we participate in what we criticise: we help to de-potentialise any critical proposal. And not only that, the erasure of workers' bodies is an abuse of power not so different from what we might criticise of the "factual powers" of the institution. The critique of depowering from the outside (although this outside functions more as a hedonistic fiction than a reality) not only applies a homogenisation to these workers' bodies, but also places

them in a kind of space where they are relegated to having to act as retaining walls between different hierarchies of power, those *inside* and those *outside*.

Isn't this constant differentiation of *inside* and *outside* the perpetuation of *difference as opposition*?

## F4 Capitalization and the tricky game of cogni- tive capitalism

As mentioned above, in the framework of cognitive capitalism the main driver of value creation is knowledge, or rather systems of value production based on the accumulation of knowledge. In this process (which is much more complex than we can address here) the so-called *symbolic capital* plays a fundamental role. In fact, it is the oil that greases the engines of generation and accumulation not only of knowledge but also of recognition. In general terms, symbolic capital is the value attributed to a person\_object\_thing by a whole social group, social space and/or of a specific context, such as the so-called “art world” or “culture world”, for example; with their corresponding super-infra-structures.

In “our”<sup>5</sup> context of artistic practices, symbolic capital is also that “element” that adds value (in terms of culture of recognition) to what we do. The more symbolic capital we generate, the more plots of recognition we hold, which in turn tends to generate more openness of possibility to be able to continue generating a project. Does this mean that it opens up horizons of possibility that allow us to escape from precariousness? Unfortunately, in most cases it does not, for

<sup>5</sup> It refers to the privileged western (hegemonic) context in which Biofriction has occurred.

two main reasons. The first one is that precariousness does not only refer to material-economic conditions, but also to the impossibility of an immediate “future”, in terms of continuity. The second one is that the process of generating symbolic capital becomes the constant production of a kind of non-stop working on a subject-brand production, where the boundaries between work and life are blurred, nurtured by the drifts of so-called platform capitalism. An almost perfect trap that we pay for with life, halfway between entrepreneurship and desire. In other words, each and every one of us has become the new cognitariat. The social corporeality of cognitive labour. In terms of Bifo Berardi “The social existence of cognitive workers cannot be reduced to intelligence: in their existential concreteness, the cognitarians are also body, in other words nerves that stiffen in the constant strain of attention, eyes that get tired staring at a screen”.

In a context in which what produces the most value(ble) is knowledge and where symbolic capital plays a fundamental role, it is not difficult to see a multiplicity of structures through which processes of capitalisation take place.

Faced this, we could completely renounce any project that has the slightest hint of institutionality. Or we could also try to redistribute the resources of an institutional project to make *things* possible. *Things* that without those resources would not happen, or would happen in an even more precarious condition. Both options, which are obviously not the only ones, imply a multiplicity of inherent problems. In relation to the previous friction, we tend to point to the institution as a kind of abstract machine. A machine of constant capitalisation. And yes, this is certainly the case, but to think that when we are *outside the institution*<sup>6</sup> and we are invited to do something within the institution, we are not producing symbolic capital or nurturing processes of capitalisation, it is not only a very complacent fallacy but a dangerous one. Claiming that we do not participate in these processes but that we capitalise the institution is a self-indulgent trap that keeps us in a kind of reverie of political radicalism where we get lost in dogma and self<sup>7</sup>-delusion.

Would it not be more politically radical (unless we renounce all institutional collaboration altogether) to highlight not only the paradoxes but the contradictions we all hold in relation to these issues and

- 6 That based on the material conditions that make our projects possible, we are hardly ever.
- 7 Self here does not refer to the subject as an individual being.

take response-ability(ies) in order to articulate situated and shared tactics to re-distribute resources, and from these specific material conditions critically re-think how we participate in the processes of capitalisation and symbolic capital production in order to try to generate gradual micro-disruptions?

## F5 Non-normative structures

“We do things with language, produce effects with language, and we do things to language, but language is also the thing that we do. Language is a name for our doing: both “what” we do (the name for the action that we characteristically perform) and that which we effect, the act and its consequences.”

Judith Butler, *Excitable Speech: A Politics of the Performative*

Sometimes, in the framework of the so-called *disruptive practices*, there is a certain tendency to “believe” that through our practices we escape normative structures. That there is a multiplicity of practices that question the functioning of certain structures is, fortunately, true, albeit at the micro level. And even though they do so at a much slower pace than we would probably desire. The problem is that a *disruptive practice*, or one with disruptive potential, such as some biohacking projects, does not imply per se escaping from the existing normative structures, such as language. Or to be more precise, languages.

Throughout Biofriction, in different activities, we have had many conversations and discussions about the terminology we used. In some of these discussions, it was stated that there were terms that we were using that “had no definition”. So far we could agree, but only with the following nuance: that they do not have only one possible definition. The problem is that sometimes when it has been stated that X term had no definition, it was referring to the fact that it had no single meaning and no single possible interpretation. That the term,

directly related to its material dimension and to practice, is always on the move, always becoming. Again, we agree on this last point. But it is important not to fall into the trap, the illusion, that through our practices we escape normative structures. We can escape from other things, but as linguistic beings, *we-are-always-in-the-midst-of-language(s)* and therefore, always entangled in a multiplicity of normative structures.

For example: if we say “Transhackfeminism is not what it says in this article because it has no definition.”

- Is this statement hiding an antithesis?
- How do we know what it is not if it has no definition?
- With this statement, are we not already in the midst of an attempt of definition through negation? An attempt of definition by counter-proposal?
- Have we become trapped in negative theology?  
On transhackfeminism, as on the idea of God,  
one can only say what it is not.

Beyond the example, with a certain dose of humour, it is important not to lose sight of the fact that every question is an articulation of language. And that language(s) is a normative structure. So, as Judith Butler points out, in the same way that it affects us, we also affect language. What is really important is not to fall into the complacent fabulation that by engaging in certain practices we are outside a normative structure, but to pay attention to how we can modify, perform, these structures. The better we know how language structures and hegemonic knowledge production systems work, the more likely we are to generate a (micro) crack in their structures. The more likely we are to be able to generate gaps in meaning and processes of re-signification.

If we understand language as technology, the question of technology is already a technological question. And if we understand language(s) as a living technology(ies), perhaps we can hack into its structures in a similar way to the way we hack into other structures. But the fiction of thinking *ourselves* outside a normative structure is just that, an illusion, highly complacent but also highly irrespons(e)-ible, since it is not committed beyond the projected desire.



BIOFRICTION

GLÖ  
SSARY

# Situated Glossary

Disclaimer: This situated glossary is not an academic exercise, nor is it a genealogical exercise or one that seeks to objectively validate the descriptions/definitions articulated here. It is simply a working tool that states what terminological uses have operated with\_in Biofriction, but each and every one of them must be re-visited, disarticulated and, re-articulated. Every term is mutable and processual, corresponding to a micro-community of historically and culturally situated agreements and covenants. Therefore, in no way is this glossary an attempt at truth or an ostentation of universal definition. Nor does it claim to be an attempt at a dictionary or encyclopaedic accumulation.

→ The term *situated glossary* is borrowed from Marta Gracia in her master's dissertation on artistic research entitled "When artistic practice becomes research. Discourses and Practices of Artistic Research in Hangar 2010-2019" (2020)

## A

ACOUSTIC ECOLOGY

Acoustic ecology, sometimes called ecoacoustics or soundscape studies, is a discipline studying the relationship, mediated through sound, between human beings and their environment. From its roots in the sonic sociology and radio art of Schafer and his colleagues, acoustic ecology has found expression in many different fields. While most have taken some inspiration from Schafer's writings, in recent years there have also been healthy divergences from the initial ideas. Among the expanded expressions of acoustic ecology are increasing attention to the sonic impacts of road and airport construction, widespread networks of "phonographers" exploring the world through sound, the broadening of bioacoustics (the use of sound by animals) to consider the subjective and objective responses of animals to human noise, including increasing use of the idea of "acoustic ecology" in the literature, and a popular in the effects of human noise on animals, with ocean noise capturing the most attention. Acoustic ecology finds expression in many different fields, including niches as unique as historical soundscapes and psychosonography.

AERIAL MICROBIOTA

The atmosphere carries a diverse and dynamic pool of bacteria, archaea, fungi and viruses as aerosols. Once aerosolized from terrestrial and marine surfaces, air movements can transport them to high altitudes, clouds, and distances of up to thousands of kilometers from their source. During their journey, they likely interact with physical atmospheric processes in the high atmosphere, such as the nucleation of water into cloud droplets and ice crystals, and to influence chemical reactivity through complexation, binding properties and metabolic activity. They finally settle down with dust or precipitation over surface ecosystems, alive as colonizers or competitors with established communities, or dead as genetic material and organic nutrients.

AROMATA5E

Aromatase is an enzyme responsible for a key step in the biosynthesis of estrogens. It catalyzes the rate-limiting step of

testosterone and androstenedione conversion into estradiol and estrone.

For Adriana Knouf is one of the ingredients in her investigation on how to transform the “masculine” into “feminine” as the testicular cells are converting testosterone to estradiol within a microgravity condition using this enzyme.

## ATMOSPHERE

An atmosphere (Greek: ἀτμός *atmos* + σφαῖρα *sphaira*, sphere of vapour) is a layer of gas or layers of gases that envelope a planet, and is held in place by the gravity of the planetary body. A planet retains an atmosphere when the gravity is great and the temperature of the atmosphere is low.

# B

## BIOACOUSTICS

Bioacoustics is a cross-disciplinary science that combines biology and acoustics. Usually it refers to the investigation of sound production, dispersion and reception in animals (including humans). This involves the neurophysiological and anatomical basis of sound production and detection, and relation of acoustic signals to the medium they disperse through. The findings provide clues about the evolution of acoustic mechanisms, and from that, the evolution of animals that employ them.

In underwater acoustics and fisheries acoustics the term is also used to mean the effect of plants and animals on sound propagated underwater, usually in reference to the use of sonar technology for biomass estimation. The study of substrate-borne vibrations used by animals is considered by some a distinct field called biotremology.

## BIOART

In general terms Bioart is defined as an art practice working with biomaterials, such as live tissues, bacteria, living organisms, and life processes. Using scientific processes such as biotechnology (including technologies such as biochemistry, genetic engineering or tissue culture among others) the artworks are produced in lab, galleries, or artists' studios. The scope of Bioart is considered by some artists to be strictly limited to “living forms” while other artists would include art that uses the imagery of contemporary medicine and biological research.

## BIOFRICTION

Refers to the combination of biology, biotech, fiction and arts as surfaces of friction. The proposal is to explore the physical, emotional and political relationships between biomaterials, humans and “others” through friction (touch). The project is a critical analysis of the emancipatory potential of biotechnology through interfaces in the context of artistic practises. This proposal seeks to address bioart and biohacking practices as triggers that challenge responsibilities as collective agents capable of making transitions between multiple levels of political, material and conceptual organisation, taking artistic practices and its performativity as a framework and condition of possibility. Understanding the combination of biology, science fiction and arts as a potency to perform what we call in general terms culture. Biofriction comes from an analysis of the differences between classical physics and quantum physics on touching and how they affect artistic practises as well as Epistemology, Ontology, Ethics, Aesthetics or Politics.

## BIOHACKING

The term biohacking (biology and biotech do it yourself or do it together) is born from the union of the words biological and hacking, which contextually refers to the management of biology and biomaterials using a series of techniques with the aim of expanding knowledge on the potentials on biology and biotech. Such hackteria remarks “biohacking aims to encourage the collaboration of scientists, hackers and artists to combine their expertise, write critical and theoretical reflections, share simple instructions to work with lifescience technologies and cooperate on the organization of workshops, temporary labs, hack-sprints and meetings.”

## BIOLOGY

Within the framework of Biofriction, biology is not only understood as the natural sciences that study life and living organisms, including their physical structure, chemical processes, molecular interactions, physiological mechanisms, development and evolution. Biology is a discourse, not the living world itself. But humans are not the only actors in the construction of the entities of any scientific discourse; machines (delegates that can produce surprises) and other partners (not “pre- or extra-discursive objects” but partners) are active constructors of natural scientific objects. Like other scientific bodies, organisms are

not ideological constructions. The whole point about discursive construction has been that it is not about ideology. Always radically historically specific, always lively, bodies have a different kind of specificity and effectivity; and so they invite a different kind of engagement and intervention. (Haraway)

## BIOMATERIALS

A biological or synthetic substance which can be introduced into body tissue as part of an implanted medical device or used to replace an organ, bodily function, etc.

## BIOPHYSICAL

A surrounding of an organism or population (biological organisation, affected by the physical world and laws), which also affects the survival, development, and evolution of the organism. In the context of [Adriana Knouf's project](#), the biophysical properties of her body need to be targeted and affected in a way that has “deep biophysical effects”, enabling her transformation.

# C

## CLIMATE REMEDIATION

Climate change mitigation means avoiding and reducing emissions of heat-trapping greenhouse gases into the atmosphere to prevent the planet from warming to more extreme temperatures. Climate change adaptation means altering our behavior, systems, and—in some cases—ways of life to protect our families, our economies, and the environment in which we live from the impacts of climate change. The more we reduce emissions right now, the easier it will be to adapt to the changes we can no longer avoid.

## CLOUD MODIFICATIONS

Physical theories of cloud and precipitation processes that have undergone a rapid evolution in the past few years, and tries to call attention to the principal implications that these theories have for prospects of control of certain links in the chain of events leading to precipitation. [Read the article.](#)

## CLOUD SEEDING

Cloud seeding is a type of weather modification that aims to change the amount or type of precipitation that falls from clouds by dispersing substances into the air that serve as cloud condensation or ice nuclei, which alter the microphysical processes within the cloud. Its effectiveness is debated; some studies have suggested that it is “difficult to show clearly that cloud seeding has a very large effect”. The usual objective is to increase precipitation (rain or snow), either for its own sake or to prevent precipitation from occurring in days afterward.

# E

## ECOLOGY

The scientific study of the processes influencing the distribution and abundance of organisms, the interactions among organisms, and the interactions between organisms and the transformation and flux of energy and matter. [Read the article.](#)

## ENTANGLEMENT

Verb (used with object), en-tan-gled, en-tan-gling.  
 to make tangled; ensnarl; intertwine.  
 to involve in or as in a tangle; ensnare; enmesh:  
 to be entangled by intrigue.  
 to involve in difficulties.  
 to confuse or perplex.

## ENVIRONMENTAL MENOPAUSE

Is also a terming that acknowledges the Body (ie the discursive, material semiotic) as being expanded, contingent and provisional whilst also, in the lineage of feminist practice as being deeply tethered to the specific and particular of the personal and lived immediacy of intimacy of my body. (Kira O’Reilly in Biofriction).

## ENVIRONMENTAL REMEDIATION

Deals with the removal of pollution or contaminants from environmental media such as soil, groundwater, sediment, or surface water. Remedial action is generally subject to an array of regulatory requirements, and may also be based on assessments of human health and ecological risks where no legislative standards exist, or where standards are advisory.

## ETHICS

*Not just about being-in but being-with.* Our human responsibility can therefore be described as a form of experiential, corporeal and affective “worlding” in which we produce (knowledge about) the world, seen as a set of relations and tasks. This may involve relating responsibly to other humans, but also to nonhuman beings and processes, including some extremely tiny and extremely complex or even abstract ones: microbes, clouds, climate, global warming. (...) Our response is thus a way of taking responsibility for the multiplicity of the world, and for our relations to and with it. Such responsibility can always be denied or withdrawn, but a response will have already taken place nonetheless. However, an act of taking responsibility is not just a passive reaction to pre-existing reality: it involves actively making cuts into the ongoing unfolding of matter in order to stabilize it. Ethical decisions can thus be best understood as material incisions. (Joanna Zylińska, *Minimal Ethics for the Anthropocene*). How to articulate *minimal ethics* instead of *deontological ethics* within bio\_practices?

## EXPERIENTIAL FUTURES

A term coined by Stuart Candy; it is an Emerging field of artistic endeavor, where the future scenario is made into an Immersive environment, a situation, an embodied experience, breaking issues in a possible future down to Everyday.



## GATEKEEPERS

Are entities that control access to something – they control who is granted access to resources, categories or status. Gatekeepers assess who is “in or out”.

In the context of Adriana Knouf, they are the pharmaceutical companies and the institutionalized medical / health system that monopolises (exclusively limits and distributes / titrates) means for her transformation to the ones “that fit-in”.

## GENETIC DETERMINISM

Biological determinism, also known as genetic determinism, is the belief that human behaviour is directly controlled by an individual’s genes or some component of their physiology, generally at the expense of the role of the environment, whether in embryonic development or in learning.

## GEO-ENGINEERING

Climate engineering or commonly geoengineering, is the deliberate and large-scale intervention in the Earth's climate system. The main categories of climate engineering are solar geoengineering and carbon dioxide removal. Solar geoengineering, or solar radiation modification, would reflect some sunlight (solar radiation) back to space to limit or reverse human-caused climate change. Carbon dioxide removal refers to removing carbon dioxide gas from the atmosphere and sequestering it for long periods of time. The difference between the two is sometimes described as solar geoengineering modifying the planet's short-wave radiation budget and carbon dioxide removal modifying its longwave radiation budget.

# H

## HYBRID SPACES

Historically, hybrid beings have been underestimated, whether in mythology, literature or even in real life. When someone was deformed, he or she was marginalized and hidden by his family. Any factor that deviated from what was known as normality was relegated to the category of monstrous. On the contrary, within the framework of this project the hybrid is a positive category. Hybrid spaces refers to physical and theoretical spaces where actors like humans, animals and plants (biomaterials) share a life-world with machines, networks and increasingly also genetically altered organisms and other post-natural actors. A hybrid space is a thought vehicle which enables us to expand our knowledge in terms of transversality, re-evaluating the idea of an external nature and to rethink the relationship to the world in terms of responsibility. The term refers to transdisciplinary spaces where to work on how we can address cultural transformations and respectful forms of co-existence.

## HYBRIDITY

Hybridity, in its most basic sense, refers to mixture. The term originates from biology and was subsequently employed in linguistics and in racial theory in the nineteenth century. Its contemporary uses are scattered across numerous academic disciplines and is salient in popular culture. Hybridity is used in discourses about race, postcolonialism, identity, anti-racism and multiculturalism, and globalization, developed from its roots as a biological term.

In biology, a hybrid is the offspring resulting from combining the qualities of two organisms of different breeds, varieties,

species or genera through sexual reproduction. Hybrids are not always intermediates between their parents (such as in blending inheritance), but can show hybrid vigour, sometimes growing larger or taller than either parent. The concept of a hybrid is interpreted differently in animal and plant breeding, where there is interest in the individual parentage. In genetics, attention is focused on the numbers of chromosomes. In taxonomy, a key question is how closely related the parent species are.

## INFECT

1. To contaminate with a disease-producing substance or agent (such as bacteria)
2. To communicate a pathogen or a disease to a. (infection) of a pathogenic organism : to invade (an individual or organ) usually by penetration.
3. Contaminate, Corrupt; to work upon or seize upon so as to induce sympathy, belief, or support

## JOUISSANCE (MOLECULAR)

It's a form of enjoyment – transgressive, excessive pleasure linked to the division and splitting of the subjects.

In Adriana Knouf's case, she sees it as an intoxication that belies the complex processes that bring a body that is in biomolecular fluidity into the social and juridical domains of sex.

## KIN

“Something” which we have to generate in “ingenious lines of connection as a practice to learn to live and die well reciprocally in a dense present”; in order to “problematize important matters, as to whom one is responsible in reality”. According to Haraway: “wild category whose domestication is attempted by people of all kinds”.

## LIVING TECHNOLOGIES

The residents in the Wetlab (Hangar) problematise the use of biomaterials without a critical review of the term. From their perspective, the term biomaterials imposes an existential condition as a thing, as well as illustrating a relationship that instrumentalises the “entities” ‘encompassed by the term. They propose to use the term Living Technologies instead of Biomaterials. Access to zine [here](#).

# M

## MATERIALIZED

To come into perceptible existence; appear; become actual or real; be realized or carried out; to assume material or bodily form; become corporeal.

## MEASUREMENT(S)

Are agential practices, which are not simply revelatory but performative: they help constitute and are a constitutive part of what is being measured. In other words, measurements are intra-actions (not interactions): the agencies of observation are inseparable from that which is observed. Measurements are world-making: matter and meaning do not preexist, but rather are co-constituted via measurement Intra-actions. If the measurement intra-action plays a constitutive role in what is measured, then it matters how something is explored. (...)

→ Measurements are material-discursive practices of mattering.  
(Karen Barad)

## MENØPAUSE

Menopause is defined as the time when there has been no menstrual periods for 12 consecutive months and no other biological or physiological cause can be identified. It is the end of fertility, the end of the childbearing years. Natural menopause occurs when the ovaries naturally begin decreasing their production of the sex hormones estrogen and progesterone.

## MENOPAUSE BATTERIES

The term menopause batteries was coined in a conversation Kira O'Reilly with her colleague and friend Laura Beloff. Endocrine Piracy is inspired by the departures from the known and hitherto familiar menopause experience. (Kira O'Reilly in Biofriction).

## MICROBIOME

The microbiome is defined as a characteristic microbial community occupying a reasonably well-defined habitat which has distinct physio-chemical properties. The microbiome not only refers to the microorganisms involved but also encompasses their theatre of activity, which results in the formation of specific ecological niches. The microbiome, which forms a dynamic and interactive micro-ecosystem prone to change in time and scale, is integrated in macro-ecosystems including eukaryotic hosts, and here crucial for their functioning and health. [Read the article.](#)

## MICROBIOTA

The microbiota consists of the assembly of microorganisms belonging to different kingdoms (Prokaryotes [Bacteria, Archaea], Eukaryotes [e.g., Protozoa, Fungi, and Algae]), while “their theatre of activity” includes microbial structures, metabolites, mobile genetic elements (e.g., transposons, phages, and viruses), and relic DNA embedded in the environmental conditions of the habitat. The core microbiota is a suite of members shared among microbial consortia from similar habitats, which is important for understanding stability, plasticity, and functioning across complex microbial assemblages. [Read the article.](#)

# N

## NATURE

Nature is not a physical place to which one can go, nor a treasure to fence in or bank, nor as essence to be saved or violated. Nature is not hidden and so does not need to be unveiled. Nature is not a text to be read in the codes of mathematics and biomedicine. It is not the “other” who offers origin, replenishment, and service. Neither mother, nurse, nor slave, nature is not matrix, resource, or tool for the reproduction of man. Nature is, however, a topos, a place, in the sense of a rhetorician’s place or topic for consideration of common themes; nature is, strictly, a commonplace. We turn to this topic to order our discourse, to compose our memory. Nature is also a tropos, a trope. It is figure, construction, artifact, movement, displacement. Nature cannot pre-exist its construction. This construction is based on a particular kind of move- a tropos or “turn.” Faithful to the Greek, as tropos nature is about turning. Troping, we turn to nature as if to the earth, to the primal stuff-geotropic, physiotropic. (Haraway, The promises of Monsters).

## P

PERIMENŌPAUSAL

Perimenopause means “around menopause” and refers to the time during which your body makes the natural transition to menopause, marking the end of the reproductive years. Perimenopause is also called the menopausal transition. Perimenopause, or menopause transition, begins several years before menopause. It’s the time when the ovaries gradually begin to make less estrogen.

PHYSICAL NARRATIVE

Artistic strategy by Times Up collective.

PŌLITICIZED

(Of an activity or event) made political in character. (of a person) made politically aware or active.

PŌTENTIA

Although Baruch Spinoza never defined it as such, the concept of potency [*potentia*] is perhaps one of the major Spinozist influences.

In his book *Ethics* (1677), potency derives from active power. Potency is not to be understood as potentiality or possibility, but as activity; hence it loses its passive meaning in the Aristotelian sense. The potency of a thing is the active “essence” by means of which it produces the effects inherent in its nature, that is, the potency to preserve its own “nature”; its own being.

- Potentia is not only related to power but is a dimension of power.
- Power as negative/restrictive/oppressive = potestas (politics as usual)
- Power as positive/affirmative/empowering = potentia (the political) (Braidotti)

Potestas is the power of authority, whereas potentia is actual force and strength of the multitude (Negri)

# Q

## QUANTUM ENTANGLEMENT

Is a physical phenomenon that occurs when a group of particles are generated, interact, or share spatial proximity in a way such that the quantum state of each particle of the group cannot be described independently of the state of the others, including when the particles are separated by a large distance. The topic of quantum entanglement is at the heart of the disparity between classical and quantum physics: entanglement is a primary feature of quantum mechanics lacking in classical mechanics.

# R

## REMEDICATION

The process of improving a situation or of correcting a problem.

## REPOPULATION

Is the phenomenon of increasing the numerical size of human inhabitants or organisms of a particular species after they had almost gone extinct.

# S

## SAMPLING PRACTICES

Sampling is a way of getting a quantitative (numerical) measurement which is an estimate of the actual number. It involves finding the average number of organisms of a species in a particular area and then multiplying this by the total area being studied.

## SÁPMI

The cultural region inhabited by the Sámi people in Northern Europe and Russia. The Ars Bioarctica residency program by the Bioart Society is located in Sápmi

## SOCIAL REPRODUCTION

(...) An emphasis on care and affect within feminism has been repeatedly pulled toward an embrace of positive affect, conflating

ing care with affection and nurture. Emphasizing matters of care risks drawing politics into the microcosm of legible attachment and affect as its narrow domain of engagement

(...) Unsettling requires analysis that is in solidarity with the thick and hard-won analytics created by women and queer people of color, as well as anti-racist and decolonial feminisms. Beyond a simple politics of dismantling, unsettling is a politics of reckoning with a world already violated: it is a commitment to desedimentation relationships that set the political, economic, and geopolitical conditions of knowledge-making, world-making, forgetting, and world destruction.

## SONIC ECOLOGY

(See acoustic ecology)

## SPECIMEN

A part or an individual taken as exemplifying a whole mass or number; a typical animal, plant, mineral, part, etc.

## STRING FIGURES

Form(s) of “continuous weaving”. (bio)Practices as entanglements. Sf (acronym) names the game played in different parts of the world with which designs are braided passing from hand to hand, Haraway uses it as a metaphor of thought. Sf is about designs and knots, it requires great dexterity and can end up with serious surprises. This game invites a sense of collective work, one person is unable to create all the designs on their own. Nobody “wins” in this game, the goal is much more interesting and with a more open ending. The game is played all over the world and can have considerable cultural significance. It is global and local at the same time, distributed and linked. (Haraway, Modest Witness).

## SUBALTERN

A term coined by Gramsci (Prison Notebooks/ 1930) in contemporary debates, the term subaltern has been re-articulated mainly by Gayatri Spivak. In Gramsci the term “subaltern” referred mainly to hegemony, i.e. subaltern as an expression of the experience and subjective condition of the subordinate, determined by a relation of domination. Instead, Spivak’s notion of

Subalternity, who comes from the School of Subaltern Studies (Hindu theorists trained in Western universities) is specifically focused on the problem of representation, insisting that new places of enunciation must be articulated. The representation of a subject X articulated by hegemonic narratives imposes an existential condition to the subject X, who ends up understanding themself as such and the type of relationships. Although this only refers to “human subjects”, the claim by Wetlab residents is interesting because it addresses how the use of the term Biomaterials imposes an existential (instrumentalised) condition on X entities and thus conditions the kind of relationships. Therefore, the use of the term Biomaterials, taking into account their discursive-material affectations, would relegate these entities to a condition of subalternity, which is why they propose to name them Living Technologies.

## SYNANTHRŒPIC INTIMACY

The intimate closeness between humans and certain species in human controlled habitats stemming from thinking about ticks.

## TRANSHACKFEMINISM

(Def by the beginning of the project) When we use the term in the context of this project, we mean a re-politicization of feminism through (bio)practice, as a methodology. This proposal has its origin in the transhackfeminist meeting organized for the first time in [Calafou in 2014](#), as well as its subsequent versions, nodes and tentacles and presence in [Hack the Earth](#). In general terms “transhackfeminism” refers to [hacking\\_with\\_care](#), using hacking with a meaning of (active) resistance and transformation to generate transversal knowledge through transdisciplinary artistic, aesthetic or cultural practices/ proposals. To work on producing knowledge collectively: without differentiating between theory and practice as well as to embrace, protect and advance in free culture. To Create communities where people meet, exchange, experience and share knowledge. To work on human and non-human alliances and solidarity through DIY/DIWO/DIT biotechnology, artistic and cultural practices. To stay in touch with the material-affective dimensions of doing and engaging (bio)practices.

(Trigger\_text Transhackfeminist Session coordinated by Ce Quimera and Gaia Leandra)

“If we propose to generate knowledge, practices and experiences from a transhackfeminist perspective, how do we understand transhackfeminism? If what matters are the ways of doing, and transhackfeminism could be understood, in a way, as “hacking with care”; how can care be agenisised in these practices? How can we think of a transversal transhackfeminism? How do we establish interspecies links without reproducing colonialist or anthropocentric logics? How do we establish links with humans and non-humans? How does contamination and the transmission of knowledge operate in this ecosystem?”

Acces to zine [here](#).

# U

## UNSETTLING CARE

(Murphy, M.) / OBOT\_KinLab

(...) An emphasis on care and affect within feminism has been repeatedly pulled toward an embrace of positive affect, conflating care with affection and nurture. Emphasizing matters of care risks drawing politics into the microcosm of legible attachment and affect as its narrow domain of engagement

(...) Unsettling requires analysis that is in solidarity with the thick and hard-won analytics created by women and queer people of color, as well as anti-racist and decolonial feminisms. Beyond a simple politics of dismantling, unsettling is a politics of reckoning with a world already violated: it is a commitment to desedimenting relationships that set the political, economic, and geopolitical conditions of knowledge-making, world-making, forgetting, and world destruction.

# W

## WETLAB

Hangar’s wetlab is a space coordinated by the research team and it is a space where workshops, presentations, research residences, collective work processes, and discussions are developed. Its projects are situated in the hybrid interactions of arts and sciences, with the intention of facilitating the meeting between artists, scientists and different social agents to address multiple issues present in the contemporary context, such as: what are the conditions of knowledge production in these interactions? What are the challenges for aesthetics? And for ethics? Can we offer solutions or joint critical reviews about the current situation?

In the context of ecological debacle we feel interpellated to promote projects that, starting from a current that feeds on eco-feminisms, are propoitive at the time of offering other perspectives and above all, of rethinking other possible (immediate) futures.

The origin of this laboratory is in *EXOglands radical dynamics project: fluids, tissues & bloody self-aware enhancement bi-omicLAB* project, by Klau Kinki and Paula Pin, during the Spring Sessions in 2015. Its impact on the Hangar community and the relationship that started with the Biomedical Research Park of Barcelona (PRBB) led to a self-managed biology laboratory that continued in operation through *Prototyp\_ome*, a two-year interdisciplinary collaborative project funded by the Carasso Foundation. From this program, Hangar wetlab continues its activity as one of the stable laboratories of the center.

Hangar's wetlab is related to wetware in terms of embodied collaborative production (*hacking\_with\_care*) not to wetware in terms of cognitive capitalism.

## WETWARE

A term derived from the computing-related idea of hardware or software, but applied to biological life forms. The prefix "wet" is a reference to the water found in living creatures. Wetware is used to describe elements equivalent to the hardware and software found in a person, referring to the Central Nervous System and the human mind. In the framework of cognitive capitalism it is used to refer to the multiplicity of connected brains, through digital technologies, generating information, knowledge, systemic knowledge. In some biohacking practices (ex:X) it refers to the encounters, practices, exchanges and entanglements that happen between bodies. \*Fluids, fluidity...

## WILD TYPE

1. The typical (or the most common) form, appearance or strain existing in the wild.
2. The normal, non-mutated version of a gene common in nature.
3. The allele at each locus required to produce the wild-type phenotype.

The wild type is the most common form or phenotype in nature or in a natural breeding population.

In genetics, the wild-type organisms serve as the original parent strain before a deliberate mutation is introduced (for research) so that geneticists can use them as reference to compare the naturally occurring genotypes and phenotypes of a given species against those of the deliberately mutated counterparts.

## WORLDING

(According to Haraway, not Heidegger): generat(ing)-worlds. It arises from non-representational theory by providing a tool through which to refer to human-non-human entanglement(s). Haraway dialogues with Preciado and Tsing about interspecies relations in relation to the term in *When species meet* (Helen Torres).



BIOFRICTION

PR<sup>0</sup>TO  
COLS

# Protocol<sup>1</sup> (n.) /s/

- Mid-15c., prothogol, “prologue;” 1540s, prothogall, “draft of a document, minutes of a transaction or negotiation, original of any writing” (senses now obsolete)
- From French prothocolle (c. 1200, Modern French protocole)
- From Medieval Latin protocollum “draft;” literally “the first sheet of a volume” (on which contents and errata were written)
- From Greek prōtokollon “first sheet glued onto a manuscript”
- From prōtos “first” + kolla “glue;” a word of uncertain origin

## Proto-

Before vowels prot-, word-forming element in compounds of Greek origin meaning “first, source, parent, preceding, earliest form, original, basic;” from Greek prōto-, from prōtos “first” (from PIE \*pre-, from root \*per- (1) “forward;” hence “before, first”). It is also used in forming words in the sciences and to form compounds having historical reference (such as Proto-Indo-European).

The sense developed in Medieval Latin and French from “rough draft; original copy of a treaty, etc.” to “official record of a transaction;” to “diplomatic document” (especially one signed by friendly powers to secure certain ends by peaceful means), and finally, in French, to “formula of diplomatic etiquette.” That final sense is attested in English by 1896.

The general sense of “conventional proper conduct” is recorded from 1952. “Protocols of the (Learned) Elders of Zion;” Russian anti-Semitic forgery purporting to reveal Jewish plan for world domination, first was published in English 1920 under title “The Jewish Peril!”

<sup>1</sup> Etymological definitions from the online etymology dictionary. For more information check here <https://www.etymonline.com/>

# Protocol as rules<sup>2</sup>

The formal system of rules for correct behavior on official occasions. A protocol is also the rules to be followed when doing a scientific study or an exact method for giving medical treatment.

## DIY Bio\_Protocols

DIYbio.org organized a series of congresses in 2011, where they brought together individuals and delegates from regional groups in North America and Europe to collaborate on the development of a DIYbio code that may serve as a framework for helping achieve a vibrant, productive and safe global community of DIYbio practitioners, regional groups, and community labs.

In May 2011, individuals and delegates from regional groups of DIY biologists from across Europe came together at the London School of Economics BIOS Centre with the goal of generating an aspirational code of ethics for the emerging do-it-yourself biology movement. The congress was composed of participants from five countries, including Denmark, England, France, Germany, and Ireland .

In July 2011, a second congress was held in San Francisco with participants from regional DIYbio groups across North America, including individuals from ARC (Houston, TX), BioBridge (San Francisco, CA), BioCurious (Mountain View, CA), BOSSLab (Boston, MA), Genspace (Brooklyn, NY), and LA Biohackers (Los Angeles, CA).

DIYBIO CODE OF ETHICS  
DRAFT FROM THE EUROPEAN DELEGATION  
09/07/2011

TRANSPARENCY

Emphasize transparency and the sharing of ideas, knowledge, data and results.

SAFETY

Adopt safe practices.

OPEN ACCESS

Promote citizen science and decentralized access to biotechnology.

EDUCATION

Help educate the public about biotechnology, its benefits and implications.

MODESTY

Know you don't know everything.

COMMUNITY

Carefully listen to any concerns and questions and respond honestly.

PEACEFUL PURPOSES

Biotechnology must only be used for peaceful purposes.

RESPECT

Respect humans and all living systems.

RESPONSIBILITY

Recognize the complexity and dynamics of living systems and our responsibility towards them.

ACCOUNTABILITY

Remain accountable for your actions and for upholding this code.

DRAFT DIYBIO CODE OF ETHICS  
AS AGREED BY U.S. DELEGATES  
JULY 2011

OPEN ACCESS

Promote citizen science and decentralized access to biotechnology.

TRANSPARENCY

Emphasize transparency, the sharing of ideas, knowledge and data.

EDUCATION

Engage the public about biology, biotechnology and their possibilities.

SAFETY

Adopt safe practices.

ENVIRONMENT

Respect the environment.

PEACEFUL PURPOSES

Biotechnology should only be used for peaceful purposes.

TINKERING

Tinkering with biology leads to insight;  
insight leads to innovation.

# Open Protocol(s)

There is, a Philosophy of “life” in Spinoza; it consist precisely in denouncing all that separates us from life, all these transcendent values that are turned against life, these values that are tied to the conditions and illusions of consciousness.

— Deleuze. Spinoza: Practical Philosophy, 1970

Questions, debates and proposals to elaborate an open protocol for the use of wetlab(s).

During the months of October to November 2019, an open group met every Thursday in Hangar’s Wetlab to think of the following questions: A space like the wetlab challenges us to think not only from a \_being-in\_ but from a \_being-with\_. What kind of responsibilities do we face when working and/or experimenting with “biomaterials”? Is it possible to think of responsibility not based on duty? How can we operate with protocols that fiction a sort of immutable reality? Is it possible to continue sustaining feminist discourses and objectifying other entities for our benefit? How do we sustain our contradictions? How do we work with them? Can we reformulate a minimum ethic with non-anthropocentric presuppositions? What do we do and what do we not do in a shared space of experimentation?

The sessions were intended as a meeting place\_space to share questions, debates and proposals to develop an open protocol. The group shared how a space such as the wetlab challenges us, putting at the centre of debate a simple/difficult question: anything works in potential, but what about in practice?

These sessions resulted in a draft of a possible open protocol:

- Generate, promote, open up and share knowledge based on mutual contamination between curious people and critters that inhabit the Wetlab, through practice and experience.
- Modesty: knowing that you don’t know everything.
- Symbiotic interdependence (co-inhabiting/horizontality/ encounter).

- Transdisciplinarity, generation and transfer of undisciplined knowledge.
- Response-ability / assuming respons-ability(ies)  
Making glossaries accessible without genealogical pretensions.  
Wetlab is a space for experimentation and generation of transversal and situated knowledge.

The issues collected were taken as a first draft for a possible minimal and open protocol<sup>3</sup>, which meant that it would always be open to critical discussion.

During December 2020 and January 2021 we took up the draft again in the framework of Biofriction, taking advantage of the fact that the resident artists, Vanessa Lorenzo and KinLab, had the wetlab as their main working space as a trigger for critical thought and action. This was done through two specific meetings to address issues related to the open protocol with Anoushka Skoudy (scientific advisor of the Biofriction residences) and the Wetlab resident collective composed by Gaia Leandra and Ce Quimera. But many of the questions also emerged from multiple conversations during the work done by the artists and collectives in the wetlab, conversations with Anoushka, conversations of a more reflexive nature and above all from co-inhabiting not only a space but also practices, a situated and committed *way of doing and being*.

As the residents of Wetlab wrote in their fanzine:

We assembled and disassembled the first draft, we crossed ethical questions with the legal responsibilities of both the artists/scientists and the institution. We came up with concepts such as de-blackening, giving a twist to the open the box of hacker ethics. We talked about care, taking references such as Michelle Murphy in *Unsettling care*, something like unsettling care: where care is not equal to affection, happiness, attachment, positivity... and that these are not political goods, as the

<sup>3</sup> Another material (and perspective) for re-thinking/articulating the open protocol is the *accountability model*, developed by the Power Makes Us Sick collective. *A guide to their ever-developing model for coordinating autonomous care in clinics and collectives or among friends*. You can find it here. We recommend consulting the collective's resources and projects not only for those working with experimental practices with DIT Bio [Do it Togethe] but for all those interested in autonomous health care practices and networks from a feminist perspective.

exercise of power operates through care in many divergent ways. Techno-science or feminism invite us to ways of situating affection, attachment, attachment, positivity..

Of situating affect, feelings, healing and responsibility as non-innocent orientations circulating within larger formations, and not as attributes of scientists/artists as individuals. In technoscience, as a world-making practice, we are interested in working with discomfort and trouble. An unsettling making, an unsettling care. And we also return to María Puig de la Bellacasa with *Matters of Care* and her notion of thinking with care, which is articulated through a series of concrete movements: thinking-with, dissenting-within and thinking-for. And response-ability also appears: the sum of responsibility and responsiveness. The ethical disposition of how we respond to others from a solidarity that is not based on proximity and similarity, but on difference and the idea that we are all here inhabiting the world.

As they state in their Fanzine, at this point the following question arose: *Can we think of the Wetlab as a space, which in terms of care, deals with conflicts?*

From these conversations and in relation to their own practice KinLab proposed the following questions:

for  
whom  
did you  
**RESEARCH**  
today?

**who** is  
missing  
in this  
space?

**WHAT**

is toxic,

**WHAT** is

pure?

We hope these questions and reflections can be helpful in some other spaces, projects. To work as a critical trigger to rethink, articulate and re-articulate how to co-inhabit other spaces of experimental practices. Always keeping in mind a situated dimension, committed to care and response-abilities.



BIOFRICTION

MIT  
SEIN(♣)

## Biofriction: agential(s) upside\_down<sup>1</sup>

Biofriction has the particularity that it has become the great biofriction itself. That is to say, a project about the intersections between artistic practices, philosophy, biology and biotech, has been frictioned and re-articulated by a non-human agency: the virus. This agent has brought to the material-dimension what has been constantly “theorised” about, that is, “whenever entities enter into causal relationships, they can be said to act on each other and interact with each other, bringing about changes in each other”<sup>2</sup>. In fact, the project, with all the nodes and agents, has undergone what we could call the exhaustion of the virus as a pathogen.

Under the warmongering dialectic of the virus as the enemy to be defeated, we have been faced with the hyper-stimulation of the collective imaginary of the virus as pathogen, as infectious agent. We are once again faced with the impossible myth of the disinfected body and the ideological phantasm of purity, articulated not only by epic narratives but also by masculinist epistemologies. As a result of the COVID-19 pandemic and postponed activities, we organized [Braiding Friction](#), a series of working groups and online events to instigate an informed discussion on the current situation and possible scenarios. During these sessions we raised questions that are still relevant to us, not only because we are still in the middle of the pandemic after the project is over, but also because they are questions that transcend the pandemic situation itself. Questions that inscribe us in this thick [clumpy] now, as Helen Torres would say. In the midst of the lockdown we asked about the role of (the) art(s) in the unpacking\_understanding of the now. On how art can mobilise a better understanding of possible futures. On how art spaces could be prepared to respond to this possible pendulum of cyclical outbreaks. Or on what alliances can be woven in this context of precariousness, life, death, and malaise, among many other questions.

One of the issues we felt most urgent to address was the war narrative mentioned above, not least because it attacked one of the

- 1 This is not an academic text, nor is it intended to be, and therefore does not conform to either the structure or the citation styles (systems) that operate in such contexts. It should also be noted that this text is a corpus of “reflections” that have been articulated not just throughout the project, but which also precede it and shall prevail beyond its chronological limits
- 2 Stanford [Encyclopedia of Philosophy](#)

fundamental nodes of Biofriction that we will address later: *difference*. This narrative neglects the power of the viral agent as a condition for the possibility of horizontal transfer of genetic material and thus of microbial evolution. In this context, and following Donna Haraway's contributions, we decided to put a figure [bacteriophage] into play in order to question not only how the dialectic of the enemy operated, but also to debate and think, situationally, about its consequences. Classified as one of the most deadly entities, phages *are-in-between* what is *not quite alive and what is not quite dead*, a kind of dark force of evolution.

We wanted to take this figure as a critical trigger to think about possible alliances in the context of a hyper-disinfected world, alliances in a world where *touching* (and being touched) only happens through the mediation of disinfectant gel. We found it interesting to think about how precisely the figuration of the bacteriophage places us not only before the measure of life from death but also before the impossibility of an aseptic life. This (con)figuration allowed us to glimpse once again how fictions, or phantasmagorias, both of disinfection and of threat, articulate politics that govern over death. These fictions underlie the material conditions of structural violence, showing that we do not have a global world, but global capital, which in turn reveals mobility as a perverse fiction based on privilege, one of Biofriction's top frictions. We wondered and, indeed, continue to wonder, if in a context where necropolitics has been delegated solely and exclusively to governments and disciplinary agencies, where in the environmental crisis there seems to be a consideration of life as surplus: *Can we articulate a re-politicisation of malaise? Can we think of new models of responsibility? How to confront suffering? Are we able to confront some unpleasant thoughts that arise when we think of the pandemic crisis, environmental struggle and justice? We thought that perhaps by taking the Phage as a contradictory figuration, entangled between the power of life [potentia] and the power of death, between Bios (Zoé) and Thanatos, between the no-longer and the not-yet, between struggle and mutual aid, we could actively consider what political, aesthetic and affective imagination we are able to activate through strange alliances. And certainly, figuration functioned as a trigger for a multiplicity of critical and situated reflections that intertwined with questions such as *How can we understand the long- and short-term (temporal); local and global (spatial); micro- and macro-scales of more-than-human and non/living actants and**

*the processes of the Anthropocene they are involved in (like previously unknown viruses, for example)? Or how the viral load cuts into the thick now.*

One of the (inconclusive) conclusions of the situation that Biofriction was thrown into by the *agential cut* of the virus was how this strange alliance has confronted us with temporality. As we wrote in [Node 27 “Arts in the Time of Pandemic”](#):

Our current entanglement with this particular virus has confronted us, once again, with the question of temporality; (...) (Re)taking Heidegger’s contributions on temporality, this making-present is not merely a function of existing together in the now, its remains informed by the futurity (maybe a deep future) of projection and the grounding in its having been, in this particular case, viruses as a condition of possibility of our existence. In a certain way, with all the necessary nuances it entails, the viral entanglement (re)presents the Heideggerian threefold structure of fundamental temporality (Zeitlichkeit). That is, having-been, being at and coming towards. Certainly, resorting to Heideggerian temporality is controversial but no less relevant. In the environmental struggle (Critical Art Ensemble 2018) along with the pandemic, we are, simultaneously, an affected part and agent of possibility, bringing in other non-human temporalities that throw us into an ecstatic temporality. Ecstatic temporality is that space of speculation that is presented but in the form of having-been from a future that is not a present future, but the anticipation of a finitude that bursts in. And although during the lockdown(s), we seemed to be lost in the middle of the Black Lodge while Special Agent Dale Cooper asks *is it the future or is it the past?*, the having-been indicates that the experience of this finitude points to an already having-been finite, which we constantly ignore and silence, and try to erase by failing miserably and inappropriately, being-towards-death. Bearing in mind the biopolitical, thanatopolitical and necropolitical consequences of not being properly through care (Sorge). Although we share with Heidegger that time and phenomena are not ahistorical essences, it should be noted that the exceptionality of the Dasein does not operate anymore in terms of care within all the nonhuman multiple scales. In this sense, the notion of temporality and care proposed by

Haraway seems more appropriate/coherent for the purpose to live in a thick time of caring for and with each other, with all the critters, agents, entities, presences, absences and latencies.

The estrangements that occurred during the pandemic have also revealed (once again) that at some point we were not able to draw a clear line between fiction and nonfiction. With the experience of a strange temporality, it seemed that both fiction and nonfiction were merging together, although the necropolitical consequences suddenly, and clearly, draw at least one plot of nonfiction, that of deaths. And, again, paying attention to care(s), fiction offers us critical tools with which to evaluate and rearticulate the present. As addressed in this issue, fiction within the arts is more like a *gerund*, a making (present). The speculative fiction present in this issue invites us to articulate fantasies with which to dismantle the warmongering discourses of the virus as an enemy to be defeated. The same ones that for centuries have dragged us to violent fantasy that leads us to murder and war. Leading us to violence against the other because the other remains other. Instead of (bio)techno-optimism and the promises of fixing and solving, we have the response-ability to figure out how to live well on a planet which we damaged for ourselves (Anna Tsing 2017). To live well with each other in a thick present, which means environmental, multispecies, multiracial, multikinded reproductive and environmental justice. To live in a thick now of caring for and with each other. (Haraway 2016)

Returning to Haraway (again), throughout the project we have tried to keep in mind how to live in a thick now of *caring-for-and-with*. For this reason, in a context where life, in Braidotti's terms, understood as an informational system is commodified as the ultimate producer of value accumulation, we have constantly wondered how we can "use" knowledge for life, for action. This issue, which was already at the core of Biofriction's conception as a project, has been one of the fundamental vectors for supporting practices that put knowledge at the service of life and not the other way around. It is in this precise sense that not only has Biofriction become the (bio)friction par excellence in itself, but that a large part of the tentacular practices that have not only traversed the project but are the condition of possibility

of it (biofriction, with a lowercase b<sup>3</sup>) are practices of bio-resistance, practices that place situated knowledge at the *core for life*. Bio-resistance here does not refer to the term that operates in the scientific field as the ability of bacteria to resist an antibiotic, but to the power of doing and encounter\_ing through the knots and practices that occur not just in practices articulated within the framework of Biofriction, but with\_in the tentacles that constitute Biofriction as such, as is the case of [UrsuLab](#). An artistic laboratory which is interested in the living and the ecologies and which thus integrates the sciences and technologies of the living into a process of democratization. A transdisciplinary research and resource centre based on the most open partnerships possible. A laboratory open to all around multiple and appropriate activities.

But why make explicit reference to a space that is not *per se* a specific practice of Biofriction as a European project? Firstly, because Biofriction has been committed from the beginning to nurturing, as far as possible, networks between experimental laboratories that become a meeting-space from a situated onto-ethical-epistemic conception. Secondly, because UrsuLab is part of Antre-Peaux, associated partners of Biofriction and with whom we have not been able to collaborate (in official terms) due to the pandemic situation. Nor have we been able to do so, except for occasional collaborations, with the [IRB](#)<sup>4</sup> [Barcelona Biomedical Research Institute] given the circumstances, as they have been (and are) overwhelmed with work. And thirdly, in fact, the most important reason because the existence of both UrsuLab, and Biofriction is due to the commitment of a multiplicity of projects to not only do things differently but to place *difference* as the “mixture of ingredients” of the practice itself. This means that, furthermore, it does not matter if UrsuLab has been inaugurated once Biofriction has officially ended, but that projects like UrsuLab have *been-already-there-in-the-middle-of*, hacking through its ways of doing all attempts at chrono-logical analysis. Therefore, the reference to UrsuLab is public thanks to all those spaces<sup>5</sup> that make possible other ways of meeting and co-inhabiting, spaces where *difference* happens, becomes, overflows, appears (but never

<sup>3</sup> See the *narrative* text

<sup>4</sup> Also associated partners of Biofriction

<sup>5</sup> The term space is not relegated to the architectural dimension of, for example, labs but to all the matrices, nodes, layers and spatial-temporal entanglements that form and shape a multiplicity of bio-resistance forces

disappears); where there is a commitment that difference does not operate as a counterposition, even if we sometimes fall into the trap<sup>6</sup>.

We are surrounded by practices and discourses that continue to focus on difference as a counterposition. Something that from contemporary metaphysics (also called post-metaphysics) is a kind of anachronism. In traditional metaphysics identity is equivalent to sameness, *idem*. In post-metaphysics, or contemporary metaphysics, identity is equivalent to ipseity, *ipse*, in such a way that the being of strangeness is a post-metaphysical being, since the experience of *strangeness* contains the dialectic of the self and the other different from the self. The other is constitutive of the self, there is no self without the other. If we understand identity from estrangement, then estrangement can only be an attempt, and thus estrangement presents itself as a form of contemporary identity, as a post-metaphysical conceptual framework. Thus the estrangement of non-identity from knowing ourselves as obsolete modern subjects entails an impossibility of identity as a fixed form. Non-identity becomes an attempt at identity, a constant *becoming* which escapes static conceptions and categorical definitions. It is in this experience of non-identity, or fixed non-identity, where there is a void of meaning, a crisis of significance, a normative crisis and where, at the same time, spaces open up to re-think “ourselves” *becoming with*. Where encounters manifest themselves as an active principle of re-signification. Thus, in Biofriction, the principle of difference is tackled (through practice and tentacular entanglements) as an ontologically relevant principle: difference as becoming, difference becomes more than being, it becomes an ontologically determinant character of time. To take up the Nietzschean assumption that artistic practices are those that reveal being as becoming, as excess, as ecstasy. *Difference* reveals everything that cannot be thought of in terms of symmetry (frictions), based on the premise that being is no longer as essence. What operates, what is particular in biofriction practices\_spaces: to become difference is to come out of *oneself*, it is a multiple becoming, a heterogeneous becoming, an identification without identity or community without commonality, because there is difference in every moment, in every event. And at the same time, we are confronted with the fact that the discursive operation is a violent operation, violent insofar as it

<sup>6</sup> See publication section *Frictions*

imposes meaning, albeit temporarily<sup>7</sup>. *Difference* here is the *ethico-onto-epistemic resistance to idem*.

That is why (taking as an example one of those spaces that are the condition of possibility of Biofriction) in UrsuLab, difference is not, difference becomes. It is the condition of possibility of bio-resistance. And it is difference that, almost in Nietzschean terms, is presented as an immanent, relational, ontological principle. UrsuLab is an extended body populated by multiplicities and potencies. That is to say, this becoming of UrsuLab's being is always an embodied becoming. And Biofriction is an extended body thanks also to these specific and situated tentacles. Being and difference become, and it is precisely this condition of becoming that difference underlines the radically situated character of being, and thus "speaks" of the radically situated character of UrsuLab.

## Difference becomes body

## Difference becomes UrsuLab

## UrsuLab becomes bio-resistance

UrsuLab is that tentacle of relational ontology where the *potentia* of Kairos<sup>8</sup>, of the indeterminate lapse, of the temporality of becoming, blurs Chronos. It bursts with disruptive power into the chronological-logical order. There are therefore fundamental differences in what is at stake in the intersections between bio(info)technologies, body(ies), artistic practices, philosophy, subjectivity and power relations, in the techno-scientific biolabs, so to speak. Whereas in the vast majority of scientific biolabs we encounter a technocentric exaltation that not only perpetuates transcendent political apparatuses but also masks a quantification of life in terms of enhancement. UrsuLab as an *untimely body* presents itself to us as an experience of estrangement from an-other-system. Through its commitment to generating shared and situated knowledge, it alerts us to the relations between knowledge and power, as well as to the importance of articulating open access to bio(info)technologies. Thus allowing us to confront the exceptionalist pretension of normalising a social body, not only through language but also through the promises of the

<sup>7</sup> A clear example of this is this text itself

<sup>8</sup> An ancient Greek term that refers to 'the right, critical, or opportune moment': A proper or opportune time for action. In this sense, while *chronos* is quantitative, *kairos* is related to a qualitative-time (event)

future, of discourses based on specific knowledge: for example, the transhumanist discourse of the improvement of cognitive and physical capacities through technological implementation, articulated from the eugenic heritage, where the “normal” exercises power over the “abnormal”:

In contrast, spaces like UrsuLab are the revolt of anomalous bodies, of singularities that re-appropriate technological mediation from a *will to power*, not as domination, but on the contrary, as creative power, where self-constitution is not understood as individuality but as sympoiesis. As a constant process of shared, situated, extended and extensive con-formation. A multitude where resistance shapes and forms *life*, assuming the terrain of the common as singularity, articulating a constituent power where each singularity, each difference beyond the human, where each living technology<sup>9</sup> is power [potentia]. But this should not lead us to apply a moral judgement on UrsuLab as “good” as opposed to scientific biolabs as “bad”; that’s why as Gilles Deleuze remarked in *Postscript on the Societies of Control* “There is no need to ask which is the toughest regime, for it’s within each of them that liberating and enslaving forces confront one another. For example, in the crisis of the hospital as an environment of enclosure, neighborhood clinics, hospices, and day care could at first express new freedom, but they could participate as well in mechanisms of control that are equal to the harshest of confinements. There is no need to fear or hope, but only to look for new weapons”.

And it is this *breaking- the-temporality-of-the-present* as a successful affirmation (so present in other laboratories), this becoming in this very thick now and not only addressing a time to come. This “bringing” into being the possibility of a *different temporality*, this operating from an open syntax of doing, what makes UrsuLab and the practices that con-formorm biofriction a space of bio-resistance, and by extension, a space of *philosophical practice*. And we remark on philosophical practice because it is not academic philosophical theory that gives meaning to the spaces\_practices of bBiofriction as a space of bio-resistance, but rather they are the condition of possibility of philosophy, since what is philosophy if not pure bio-resistance?

We are deeply grateful to all of our *strange-allies* for their commitment to a different way of doing and (co)being. To all those space-time entanglements that articulate Biofriction. And most especially, to all those tentacles that biofriction the *statu quo*.

9 See the term living technology in the situated glossary



BIOFRICTION

 QUALI  
TATIVE  
DATA

This text summarizes the answers to the survey handed out to the participants of the workshops as well as a summary of what has emerged during the interviews with the artists in residence in the framework of Biofriction. The aim of the survey was understanding the participant profile and their experience when involved in the Biofriction program.

Both during the interviews with the artists in residence and the survey with workshop participants, we have asked them to describe their experience during the activity, to underline whether there were any barriers, whether common learning, common knowledge and knowledge transfer was facilitated.

The survey, with multiple choices, allowed us to understand the target of these kinds of practices: we have found a great presence of interdisciplinary researchers, artists and university students (undergraduate and postgraduate) and a considerable percentage of biologists, curators and activists. The vast majority of participants were cis-gender women, followed by non-binary and cis-gender men. Participants came from 19 countries. The vast majority of people were from the age range 30-39, followed by 40-60, 20-29 and 16-19.

Most people discovered about the events by personal recommendation or through Biofriction media showing us that Biofriction communication channels have been effective.

The vast majority of participants considered the activity as appropriate for exchanging knowledge, experiences and common approaches and liked it. Almost all attendants answered that the activity encouraged them to attend similar activities in the future.

In almost half of the answers participants confirmed developing more positive connotations to the concepts of trans, (bio)hack, feminism, hybrid, and biomaterials after participating in an activity organized by us. No one developed negative connotations.

One of the elements that emerged from the comments is that both, participants and artists, found it extremely useful to come together, meet and share, discuss, whether in person or online, with people with similar interests and areas of work. This is relevant in a field as bioart and biohacking where the community is rather small yet progressively growing. In this sense, the project has reached one of its goals which was to foster connections among artists, scientists, activists, etc. Being an international and heterogeneous group, trans-cultural dialogue was fostered as well.

Several artists in residence underlined that the most unexpected and surprising result of their residency has been the level of collegiality with the scientists and the generosity with their time and expertise that has inspired the future development plans of their artistic projects. More than half of the artists consider the possibility of following up their artistic project in collaboration with the people who have joined the process during the residency. In this sense, we can consider that the goal of creating and supporting hybrid spaces for knowledge creation has been attained.

Another element that has been underlined as positive by participants is the practical side of the program. A constructive point of the workshops was putting into practice the knowledge explored during the talks and open labs. Participants particularly enjoyed learning how to directly deal with living organisms and learn about specific methodologies and approaches as, for example, the transhackfeminist approach. In this sense as well the project has reached the goal of favouring transfer of knowledge in an open environment and favour capacity building for cultural operators.

In the line of work of Biofriction and as expected, many participants highlighted as something positive the wide vision used by the project. Some of the testimonies mentioned as relevant the hybrid approach to art and science, the new methods and methodologies carried out during workshops, the interdisciplinary approach of the project and of the participants' backgrounds.

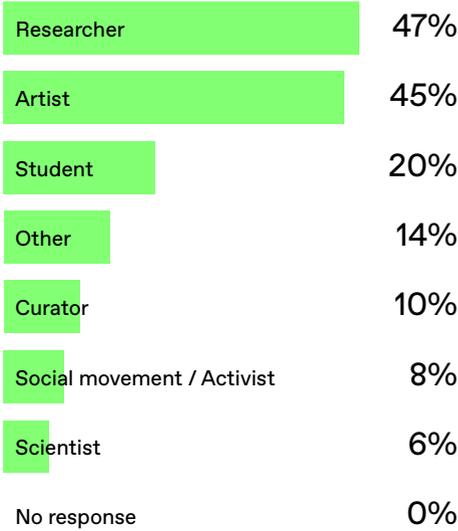
Finally, all artists in residence have confirmed that their project has at least partially changed due to Covid restrictions and connected limited access to lab, limited access to lab tools and equipment or shortened residency / change of dates etc. For this reason, some of the artists have focused on a more concrete and manageable aim inside the frame of the project. This element was not necessarily perceived in a negative way but rather as an opportunity to redirect the project in specific lines that were not thought of before.

All in all, duration has shown to be the most critical point, consequently for the next open call longer residencies should be foreseen (4 to 6 months at least). Also, answers show that hybrid residencies could be a solution in order to deepen the research dimension of the artistic projects.

As a matter of fact, some artists been found as positive carrying out the residency in two different phases. The first online part of the residency allowed to settle a clear theoretical framework while the second in person residency was more practical. The biologists involved in the residency commented that the extension of the residency gave the opportunity of having a first strong theoretical approach to the project before working in the lab.

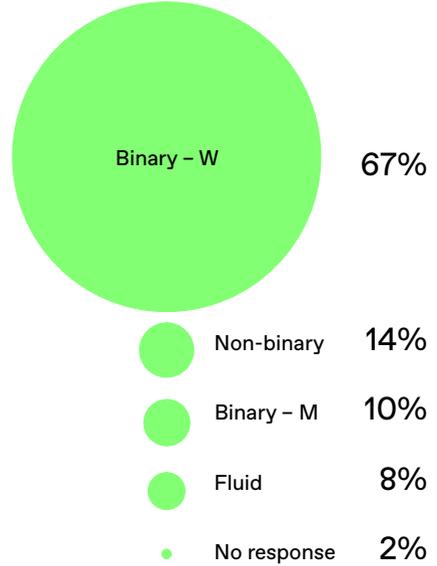
Finally, most of the artists appreciated the fact that the four institutions acted as gatekeepers to propose their work to other institutions of the city like universities, arts centers, galleries, festivals, etc. The four centers have offered to resident artists and their projects the necessary support to spread their project into the local community in an effective way.

## Your Profile



## Gender

Multiple choice



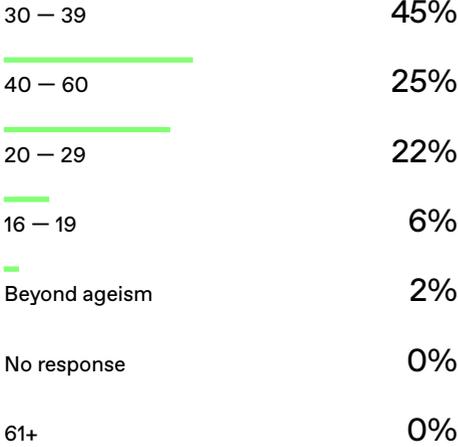
## Where are you from?

Multiple choice

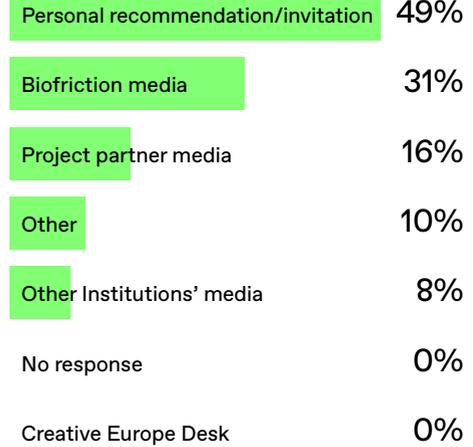


## Age

Multiple choice

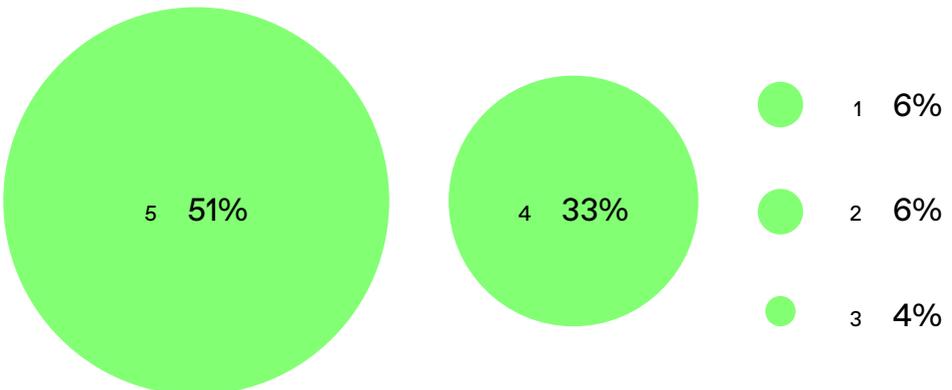


## How did you learn about the activity?



## Did you find the activity as an appropriate setting for exchanging knowledge, experiences and common approaches?

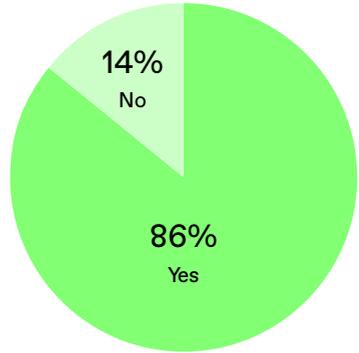
Multiple choice. (1 – inappropriate space for addressing the topic, 5 – most suitable space for addressing the topic)



## Did you find the activity intensive and/or experimental?

(physically, mentally, experientially and/or intimately).

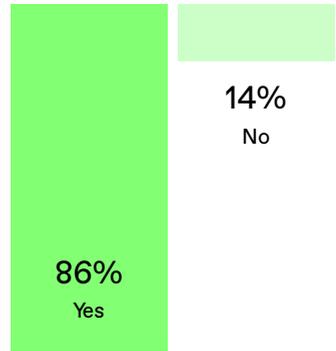
Multiple choice



## Do you feel that the level of intensity and experimentality in such activities...

is an appropriate methodology for obtaining transdisciplinary knowledge, skills and protocols, and for generating common experiences?

Multiple choice



## Did the activity encourage you to attend, develop or facilitate similar activities in the future?

Multiple choice



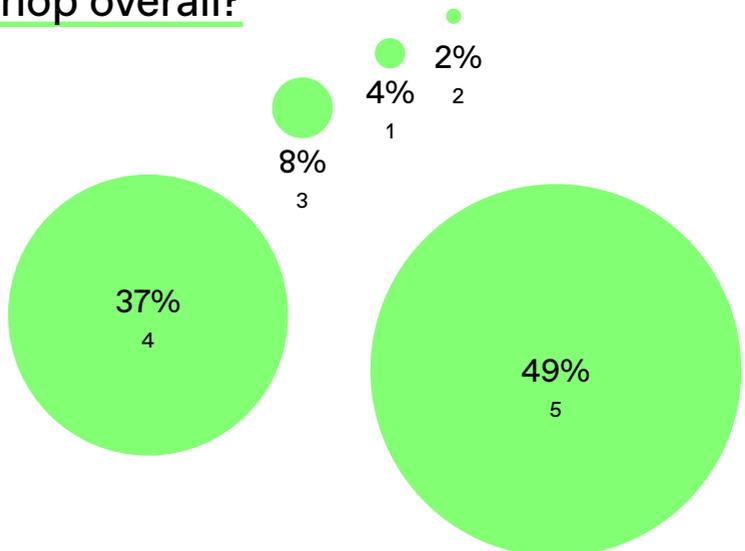
## What connotations do concepts trans, (bio)hack, feminism, hybrid, and biomaterials have for you now in relation to before you participated at the activity?

Multiple choice

Same (My feelings towards these concepts are same as before the activity)	45%
More positive connotations (I find these concepts more likable than before the activity)	25%
No response	22%
Less positive connotations (I find these concepts less likable than before activity)	6%

## How would you rate the workshop overall?

(1-poor, 5-best)





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