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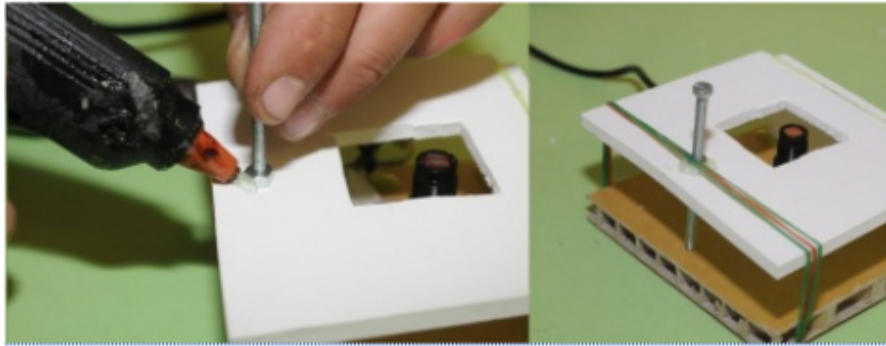
2- Micro_zine

2.1 Part 1

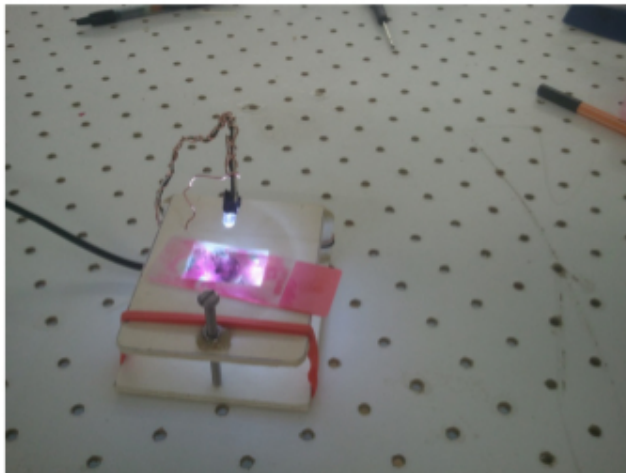
2.2 Part 2 Amplified matter

2.3 Part 3 from Biopolitics to Biotranslab





We place the pieces as shown above and paste a nut in the hole in order to insert a 4m screw until it rests on the base of the microscope, now we put the rubber band as shown in the photo. We connect our microscope to the computer and carefully look for the focal plane (very minimum distance) by slowly turning the screw.



1- Introduction: from biopolitics to bioTRANslab

The river reverberates:

it all started at the Hackmeeting, a hacker event in Calafou in November 2012, there I got motivated by the exciting experience I had as a facilitator that summer doing an experimental **workshop on electro-acoustics and bending** with my friends **Mutanger** and other well known bitches.

During the Hackmeeting event we assembled a decentralized node of computers, that is to say it worked in other ways of contact with technologies that did not focus only on programming and code.

the extended **BiOHACKing Node** arose from the need to map the distressing circumstances of the (Par)**Anoia river** and with this we began to analyze speculatively (or not) the appearance of the river under the microscope.

It was a success because, as usual, we joined forces with our TRANSisters Majo of Post-op and Rox who, for their part, did a mapping of gender technologies and, at the end, the QUEER node worked outside the norm as usual.

At the beginning the **Queer biotech node** seemed out of context, but we will see how later every detail and quantum event is important and leaves a mark so that, gradually, the results, **resistances and dreams** define the current space, time and matter **OPen sScience Friction**.

After the event, I decided to stay and live in Calafou, working hard on different fronts, **the microscope was always at the heart** of all the curious investigations that arose ... that's why the primary intention of this fanZine is:

* enabling a replication tool for that Micro.technology.

A year before my arrival in Calafou I worked intensely in a process that marked everything I will narrate next:

Biosensing/photosynthesis

<http://biosensing-blog.tumblr.com/> symbiotic interactions between human-plant-microorganisms and computers. The discovery of photosynthesis as a bio.electro.chemical phenomenon...

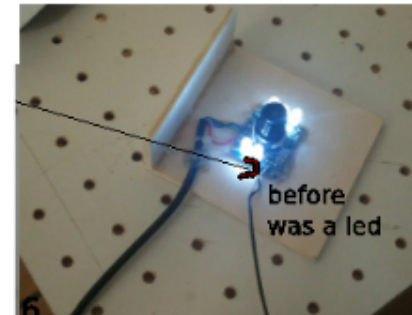
This theoretical and practical investigation was conducted collaboratively, in the sense that both the tools and the eventual addition of certain people allowed the acquisition of free, open knowledge and the gradually strengthening of the collaborative manner in which I worked tentacularly with individuals and related networks. Next came a collaboration with the biohacking network Hackteria, with Andy Gracie and Marc Duseiller. The works and experimentation with microscopes and Gaia Leandra were also very significant.

In the Nanosmano Biohacking event, we worked with matter at the nanometric level, with solar panels, organic material, extraction of chloroplasts with centrifuges for photosynthesis tests...

It was crucial for me that I found collectives in the network that worked with technologies in an open, artisanal manner: a dream come true.

Upon my arrival in Calafou, I proposed in the general assembly the creation of a laboratory of BIO.electro.chemistry.

Eventually, my fellows Mutanger (julito and klau) joined the project and we organized PechblendaLAB together, a laboratory in which everyone was contributing from within their perspective with the aim of creating together



Using hot glue or hot silicone we carefully paste the base of the webcam, (the part that contains the electronics) to the solid base (15 x 15 cm approx.)

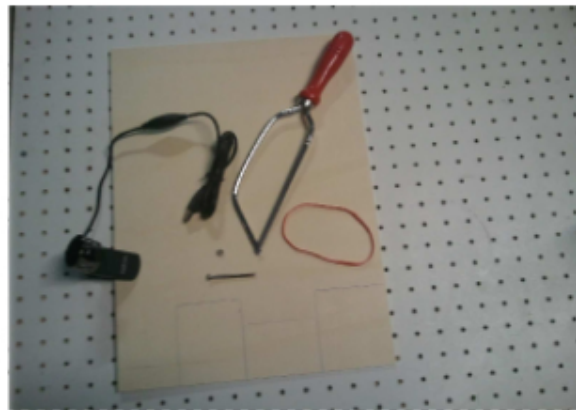
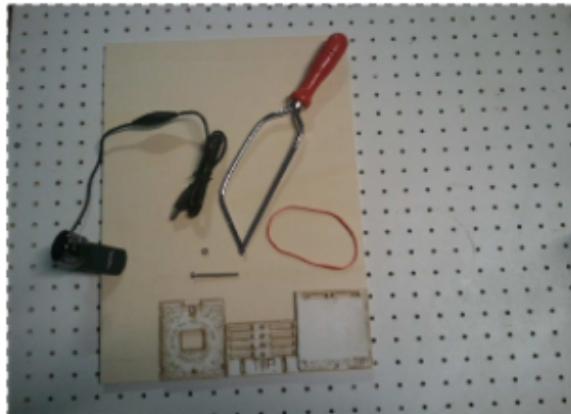


To obtain the measure of the height of the side wall, we draw the Y height with a pencil and we cut the piece along that line.



Using a cutter we make a rectangular opening on another piece of cardboard. we make a small hole to insert a 4mm screw and paste this part to the side base.

now place the pieces you were cutting on top of the fine wood or cardboard you decided to use, and trace them to cut them out later.



the rectangular top piece will have a measure that will depend on the height of the webcam, observe how to measure this height to be leveled with that of the camera



There have been numerous proposals and collaborations for almost five years since the radioactive explosion of the laboratory, initially we worked in the physical part and together we built our dream.

At present the expansive way in which pechblenda started is still active, the group is not in my opinion marked with active people but is configured through the interactions that other members perform inside and outside the lab. My intention is to keep it alive, because it's extremely fortunate for me to continue expanding trans-feminist knowledge and opening the doors to interact with interested people. During all this time diverse beings have passed and left a deep footprint in the pechblendian rhizome one way or another:

Rox, Lola Doblas, Aleph, Aleix, Meri, Mar, Beka, Gaia, Chava, Laura Benitez, Marthe, Manolo, Oskoff, Xá, and my hackteria friends who were very, very present since before the pechblendian explosion, Shachiko, Mary maggic, Marc D., Urs Gaudenz, Bent and other many indelible marks.

[transhackfeminism, free, open technologies, Biohacking, access to knowledge, environment, body, glands, Hardware, HardGlam, biopunk, DIY/DIwo, cyborg witches]

They are a trans-hack-feminist laboratory that experiments with bio.electro.chemistry. Since 2012 they belong to the extensive Hackteria.org biohacking network. Their desire to generate open access to technologies has led them to carry out highly interdisciplinary workshops and research sessions.

They started as an **open hardware electronics lab** and have become part of the **Bio/Chemistry** part of a laboratory that builds **replicable tools for self-governance**, among others, of health. <https://network23.org/pechblendalab/>

Guide of the projects, processes, prototypes, and other things we have been conducting:

<https://network23.org/pechblendalab/728-2/homelab/>

Our activities emerge from the constant need of confrontation with matter, to mold the atomic structures and train our energy to become noise, noise that penetrates and invades ...

if we cannot make noise X it's not our Revolution.

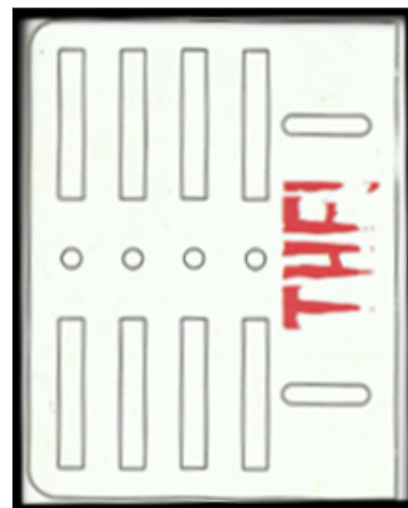
As trans-hack-feminists, biohackers and bio-punks we want to be affected by the environment, study, understand and experiment with matter and parameters that make life/death possible. Our philosophy is radically open and inclusive, it shares and decodes life in all its scales:

- we become organic/technological entities in constant change.
- we are free bodies open to experimentation and implementation,
- we have the potential to create new networks of knowledge through which we transfer information, beats.
- we generate participatory contexts where research, evaluation and experimentation with science, society, knowledge and politics can lead to multiple performances: cyborg/witches rituals, noise performances, temporary and permanent laboratories, workshops, hackathons, trans-hack-feminist meetings, autonomous technological laboratories or simple conversations.
- life, continuous performance that diffracts the possibilities and potentialities of the body, constantly performing new skills, hybridizing knowledge and practices that take us away from the capitalist logic of specialization.
- we witness the emergence of a new era as a result of the friction of organisms and ecosystems.

Mary Ward microscope for THF
<https://transhackfeminist.noblogs.org/>



Now we will proceed to make the base and the fastener of our device, instead of measuring and cutting two squares and a rectangle the recommendation is to trace this wonderful design and cut following the black lines.



New areas of interdisciplinary experimentation that favor the study, practice and development of biotechnological prototypes are tools that increase the performative capacity of our body. Those who have read Karen Barad will see that there is a strong relationship between her performativity in science and my experiences with science.
extracted from that text:

<https://network23.org/pechblendalab/readme-txt/biohacking-investigacion-cientifica-como-capacidad-de-performar-la-realidad-una-revisión-transhackfeminista-del-hackeo-de-la-ciencia/>

In the **HACKterialab 2014** event in Indonesia, we set up a new **node on Sexology**, and we worked around the idea of building dildos because it was difficult to find them in the region. Below you'll find an explanatory link:

https://www.hackteria.org/wiki/Dildomancy_hacking_science_and_DIY/DIW_O_low_cost_pleasure_and_vaginal_training

After this experience, and inspired in part by the vaginal washes with plants that our friends in Indonesia performed, **Klau made Gynepunk emerge**, connecting it with **her research on the Anarcha gland** and **I continue with the Biotranslab mobile laboratory.**

<https://pechblenda.hotglue.me/bioTRANSlab/>
which is a result of the encounter in the **MOBILE labs hackaton with Hackteria lab 2013**, a year after 2015 Klau invites me as a collaborator to develop the **DIWO tools for gynecological self-governance and hence the emergence of mobile laboratories.**



And again making **tentacles emerge** as **mobile laboratories**:

opening the collective investigation

<https://transhackfeminist.noblogs.org/>

See tentacles BIOtransLab/bioautonomy :

<https://www.hackteria.org/wiki/BioAutonomy>

<https://network23.org/pechblendalab/>

gynepunk:

<http://hackteria.org/wiki/Gynepunkfuge>

... so far it has been a personal review as Pin to explain my point of view on how collaborations and our belonging to the networks have been generated...

The fanzine you have in your hands is a tool for re-appropriating technology and updating witchcraft knowledge with the intention of disseminating free self-awareness through free tools.

Understanding self-knowledge, in this case centered around our pussy, we will advance in the feeling and learn that we are not only made of human cells,,,,, and we will explore on the Microzine which other micro entities are in synbiotic relation with the micromacro cosmos,,,,,,, pussy rules the cosmos by the way a a a

I/WE////////////////love kaos
Lab //////////////////

Of the collective processes, the
technological dysfunctions the
horizontal transfer and the wisdom
or more ancestral pussysight.

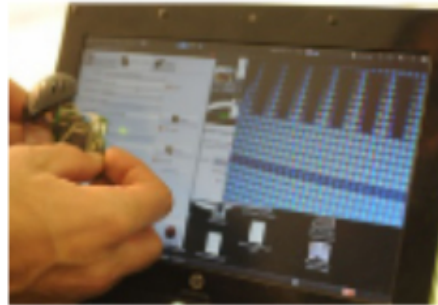
At last, again, sitting on the ship
... I happily and serenely contemplate
the surrounding space,
I see and think more clearly
always diffuse but clear,
illusions, desires and feelings
of enjoyment surround me, receptive,
I think, I think of

all the emptiness to fill, all the
pending tasks, the reward
after striving, the friction, the affection, your
smile, the fleeting rest
after relentless months,
I reflect, I look at you you smile
to me again, I think about you, we rearrange
ourselves to enter again into chaos

....., in months of obsession,
the uninhabited space of the
experiences that we remember together, I
miss you while I'm still inside of you, I
run through you and not get tired, you revive me,
encourage me all of your current,
unintentionally, you educate me,
you fill me too and finally
I overflow.....

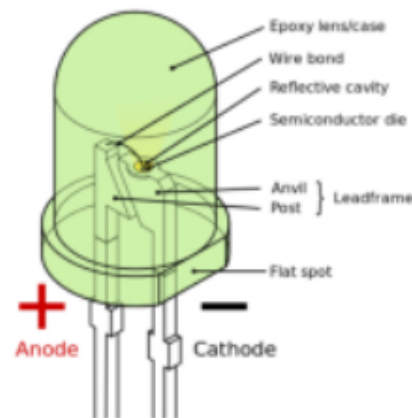
of joys,sorrows,encounters
disagreements

To test the equipment, we
connect the modified webcam
to the computer and point the
lens towards the screen, this will
help us observe the pixels and
imagine the approx.
augmentation size.

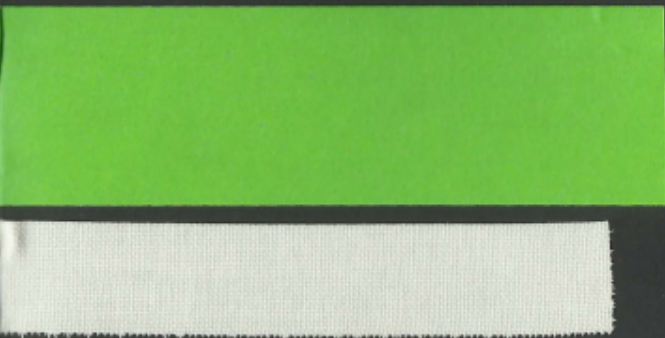


The next step is to extraction
one of the LEDs: disconnect the
camera from the computer and,
with the help of a
welder, heat the base of
one of the LEDs and remove it
with the help of small
pliers. Observe the image on
the side and add a positive
red cable in the anode and
a negative black wire in the
cathode, now look at the
position of the remaining
LEDs on the board and place
an extension of at least 15 cm
of black and red cable
where the LED was before.

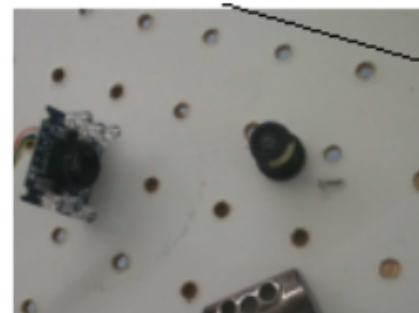
place the LED following the
direction of the others on the
plate, at this point you can also
use a multimeter to look which is
the positive red cable and which
is the negative black pin.
positive 5V negative 0V



This is how a LED
looks like, usually the
long leg mens positive
so go to 5 V and short
leg negative 0V. in
case legs are cutted
you should look inside
small piece is the 5V
one and big piece is
the 0V one



Now we begin to dismantle the webcam. Screws are removed. WATCH OUT for some screws that may be hidden below labels or rubber caps;



we remove the webcam cover to access the inside. The majority consists of a lens, an electronic switch and LEDs. The lens is partially fixed. Through a careful turn we can separate it (the lens or objective) from the electronics.



Next we place the lens upside down, we flip it, that is, we turn it around. Probably it doesn't screw up to the base anymore, so bring them together with a piece of adhesive tape or a bit of hot glue.

TOOLS:

cutter
Small screwdriver
Hot glue gun tinner



1. Webcam modification

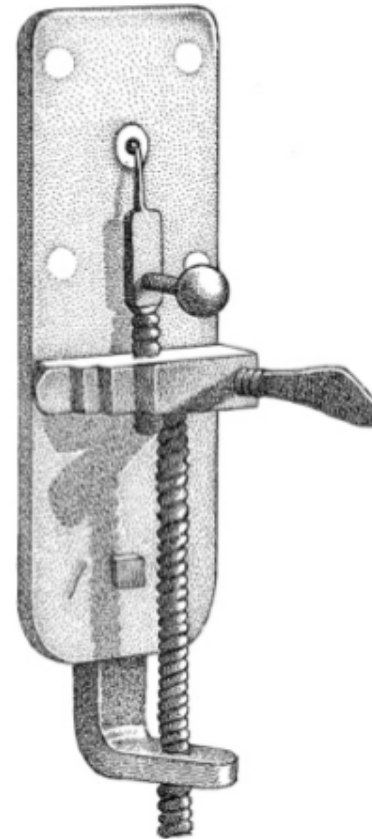
Before inverting our webcam lens we will check that by simply focusing on an object, in this case some moss, we can get fantastic macro images.



Use a flashlight and bring the camera lens to the object of study, you will see that by changing the focus you get macro images.



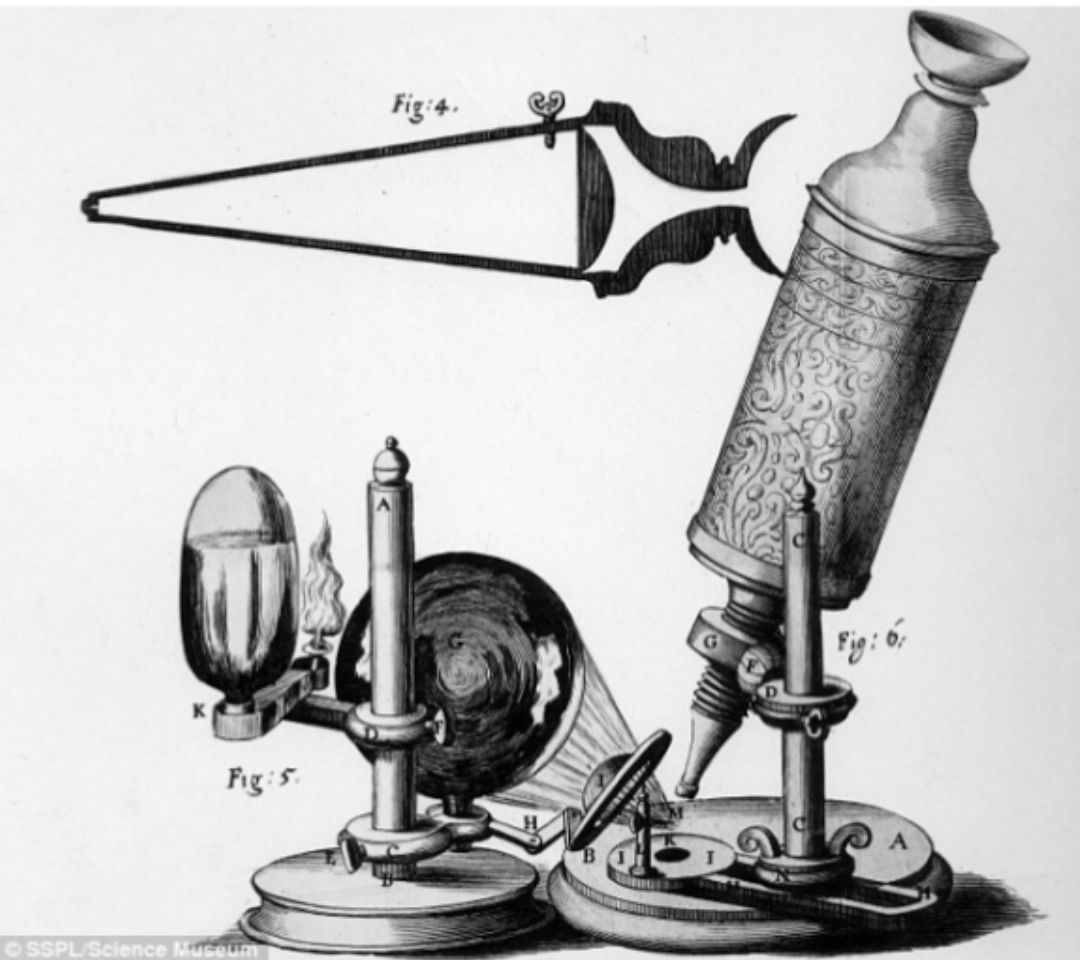
Moss and fly eye on macro !!!



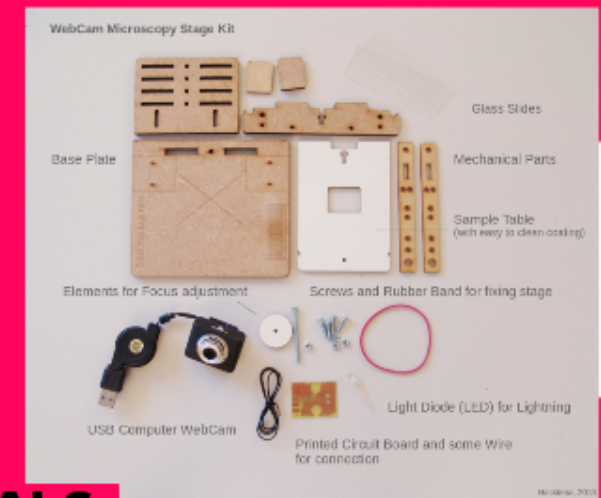
LEE U W E N H O E K ' S
M I C R O S C O P E



LEE U W E N H O E K ' S
A N I M A L C U L E S



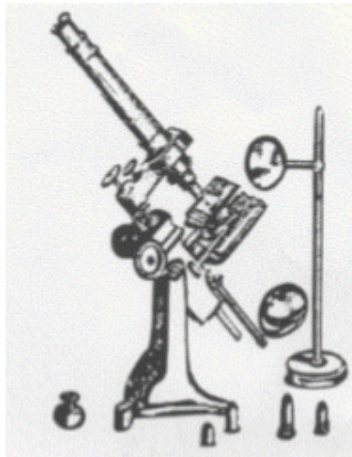
Robert Richard



MATERIALS :

1 webcam
 Thick cardboard or foam board or wood 5mm, 20x30cm
 4 Hex head screws, 15cm approx. with nuts for adjustment.
 Duct tape
 Blu-Tack Adhesive
 Hot melt adhesive/hot glue
 Rubber band

Optional external LED light source
 1 white light LED diode
 30 cm of insulated wire
 Wire covered in plastic
 optional because currently webcams have built-in LEDs, further on we'll see how to make our light by recycling one of them



If you have access to a laser cutting download the files here,
if not, follow the guide below.
https://hackteria.org/wiki/File:Mary_Ward_stage.zip

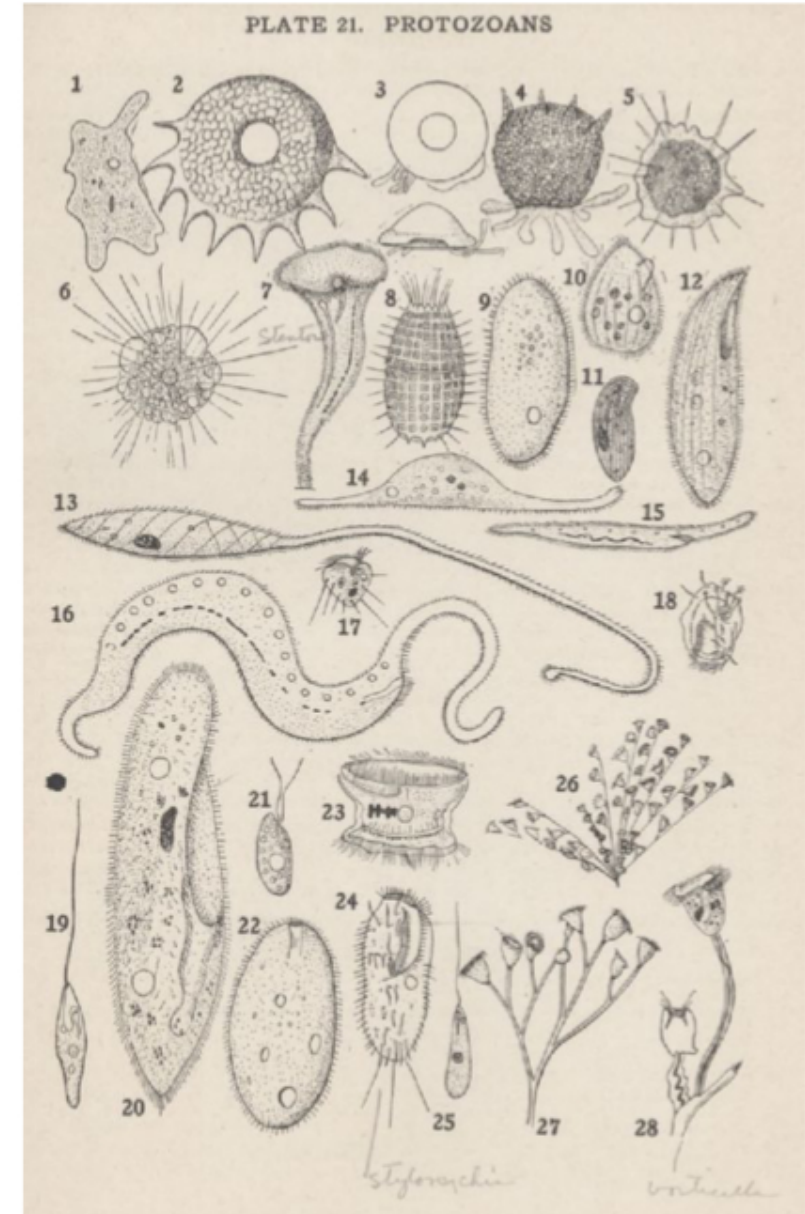
. Introduction and Materials

The construction of the DIY Microscope includes the transformation of a common webcam into a microscope. The electronics remain unchanged, while the position of the lenses is modified.

A solid platform allows to fix and focus with precision the small objects of study illuminated by a LED light.

The DIY microscope is composed of three consecutively assembled elements:

- _A modified webcam
- _A stable observation platform
- _Lighting through a LED light



animalcules

plate 21 animacules protozoans



muestra marina

Mary ward special edition from Marc Duseiller.



was a gift for THF
<https://transhackfeminist.noblogs.org/>

It is a beautiful piece in honor of Mary Ward who, despite never receiving formal recognition, became known as an artist, naturalist, astronomer and microscopist. At the time women could not be members of societies or institutions or obtain degrees or diplomas during their life so it was very difficult for them to establish or be recognized in the scientific or literary field until the last quarter of the nineteenth century. However, Mary was the first woman to write and publish a book on microscopes, although it was very difficult to find publishers who accepted manuscripts written by women. When her first book on microscopes was published in London in 1858, Mary did not use her full name, but she was known as The Hon. Mrs. W. would write three books on scientific topics and numerous scientific articles while fulfilling her duties as wife and mother of a rapidly growing family. Her book on the microscope was reprinted at least eight times between 1858-1880.



our seascape

... and in a perhaps failed attempt to remember and connect quantum facts that flood the space where the body dwells and while the unceasing desire to transmit disjointed ideas, I click, click and the human being descends to their origins ...

Luciferian they glimpse the abyss of a space still in the penumbra connect with luciferases that shine, while my body relegated to the mere act of automatic writing moistens in contact with a cold, industrial ground. product of what they called revolution.

and while ideas, words and objects wander and glimmer some glimpse to arrive clear, like water, with their original impulse of life to a moment virtual world in which you read what my body offers you and confusion of an indeterminate present, past, future, am I in two places at once?

I stop

and again the language performs it all, and the ideas are not ideas anymore but letters written on a post, and are transformed into something that played out different in my mind a moment ago, making horizontal transmission impossible, too many complexities playing in spacetime where the matter is again amorphous.

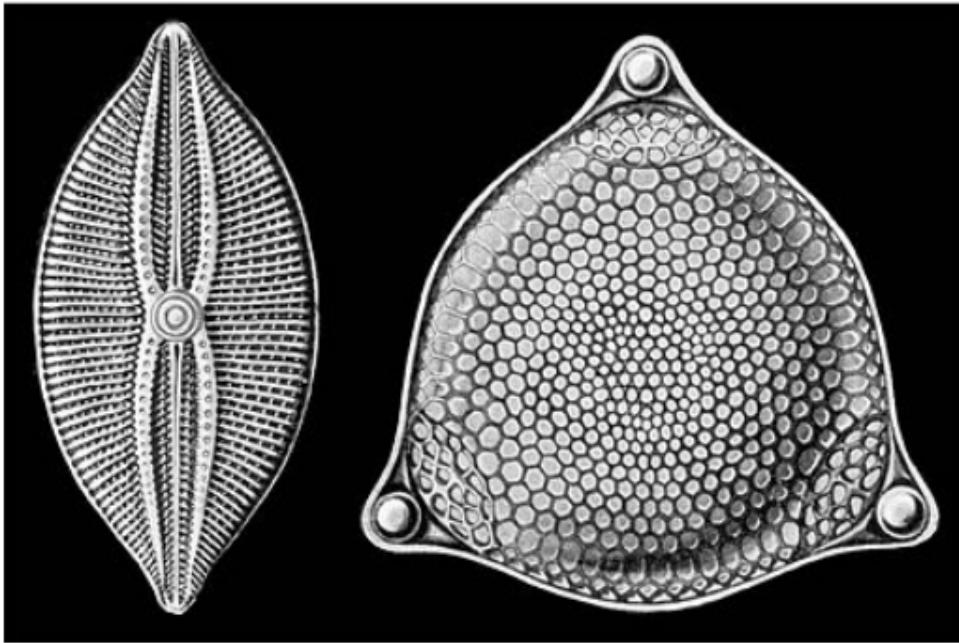
horizons loaded with clouds because we wanted to think that humans would be above nature, relegating a dark, cold, withered world ...

Anthropomorphocentric

and during long processes of thinking, rethinking and becoming one, we are everything, descending the ladder, finding ourselves in others, another that is not defined within our categories, another who is different, different but complementary, let's go down, observe and learn from the depths, we will then arrive with luck clear as the water that flows and connects everything.

let's train ourselves to return to nature,

pin 2013



Ernst Haeckel Naturalist, hand-drawn images
they look like a vagina and a uterus,
but they are microscopic entities, in this case **diatomea**

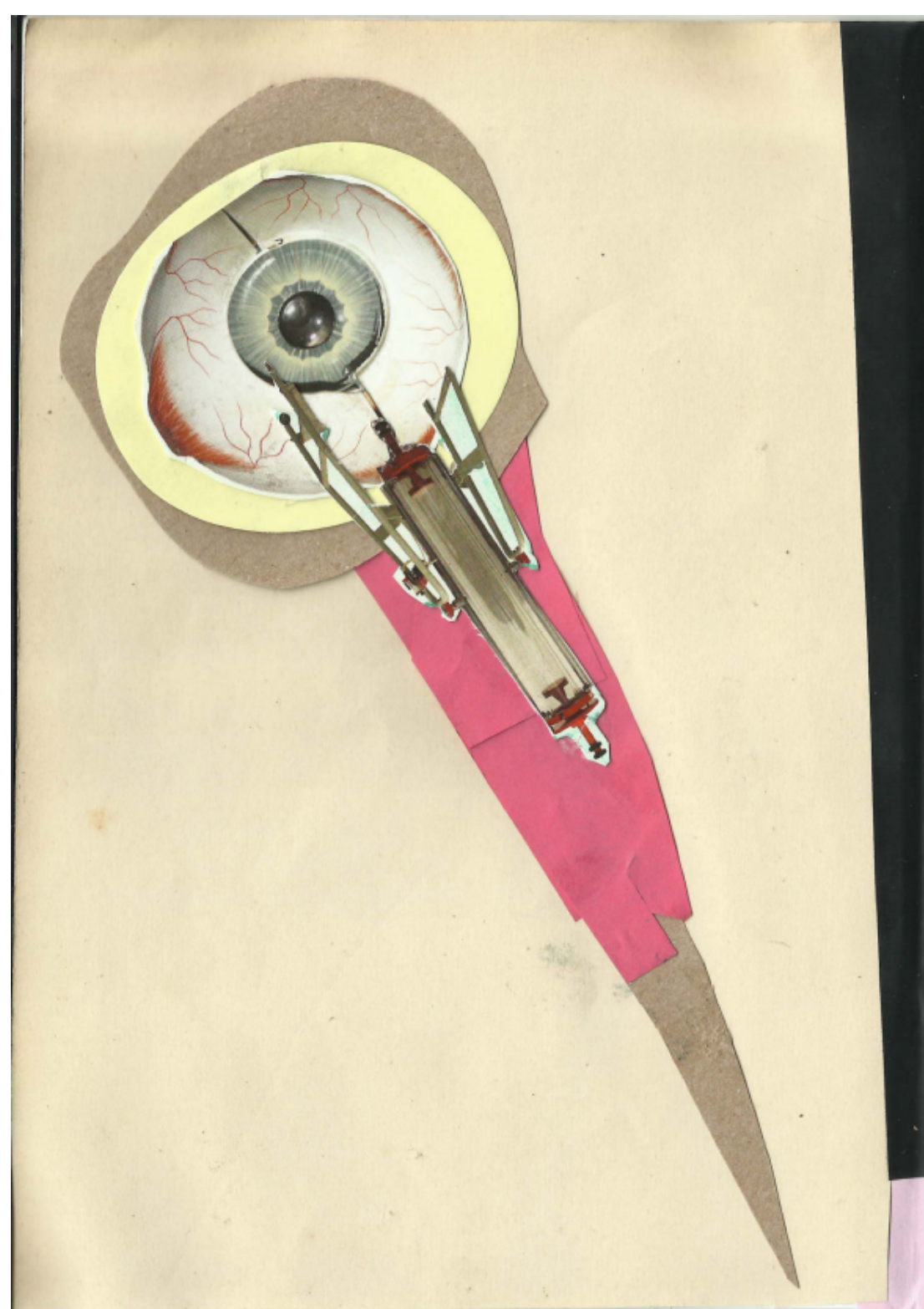
Biosensing/queer natures. (blog about queer natures. 2012)
<https://biosensing-blog.tumblr.com/emotionalwords>

various symbiosis and amplification of our senses ... uses of devices to
see beyond humans until we discover ourselves in protozoa

Elysia chlorotica (animal Plant symbiosis)
<https://biosensing-blog.tumblr.com/post/22686241512/simbiogenesis>

inspires me to think on **animal photosynthesis** :
<https://biosensing-blog.tumblr.com/post/22692066349/implantes-de-cloroplastos-en-los-humanos>

Bacteria.l sex : <https://biosensing-blog.tumblr.com/post/22474992053/transferencia-horizontal-de-genes>



Some models made at different times

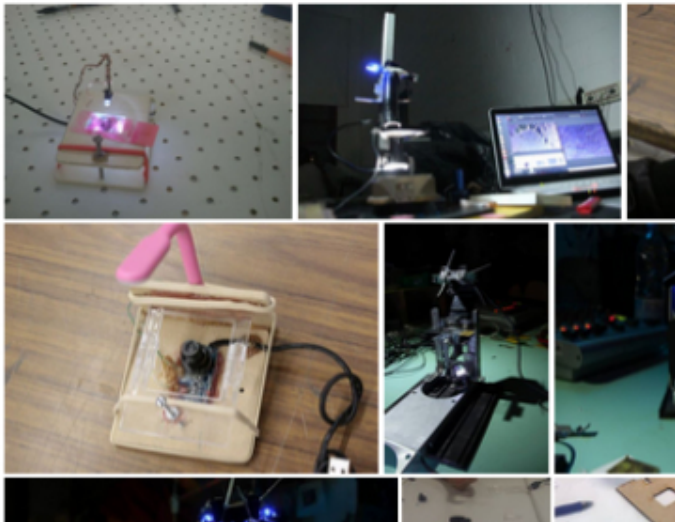


Made in 2012 during the process of Photosynthetika

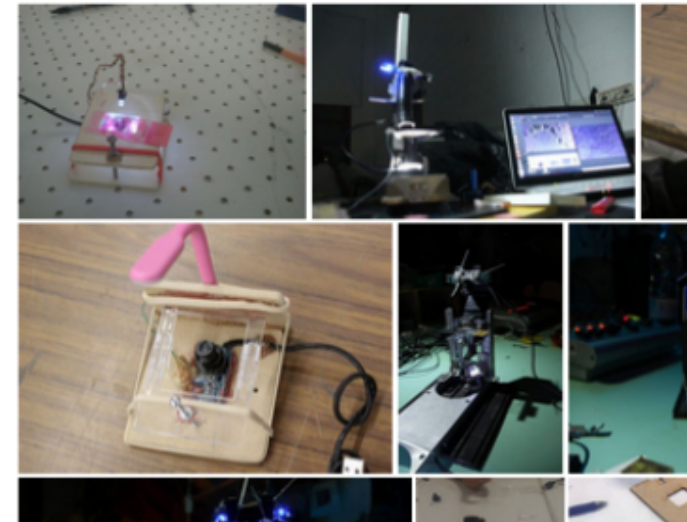
Some models made at different times



Made in 2012 during the process of Photosynthetika



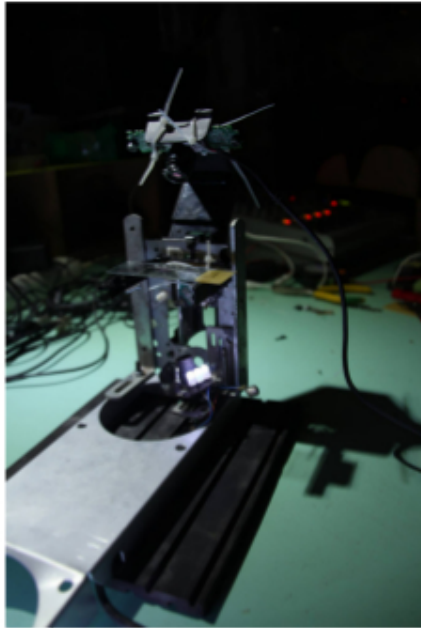
Berlin 2014, Barcelona 2015, Mexico 2017
Pechblenda 2014



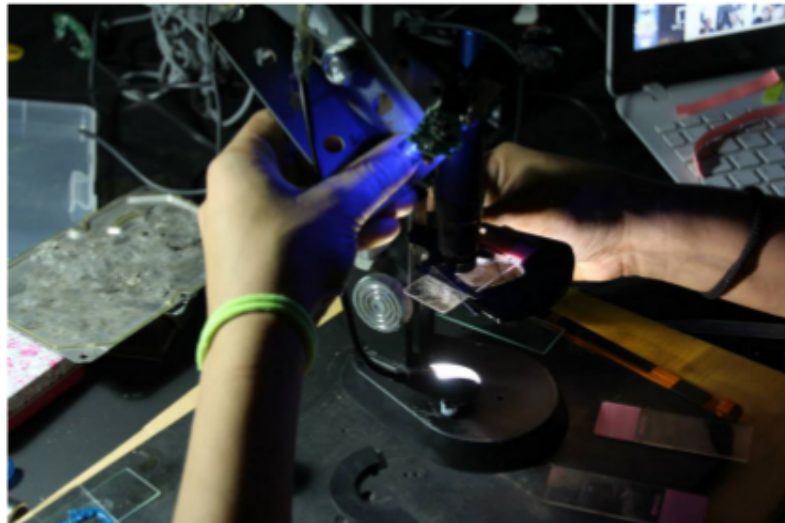
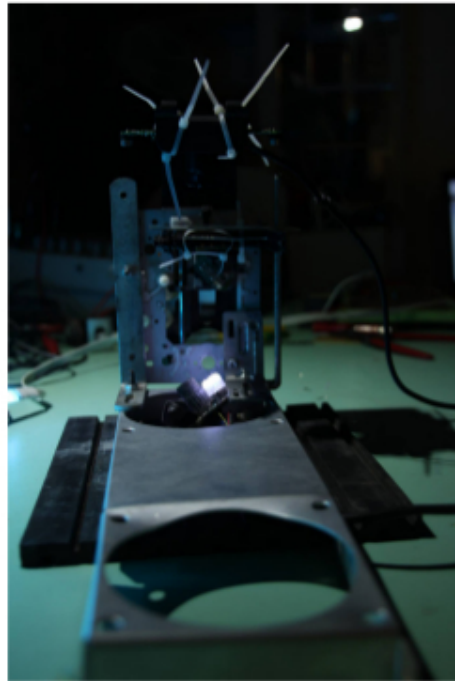
Berlin 2014, Barcelona 2015, Mexico 2017
Pechblenda 2014

microscope collection 02

pech 2014



pech 2014

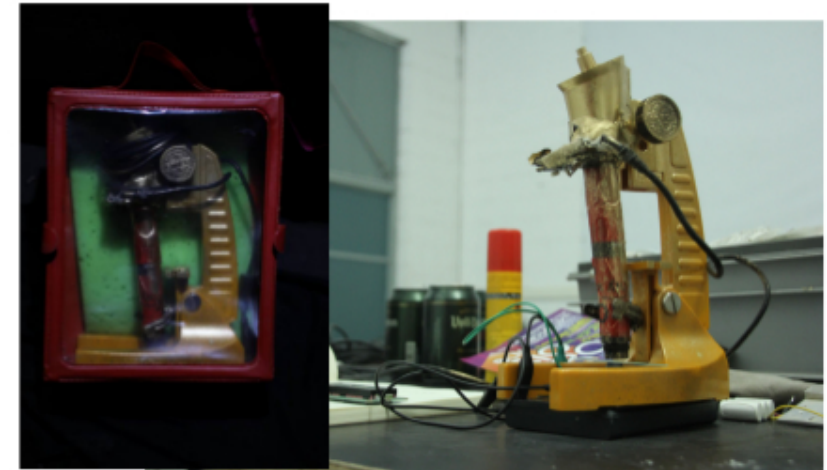


pech/gynepunk 2015

microscope collection 03



micro lab mobile 2014 pech



golden edition 2012-2017 in its more implemented version with telephoto lens = black plastic tube that separates the lens from the CCD. makes a more amplified images because of the telescope