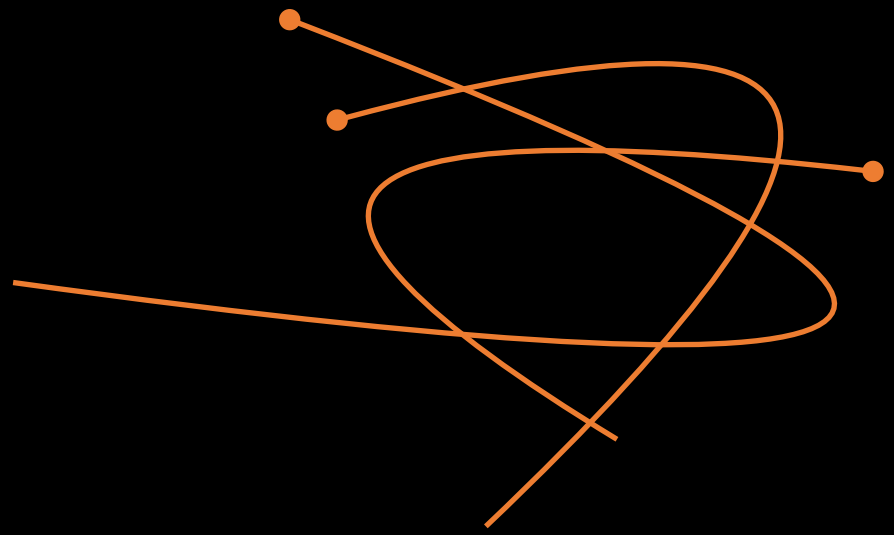
DEFORMABLE INTERACTION & SOFT WORLDS - 12 PROPOSALS



HEAD workshop, Oct 14, 2024

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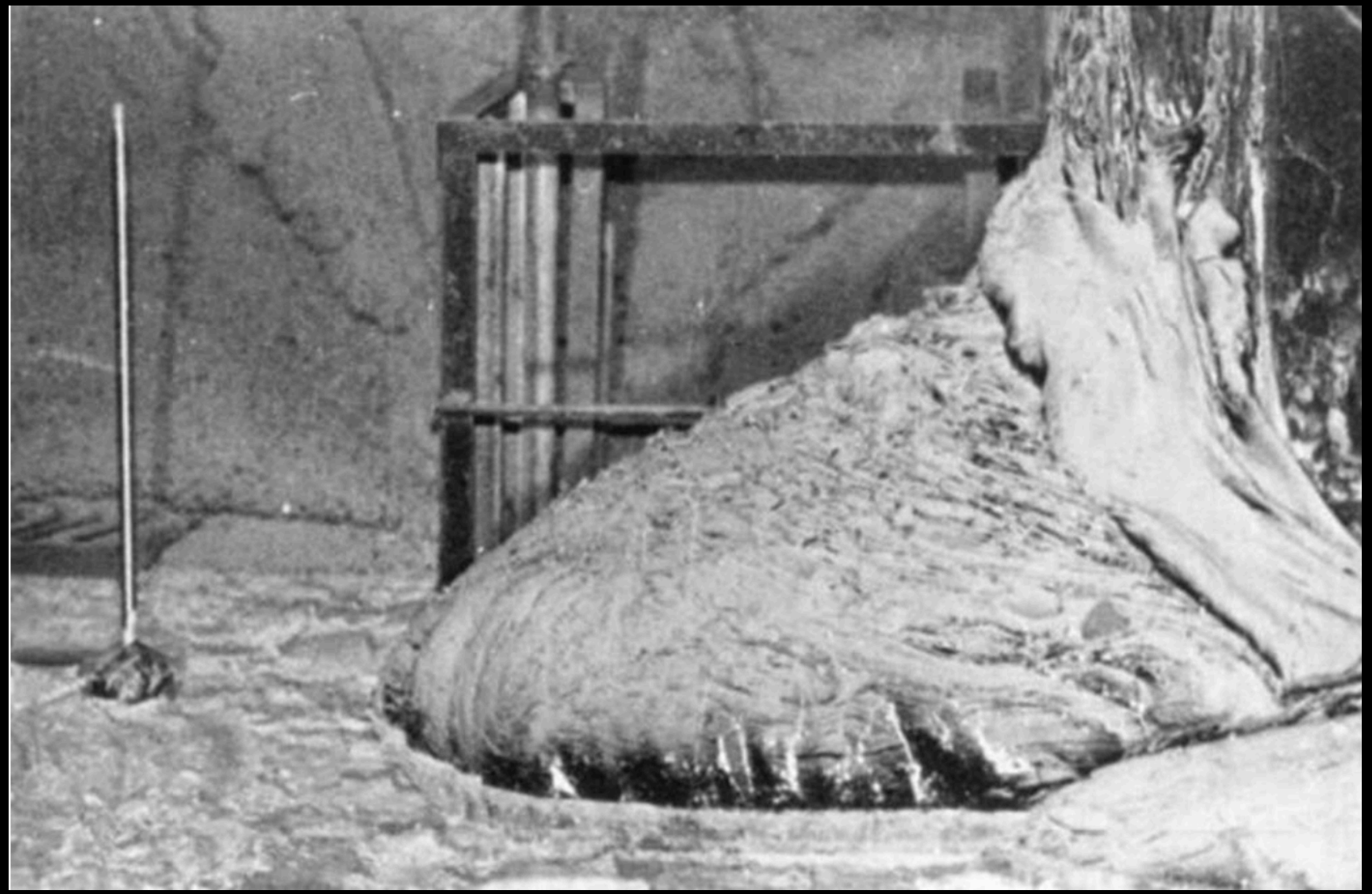
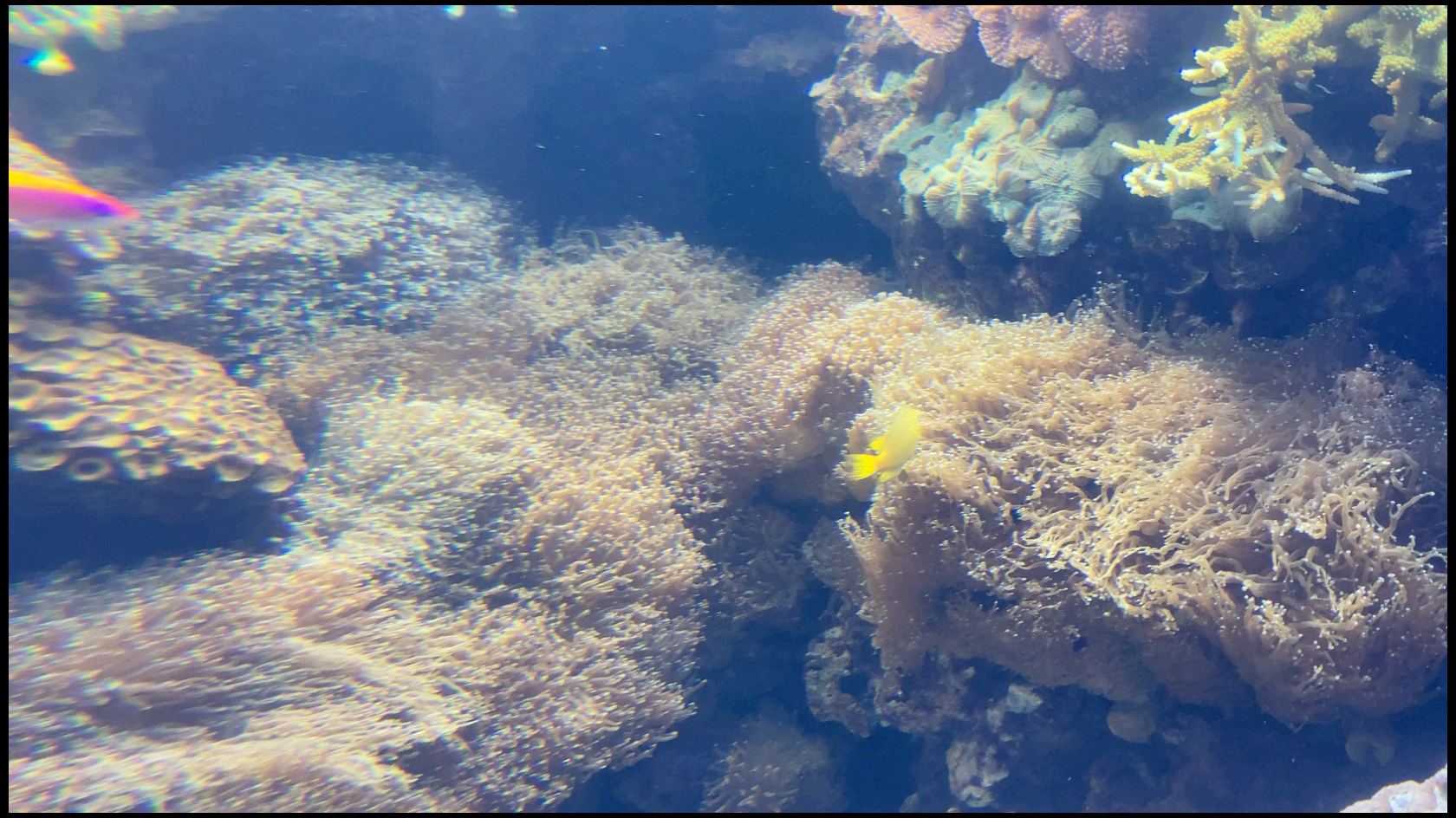


This radioactive deposit is called the elephant feet of Tchernobyl , a highly dangerous material is moving in the underground of Tchernobyl and spreading at a speed indiscernable to a human eye. At a certain scale, it is soft, animated, morphing, viscous, at another it is hard, still, resisting, untouchable.

IMMERSE YOURSELF IN AN AQUARIUM

Think of your own environment as an ecosystem. Intelligence, life, smoothness are not always located where we think it is. The fish are not only intentionally but because of the liquid flow that affect their bodies and the alguas have not central nervous system, only sensors distributed all over their bodies. Animation, smoothness and even intelligence are in fact effects in a interaction, generated through contact, encounters and reactions of the elements to one another.



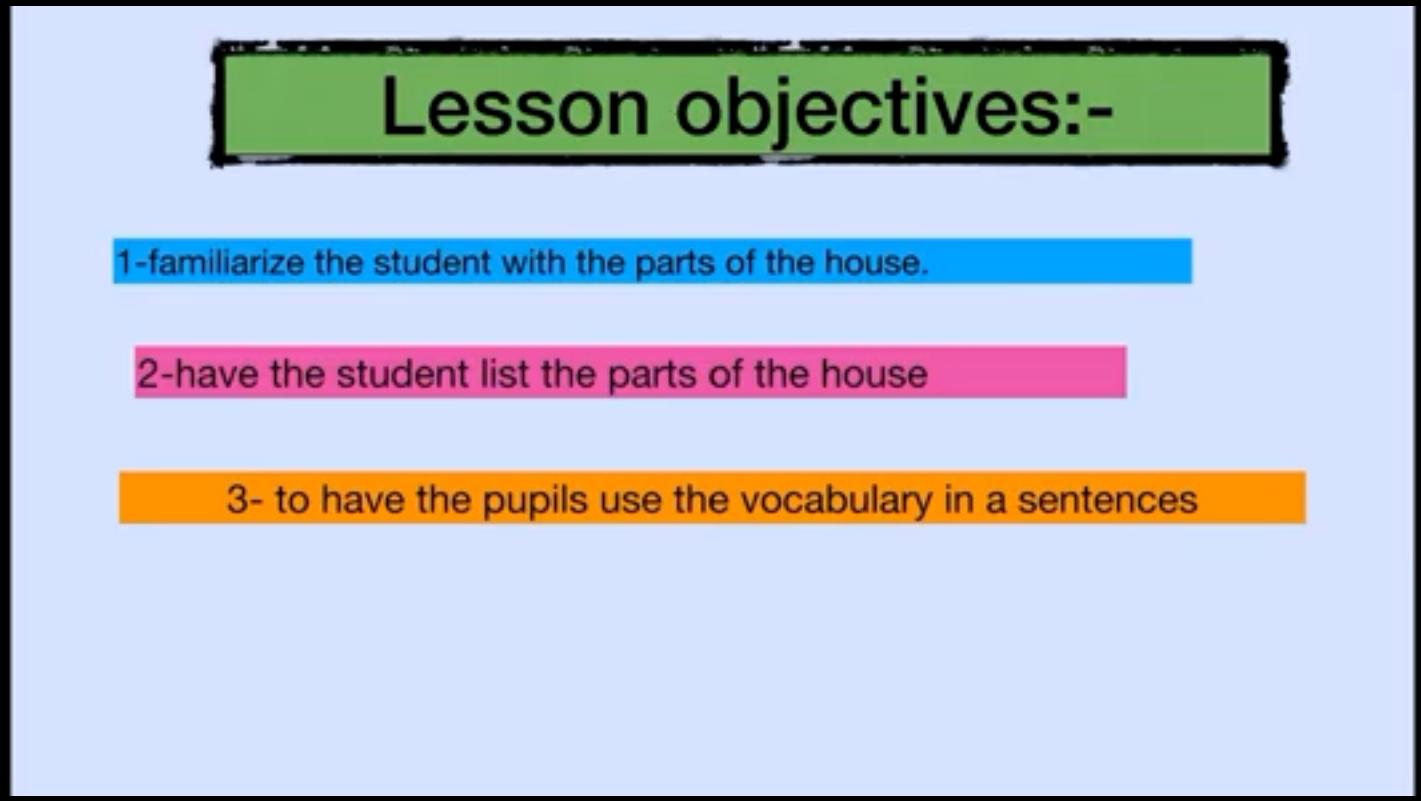
The Jelly fish is an emblematic creature for soft robotics as much as elephants trunks and tentacles. Liquefied movement crystallized into a solid organic form. The jelly fish contains the sea and the sea serves as a propulsor.

PROPOSAL 1

To think soft is to go against much of our architecture, our domestic world stuck in habits, our machines made of hard mechanics. Why such a human obsession for solidity, hardness ? We are animals made up of 80% water, with soft, flexible bone structures, and there is fluid mechanics! How to achieve **MAXIMUM FLEXIBILITY IN INTERACTION AND OPEN NEW POSSIBILITES OF INTERACTING WITH OUR SURROUNDING ? ?** How can we make interactions more flexible, less mechanical ? How do you introduce possibilities of interaction we have neve imagined, uncertainty, dialogue between things and us?

PROPOSAL 2

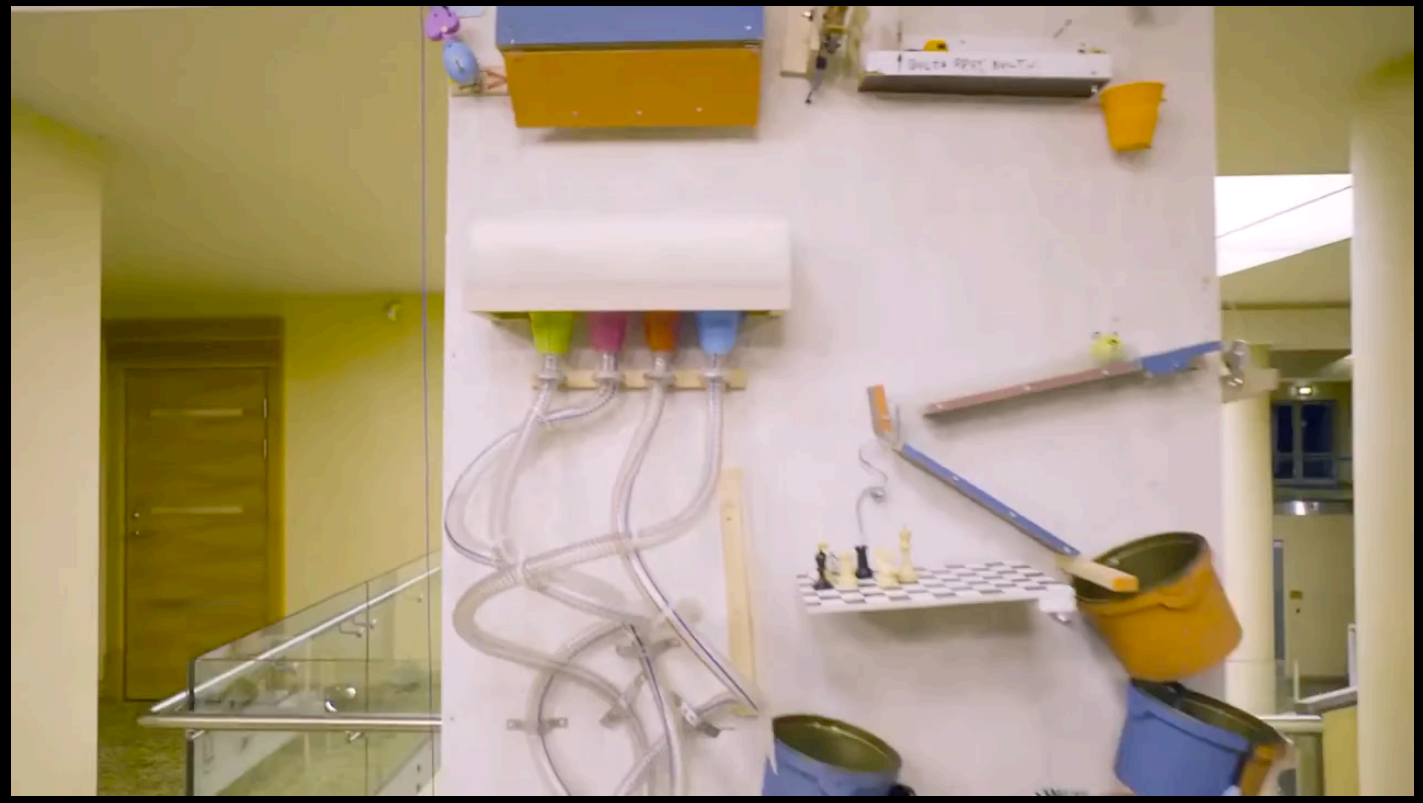
Identify a hard problem, an area of daily life that is resistant, a frozen relationship and propose **A VIRTUOUS SOFTENING / RELAXATION** that opens new possibilites allows us to envisage a future other than a ‘humanity of gastropods’ (Leroi Gourhan).



Video, Mr Stretch

PROPOSAL 3

TO WHAT EXTENT can we machine ourselves? See Mumford's mega-machines or the rube goldberg mechanisms. A proposal that must ask, in the mode of speculative design, WHAT, HOW, WHY and HOW far to go.



PROPOSAL 4

CHOOSE YOUR PROBLEM, YOUR AREA OF INTERVENTION. See Siegfried Giedion, *Mechanization takes commands,* 1948. From the slaughterhouse to the bathroom. What would happen if we liquefy or soften all structures?

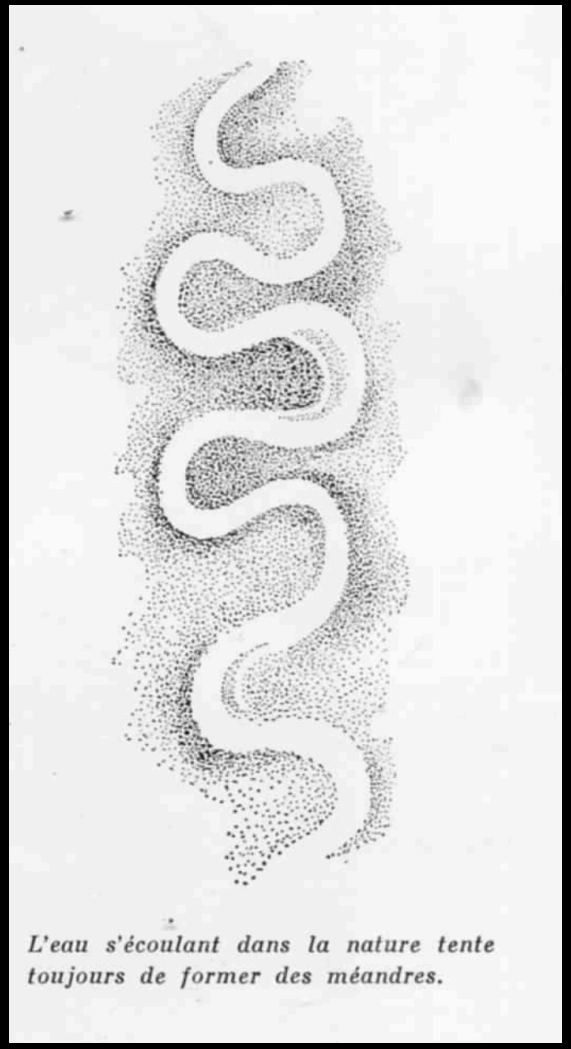
Awakening Ceremony, Kara Chin, 2021

PROPOSAL 5

MOVE AWAY FROM THE IMAGINARY OF THE CREATURE. PROPOSE A SYSTEM OF INTERACTION. When we think of robotics, we think of creatures and humanoids, not human/machine cooperation, intelligent systems with no central control system, the possibility of uncontrolled operation (open loop) and infinite degrees of freedom.

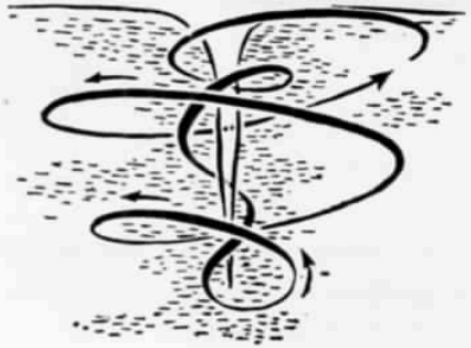
PROPOSAL 6

CHOOSE YOUR ELEMENT and draw inspiration from its deformability. SOFT, LIQUID, VISCOUS. Theodor Schwenk and the movements of air, water and gas. *The sensible Chaos,* 1980.



L'eau s'écoulant dans la nature tente toujours de former des méandres.

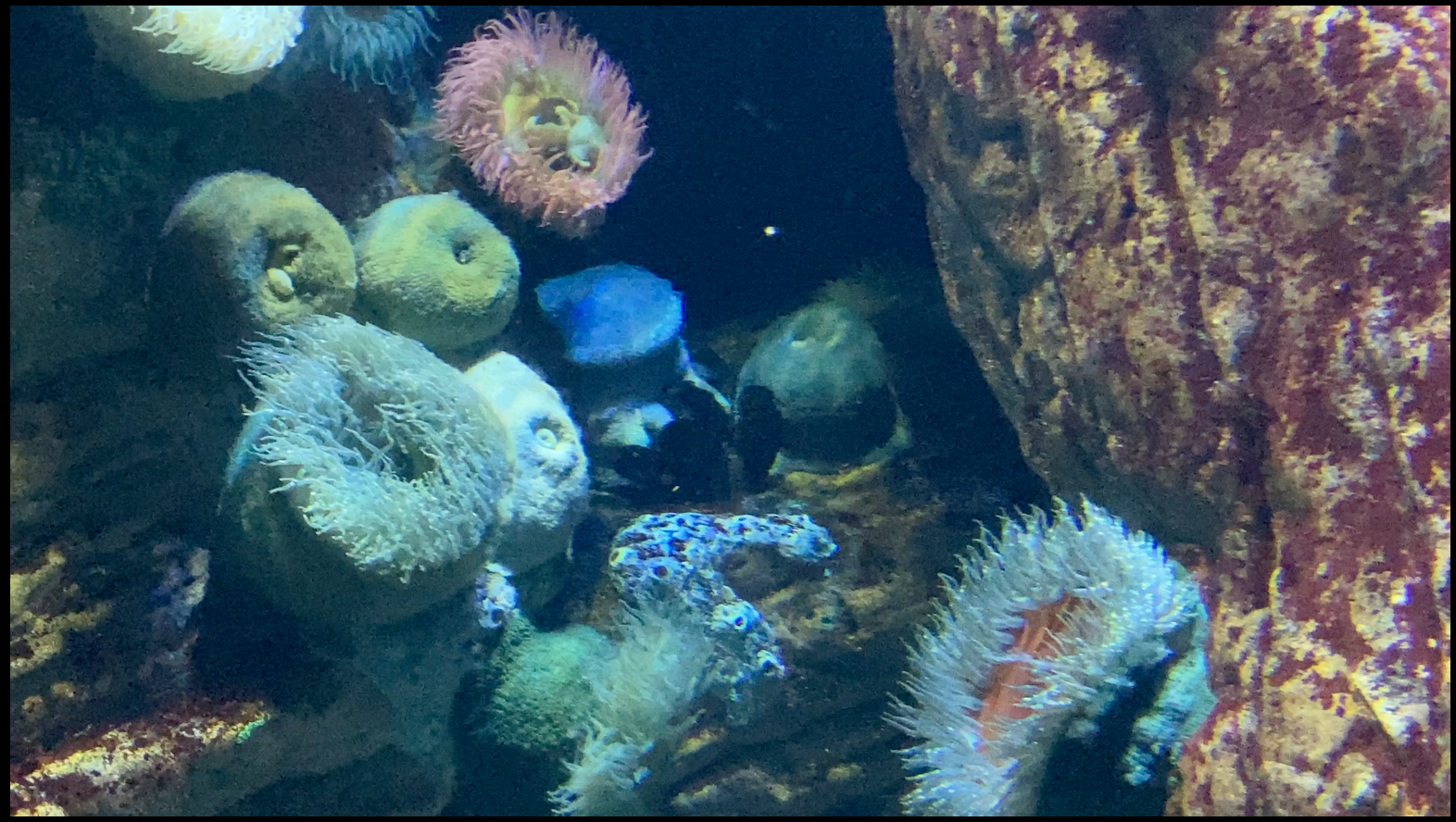
Le liquide, au voisinage du tourbillon, se meut selon des trajectoires spiralées.

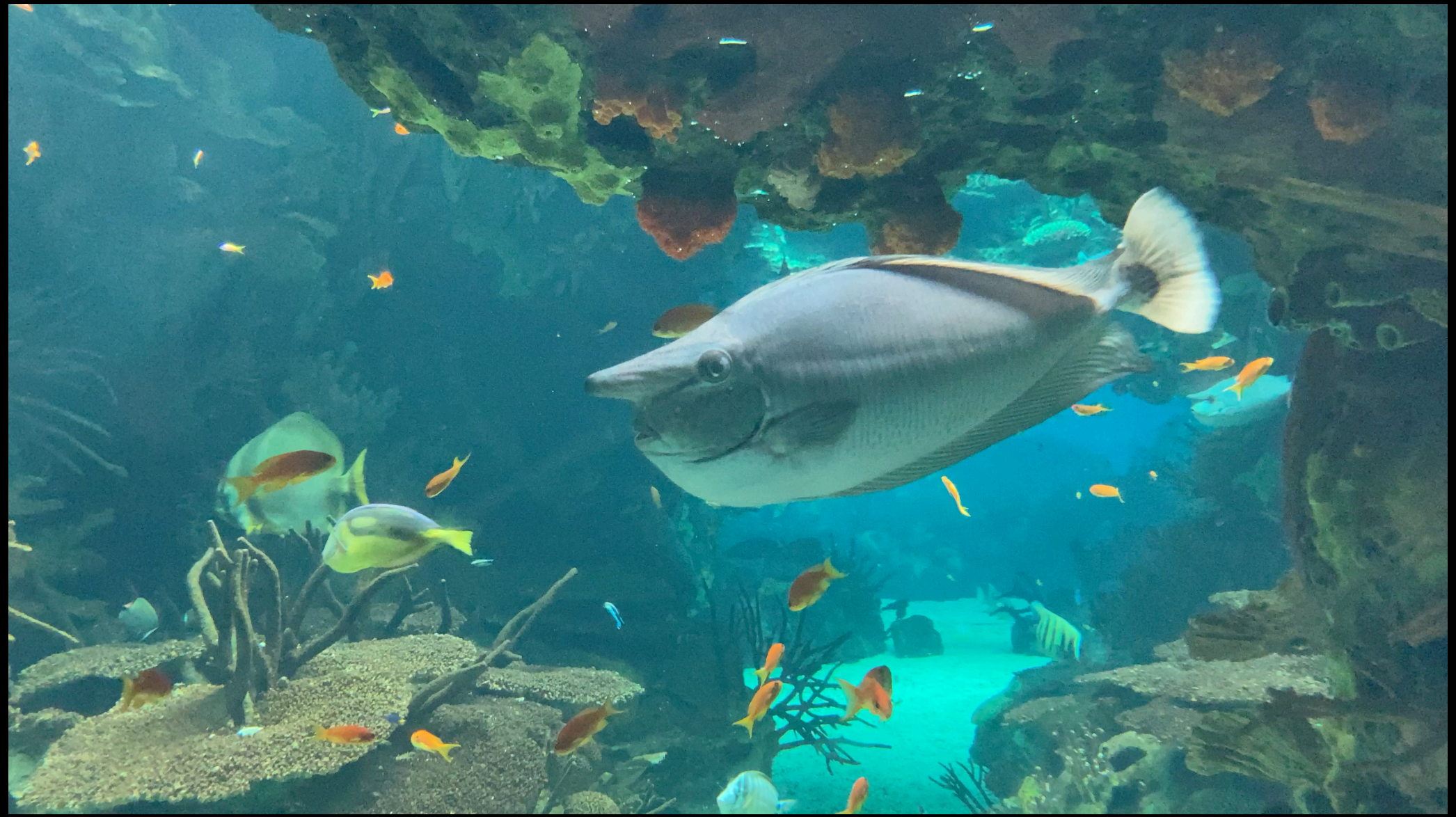


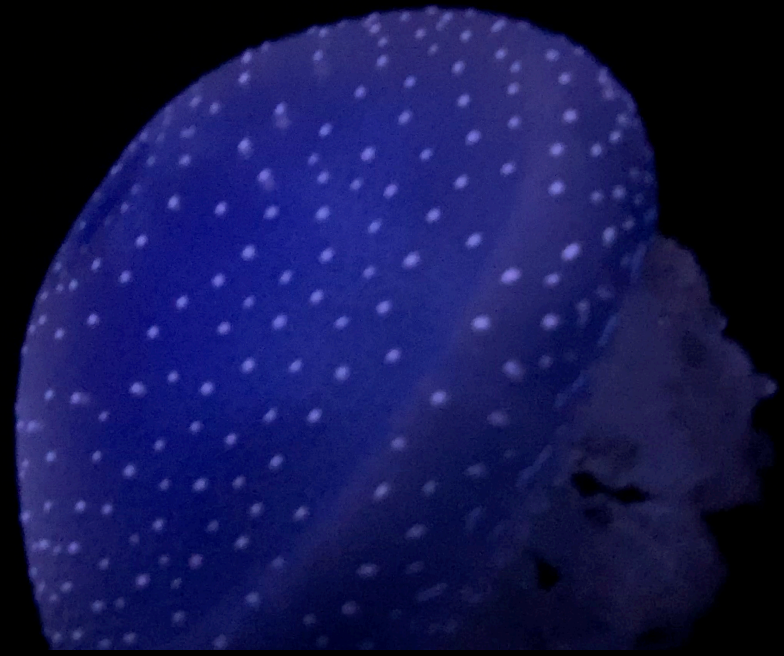
Theodor Schwenk, *The sensible Chaos,* 1980.

PROPOSAL 7

CHOOSE YOUR NON-HUMAN. A reference animal, a non-human companion (if possible marine) who will help us to ease a question, a problem. Sea anemones, aceras, molluscs, etc. See Painlevé's films. When we choose a non-human, we are not simply choosing a creature, but an entire ecosystem, an umwelt (perceptive world).

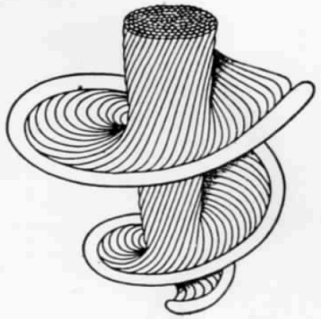




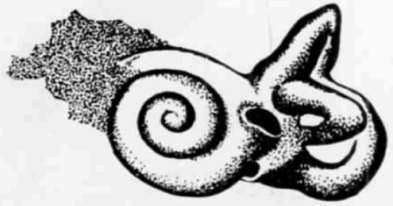


PROPOSAL 8

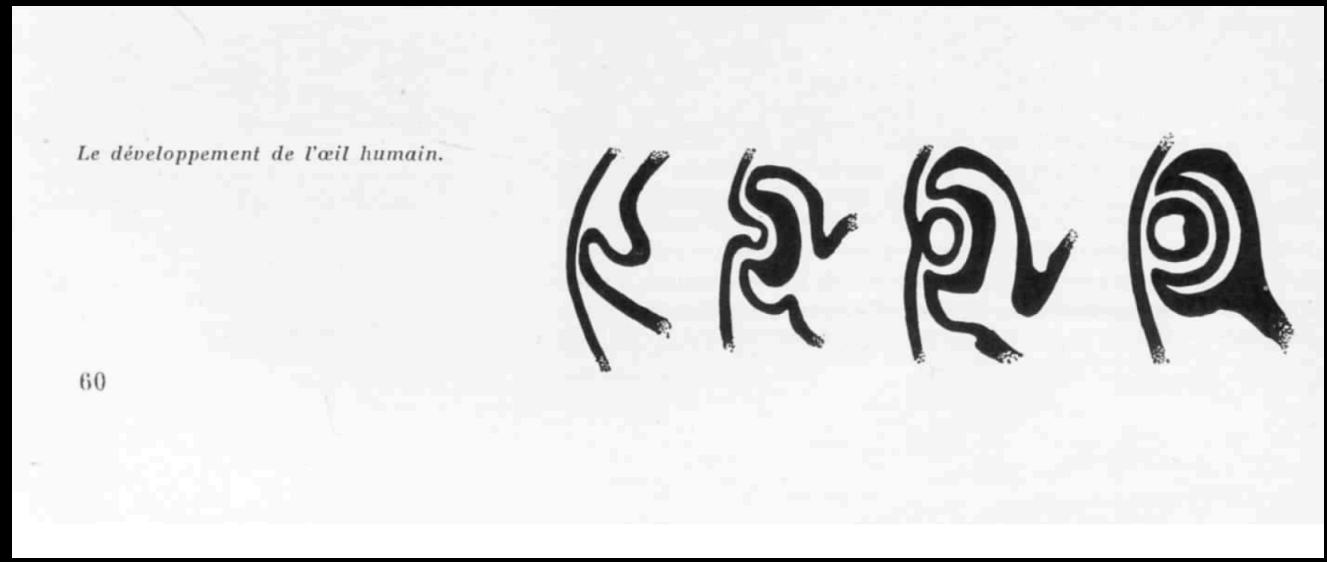
FOCUS ON AN ORGAN or a vital function with motor properties (breathing? breath?). Tentacles, trunks have extraordinary properties, but there are plenty of others.



Disposition des fibres dans le nerf auditif. Le déroulement de la spirale rappelle un tourbillon liquide et met en évidence un tournoiement de forces (d'après Burlet).



Limaçon et canaux semi-circulaires chez l'homme.



Le développement de l'œil humain.

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PROPOSAL 9

EXPERIMENT ON UNCONTROL, degrees of fluidity, thresholds of elasticity and emergent possibilities of interaction.

Biomechanics of the elephant trunk / Curr. Biol., Aug. 23, 2021

PROPOSAL 10

QUALITY OF RELATIONSHIP OR GAIN IN SENSITIVITY

When we think of robotics, we always think of extensions of the body, extensions of gesture, ‘augmented human’. A good proposal for organic robotics is a human-centered proposal that thinks about how to increase the place of human being at the heart of the system.

PROPOSAL 11

Choose a softener, a stretcher or a relaxator. Do yoga (or stretching, acrobatics, contorsion) to your 'proposal' to gain in FLEXIBILITY OR DEGREES OF UNCONTROL.

PROPOSAL 12

What if the walls were stretchable ?
We might be able to cohabitate with elephants….

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TO WHAT EXTENT can we machine ourselves? See Mumford's mega-machines or the rube goldberg mechanisms. A proposal that must ask, in the mode of **speculative design, WHAT, HOW, WHY and HOW far to go**.

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CHOOSE AN ORGAN or a vital function with motor properties (breathing? breath?).

EXPERIMENT ON UNCONTROL, degrees of elasticity, fluidity thresholds, emergent behaviours in interaction.

This proposal is not about optimisation or speed, but about **QUALITY OF RELATIONSHIP OR GAIN IN SENSITIVITY**, in an ecologically virtuous way.

Choose a softener /a relaxator / strectcher (yoga?). Do yoga to your 'proposal' to gain in **FLEXIBILITY**.

If possible, make it a experimental device that can be tried out with people, put to test, with a **REFLEXIVE VALUE.**