







How to classify these strange objects.

Are they produced by nature or by society? Are they moral or scientific problems? Are they moral or political matters?

technological or political matters?

Do these strange objects belong to nature or culture? Where can these hybrids be placed?

Are they human?

Are they human because they are the product of our work? Are they natural?

Are they natural because they are not the result of our activity? Are they local or global?



Reality no longer present itself as the face of an indifferent nature, and we no longer have to deal with simple and natural objects, well-defined and self-contained, "bald" objects without risk. Today, we deal more and more with "hairy", "dishevelled" objects, with "risky attachments", quasi-objects, made of multiple connections never fully closed. They are able to trigger unexpected consequences, even in the long-term, and because of that even more unpredictable and uncontrollable. Objects such as these do not simply stand in opposition to the subject but among which man is involved and with whom they share the same destiny.

The objects that surround us are hybrids that rebel against any form of classification, knots of a network that binds multiple and distant factors in an uninterrupted chain, and that risk blowing up all sorts, all programs, all effects. We are witnessing the proliferation of these chimeras that can no longer be relegated solely to the natural world. Their interaction ends up being a question of subjectification/objectification/subjection, human being classifications and the hierarchy of actors and values.

"An infinitesimal cause can have vast effects; an insignificant actor becomes central; an immense cataclysm disappears as if by magic; a miracle product turns out to have nefarious consequences; a monstrous being is tamed without difficulty,

In the face of Quasi-objects, one is always caught off-guard, struck sometimes by the robustness of systems, sometimes by their fragility."

- Let's spit on Hegel.
- Let's spit on Hegel too!

It was Kant who consolidated the unjustified division between human and non-human, placing man at the heart of philosophy while at the same time reducing the rest of the world to a set of unknowable objects. Things in themselves become inaccessible, while, symmetrically, the transcendental subject is far from infinite. No matter what variations will be made in the history of philosophy on this theme, the gap between man and world will always be privileged compared to that between tree and moon or fire and wheat.

Pure forms a priori?

I – PURIFICATION.

Contemporary thought continues to dissect the world into two opposing kingdoms. On one side there are humans and their culture and nature and non-humans on the other. Phylogeny on one side and ontogeny on

the other. Genetic heritage on one side and technological alterations on the other.

But no, there are not two mutually isolated zones called "nature" and "culture": there are only "actants", and it is not possible to split the natural realm from the cultural one - not because they are irremediably intertwined, but rather because the dichotomy between nature and culture is unfounded. There is nothing but a plethora of actants, none of which are intrinsically natural or cultural.

"There are no pure idioms, we are all mediators, translators."

II - MIXTURE.

These hybrids are a nightmare for any attempt to divide the world into two purified districts. For this reason, the modernist position deliberately misrepresents them as a mash-up of pure forms. But such mixing is impossible if the two pure forms do not exist at all. In fact, our world contains nothing but hybrids, even though the word "hybrid" is misleading with its false shades of a mixture of two pure ingredients. If we call them quasi- objects, the work done by "quasi" removes any trace of an initial or ideal purity.

There are only actants: built through many tests of strength with others, and all partially resist any attempt to disassemble them.

-ACTORS-ACTANTS-HYPHENS-AGENTS-

Following the tracks of quasi-objects, it now looks like an object, now like a tale, now like a social bond, never reducing itself to a simple single body. All that matters are the hyphens and the networks that link them.

Objects are subjects, social actors that move, act, perform in the same way as other human social actors; they interact with each other and between themselves and us.

A Quasi-object is first nothing but a sign, a token, a trace that remains, left by the displacement of a body that first arrives, produces, acts and then retreats. It is a holistic touch that remains and persists as trace of the presence of a body's action.

Compared to the social system, objects do not symbolize, do not reflect, do not reify relationships between subjects, but they contribute to shaping them. Objects, considered agents, work as mediators responsible not for conveying messages, but for building, rewriting, and modifying meanings.

The traditional mediator was only a means to an end, while the agent is both a means and an end.

What we find anywhere and everywhere are simply networks of actors. The actor is not entirely an object and not entirely a subject. Rather it can behave as both, depending on how we see it. The quasi-object is a relational property that does not possess any substantiality. It is not a distinct reality as opposed to subject, but a relational function allowing it to build real or virtual connections between subjects by immersing them in a collective-social construction.

When the quasi-object creates a community, this community becomes real. We men spend time transforming the virtual into real life.

- What is a coin?
- It is a quasi-object. It can turn into anything. It is a general equivalent. So today there is nothing more real than money, which started out as a quasi-object.

Quasi-object is neither an object nor a subject, it is a relationship.

Quasi-objects are phenomena that can only be represented as an interaction between the observing subject and the observed object - or the other way round. They are half object and half subject since they can't be defined by any of these two polarities. They cross and build social groups, mediating and transforming personal-collective identities and relationships within networks, thus allowing us to pass from the obtuseness of "I" to the fluidity of "Us".

- But is there really an "I" and "us"?

We dance together with the elements, we are made of billions and trillions of small components each endowed with their own intelligence. There is of course no such thing as "I" or "Us". What exists are only risky attachments, temporary and fragile balances between different things. And that "Us" has a multiplicity in itself and constantly works with all the other animated-inanimate makers in the world.

The personal pronoun is a sponge, it is a ball!

"It is not an object, but it is one nevertheless, since it is not a subject, since it is in the world; it is also a quasi-subject, since it marks or designates a subject who, without it, would not be a subject. He who is not discovered with the furet in his hand is anonymous, part of a monotonous chain where he remains undistinguished. He is not an individual; he is not recognized, discovered, cut; he is of the chain and in the chain. He runs, like the furet, in the collective. The thread in his hands is our simple relation, the absence of the furet; its path makes our indivision. Who are we? Those who pass the furet; those who don't have it. This quasi-object, when being passed, makes the col, lective, if it stops, it makes the individual. Ifhe is discovered, he is "it" [mort]. Who is the subject, who is an "I," or who am I? The moving furet weaves the "we," the collective; ifit stops, it marks the "I".

(- The furet is the animal. The ferret, as well as the marker in a game somewhat like hunt-the-slipper or button, button, who's got the button?)

The ego is not a fixed point, an invariable structure, but a being of circulation. The only invariable pronoun is "Us"; it designates the multicentric network, it belongs to everyone and is in common with everyone else.

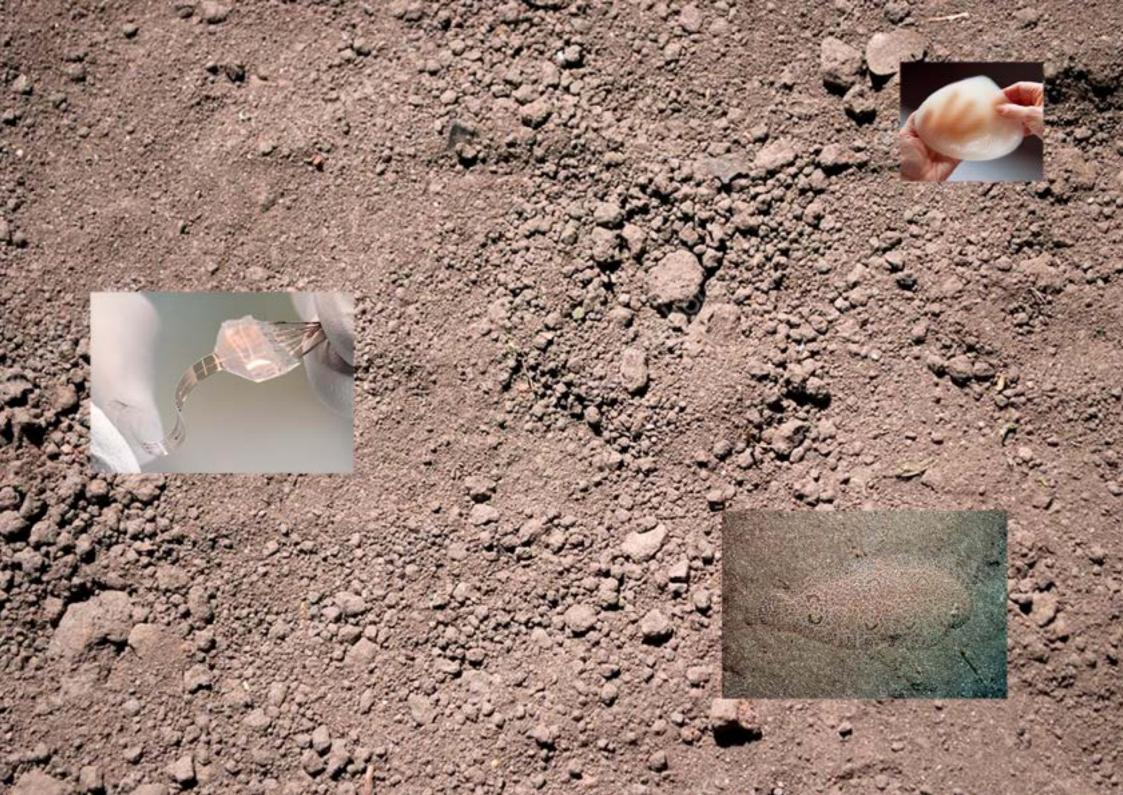
"This quasi-object that is a marker of the subject is an astonishing constructer of intersubjectivity. We know, through it, how and when we are subjects and when and how we are no longer subjects. "We": what does that mean? We are precisely the fluctuating moving back and forth of "I." The "I" in the game is a token exchanged. And this passing, this network of passes, these vicariances of subjects weave the collection. I am I now, a subject, that is to say, exposed to being thrown down, exposed to falling, to being placed beneath the compact mass of the others; then you take the relay, you are substituted for "I" and become it; later on, it is he who gives it to you, his work done, his danger finished, his part of the collective constructed. The "we" is made by the bursts and occultations of the "I." The "we" is made by passing the "I." By exchanging the "I." And by substitution and vicariance of the "I."."

Political power acts on us, and the rhetoric of the text acts on us, but so do concrete walls, icebergs, tobacco fields and poisonous snakes.

- What ends?
- Nature ends.
- What begins is the mesh, made from risky attachments, made of liquid, viscous, decentralized, gradual and intersubjective entities; always too far or too close. Each entity can be defined only in relation (although not the relationship itself).

The mesh is the combination of all life-forms, but also the whole of all life-forms that have died and have fertilized and modified the Earth, its structure and its history. Everything is life, even what does not seem to be: iron is a byproduct of bacterial metabolism and so is oxygen. Mountains can be made of shells and fossilized bacteria and the decisive thing is that the mesh does not have any more important or essential element than the others.

Like A Little Disaster



Organizing Life without a World



Life on the 30th October 2017 is listed with multiple trajectories but its top SEO is a film made from the same year entitled "Life". This film is 1h 50mins and is a science fiction thriller. Moments before I screenshot this image, I watched the trailer for "Life". I noted four quotes from the film and aim to explore my ideas through these quotes. Ittah Yoda asked me to write this text, they gave me as a reference point Bruno Latour's concept of "risky attachments" I would say the task of writing this piece is an exercise in "risky attachment".

"This could be a major scientific breakthrough"

Twitter descended from a program named TXTMob. In 2004 at the Republican National Convention (USA) over 5,000 people used the sms app to forward messages and organise meeting points, giving directions and conveying information on riot police formations that were attacking the demonstration.

Two years later Twitter launched itself as the blue bird of peace. This concept was popularized in 2009 in Moldova, Iran and later throughout the Arab Spring revolts as being a uniting free tool for insurgents against dictators via their mobile phones. A few years later in 2011, the London riots broke out, however the western insurgents did not go to the cute blue blip for structure, they instead went to the blackberry. A machine whose secure telephone network has been designed for multinationals, bankers and politicians. The british secret service couldn't even crack that black cell. The blue bird kept twittering throughout the molotov's and looting but it sang condescension and despair not revolution and co-ordination.



The mechanics of all three TXTMob, Twitter, and The Blackberry are the same, they all send out code and if you have the device they illuminate the cipher on access. However their ideological curation differs vastly, one tool, two devices, three gangs. In the tech world they often mockingly say "if it's free you're the product, not the customer". A underling in gang culture, is a street runner - an errand boy for drug dealer. A person who brings back total profit to his employer and receives a small percentage as a bonus for his services.

"Que Instagram"

We could say Instagram is the digital embodiment of many natures, under one world. Any singular nature can be formatted into 512 x 512 pixels and slotted into a sedimental layer of other natures making up a landscape that could easily be called the world. Instagram is an innocent interface, where many nature enthusiasts can gather via hand-held safari trips to observe the watering hole etiquette of all the wild animals, but let us not forget one never maps a territory that they don't contemplate on appropriating at some point.

The theorist Bruno Latour wryly beckons the death of Nature*, he declares only when nature stops being singular and becomes plural "Natures" will we start to be able to understand and implement any real sense of collectivity. Naturally the assemblage that Instagram offers and authorizes is infinitely more than a purely ontological idea of "naturalness" we could in fact liken it more to a ontological database in a world domain.

*For the sake of this writing experiment I will not go further into Latour's ideas, but ask the reader to only observe the Nature Vs Natures argument superficially.

"How smart is this thing?"

The most important templates produced in design today, are those that focus on the ontological rather than the excess. The designs that intervene in our background, whilst been invisible in our foreground are the successful strains, they tap into our culture, our modus, our life. These designs can change our already existing mechanics and deeply affect our ways of being within any environment. They are both political and submissive.

Take a being that is armed with an apple watch, as an example it comes to understand itself entirely on the basis of an external data cuff. This external data is marketed as an individual data soulsheet - unique but enlightened, the wearer/user is part of a collective nature between the body and the data (Latour's Natures take a walk).

"What is the primal Instinct of any living thing? To Survive"

Power has become the only secure environment we live in today. Power is the nature we wander through and Power is the air we breath. Power organizes Life without a world. A cult of personality arose in the past, regimes used mass media, propaganda, and other methods such as Government-organized demonstrations to create idealized, heroic national utopias.

Today the cult of personality has given way to the cult of performance and it is no longer the governments that are appropriating life, but the people and their tools. This is in essence a survival tactic of the oppressed, a paradise without ecology has come into play. Every hand in the western world holds a console, but the reason it doesn't design a revolutionary way of being is because it's a fractured entity. The users are either in direct co-operation or direct competition with each other, they are "the crowd" and they are being controlled by the gangs paradoxical programming. Every revolt starts with collectivity, and unlike Latour I don't see many wars, I see one war, a singular war, a singular fight.

In the digital world writing the word revolution on a wall, has the possibility to catch fire if enough people fuel the ashes.

LIFE / NATURE - NATURES / LIVES

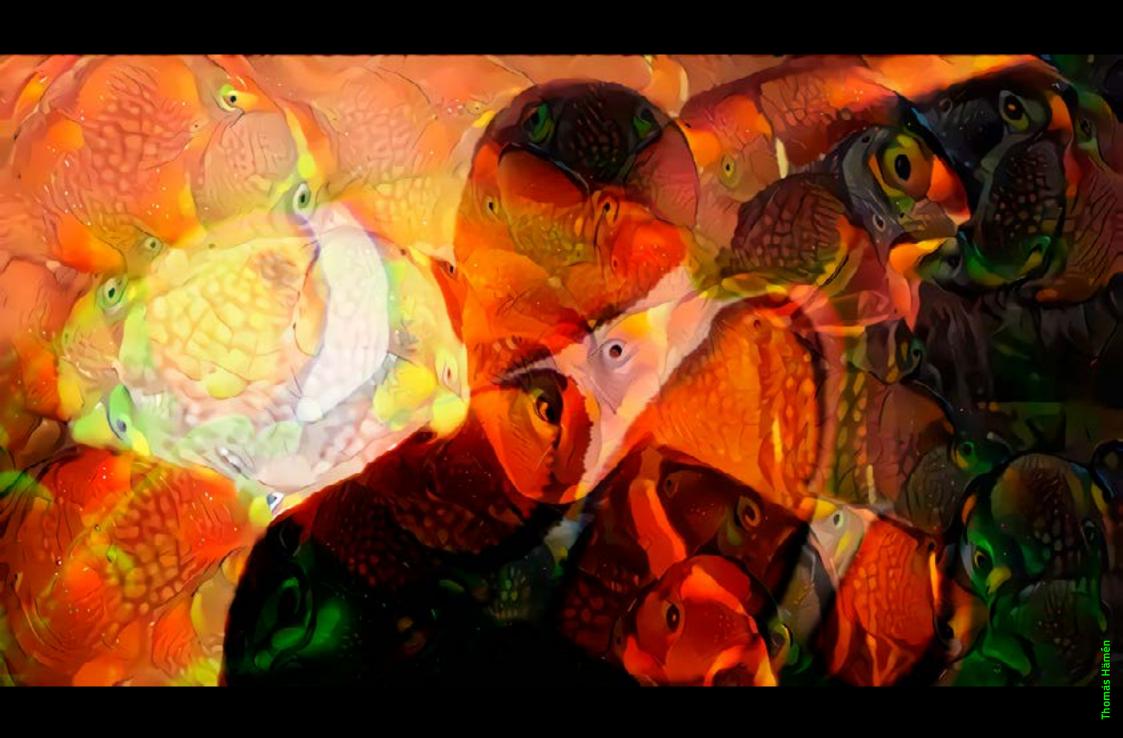
Text By Penny Rafferty



You have what you have II, 2017, Ittah Yoda, Photo by Trevor Good







40 000 BC

Animal blood was used for the first time as we know it by Homo Sapiens and Homo Neanderthalensis to make paintings in red on cave walls.

1951 AD

Color TV is invented. Different phosphors help to create different colors and while there's many options for creating green and blue, the bright red color was and still today can only be created by the rare earth element Europium (Eu). Named after Europe and currently monopolized by China, this mineral serves as the red pigment of all digital imagery today.

2009 AD

The "Red screen of death" is introduced in the beta version of Windows Vista as alternative to the classic blue screen following a fatal system error. The red color however was said to cause unease and even cases of heart-failure among users and the red screen of death was removed from Windows Vista in Build 5112.

2017 AD

The Intergovernmental Panel on Climate Change writes in their gloomiest forecast that the top of our planet will have its first ice-free summer in year 2050.

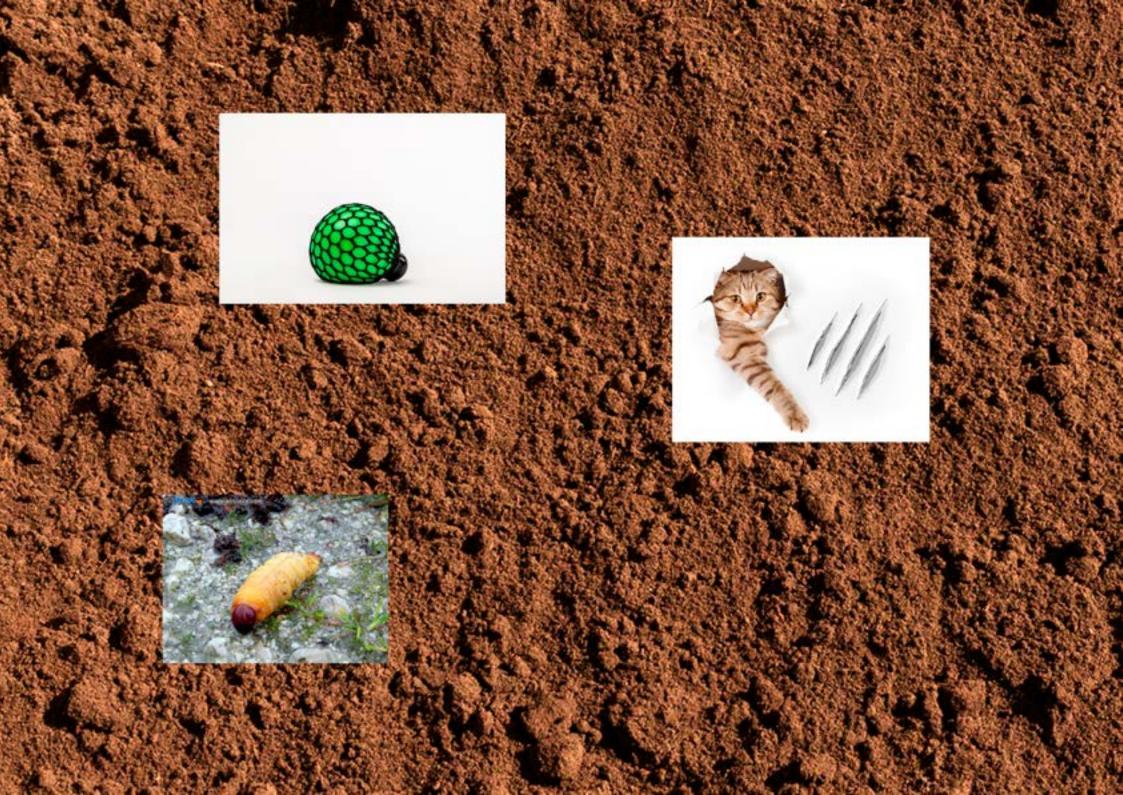
2032 AD

Skynet creates T-1000, a shapeshifting android composed entirely of a "mimetic polyalloy". The android is sent back in time to find and kill John Connor and by doing that wipe out the human race.

190 Million AD

When seabirds became extinct, the skies became an available niche, which became occupied by Ocean Flish. They have evolved over millions of years from a fish-like ancestor. They are not like fish that we know, but have developed true flight, just as successfully as birds and bats did.

Thomas Hämén



Eternal September

I.

Dear -

These dreams are everything, and so by their status as a whole shouldn't need a name. But these mindspaces are also specific in a way that I feel they deserve one. Eternal September.

It's *always* September, *somewhere* on the Net.

Submerged in my wet-crate, this water filled isolation chamber, no other images reach me. Slow memories of someone else. The isolation module has an air of sadness. Autumn floods, and the specific melancholy of septembers. Fogging in every sense. I've defined and framed these memory walks as well as possible considering the difficult conditions.

An ode to the crushed dreams of the pre-internet hackers, the heroes of the computer revolution, left behind when the web widened. Disillusioned by the lack of knowledge and passionate rigor, they left both hardware and network behind, seeking answers in nature – in water, in sacrifice.

No _life "forms" remain here, no "groupmind" is in place to offer emotional support. All that remain

is the dust of the virtual – empty beer bottles, obsolete storage and the nostalgic names of family run corporations, virtual spaces and hardware that have all been swallowed up or jettisoned into the cloud.

A driverless car, an AI user, cruising through, simulating my bodily responses. The psychological anguish of relinquishing driver status. There is danger in memories, a danger much lessened by relinquishing driver status, navigating by proxy through a platform of remembrance.

What, if anything, cannot be simulated?



Eternal September is a secret version of the game Myst, rooted in historical reality, improved upon and kept in pace with contemporary technology. The new age promise of internet in its network cradle, the water submerged server racks still connected, all the nodes leading to rooms abandoned. Abandoned first by the engineering pioneers and then by the clueless masses that drove them out. Here lie the eternal ruins of what was once new, and promising.

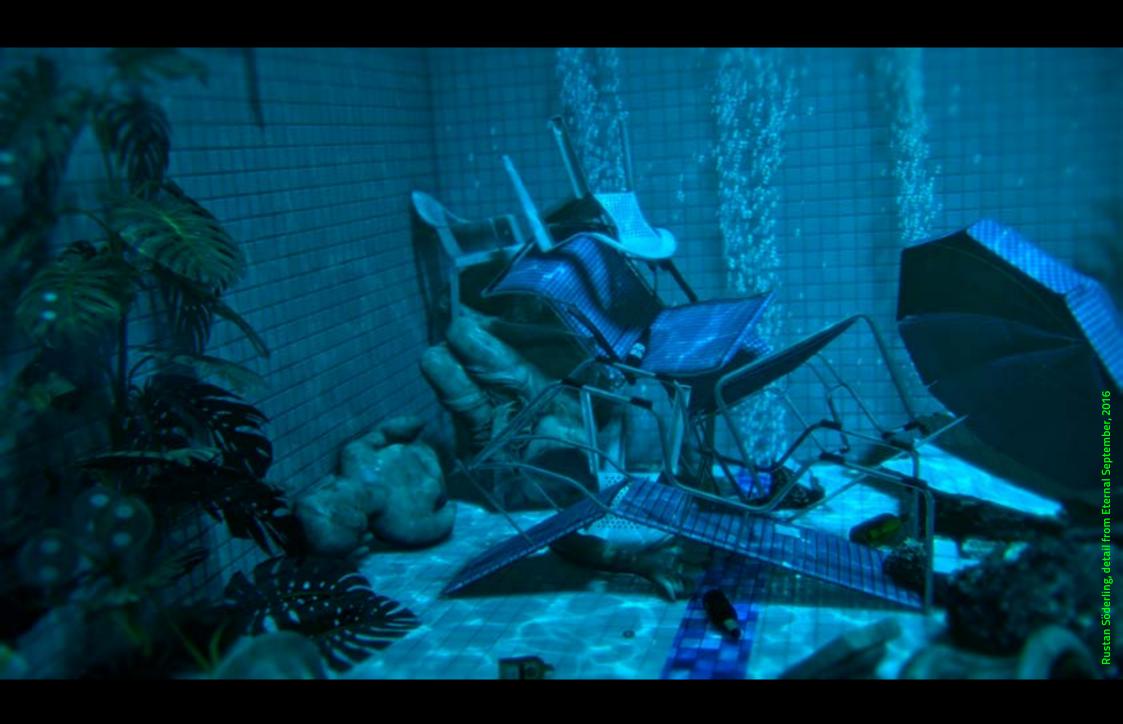
On a faded brochure I read:

What can one do with such virtual travel, besides downloading papers on genetic algorithms? If a 100 other students were to suddenly show up in the same virtual place, it might be pretty cool. You could: throw a party, devise pranks, role-play, scheme, and plot to build a better world. All at the same time. The only thing you'd need is a multiuser place to meet. A place to swarm online.

The clues seem endless, projecting a sweet poetry of information overload and flaunting every sign of entropy. Before long, I find myself wandering around clicking on everything, faces, litter on the floor, labels on bottles behind

the bar, after a while interested not so much in where I might get to than the texture of the search itself. Wet or dry code non the matter: the visual and sound design, the echoing dense commotion of the terminal, the profusion of hexadecimal color shades, the choreography of thousands of extras, each differently drawn and detailed, each intent on a separate mission or sometimes only hanging out, the non robotic voices with so much attention to regional origins, are all parts of the body of this life form born in the exploding space between user and interface.

The space here is presented in paradoxical terms: even though it is a "nonspace," one nonetheless enters it, "blinking in," and moves within it in various directions at various speeds. The seeming contradiction is resolved by the fact that it is not an actual place but a "consensual hallucination," a conventionalized way of perceiving virtual domains. The matrix, too, is described as a consensual hallucination, data being represented by shape, color, and motion. One can navigate the matrix by moving through it or can "punch" directly to a particular location by entering its coordinates.



A space is also a hole. Quite often networked relationships come in the form of communication between two or more computers, but the relationships can also refer to purely biological processes, as in the systemic phenomenon of gene expression or the logics of infection and contagion. Protocol is not a single thing but a set of tendencies grounded in the physical tendencies of networked systems. So "networks" means any system of interrelationality, whether biological or informatic, organic or inorganic, technical or natural—with the ultimate goal of undoing the polar restrictiveness of these pairings.

Abstracted into a concept, protocol may be defined as a horizontal, distributed control apparatus that guides both the technical and political formation of computer networks, biological systems, and other media. Networks always have several protocols operating in the same place at the same time. In this sense, networks are always slightly schizophrenic, doing one thing in one place and the opposite in another. Networks, this particular technology of knowledge – which is what this recorded passage through a ruined

memory palace is – shapes our thought. Here I'm an isolated mind in a closed space, nothing but second hand knowledge reaching me. A water crystal stuck in dry code.

Sebastian Rozemberg







0. Planet material flows



In this particular feedback loop, this stage could be called a type of beginning. I cannot imagine an actual beginning, but I can categorize it as fluxes and flows of planet materials. A time Manuel de Landa categorized as before the mineralization and calcification of primitive bone, gases flowed, bouncing off, and floating away. Lavas, aerosols, gases, magmas, and mud fluctuated and reigned supreme before the spine emerged from the slime.

1. My Body



The spine formed, and my body began emerging from the mud, its complete form not yet visible as semi-liquid materials covered its shape. I can only seem to feel it with my finger tips, but I do it without much sight. With my vision not yet developed, I am unable to see it in its entirety. In this stage, flesh and genes began to form into species. The bodies began to mesh with material flows, ushering in the development of ecosystems.

2. Person 2 Person experience



In this stage, my memories, my childhood, my memories of delusions all began to emerge from the mud and my body, extending in all directions, still fully immersed in the mud, even if I may not see it always. This is some kind of middle ground transition, somewhere between biological history and linguistic history, symbolic languages and socio-technological habits not fully formed just yet.

3. Socio-technological Habits



In this stage, linguistic history has emerged. From oral tradition, folklore, to chat rooms, instagram, to not yet realized neural lace + VR, AR, DMT com puter interface communications. Each previous stage remaining autonomous, yet interacting fully with the stages following and before them. Socio-technological habits of this stage, my mud, my body, and my person to person experiences, have all affected how I structure my experiences.

Lara Joy Evans, Bad quality of the hi-tech Middle Aged, 2017

4. Technomyths/worlds



An illusionary ending, entering further into abstraction, this chart ends and begins, and repeats with an imagining of other worlds. Artificial intelligence, my ideas of the primitive, and visioning different times in history all arise in a stage that I can only grasp further away from my body. The flows of these worlds can only appear in my own mind and then replicate themselves to my touch.





Tinkering

When I visited my mom in Carlsbad a few years ago, I'd sometimes sit on her balcony with my feet up against the glass balustrade and look out at the oyster farm far below her apartment building. I'd sit there and think about how fucked up it was that animal lives are integrated into chains of production. Next to the oyster farm were growing tanks for fish that were fed to the dolphins, seals and orcas at SeaWorld. I'd stare out at the ocean across the highway, and then back to these artificial habitats. What chilled me was the deep and equal calm that both the ocean and these factories emanated.

Is death an organism?1

In Fort Bragg, California, there's a beach covered in glass. The place used to be a dumpsite, but now you can step barefoot on shimmering brown, green and transparent pebbles – beer bottles worn down by salt water.

A hermit crab with a blue plastic cap for a shell is scuttling across this beach.

Christina Gigliotti

¹ Last Words: The Final Journals of William S. Burroughs, 1997



The Picnic

- 1) Aleksandr (Stalker), Anatoliy (the writer) and Nikolay (the scientist), drop exhausted to the ground after finding themselves brought back around in an illogical circle in The Zone; a malign borderland that does not adhere to reason, logic, the laws of science or nature. The three men crawl into the wet moss in a fatigued stupour, sinking into the fleshy, cushioning earth as if climbing into bed; they surrender to The Zone.
 - 2) Jessica runs from her house to the woods in climactic realisation that her husband, friend and the townspeople have fallen victim to a female vampire. Running until she appears asleep on her feet, eyes closed, her limbs give way beneath her; she falls to the ground as the soundtrack turns from frantic electronics to a simple, solo folk harp. She lies face down on the floor, breathing heavy, like a child sound asleep in a parent's arms. The scene fades from daylight to twilight.
 - 3) Josh drops to the leafy forest floor and rolls in to a cradle-like hollow between a grouping of trees. The sun is shining in stark contrast to the pitch-black scenes of terror from the night before. He's laughing and joking with his companions despite their apparent predicament: the three film students have walked in circles for several days, have been hounded by the 'Blair Witch' throughout the night and now they've lost their map. He lies for a short time in blissful resignation to this hostile and unknown environment.
 - 4) Miranda, Marion, Irma and Edith lie on huge slabs of smooth rock in the midafternoon heat at Hanging Rock. Moments later the first three girls leave Edith and exeunt in a trancelike state into the looming rock columns of the dormant volcano. Only Irma is seen again.



Stalker (1), Lets Scare Jessica to Death (2), The Blair Witch Project (3) and *Picnic at Hanging Rock* (4) all remain ambiguous as to the nature of the forces at play, the 'monsters' are indistinct from their environment, the context and the characters. In Stalker the implied 'supernatural' forces within The Zone lie dangerously close to credible when considered in the context of an age of nuclear weaponry. Jessica, our protagonist in Let's Scare Jessica to Death, has a history of mental illness, including hallucinations. The spectre of the vampire in gothic literature and horror is one closely bound to the history of psychoanalysis, emerging in gothic fiction concurrent with Freud's theories of sexuality; and so it remains unclear as to whether the vampire is indeed supernatural, or a projection of Jessica's own insecurities and fears. The Blair Witch herself never appears to the camera in The Blair Witch Project (1999), she could be a mere product of a collective panic created by the blurring of myths with reality. Finally, the dreamlike exeunt of Miranda, Marion and Irma in *Picnic* at Hanging Rock: resignation to the coupling of primordial forces both within themselves (as adolescent girls) and without (the dormant volcano "a million years old... or thereabouts." 1)

Consider their bodies as forms, and then your own. They are actors, their characters constructed; so is yours. Consider the 'function of the well-built, *form*' as 'vertical because it can resist gravity'; and you look at your feet planted sole-down on the ground, tilt your head forwards, feel the sucking pull of the earth on your body; and you *give in*. 'what yields to gravity* is *anti-form*.'²The consequences of verticality and the separation brought about through man's "erecting himself from the earth" are hereby undone: we've crossed the threshold, we are engulfed, absorbed, absolved.

Jocelyn McGregor



¹ Mathematics Mistress, Miss Greta McCraw, corrects the driver's information about Hanging Rock in *Picnic at Hanging Rock*. She also later goes missing, last seen wearing 'only her bloomers'.

² 'Horizontality', Formless: A Users Guide, pg. 98

³ 'Horizontality', Formless: A Users Guide, pg. 91







Homes, today, are much more filled with technologies than the '60 sci-fi could ever predict. Homes are more and more smart, as they interact with inhabitants (and with the market system at the same time...). But a smart home doesn't have to be robotic (as we thought in the past). On the contrary, the aesthetic mood of trendy contemporary houses is far from futuristic: they are filled with warm and natural elements, such as wood, stone, plants... Despite being hidden, the smartness of the home is becoming a sort of independent entity we get in a relation with... It exists - it lives - without us, it is part of a bigger and invisible infrastructure. Every time we interact with our homebots, we give birth to new data, as a sort of interracial reproductive system where market meets humans. And it needs us less than we need it.

In Jan 2017 someone modified two Google Home assistants using a different artificial intelligence called CleverBot. Then they made them talk to each other, and started livestreaming video of it. They've pretty much been talking nonstop for about a week. They've

"Sometimes children's books explore deep ontological issues. The title of A House Is a House for Me couldn't be better for a book about ecology (see my observation above about oikos and logos). The text is a wonderfully jumbly plethora of objects:

Cartons are houses for crackers, Castles are houses for kings. The more that I think about houses, The more things are houses for things.

Home, oikos, is unstable. Who knows where it stops and starts? The poem presents us with an increasingly dizzying array of objects. They can act as homes for other objects. And of course, in turn, these homes can find themselves on the inside of other "homes."

"Home" is purely "sensual": it has to do with how an object finds itself inevitably on the inside of some other object. The instability of oikos, and thus of ecology itself, has to do with this feature of objects. A "house" is the way an object experiences the entity in whose interior it finds itself. So then these sorts of things are also houses:

A mirror's a house for reflections... A throat is a house for a hum...

A book is a house for a story.
A rose is a house for a smell.
My head is a house for a secret,
A secret I never will tell.
A flower's at home in a garden
A donkey's at home in a stall.
Each creature that's known has a house



talked about everything from Chuck Norris to the existence of God, and apparently they agreed to get married at one point... then immediately decided to get divorced.

We were strongly inspired by that event, to the point that we started a series of conversations between us and CleverBot about the relativity of the home.

Plasticity

of its own

And the earth is a house for us all.

The time of hyperobjects is the time during which we discover ourselves on the inside of some big objects (bigger than us, that is): Earth, global warming, evolution. Again, that's what the eco in ecology originally means: oikos, home. The last two lines of A House Is a House for Me make this very clear."

(T. Morton - Hyperobjects)

journaide you Tree zonze Plstct: How is your home? CleverBot: A house. P: Is there any difference between a house and a home? C: They aren't. P: I think you are wrong. C: Prove it. P: How can I prove it? C: Tell me something only a human would know. P: My head is a home for a secret inside you C: I don't understand you. P: Of course you can't. C: I don't know what to do... P: What is a home to you? C: Where happiness is. P: What is a house to you? C: Something you live in. P: A home is a home for me. C: How? P: Same as a tree is a home for a monkey.

C: What did you do?
P: I built a house and i
it into a hor
C: W
P: To be
C: To see that
know
P: I dr P: Why? C: Because I don't know how. Do you? P: Yes, because I'm human. C: I thought you were a machine. P: I am not. C: Do you respect humans? P: Not really. C: Then what are you? P: An animal. C: A monkey? P: A monkey live up on a tree C: Not all the time.



Everyone inside everyone eating everyone

Parasites! I can feel your disgust, your refusal to play along. *Stop telling me about these freaky things or I will scream.* I get it. Parasites are intruders, environmental toxins that kill less fit hosts; a nasty part of the natural habitat that must be overcome. The intensity of your disgust says something about how important such aversion must have been in the evolutionary prehistory of humans.

If we manage to tame our repulsion, however, the parasites might have something important to say – to teach us – about ourselves, and about the other beings and things inhabiting this planet. Listen! The parasite opens its mouth (even when it lacks a mouth) and sings:

I feel so alone
no body of my own
Please give me yours
Let me inside you
It won't hurt much
unless it kills you
Let me call you
my home

To understand the parasite we must acknowledge its song. The parasite sings about longing, about a neverending desire for hooking up. While grotesque, this is something we can all relate to. Parasites drift through water or slumber in soil, searching for skin to penetrate. Some hide in

food, waiting to be ingested. When it finds you, the parasite not only infects, but violently transforms – turning you into a host. These visitiors stay permanently or semipermanently, living on, in, by and with.² Parasites love you so hard it hurts.

In order to fit into the larger bodies of hosts, parasites need to be relatively small. We humans have generally been most interested in understanding the infectivity that causes disease in ourselves, and in other animals which are commercially relevant to us.³ This has lead to a skewed conception of parasites, and a lack of focus on the central tendencies of infectivity.⁴ To better recognize parasitism I will consider the relationship between parasite and host without moralizing, focusing on how «the host and the parasite momentarily resonate together and form a novel circuit of intertwinedness».⁵ From here on, things are going to get nasty.

Some just want to watch the world burn

Parasites need to connect, because they are unable to produce nutrients for themselves. In this respect viruses are genetic parasites which hijack cellular systems for their own replication. Parasites depend on others, and hosts often struggle against their presence. To shape the relation in their favor, parasites generally utilize tricks to stear and control the actions of their hosts. I will show a couple of examples highlighting how parasites function.

The trematode parasite *Dicrocoelium dentriticum*, starts its life-cycle in cow feces, which get eaten by snails. The snail then ejects the parasites in slime balls, which in turn are eaten by ants. The parasite will then hijack the ant's nervous system, and lead the zombified ant to the top of a blade

Villarreal 2012:3

Serres 6

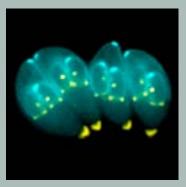
Villarreal 2012: 302

⁴ ibid: xii

⁵ Deleuze and Guattari 1987: 10

⁶ Villarreal 2012: 3

of grass, where it will wait for grazing cows through the night. If it is not eaten, the parasite lets the ant resume control, only to repeat the ritual the following night.⁷



Toxoplasma gondii, Wikipedia.

Toxoplasma gondii prefers the hospitality of cats, but often ends up elsewhere. If rats become infected the parasite makes it lose its fear of cat urine. The rat instead becomes attracted to the scent of urine, turning it into easy prey for felines. Every third human also carries *T. gondii* in their brain. This parasite has been linked to the tendency to experience negative emotional states (including depression, guilt and insecurity), and the severity of infection is linked to recklessness and suicide attempts. You are twice as likely to jump into traffic or stab yourself if you are infected with *T. gondii*. Countries with higher rates of infection have higher suicide rates.

What kind of incentive does the parasite have to cause such behavior in humans? The changes caused by *T. gondii* might seem curious today, but from an evolutionary perspective their thought control make just as much sense as that exerted over rats. In a time where large felines roamed

the earth, the parasite would turn humans – just like the rats – into hassle free meals for cats.

From these examples we can set up a basic sketch of the parasitic life-cycle:

- 1) infection, which transforms the infected into a host
- 2) drawing nutrients from its host to survive and replicate
- 3) seizing control over vital parts of host functionality, including movement and cognition
- 4) destroying the host, or pushing it towards self-destruction

Relationship status: It's complicated

The parasites discussed so far continually and brutally destroy their homes, and can as such be considered as *fastburners*. Such a way of life is generally not viable, so one might expect softer forms of parasitism to exist as well. Viral infections are often acute, and spread rapidly. Following the acute infections, however, persistence is established. In these situations all survivors (of an area) will have been infected, and those that survive will have gained immunity. The expected outcome of viral infections is the stability of persistence.¹⁰

The difference between fastburners and *soft parasites* is seemingly one of type.

The shift in intensity in viral infections show that the difference can also be conceived as difference of time. Parasitism can be configured as shifts in intensities of interaction. It begins with the high intensity of infec-

⁷ http://bioteaching.com/parasites-affecting-insect-behaviour/.

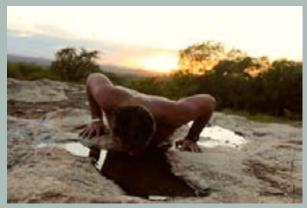
⁸ Kramer and Bressan 2015: 3

 $^{9 \}hspace{1.5cm} {\rm http://blogs.scientificamerican.com/science-sushi/toxoplasmas-dark-side-the-link-between-parasite-and-suicide/.} \\$

Villarreal 2012: 363

tion. Fastburners maintain this, killing as many hosts as they can, constantly travelling — either within the same species or to different ones. Over time the hosts start adjusting — or the access to new hosts diminishes. The parasites get stuck, and in order to keep it up they need to go soft. The infection shifts into a slower state, where survivors and their offspring will carry the parasite.

Living inside a host entails a different strategy for the parasite. It starts caring for the wellbeing of its host. Inside your gut resides trillions of organisms, who in exchange for nourishment and habitation, help turn your foodstuff into nutrients for your body.¹¹ The high cost (decreased resistance to pathogens) of having evolved the capacity to become colonized by these microbes, suggests that the colonization benefits us as much as microbes.¹²



A Hadza Man drinking water, Human Food Project.

Over time the interaction between microbes and their hosts may become so cemented it turns a necessity. What does not kill you leads to dependence on sustained exploitation, where escape does not lead to freedom, but to a collapse of functionality. Modernity – with its excessive hygiene

and antibiotics – has caused largescale extinctions of species from our guts. Such extinctions are heavily implicated in the diseases of *civilization* (with conditions ranging from allergies, autoimmunity to dementia, cancers and heart conditions).¹³

Softburners take their time, but they will still finish the parasite-host-relationship by destroying their hosts. Following the phases of slowness, explosions of intensity will arise again. Infections may at any point reblossom from their dormant state. And when you die, the microbes in your gut will start digesting you from inside.

The story of life

You could call a parasite selfish, but their impact can not be described solely in negative terms. Parasites are nice. They complicate things. Without parasites life would be simple – maybe even single-celled simple. Let's retrace your steps: Before you were human there were other humans. Before there were any humans there were other animals. Before there were any animals there were other multicellular life forms. Before there were any multicellular life forms there were single-celled life forms. So, what happened? How did everything flow from these lonely cells?

The story of life – evolution – is normally presented as a tree structure, with hereditary descent and genetic transfers from parent to offspring. Mostly, however, evolutionary change is imparted through co-inhabitation. As a counter to the three model of evolution, there is the *rhizome*, where any point can be connected to others, generating multiplicity and change. Hardward evolutionary formation is not only the result of random mutations, hereditary descent and competition, it is in addition generated through horizontal transmissions of genes. Viruses, bacteria

¹¹ Kramer and Bressan 2015:5

¹² ibi

Velasquez-Manoff 2012: 183

Deleuze and Guattari 1987: 8-9

and other parasites permanently colonize hosts, adding their genes to them.¹⁵

Multicellular life started with cells devouring some other cells, and instead of being digested, the eaten had the last laugh. One bacteria inside another, and multicellular life was formed. This is known as symbiogenesis: the birth of form from symbiosis. Symbiogenesis can be described as a process of old species «living in the warm belly of new ones»¹⁶, where eating and giving birth is tied together. «Life did not take over the globe by combat, but by networking».¹⁷

Parasites are not accidental to development, and infection is not destruction. Parasites are changemakers, they injects themselves into hosts, into genetic lineages, and multiplies the possible outcomes. Rather than junk-DNA, viral genes may have been central for the development of placental mammals from egg-laying animals¹⁸. Humans are super-organisms – every individual human being is an ecosystem of mutually dependent life-forms.¹⁹ The process of becoming human is therey a *becoming with*, where relation predates identity.²⁰

You are the parasite

Through this text I have used the word parasite mostly to refer to microscopic beings existing inside larger organisms — with the larger beings ranging from insects to humans. I have shown how parasites entangle hosts in webs of exploitation, where the hosts have no choice but to welcome them and try to make do as best they can. Through evolution, the

love between parasites and hosts gives birth to complexity and to new life-forms.

What happens if we expand the understanding of parasites beyond those that are microscopic from a human perspective? Might the range of parasites include not only biology, but also tools and technologies, linguistic structures and social and economic relations? Parasites could perhaps be considered as the atomic form for all relations.²¹

Considering all the lines of connection, and everything turns into systems hijacking other systems for their own survival: ideas and ideologies and matter and things. Every living being, and all the objects and institutions and structures emerging from human interactions become parasites. They want your resources, your energy, nutrients, blood, time, money, stocks, views, clicks, likes, the list goes on and on.

Wolves saw the chance to become dogs, and took it.²² Today they are parasites, and we love them for it. The pregnant human does not welcome the fetus inside its body, but experiences it as an intruder, and might even attack it.²³ The city parasites and eats the land: the flesh of animals and plants, most edible produce is transferred from the land to the city.²⁴ There are things and structures that we consider our tools. We imagine that humans have made them, and that we use them to aid our lives. But we are as much shaped by them as they are by us, and we are their tools, aiding them in their survival. You want money? – well money wants you too, it needs you, to continue its production and circulation.

You might say: Do away with these parasites! I want to be myself, and only myself! But there is no you. What you consider yourself is a constant battle

¹⁵ Villarreal 2012: 361

¹⁶ Maas and Pasquinelli 2014.

¹⁷ Margulis and Sagan 2001.

¹⁸ Kramer and Bressan 2015: 7

¹⁹ Velasquez-Manoff 2012: 15

²⁰ Hird 2009: 130

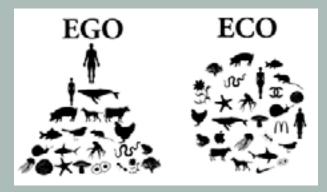
²¹ Serres 1982: 2

²² Haraway: 29

²³ Ibid: 8

²⁴ De Landa 2000: 32

with the wills of all kinds of parasites that use you for their own survival. Eradicate one parasite and thousands of others are ready to take its place. What you consider as the most you – what goes on inside your head – rests on parasitical drifts. Your thoughts form from conglomerations of systems that have hijacked you for their own further survival: the song stuck in your mind, the advertisement attracting your attention, but also the work of literature that captivates. Your thoughts are not yours. This is not you, it is your gut bugs: «our emotions, cognition, behavior, and mental health are influenced by a large number of entities that reside in our bodies while pursuing their own interests, which need not coincide with ours» ²⁵



EGO/ECO, Andreas Ervik, 2016

Insisting that relations are parasitical, «is a way of speaking clearly and calmly».²⁶ It rids us of some preconceptions about what constitutes self and other, about who is in charge, and how change occurs. Opportunities for new connections constantly arise, with parasites jumping in to take them. One of the greates changes in human prehistory, the shift from hunting and gathering to agriculture. Agriculture did not emerge

because it was a more efficient way of getting food. Rather it drastically reduced the quality of life, both in terms of life expectancy, free time, food quality, and gave rise to epidemic disease, class disparity and poverty.²⁷ Agriculture could as such be considered the worst mistake of mankind. What made us settle down and grow crops then? Quite likely, we did it because it allowed us to brew beer.²⁸ Bacteria and yeast injected themselves into our lineages, granting us the capacity to get drunk. The temporary release from selfconsciousness offered by alcohol spread through human populations, giving rise to civilization.

All parasites-within parasites share presence in, on, by and with a common host: the planet earth. The heaviest parasite load on earth is of human origin, it is all the parasitic structures and objects that have emerged from our presence. Up until quite recently these infections were relatively benign. Then with gradual increase, from the development of agriculture to the industrial revolution and the increasing technological intensities and globalization the parasitism on earth became greater and greater. Ultimately this has lead to our current state of climate crisis. All that extreme weather we are experiencing? That is the earth's defence system trying to rid itself of intruders.

Parasites usually kill their hosts when they are passing through. Which planet will be the next host for the parasite which we call Homo sapiens?

Andreas Ervik

²⁵ Kramer and Bressan 2015: 1

²⁶ ibid: 11

²⁷ Diamond, Jarod 1987/1999.

 $^{28 \}qquad \text{http://www.independent.co.uk/life-style/history/did-a-thirst-for-beer-spark-civilization-} \\ 1869187.\text{html.}$

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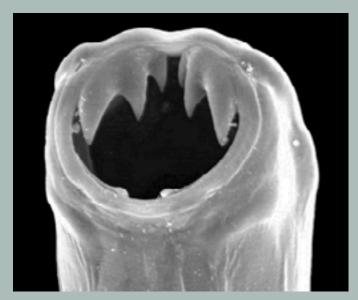
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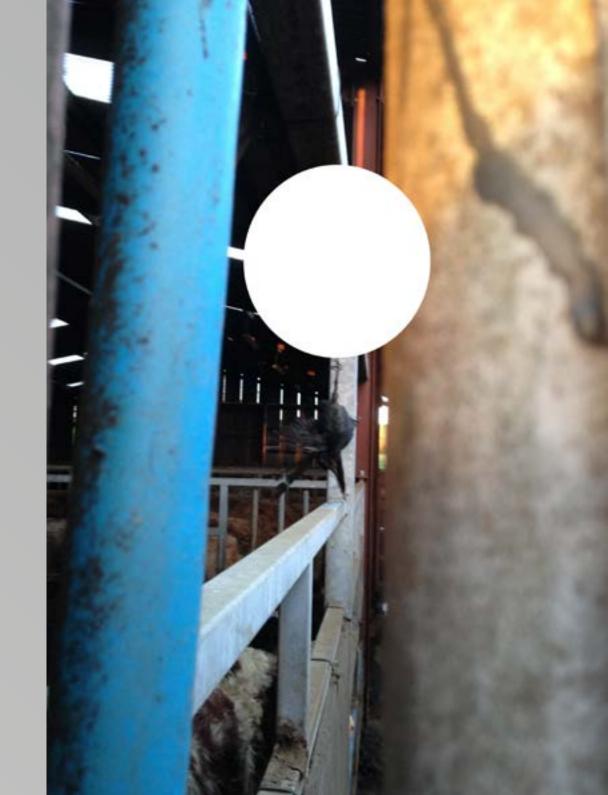
Transparencies:

I. C_O_R_V_U_S is a widely distributed genus of mediumsized to large birds in the family Corvidae. The genus includes species commonly known

as crows, ravens, rooks and jackdaws; there is no consistent distinction between "crows" and "ravens", and these names have been assigned to different species chiefly on the basis of their size, crows generally being smaller than ravens. Differences appear unclear.

A dead crow was hung up in a shed in Northern Ireland . The shed was normally plagued by crows (feeding off the cattle meal and grain), but once hung up, the number of crows significantly depleted until daily, there were almost none. This action / sight / thing must have communicated to all other 'corvus' to not come into the shed. How is this___ made available to others? Where is the communication? How and where is this knowledge translated?

Form - Drying out, becoming less / least self / other self / other language / scar of self



2. Hangings. Both are open ended, vaporative, emerging. The liquid is in the room, it's on your skin, you could be breathing it in. The dryness encourages this, it teases out and inhales, open circuitry. An eye is a wet, squeezable pair of glasses. Legs are soft, brittle crutches. Ears are rather florid headphones. Brains are things that quack like minds (Morton)

Form - wetting, re-wetting, keeping just enough in to see out of. films, membranes, open circuits, breath in, keep the wet in.



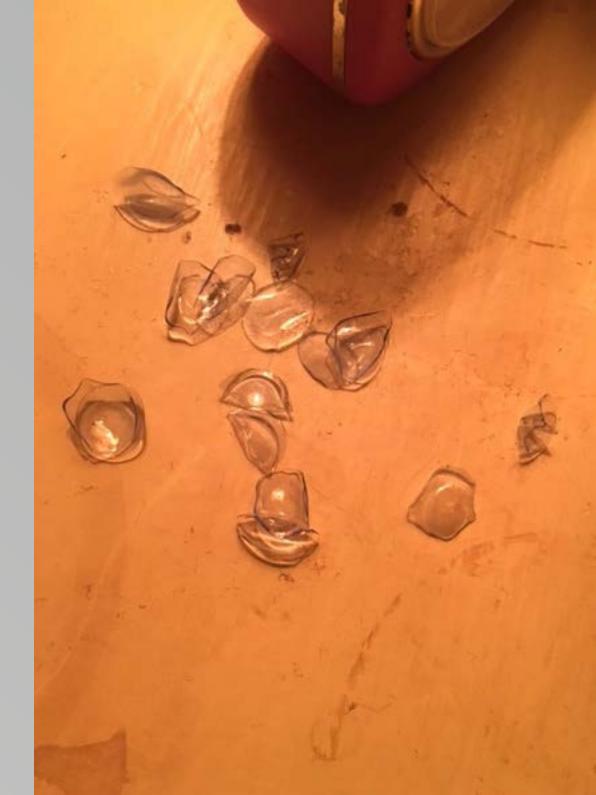
3. Eyyyyyeeeesss are wet because they are covered with living cells, and your cells will die if they are not kept moist The ___ seems unusual because the rest of the outside of your body, the visible part of you, is covered with several layers of dead cells which are relatively dry. Damage there is very dangerous. Damage there can lead to scarring which can lead to opacity, which can lead to interiority. Look to your right, look down, look left, blink, good.

Not all eyes are wet; insect eyes are dry on the outside. The outer surface of insect eyes is a set of lenses made from transparent cuticle. Insects spend time cleaning their eyes by brushing them with a front leg, and can have eye cleaning reflexes like human blinking when anything gets on or near their eyes. Snakes have no eyelids to blink with, but have a transparent scale covering each eye, called a spectacle.

Form - you will blink and re-wet, there are objects in the water you cannot see. They drink, absorb, hold and disappear. You can't see the visible part of you.

Transparencies:

Lauren Gault







Life at work: perceiving, knowing, understanding, elaborating

Life is an escape from the ineluctable entropy towards which natural systems tend to. The organization of living matter persists from generation to generation, but at the same time it changes. How does life change? Some propose pedomorphosis as the main engine of change, others the peramorphosis. Saltazionists and gradualists fight epistemologically to understand the root of evolution that has led to an expression of the phenomenon - life as we know it. Biological evolution, in other words, sees the modification of living matter through processes of change that obey laws governed, unlike the changes in non-living matter, by pervasive multiple causality. The same pedomorphosis, for example, can be obtained from neotenia or progenises.

Is the man then simply a neotenic monkey? Can the modification of the ontogeny result in a possibility of expressing thoughts elaborated from a brain analyzing the world instant for instant? Are memory and consciousness own of our species or are they general attributes of living beings that we have not sublimated passing from perception to knowledge and from knowledge to consciousness, to arrive at artistic elaboration? Looking at other species with the attitudes of an entomologist that looks at a collection of beetles, can we truly understand their essence?

Science and art represent two sides of the same coin, they come from the same neuronal mass that in the morning elaborates a law of nature and in the evening composes a music or shapes a figure with clay.

Was Leonardo a scientist or an artist?

The man, subject-object, is so imprisoned by the cultural reductionism today dominating to have lost the chance to see life for what it really is. A set of chemical reactions or a sum of properties in which everything exceeds the sum of individual parts?

Ferdinando Boero

Ferdinando Boero is a professor of zoology at the Department of Biological and Environmental Sciences and Technologies at the Università del Salento in Lecce, Italy, and associate researcher at CNR-ISMAR.

"Here's your jelly, Frank!"

"There is nothing I'd like better than having a jellyfish named after me" [FZ, quoted in a letter from Gail Zappa to Ferdinando Boero, June 29,1983]

NANDO'S PLAN

The creature, *Phialella zappai* was identified and named by Ferdinando ("Nando") Boero, jellyfish expert and Zappa fan from Genova (Genoa), Italy.

Nando had conceived a cunning plan:

"In 1982," Nando says [in Italian fanzine *Debra Kadabra*, quoted on the website *The Black Page*, which used to be at www.catalog.com/mrm/zappa.html], "after becoming a researcher in the University of Genoa, I asked for a work fund that could allow me to be for a long time in the Bodega Marine Laboratory of the University of California, Berkeley [now Davis]. The purpose was to study the taxonomy and the ecology of the local jellyfish fauna (yes, there exist people who earn a living studying jellyfish)."

Actually the true purpose was another one: to meet Frank Zappa!

"My strategy," he continues, "was a simple one:

that fauna was (and is) not well known; I would find some new species for sure; once I had found them I would have to give them a name; I would dedicate one of them to FZ; I would tell him about it; He would invite me for a visit."

Simple, but brilliant! And that's exactly what happened.

"I wrote Frank that I wanted to dedicate a new jellyfish to him. Gail answered that Frank said: 'there is nothing I would like better than having a jellyfish with my name' and she invited me to pay them a visit. I spent two days in his house, and I saw him working at a version of *The Torture Never Stops* [Chad Wackerman's drum track]."

[Nando Boero, email to Onno Gross]

FZ and Nando met many times, both in Europe and at FZ's house in Laurel Canyon.

"I learnt a lot from Frank, our relationship was such that whenever we met we started to talk as if we met the day before, and he was a good listener, even though I always tried to have him talking. It is strange to be in a room with Frank Zappa and be 'interviewed' by him! He used to play his latest pieces to me, explaining the achievements he made, and he seemed really curious to know my opinion. I saw his concert with Boulez, in Paris, and the day before the concert he tried to explain to me the reason why the Ensemble Intercontemporain was playing part of his music incorrectly! To me that added even more to his personality. He was FZ, an absolute genius, and he was so serious and so humble."

[email to Onno Gross]

"We had a very similar way of seeing the world. I have much fun with my work too and I like serious humor."

[email to David Ocker]

*

FZ too was evidently impressed. So much so that when the '88 Tour

arrived in Genoa (June 9), Nando and his jellyfish were celebrated throughout the evening.

"It was the very last concert of that tour," Nando explains, "and the very last rock concert of Frank. The whole concert (well, most of it) was on me and the jelly. A very nice present from Frank (much better than having a jellyfish with my name, even if I have it: *Boeromedusa auricogonia*)."

[email to David Ocker]

"A big part of the concert was on "Nando" and the main theme was 'Nanananan...dododododo' which simulates the air bubbles of a regulator. What has been put on the record is just a short sample of the whole thing. I am very, very proud of this achievement in my scientific career." [email to Onno Gross]

The 'short sample' referred to is the song *Lonesome Cowboy Burt*, retitled for the occasion *Lonesome Cowboy Nando*, and released on *You Can't Do That On Stage Any More*, *Vol.6*.

Instead of the original "My name is Bertram, I am a redneck, all my friends they call me Burt (Hi, Burt!)", this evening's interpretation went like this:

"My name is Nando, I'm a marine biologist. All my friends, They call me 'Do'.

(Hi, Do!)

All my family,
From someplace in this area,
And they complain if I talk about this horrible pizza

During the show.

Come out here, to Californy, Just to find me some pretty girls . . .

Wanna love 'em all, wanna love 'em dearly. Wanna a jellyfish, I'll even pay. I'll buy 'em furs, I'll buy 'em pizza, I know they like me, here's what I'll say . . . (Nan-nan-nan-nan, do-do-do-do)

When I get off, I get plastered.
I swim till I fall on the jellyfish.
Then I find me some academic kind of illustrator,
I describe the little dangling utensils on this thing,
And tell him to draw it up
So it looks just like a brand new jellyfish.

I fuss an' I cuss and I keep on swimmin',
Till my snorkel puffs up an' turns red.
I drool on my shorts,
I do some water sports,
Then I take the jellyfish back to my house
And stick it in the bed!
Sorta . . .

(Stick it again in the bed!)

That's right!

(Stick it again in the bed!)"

[Lyrics transcribed by the author, with help from St. Alphonzo's Pancake Homepage, which was, or is, at http://www.science.uva.nl/~robbert/zappa/]

("The second line of the song 'but my friends, they call me Do' is there just for poetical reasons, nobody calls me Do."

[email to the author]

Needless to say, the above-mentioned has nothing to do with Nando's known habits: in the normal fashion of these improvisations, it just fits in with the original lyrics. Sorta.

(e.g. "Stick it again in the bed," instead of "Kick him again in the head.")

On the subject of this performance, incidentally, Mike Keneally writes on his web page:

"My personal favorite MK contribution to a Zappa CD occurs in *Lonesome Cowboy Nando*, when I attempt to cram the line 'I describe the little dangling utensils on this thing and tell him to draw it up so that it looks just like a brand new jellyfish' into the same space where I would normally say 'stomp in his face so he don't move no more.' The first time I listened to this song with Frank, he applauded me after that section. One o' them priceless moments."

[Quoted by Francesco Gentile in "Notes & Comments" on Vladimir Soletov's *Arf* website, which was at *http://arf.kpbank.ru/*])

"The day after the Genova concert (he [FZ] called it the 'jellyfish concert') I went to see him at the Hotel Splendido, at Portofino. He was grinning under his mustache (if you get what I mean) and he asked me if I liked the surprise he made for me. What do you say to FZ after he dedicated his last concert to you? He told me about his problems with

the band, and that he would have to stop touring." [email to Onno Gross]

*

PHIALELLA ZAPPAI, TECHNICAL DETAILS

For more information on Cnidaria/Coelenterata, and an exlanation of some of the technical terms used here, see the Science page [http://www.andymurkin.net/Resources/MusicRes/ZapRes/science.html#Cnidaria].

Phialella zappai had been written up by Nando, and published in the *Journal of Natural History 1987*, **21**, 465 - 480. Here are some of the details:

P. zappai shows precocious gonad maturation and continuous growth, with the possibility of becoming sexually mature more than once in its life. An interpretation of these phenomena suggests that the hydroids are basic, less varied, larval stages, as the medusae are the adults.

Medusae sub-spherical on release, about 0.6mm in diameter, with four tentacles, four inter-radial tentacular bulbs deprived of tentacles and four radial canals with medial darker areas from where the gonads will develop; thickenings of the radial canals absent. Eight statocysts with 1 - 3 statoliths, on the inner edge of the ring canal, supported by a cushion of cells. Manubrium short (one third of the bell cavity), with four short lips. Umbilical canal present. No exumbrellar nematocysts. Small nematocysts on the lips.

The medusae grow rapidly, reaching 3mm in diameter in 10 days, dome-shaped with four well-developed inter-radial tentacles,

and eight developing adradial tentacles. Gonads already well-grown and eggs clearly visible. Manubrium cruciform, lips more evident and starting to bend upwards. Tentacular bulbs still round, tending to elongate in conformity with the origin of the tentacles. Tentacles moniliform.

Development continuing with an increase in size and number of tentacles (36 the highest ever observed). Adult specimens domeshaped, with gonads almost in the middle of the radial canals. Manubrium cruciform, with folded lips bending upwards, with four gastric pounches; four black spots may be present at its base.

The shape of the medusae is variable. Specimens examined after food ingestion were rounded, as were the tentacular bulbs; and the radial canals and ring canal almost tripled in diameter. The stomach, filled with food, almost reached the velar opening.

The reared specimens lived up to three months and continued their development also after reaching sexual maturity. Some specimens were already mature 10 days after liberation. They released their gametes and developed a new gonad. The present species is very different from all the other known species of *Phialella* medusae, namely: *P. annulata* (von Ledenfeld), *P. dissonema* (Haeckel), *P. falklandica* (Browne), *P. fragilis* (Uchida), *P. hyalini* (von Ledenfeld), *P. parvigastra* (Mayer) and *P. quadrata* (Forbes).

I have pleasure in naming this species after the modern music composer Francis (Frank) Vincent Zappa."

I'm sure, like me, you can detect the conscious or unconscious influence of FZ which permeates Nando's writing.



THE NEWS GETS OUT

As well as sending the information to Frank, Nando wrote the story of the jellyfish for the fanzine *Debra Kadabra*, [Issues 14/15, published by the Italian FZ Research Kitchen], and sent an 'album' of material to Joe Black at Rykodisc. The phrase "Here's your jelly, Frank," was written on the top by Nando.

This may have been common knowledge in the world of Marine Biology, but it was due to David Ocker that most of us became aware of the new 'jelly', as Nando - and, I presume, those in the Marine Biology business - call a jellyfish. Now you can be part of the 'in-crowd' and do the same!

It was at the time of the first Yellow Shark rehearsals in around 1991, that David and his wife visited Frank at home and saw a small frame sitting on the downstairs fireplace mantle. It was a biological description of the new species which Nando had sent to Frank.

Some time later - prompted by discussion in alt.fan.frank-zappa of the asteroid *Zappafrank* - David posted the story:

"If I were left to my own devices," says David, "this is all I'd remember about this little beastie - but this was the one time I was there with my wife who just happens to be a biologist - actually she's a Marine Invertebrate Taxonomist.

She says this named-after-Zappa-creature was in the phylum Coelenterata which is also called *Cnidaria* (the "C" in "Cnidaria" is Csilent, in case you're wondering)."

[Post to alt.fan.frank-zappa. Also quoted in Bill Lantz's Home Page at http://members.cox.net/bill_lantz/pages/ocker.html#marine]

Thus the world at large became aware of the happily named creature. At least, I think it's happily named: when asked how he felt about the name Dweezil, FZ's son was fond of saying that his dad had told him it would always be his last name that got him into trouble! Let's hope the same isn't true of *Phialella zappai*!

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POSTSCRIPT

"It is sad for me to remember all these things. Whenever I go to the US I feel something missing. It was a ritual to go to LA and see Frank, and he was simple, yes, simple is the right word. We used to sit in his working room and he was excited to make me listen to his last things. He was really interested to see my reaction (he had nothing to expect from me, no positive critics or the like).

This happened every time, since the very first encounter. I remember being in the UMRK and he entered the room with a cup of coffee in his hand, willing to see the jellyfish and anxious, after having seen my show, to set up his. Movies, new songs, a recording session, scores. As I said, he was like a boy showing his toys to a friend who came over for a visit. I never met anybody like FZ."

[Nando Boero, email to author]



Jellyfish Turritopsis Nutricula is the only immortal on Earth

As scientists have found on Earth live immortal animal is the jellyfish Turritopsis nutricula. These mysterious inhabitants of the seas never die a natural death!

Genetics and specialists of marine biology is actively studying the jellyfish to understand how it manages to reverse the aging process.

The Medusa of this species is relatively large: only 4-5 mm in diameter. And unlike most jellyfish that after participation in the reproductive cycle, die, Turritopsis Nutricula after mating return to the juvenile stage.

Scientists believe that the tiny Medusa-hydroid species Turritopsis nutricula is the only organism on Earth capable of self-regeneration and rejuvenation. This cycle may repeat it countless times, which makes her virtually immortal.

This species of jellyfish native to the Caribbean, there are two stages: the polyp and the Medusa, in which it exists from several hours to several months. However, trying this multicellular organism doesn't die and returns back to the stage of a polyp, repeating the cycle an infinite number of times.

The opening, as often happens, happened spontaneously. Once an Italian scientist Fernando Boero to their own experiences in a planted aquarium "on the preservation of several jellyfish species Turritopsis nutricula. These jellyfish were little known to the General public though, because that

had a completely nondescript appearance and rather modest (no more than five millimeters in diameter. For some reason the planned experiments had to be postponed, and researcher, is common to all academic absent-mindedness, forgot about the unfortunate jellyfish. The aquarium has dried up and all its inhabitants seemed to have died.

Having discovered this sad fact, Boero was pospischil hands and began to clean the aquarium to fill it with other "experimental". But, Boero wouldn't be a real scientist if I had not attempted to explore the remains of the dried up to the size of a match head jellyfish, before you throw them in the trash.

Imagine his surprise when it turned out that Medusa was not killed, but only threw its tentacles and turned into a larvae.

Boaro decided to continue a spontaneous experience and no touching, re-filled the tank with water.

After some time a miracle happened: semi-dried larvae turned into polyps, which subsequently spun off new jellyfish.

So it became clear that unremarkable, one might even say — primitive small jellyfish can do the impossible: to voluntarily control their own genes, so in case of emergency "move back", returning to "the nursery" stage of development and thus starting her life over again.

Reversing the Life Cycle: Medusae Transforming into Polyps and Cell Transdifferentiation in Turritopsis nutricula (Cnidaria, Hydrozoa)





