SOCIETY – TERRITORY ?
HUMAN. S – BIOSPHERE
MERIZOTOPIE...



Redo the Puzzle from the real
That of a planet "Earth" engaged in a long-standing system of physico-chemical transformation. A planet sheltered from an incessant process of evolution and transformation: " the Living".
And within this complex community, a Species whose only reason for being is to associate with others by understanding and practicing the common language of "Co-evolution", while contributing to ensuring the conditions for the sustainable maintenance of the global Ecosystem.

To Annie B, Sékou, Vladimir, John, Oyun, Hassan, Zi Qing, Jasmin, Ulrike, and all others...

The subject is at once historical, economic, social, political, biotic, technical, spatial, architectural... Is a question about the exit from a multi-millennial "Civilizing" system.
A systemic model which, by its very essence, has been working for a very long time to marginalize the human species on the planetary base, through an enterprise that consists of monopolizing the planetary soil, eradicating or domesticating the other living being, and increasingly degrading the Biosphere; deteriorating or depleting abiotic resources; disrupting the Earth's climate; and more recently to format the human cognitive into Intelligence-Artifice...

Our aim is to relate the concrete ecological and social initiatives taken against this trend in recent decades in Europe, initiatives most often developed at the level of proximity, by groups eager to write and experiment with concepts of life, on a reopened field: that of an experimentation of inter-compatibilities within the Living Earth in concrete forms of accommodation in eco-compatibility with the ambient environments, and sometimes even by outlining forms of co-evolution of the human group within the Living as a whole.

These life practices and acquired knowledge, in connection with a frugal conception of existence with a small footprint or even an erasable footprint on the biosphere, open up to the implementation of an Eco-Etho-policy of living environments in the biosphere, capable of allowing the development of spaces in mutuality, geo-biocompatibility, and "Merizotony".

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The approach taken consists of questioning the historical "Long Time" in the manner of the Amerindians of Chiapas "**Looking backwards to move forward**", to approach the human societal system in a **space-time** starting from the formation of Tribute and then Profit, and to continue in the last two centuries on: The degradation of biodiversity; the modification of the planet's climatic parameters; the diversion of the digital age towards a process of capturing human knowledge for a reformatting into "Intelligence-Artifice"... Suggesting a "Mass" cloning.
This context urges to create counter-fire to this suicidal systemic model, by creating an "Alternative" focused on the protection of a human cognitive (free evolution), by establishing a compatibility of existence and evolution of the Species with the "Mother Earth"...
By gradually departing from the Civilizing models attached to seeking the manufacture of an Avatarized "Cosmic Being".

In these contexts, although tense, a part of the Human being on the planet is still committed to developing concrete forms of Alternatives on all Continents relating to the **forms of residence of a multicultural "Human Commons" in eco-compatibility, or even in search of forms of existence in co-evolution with the entire world of Biospheric Life.**
This is what we have chosen to make known about Europe by choosing to present: Achievements (buildings and associated developments); their support in research and invention (scientific, technical, architectural, etc.); while recounting the social and cultural dynamics carried by the authors and doers of the neighborhoods.

To circumvent the ambient state of disinformation destroying mass reflection, it has been chosen to disseminate this dossier entitled **Merizotopias** (Spaces of Exchange) through the Net under the "**Creative Common**" format, a way that allows an update and evolution of data and reflections in the context of a dissemination that feeds exchanges between Authors-Actors sensitive to rectifying and experimenting with the forms and terms of a "Co-Evolution in Biosphere".

A formula chosen at the origin of the project, supposed to allow each Internet user to freely copy and disseminate the work thus published (non-proprietary system), to participate in the correction of any errors, to continue the contribution of data and experiences contributing to popularizing the forms of disengagement from the political-financial model in force, and thus participate in the development and dissemination of the ways of application of the ecosystem alternative implemented inter-peoples.
The Themes of Change explored in these pages are based on the **forms of reinvention of the living space at the scale of neighborhood dynamics** (Blocks and Neighborhoods).
Most of the experiments cited have been visited in Northern Europe. There are many others, in Europe and on other Continents, which remain to be made known and reported to show that there is no Utopia in this matter but already a concrete change of sail.

The Essay produced here is a call for contributions and actions. It states facts and formulates hypotheses on the evolution of the life forms of the Human Commons co-evolving with the Living Whole,
It is built to be approached by Internet users surfing on a theme related to one of the four themes: **SOCIETY – TERRITORY – HUMAN. S – BIOSPHERE.**



The long time ...
After the phase of community regrouping on resource territories, followed by that of an organization in denser systems in the form of agglomerated villages, then that of larger groupings (Bourgs), the evolution of forms of production and division of labor gave rise to the model of the "City of Classes".
This model was born in Mesopotamia around the 5th millennium BC, at a time that was characterized by the division of human communities into two forms of organization.
The first is driven by a society of "accumulation" characterized by increased productivity and the accumulation of tradable surpluses, and the second is itinerant in search of climate compatibility and balance with the surrounding natural context...

For the millennia that followed, human societies strove to sophisticate the model of "Appropriation-Domestication-Extermination", to engage at the end of the eighteenth century in a new mutation (use of fossil fuels) which generated a phase of invasive development accelerating the destruction of the physical and living environments of the Planet.

Is it still conceivable today that a society of the animal kingdom, launched for several millennia in an enterprise of continuous growth, punctuated by collapses and then rebirths in reinvention of forms of exploitation-cloning-extermination, could abandon this erroneous behavioral schema to **redefine itself in compatibility with the biochemical and physical mechanisms in place, and strive to develop forms of co-evolution and languages shared with the Living together ?**

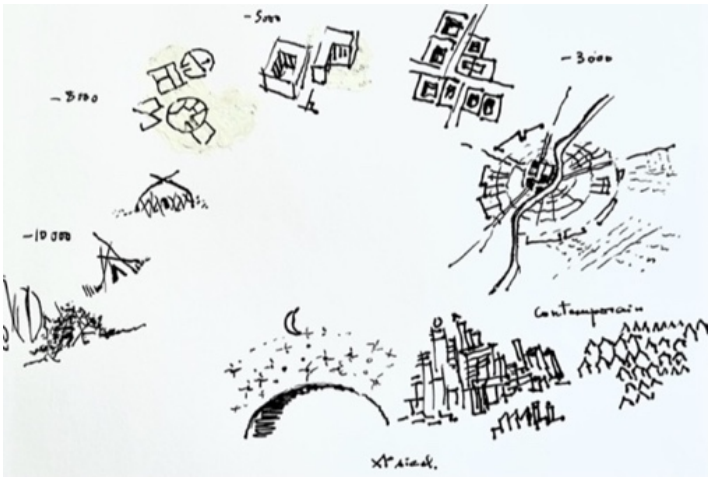
In the present circumstances, the question that must be addressed in the first place is that of the disengagement from the **existential impasse** led by a global "Tech-Libertarian" oligarchy (Gafas...), which is trying to engage our fragile Species towards a societal system formatting-subjecting the Human-People to its delusions and conveniences, and intensively pursuing the deterioration of the biophysical system of terrestrial reception...
A beginning of partial or total erasure of the Species?

The committed ecological and social alternative is of a civic nature and is developing in the field **of expansion of the Commons of proximity.**
It starts from an observation made both on the deterioration of the environment generated by the human system, and more recently on that of an Anthropo-system trying to reformat the Human to a new cosmic consciousness. An extraterrestrial imperialism...
The "Alternative" path must instruct humans on the forms of extrication, deconditioning and de-addiction of urban "Container" systems, to allow them to reinvent themselves as biocompatible Commons.
Death or Co-vivance?
The urgency requires convincing the Common-Human, among other things thanks to the public digital interconnections still in place, to move towards forms of mutualization, weaving of Living Worlds, inter-language, and to place itself both in connection with the Living as a whole, and in compatibility with the chemical-biogeophysical system of the Globe.

The present times are for the definition of a co-evolutionary Living Whole, made up of multiple ecosystem communities, and of the human commons in discovery. They are also "**responsible for the maintenance**" of a Living Planet within the framework of astrophysical laws... As mentioned in one of the oldest cuneiform texts, made on a clay tablet in 3000 AD.

We know how to create these living conditions collegially, almost without imprinting on ecosystem environments and to neighboring them.
We know how to live in sobriety and have a low impact on the planet, **we know how** to reconcile the intimate and the collective within the same architectural unit, **we know how** to use the renewable resources necessary for our lives, and not to deplete them, **we know how** to protect other biospheric living species**...**

But our anthropo-systemic philosophy has not led us to **find a language, an inter-species coding** that would have allowed us to discard the initial beliefs, stemming from the fear of existing in a mysterious and dangerous space, leading us to interpret unexplained phenomena as emanating from proto-human Deities guiding the Species towards a mastery or erasure of the phenomena hindering its Earthly existence...
Switching error!
The way was not to make them owners and lock them up in false certainties to make them the cogs of an apparatus that is not compatible with the laws of cosmic life.



The mode of presentation, chosen to develop the point of view of an alternative path to that of the "Capitalocene", is based on elements of investigation and observations examined over the **Long Historical Time**.

This requires developing the text in two sizes:
Under the heading "***In the thickness of time***: ***installation times - recent times":***
This first body exposes the times during which the societal model of the "Anthropocene" is constituted in trial and error, to then approach the phase of the establishment of "Capitalism".

A second body relates the appearance from the second half of the twentieth century of a societal impasse marked by a growing attack on the human footprint on the biosphere, and the observation of an advanced degradation of living and geophysical environments. **Under the name "Merizotopia " are sketched out alternatives for a way out of the impasse**, by a civil society committed to collegiality, and eco-compatible forms of evolution between the Species and the Living Planet which is neither to be bought, nor sold, nor destroyed are evoked.

I - In the thickness of time – Installations p 12

The chapter describes, during the millennia preceding our era, the phases of development of community regimes from the end of Neolithic times: Mastery of irrigation techniques, development of forms of hybridization of plants (cereals), animal domestication, mastery of metallurgy and construction techniques, in materials and materials in situ -
This intense exchange between the peoples of the Mesopotamian Basin, crossed by the Tigris and Euphrates rivers, led to the gathering of language bricks (pictograms, logograms, phonemes, words) in 3300 BC (the time of invention on the planet of compatibility) to achieve a common writing and understanding of the peoples in residence.
Around 3000 BC, the Cities were built, which testified to an entry into a productive system that was characterized by: exchange markets; the development of inequalities within and between communities; the appearance of potentates and an organizing ruling class supported by the gods
These times lead: to the appearance of the first imperialisms; an exponential growth in appropriation; then without restraint to the Collapse... Later on to the schizophrenic re-edition of the experience. (- 934 Assyrian Empire, - 626 Babylonian, - 331 Achaemenid Persia...).
During these periods, armed governance, the capture of markets and peoples, forms of "Exploitation of Man by Man", modes of land grabbing, modes of degradation of the potential of natural resources, modification of microclimates, etc.
These founding times of our civilization, strangely enough today, are not cited?
Fortunately, closer to our time, the Ancient Greek and Slave City appears, An organization of social classes that for its upper class (citizens) invents an Assembly power: The Demos ... Democracy... Democracy...

II - In the Thickness of Time – Recent Times p 63

Societies on the different continents over the last few millennia have progressed in the following forms: of extermination or subjugation of their fellow human beings; domestication of other species; elimination of an "invasive" nature; plundering of fossil resources...
All acts maintained by multiple beliefs, converging for the most part on the certainty of having obtained from the gods and divinities, a right given to the Human Species to use a planet of pantry, and to enact its laws and values "at its pleasure".

The chapter deals with the last sequence from the 19th to the 20th century, up to the Present in Debate.
This latest era of invention opens up a massive use of fossil and carbon energy resources and materials held in the planet's soil.
Two centuries that make it possible to create an expansive productive apparatus and the associated knowledge, and that launch a market of new goods and means, on the condition that humans are linked to the company through a partial redistribution of profits into wages, and a reinjection of these income from work into the sphere of consumption-addiction-domination.
The system of seeking maximum profit, in this process, in the present time, is oriented towards the predation of the cognitive with a desire to artificialize intelligence, in order perhaps to more completely enslave the Human, still associated with a reactive brain.
Can we still conceive of a passage towards a revision of the trajectory, and develop ways that lead to placing the "conscious human" in compatibility with the planet that designed and welcomes him?

III - For biospheric eco-compatibility p 137

Consists of examining the state of the alternatives currently being developed in terms of the installation and organization of the living and activity space, and the social, political and ecological dynamics.

- Paths that lead to experimenting with bio-compatible spaces in shared inventions, and to discovering and redefining the relationship with a complex biodiversity that cannot be domesticated.
- Initiatives that explore a sober development for the sustainable maintenance of our lives.
- Movements that demonstrate that popular initiative is capable of escaping a dystopian society and conceals dynamics that are likely to question and reinvent itself, starting at the local levels.

IV - Explorations ... Towards another account of the Living **p**196

Would questioning the Biosphere Being consist in the first place of disengaging oneself from the civil-cidal path taken to the point of going beyond the available resource of living environments, in order to conceive of oneself in the biodiversity still remaining in place, by redefining both the terms of exchange within the human community, and the modes of reweaving links with the "Living Planet"?

The knowledge acquired and the technologies available are dual-use: in submission to private interest and formatting of human thought... Or escape via the formidable means of interconnection that are still open to direct exchange in all languages between the 8.5 billion humans placed on the globe.
It is a question of unmooring the productivist dystopia, of deconditioning the city-storage: segregated, policed, cultivating ignorance and artifice
The alternatives developed in recent decades are in constant renewal, they testify to a need to correct this confinement that breaks solidarity at all levels of the living space.
Past times still bear witness to this ability to collectively conceive in the register of the so-called "vernacular" construction of technical knowledge, developed and tested by the human communities of the planet, which responds to the physical and bioclimatic characteristics of the earth's environments.

V - How to inhabit the Earth... A shared relationship p 228

To cohabit on Earth by leaving the City, a site for the production of surplus value and the establishment of unequal exchange, to pool the respective achievements between the two worlds, that of the human and that of the ecosystem, and particularly for the first to consciously commit it to the paths of sobriety and humility.
Develop an overall policy for living organisms that manifests itself in the implementation of a circular metabolism, and a biodegradable footprint of living bases, with fixed temporalities of stay, to allow the refoundation or regeneration of biophysical environments that are shared for a while.
Poles of life, Ecotopic sites (Micro and Mezo-Ecotopes), designed to be in line with the available resources and bioclimatic characteristics (water, soil and subsoil, topography, plant cover, climate, etc.).

VI - Merizotopie - Sketch of a "Unity of Life" in elaboration of a Biosphero-compatible Condition p 251

Evokes the framework of the sites of life and activities, for a defined period, led by Assemblies of "Neighbours" designated within the blocks and neighbourhoods.
A living space conducted with the participation of the neighbourhoods and in overall co-management, aiming to elaborate and practice a mutation of the relationships and modes of installation of human activity into biospheric compatibility and reinvention of equitable forms of exchange (Drafts inspired by the Eco-City projects (islands-neighbourhoods-city) of Freiburg am Breisgau -Germany- and other European initiatives in action.

A living space without centrality-authority but a global space of meeting, attraction, federation and elaboration in a framework open to the natural site, its life in panorama.
The projection addresses the living space of a Human Commons temporarily installed, without ownership of the soil, nor imprint on the living environment (fauna, flora, micro-organisms), on the soil and subsoil, without degradation of the microclimate in place...
In an osmotic relationship with the geosite and the indigenous ecosystem communities of the periphery.

VII - Merizotopie - Place of learning of a Species-Space, and of implementation of an Etho-politics of living environments p 264

Starting from an examination of natural engineering, the times of popular vernacular invention and the more recent times of invention "opened" by a free commons, it is evoked and sketched out some of the following paths of a mode of **existence in para-symbiosis with the various bio-geo-climatic environments**.
He is also tempted to set out certain "refuge" approaches, in order to protect the lives of this fragile human species, while giving it the means to find by itself the universal biospheric language that would make it possible to define intercompatibility, without domination, appropriation or domestication, between the components of the Living.

An "**inter-species language of exchange**" or coding, suitable for defining the still ignored terms of an overall co-evolution, and the biotopic forms, servants and servants, supposed to be suitable for a return to the Biosphere.

In terms of built space, pioneering achievements attempting to state a co-evolution in biosphere compatibility exist, pushed by groups associating the fields: Architecture, Engineering, Ecology, Sociology, Economics, Climate, etc. In a reading of the Long Time combined with an itinerancy.
Some of them are analyzed, which carry from various angles some of the concepts that are likely to enunciate the Human Space more generally, in a biotopic and multi-climatic approach pushed to the

point of generating a first form of permeability and conversation between the actors of the earthly world.
This presupposes a sober and wise human actor-author.
The chapter attempts to illustrate certain possibilities on the basis of acquired knowledge, old and recent, often brought together in the act of giving shape to the living space, between intimate and shared, at all the apprehensible scales of the Inter-Species living space.
An Ecosystem Architecture in free evolution and erasable imprint on the environments?

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II. IN THE THICKNESS OF TIME: THE SO-CALLED "MODERN" TIMES... ..... *Erreur ! Signet non défini.*

III. FOR BIOSPHERIC ECO-COMPATIBILITY.... *Erreur ! Signet non défini.*

IV. EXPLORATIONS... ..... *Erreur ! Signet non défini.*

V. HOW TO INHABIT THE EARTH... ..... *Erreur ! Signet non défini.*

VI. MERIZOTOPIAS ..... *Erreur ! Signet non défini.*

VII. MERIZOTOPOS ..... *Erreur ! Signet non défini.*

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I. IN THE THICKNESS OF TIME

"THE INSTALLATION"

The Territory - emergence, genesis and structure
The City - Birth, Growth and Domination
Civilization - factors of mutation and collapse



"Digging into the past only makes sense to correct
the direction of the present and announce the future... »
S. Zweig

0I -1 – In the Thickness of Time: Emergence, Genesis, Mutation... Collapse?

01 – The Territory of the Five Seas



Territory and civilizations, our question.

As soon as we try to bring together the "frugal approach" to: Planet – Civilization – Territory – City, to imagine an alternative to the present time and its wanderings, a question quickly arises.
How and why did we come to call for Frugality today?
Having as never before a light on the present and future challenges and risks, questioning the past was obvious to us to find some clarity on the links between Society and Territory.

The choice of a past

That of an Era that begins nearly 15,000 years BC (end of the last ice age), of a territory referred to as the "Territory of the 5 Seas", of "New Men" (succeeding the Neanderthals) led in their journey to build a new civilization by trial and error.

A step of Humanity that leaves us as a legacy, fundamental discoveries, and certain mistakes, including the unjustifiable ones attached to a quest for "Power".

A march which, beginning with a relationship between Humans and nature of the bio-shared type, will continue in a mode of imprint diffusion, to end up in a sickly pretension, that of the anthropogenic conduct of the planet, and even in some cases an imperialist expansion on the Universe... Schizophrenia!

But a past, thanks to the archaeological data gathered on the contemporary period, which also allows us to discover the progression of the various peoples over the last millennia, in the acquisition of knowledge in terms of: cultures; techniques; of science; forms of adaptation to local climatic conditions and resources, beliefs; of reasoned coevolution, etc.

After the last glaciation in this territory of the present-day Middle East, within a favourable climatic environment (hot and humid) and a topographically original geographical basin, exchanges between peoples from distinct migratory flows and horizons intensified to develop the first models of society
This domain of the Five Seas was on Earth in itself a macrocosm, served by the Taurus massifs to the north and the Zagros to the east, the Iranian plateau, the Tigris and Euphrates valleys (natural

north/south arteries of communication), and open to five maritime faces (Caspian, Black Sea, Mediterranean, Red Sea, Persian Gulf).
This framework may partly explain the formation of this civilizing melting pot which led to the grouping of migratory movements guided by coastal routes with multiple orientations.

In the 8th millennium BC, at the end of the Neolithic Era, for the first time on Earth, in the right of the current Middle East, a transformation of human society took place which gradually developed into a model of productive growth and exploitation of Man by Man, until today: attacking the fundamental rules of Physico-chemical functioning of our planet - Eradication of biodiversity and deterioration of the climate system and effects Induced-

The period questioned, phasing

The civilizing process between 12000 and 10000 BC was marked by the passage of hunter-gatherer communities to a stage of sedentarization that corresponded to the first plant domestications.

Around 9000 BC, nomadic herding communities and agricultural communities were established in distinct territories, practising the beginnings of micro-cultivation (permaculture?) as well as the first animal domestications.

From the 7th millennium BC onwards. AD), in the basins of the great rivers: agricultural production increased, surpluses were built, settlements (villages) became denser, and the exchange of resources between territories developed.

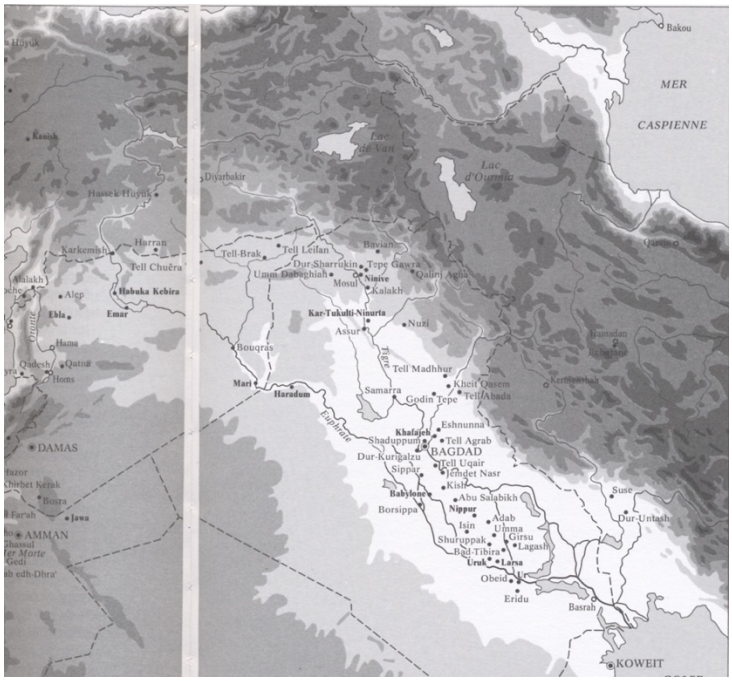
During the 6th Millennium, at the end of the Neolithic period, noting the growth in yields and the complexity reached at a certain stage of development by the mode of production: the communities were gradually led to grant a delegation of management to an organizing entity chosen from within them (the guarantor), then to accept over time the exit from the production process of a growing category of people in charge of economic and economic management. administrative.
This phase marks the end of the process of self-control and co-decision of the paths of evolution undertaken by the communities of farmers in the Neolithic; Towards a society of equals?

Until the 4th millennium, the exchange of knowledge and foodstuffs took place on an increasing scale.
The mode of production passed from a self-managed stage to a directed stage where the assembly of the Commons disappeared in favor of an executive (Dynaste, Potentate, Religious, etc.) and Services (administration, worship, militia and army, etc.) led by a group of the population that had left the productive sphere.
Agriculture benefits from ploughing instruments produced by integrated crafts and the commitment of new irrigation techniques.
A time of "frugal" discoveries: natural air conditioning of buildings; construction in bio-based materials; rational use of water resources; invention of accounting entry...
The phenomenon of expansion of arable land is accompanied by the construction of new agricultural villages and a multifunctional built pole most often achieved by deconstruction-reconstruction of the largest and most defensible village.

From the 4th millennium onwards, new structures or social categories were gradually formed on a regional scale, by bringing together existing communities, in connection with the establishment of a new organization of the mode of production and management of territories.
This appears in the following forms: intensive agriculture, long-distance trade, the multiplication of commercial objects, the birth of language writing, the invention of the wheel, a pre-industrial craft, etc.
The receptacle of the administrative, executive and religious apparatus was made a CITY: on the foundations of the initial agglomeration or Ville-Nouvelle

This phase marks: the end of the process of preserving the balance within the ambient biodiversity, self-production, self-consumption and co-decision within the communities of farmers; that of the undermining of a conception where the time of the Human has been maintained in connection with the time of nature.
This is followed by the gradual establishment of a process of overexploitation and segregation, together with that of the diversion of production surpluses to the benefit of the politico-religious elites.
From another aspect of the system, this phase will accelerate access to food security, increase the population, develop inter-community exchanges, accentuate the diversification of fields of knowledge, increase the life expectancy of populations, etc.

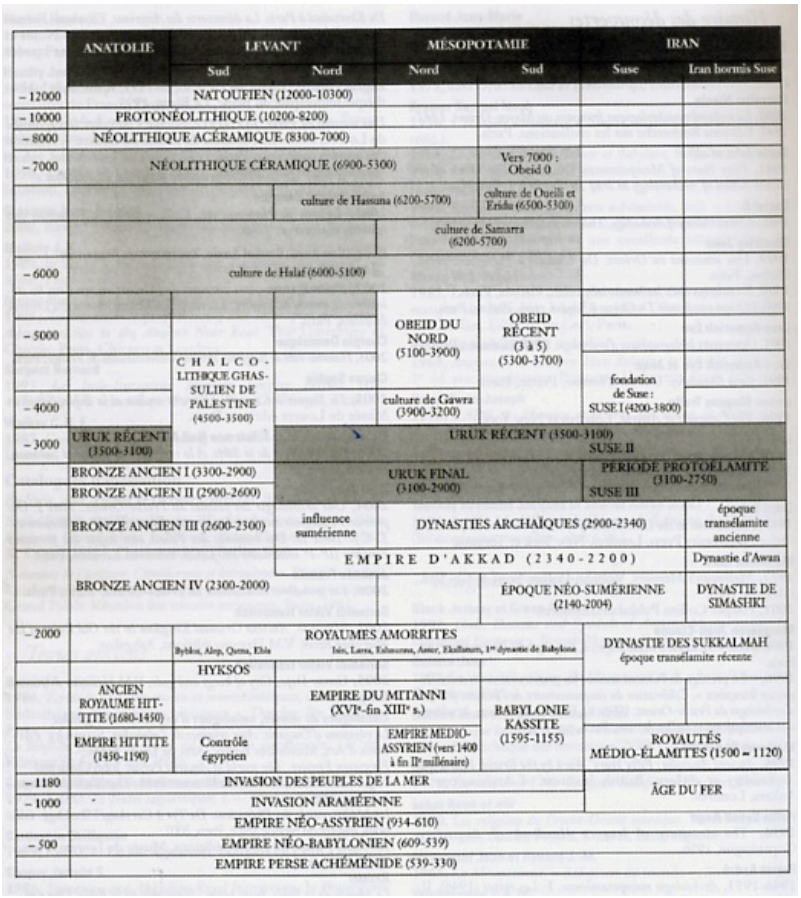
Questions



How could individual and collective intelligences, after having stubbornly and creatively traced a path of emancipation of civilized societies between the 12th and 4th Mills BC, embark on a different path from the 4th millennium onwards?
The pivotal period was that of the accelerated emergence of the autocratic City on the foundations of the Community Town.
The change took place within the framework of a first cycle of "concentration" of power and the grabbing of wealth by minority management groups, on the model of the "city-states".
It was followed by a second expansionist cycle based on the monopolization of the Great Territory with its share of looting, executions, destruction, which ended with the inauguration of the ultimate form of enrichment of a society provided by military, economic, cultural and religious imperialism.

Could this exploration help us find some of the gaps that need to be filled six millennia later?
Can the city only be the manifest space of an exploitation-transformation of its reception area, that of a formatting of the citizen... The command post of a society proliferating on the basis of accumulation and its corollary, unequal exchange?
A "Demos without Kratos"? (People without Power).

The Ancient Middle East: The Periods Questioned



	ANATOLIE	LEVANT		MÉSOPOTAMIE		IRAN	
		Sud	Nord	Nord	Sud	Suse	Iran hormis Suse
– 12000		NATOUFIEN (12000-10300)					
– 10000	PROTONÉOLITHIQUE (10200-8200)						
– 8000	NÉOLITHIQUE ACÉRAMIQUE (8300-7000)						
– 7000	NÉOLITHIQUE CÉRAMIQUE (6900-5300)				Vers 7000 : Obeid 0		
			culture de Hassuna (6200-5700)		culture de Oueili et Eridu (6500-5300)		
				culture de Samarra (6200-5700)			
– 6000	culture de Halaf (6000-5100)						
– 5000				OBEID DU NORD (5100-3900)	OBEID RÉCENT (3 à 5) (5300-3700)		
– 4000		CHALCO-LITHIQUE GHASSULIEN DE PALESTINE (4500-3500)		culture de Gawra (3900-3200)		fondation de Suse : SUSE I (4200-3800)	
– 3000	URUK RÉCENT (3500-3100)		URUK RÉCENT (3500-3100) SUSE II				
	BRONZE ANCIEN I (3300-2900)		URUK FINAL (3100-2900)			PÉRIODE PROTOÉLAMITE (3100-2750) SUSE III	
	BRONZE ANCIEN II (2900-2600)						
	BRONZE ANCIEN III (2600-2300)		influence sumérienne	DYNASTIES ARCHAÏQUES (2900-2340)			époque transélamite ancienne
			EMPIRE D'AKKAD (2340-2200)				Dynastie d'Awan
	BRONZE ANCIEN IV (2300-2000)				ÉPOQUE NÉO-SUMÉRIENNE (2140-2004)		DYNASTIE DE SIMASHKI
– 2000		ROYAUMES AMORRITES Byblos, Alep, Qatna, Ebla		Isin, Larsa, Eshnunna, Assur, Ekallatum, 1re dynastie de Babylone		DYNASTIE DES SUKKALMAH époque transélamite récente	
		HYKSOS					
	ANCIEN ROYAUME HITTITE (1680-1450)		EMPIRE DU MITANNI (XVIe-fin XIIIe s.)		BABYLONIE KASSITE (1595-1155)		
	EMPIRE HITTITE (1450-1190)	Contrôle égyptien		EMPIRE MÉDIO-ASSYRIEN (vers 1400 à fin IIe millénaire)		ROYAUTÉS MÉDIO-ÉLAMITES (1500 – 1120)	
– 1180	INVASION DES PEUPLES DE LA MER					ÂGE DU FER	
– 1000	INVASION ARAMÉENNE						
	EMPIRE NÉO-ASSYRIEN (934-610)						
– 500	EMPIRE NÉO-BABYLONIEN (609-539)						
	EMPIRE PERSE ACHÉMÉNIDE (539-330)						

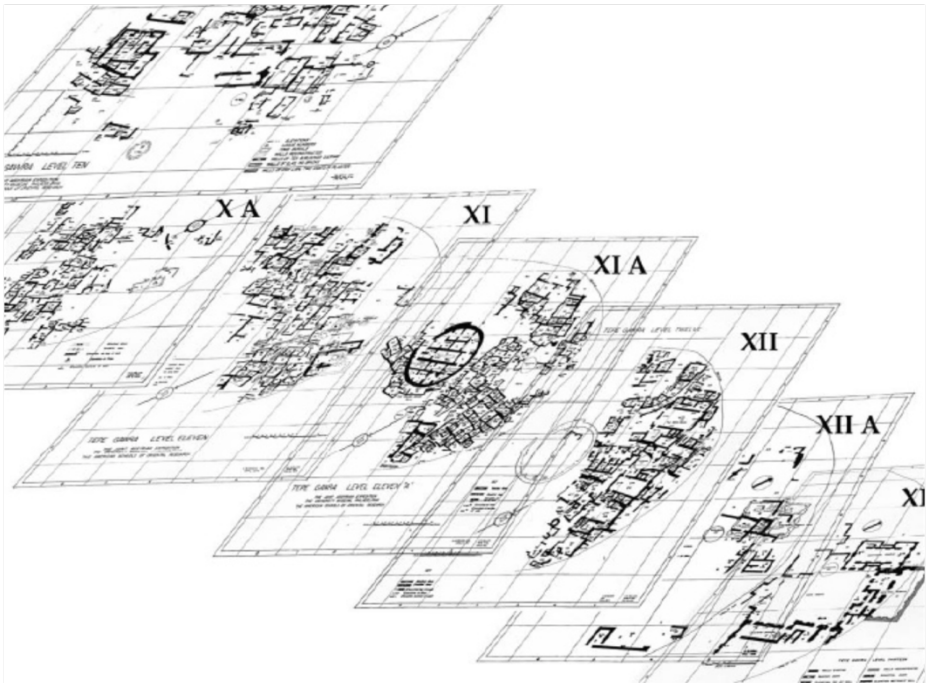
The climato-geographical context of the time and resources

Climate-
The territory in the Ancient Middle East, around 15,000 BC, saw the effects of the last glaciation disappear (end around 17,000 BC). The climate is gradually becoming warmer, more humid, it favors the development of botanical varieties, and at a certain stage of their development provides a pool of food resources for migrant hunter-gatherer populations; later to the nomadic and sedentary populations who will move to this Eden.
Two climatic models are present-day in Iran: the area of present-day Iran (plateau altitude 1500m subject to the rigours of winter – low temperatures and snow cover) and the lowland areas, Iraq, Syria, Jordan, subject to high heat where temperature variations occur mainly between day and night.

Geography–
The "Land of the 5 Seas" offers a wide potential of resources to fix life and allow its development:
- The northern part of Mesopotamia corresponds to a limestone plateau crossed mainly by two rivers, the Tigris and the Euphrates, fed by the Taurus Massif (The Anatolian Water Tower);
- The central part is a plain covered with silty-clay sediments about 200km wide in north-south elongation over 650km, an area that runs along the Sagros mountain range to the east (second water resource). The southern part of the plain opens up to a marshy delta overlooking the Arabian-Persian Gulf.

Fossil resources: Copper, lead, obsidian, limestone, clays, etc.
Water resource: The two high-flow rivers (Tigris, Euphrates, etc.) flow on alluvial beds that place them above the land that borders them, thus making it possible to irrigate the land in the basin after hydraulic works.

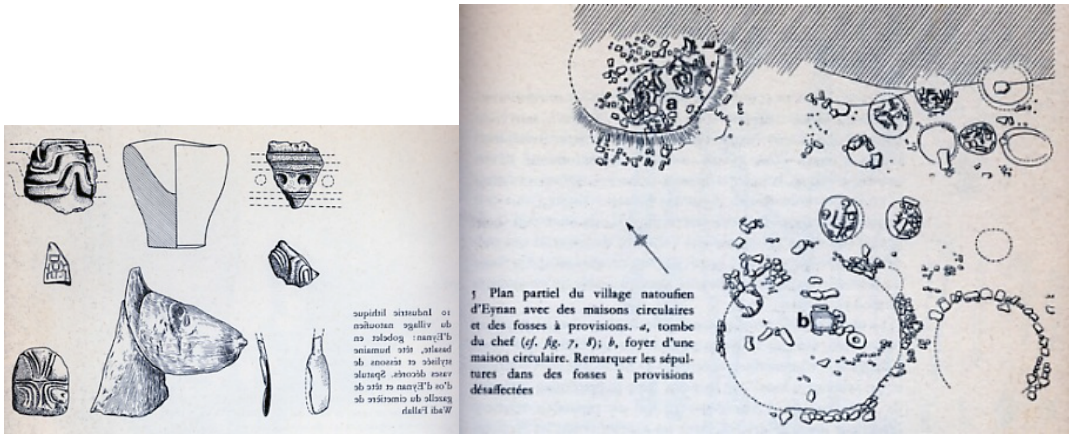
02 - Chronological progression of the Mesopotamian civilization and Territorial settlement process



Community Corporation
"The Natufian" (12,000 BC to 10000 BC)

COMPANY
It was a pivotal period that developed in a pre-agricultural context where settlements were semi-sedentary. Part of the population, in place in the more arid areas, remains nomadic. The populations have a mastery of fire attested by heated stone blades (excavations in the Levant dated to the 75th millennium BC).

- **HABITAT**
  The dwellings placed on a round base are buried 50cm in the ground, they are equipped with mortars, pestles, stone vases and (primitive) basalt millstones. The walls, depending on the region, have as their framework an assembly of posts, branches and leaves, or reeds, with a covering of the outer wall in fibres + clay.
  The skeletons of the occupants are buried under the houses or grouped together on funerary areas
  On the site of Eynan, there are small silos between the dwellings with walls of reeds or intertwined wood, plastered with clay.
- **ACTIVITY**
  The populations of hunters and fishermen practice a broad-spectrum predation around the camps on the areas of confluence of fauna and flora: on the borders of steppes rich in wild cereals, on the banks of rivers, forests or lakes (the hunted animals are gazelles, wild sheep, goats, etc.).
  The consumption of wild cereals takes place in the food thanks to flint blades (sickle blades for harvesting, tools and weapons).
  The first domestication that led from wolves to dogs is attested as early as 12000 BC
- **ART**
  Art is essentially zoomorphic



1 Plan partiel du village natoufien d'Eynan avec des maisons circulaires et des fosses à provisions. *a*, tombe du chef (*cf. fig. 7, 8*); *b*, foyer d'une maison circulaire. Remarquer les sépultures dans des fosses à provisions désaffectées



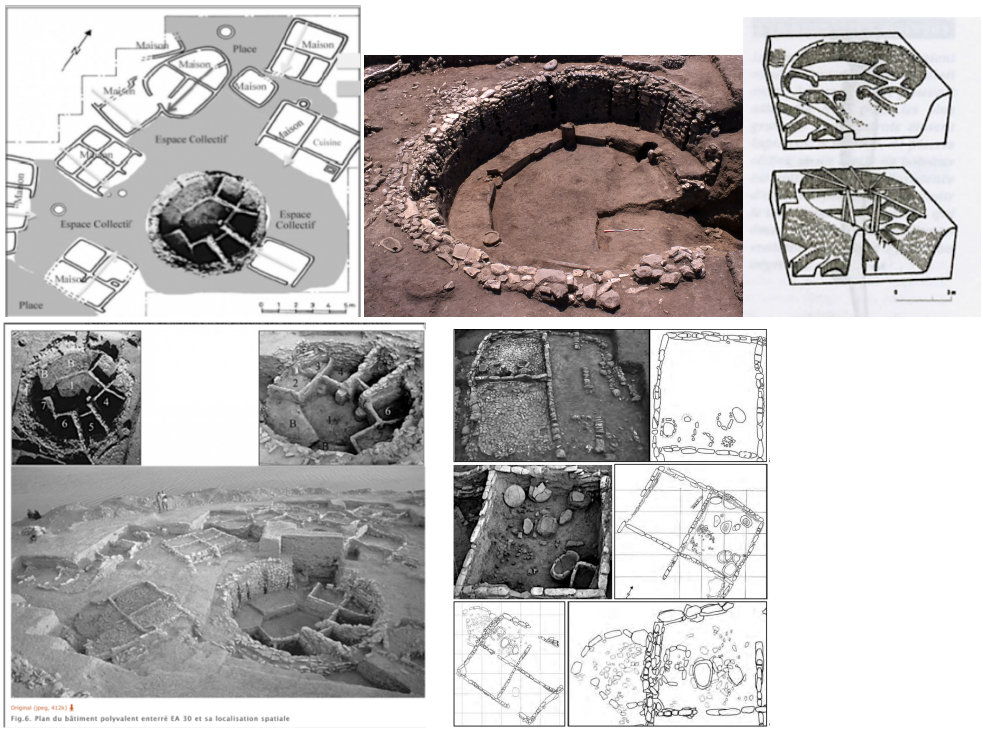


Community Corporation
Proto-Neolithic (-10200 to -8200 BC)

- **SOCIETY** ---
  Hunting is oriented towards large animals and is accompanied by the domestication of certain animal species.
  Trend towards the grouping of populations: there is an increase in the surface area of settlements and a decrease in their number, as well as a lengthening of the duration of occupation of the sites (several centuries for some).
  Stabilization over the regions makes it possible to accumulate observations on natural phenomena and in particular to discover that botanical reproduction in some cases is carried out by seeds (legumes and cereals in wild varieties); it leads to a partial control of plant resources.
  Pre-domestic agriculture appeared linked to increased use of cereals. The first works mobilizing the communities appeared (the village of Jericho with a community of 200 to 300 people).
- **HOUSING & CONSTRUCTION**
  Round or oval semi-buried houses are next to others using the techniques of high earth walls with flat roofs made with framework and earth filling, the floor is paved.
  Compartmentalization is carried out within the dwellings, indicating the introduction of functions such as specialised work and specific domestic places within the family domain.
  In the Jordan Valley, the first mud-brick building modules were used.
- **ACTIVITY**
  Appearance of a lithic industry (long arrowheads). Flint agricultural tools developed (sickle blades, stone axes) and stone dishes were used in domestic utensils.
- **ART**
  Clay was used to shape anthropomorphic figurines and animal representations, previous symbolism of a zoomorphic nature gradually disappeared.

FOCUS

_____ JERF EL AHMAR _____



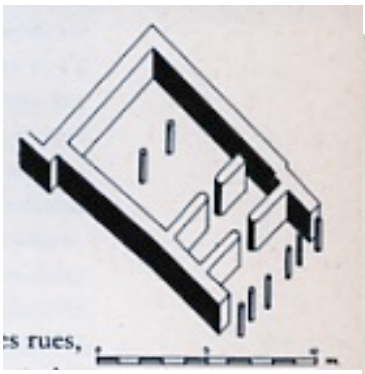
Community Corporation
Neolithic "aceramic" (-8300 to -7000 BC)

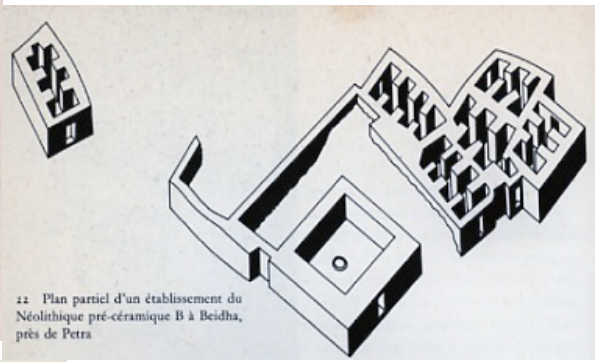
- **CLIMATE**
  The mild and humid climate leads to the development and diversification of forests. The general melting of the glaciers ushered in a period in which alluvial deposits would grow in the Mesopotamian basin, and agriculture and livestock farming would gradually become widespread in the different territories.
- **SOCIETY**
  Sedentary lifestyle - The village organization on a defined territory, occupied over several generations, induces a new conception of the social group organized into lineages, where ancestors constitute the reference figures carrying memory and experience. The result is a concern to venerate exceptional personalities through material representations depicted in statuary.
- **ACTIVITIES Agriculture – Livestock**
  In the upper valleys of the Tigris and Euphrates: the cultivation of barley, domestic wheat, and legumes (beans, peas, alfalfa, clover, etc.) is accompanied by a gradual fertilization of the soil due to nitrogen fixation; domestication of the goat and great diversity of animal species consumed.
- **ART & TECHNIQUES**
  - **Techniques** - The creation of **distant exchange** networks allows the circulation of raw materials (Anatolian obsidian, limestone, sandstone, basalt) and the shaping of complex and standardized objects (limestone and basalt for mortars, sandstone and basalt for millstones, vases and bracelets) within village workshops. The circulation of finished products between villages began.

  Around 7000 BC, appearance of **ceramics** –
  Beginning of a control of high temperatures (700°C) - wood energy input for limestone and gypsum calcination and production of lime and plaster for floor and wall plastering. Cooking of domestic utensils and clay vessels.
  The production of plasters for exterior cladding, in lime mixed with unheated marl, makes it possible to obtain plasticity and water resistance.
  The walls of rammed earth constructions are joined at the corners by the crossing of hand-shaped components (in dried raw earth), they prefigure the later moulded brick. The foundations are stoned (pebbles).
  - **Art** - A few paintings appear on the walls and floors, as well as large statuary ensembles, made of stone or plaster.

- **HOUSING & Construction**

  Transition from the round house to the rectangular house. The rectangular plan makes it possible to improve the compactness of the interior fittings compared to the circular shape, and to establish an intercommunication between joined modules that accommodate the specific functions.
  It also leads to the **densification of the built fabric**.
  The single-family housing model developed consists of 3 rooms, it is itself the constituent element of a conglomerate (Extended Family Housing Unit?).
  The area of hamlets, placed in the centre of the cultivated land, increased little compared to the previous period. It is on average one hectare.
  A change in social organization leads to the insertion of an **uncovered common space within the dwellings in the centre of the sheltered spaces** or laterally. Buildings with specific functions intended for village assemblies and common activities (meals) appeared in the built environment in the 8th millennium in the high valleys.
  The workshops for shaping stone and flint instruments (mortars, pestles, millstones and tools) and pottery workshops were integrated into the fabric of life.











Community Corporation
Neolithic "ceramics" (6900 to 5300 BC)

- **SOCIETY**

  In village constructions, there is no formal differentiation that would reflect a hierarchy in the social and political status of the inhabitants or a differentiation of workloads between households.
  Exchanges: exchanges of raw or processed resources continue between neighbouring communities but also on even larger scales between territories.
  There was a gradual rapprochement between neighbouring communities insofar as the manufacture of working instruments, the control of high temperatures and the sophistication of ceramic techniques were now based on a **community movement of wider initiative.**
  Beliefs: Scattered throughout the built fabric, some buildings, identical to houses but composed of four to five rooms, are charged with a wall decoration with a strong symbolic content. They seem to have a role as a family sanctuary.
  Funeral rite: The bones of the dead are buried under the platforms of their houses or in decorated shrines.

- **ACTIVITY Agriculture – Livestock – Trade**

  The average cultivated area is 10 to 15 ha, depending on the region. Einkorn, spelt, barley without beards, bread cereals, peas and other legumes are grown, and vegetable oil is produced from almonds, pistachios or flax, and sometimes beer. Sheep, goats and pigs are raised.
  Stone tools are widely used.

The exchange of material or food resources concerns **raw materials** : wood, ores, pigments, alabaster, marble, shells, agricultural surpluses and processing products (pottery, tools, crockery, jewellery, etc.) according to the means of production and knowledge held by the community.

- **ART & TECHNIQUES**

The technical knowledge acquired and exchanged within the "Land of the 5 Seas" (about 1300x1300 km) relates to the work of bone, leather, basketry, flint and obsidian, depending on the site.
The progress made focused on an inventive exploitation of new materials, and a mastery of ceramic firing evolving towards **painted ceramic pottery with decorations, the first fired bricks.**

- **HOUSING & CONSTRUCTION**

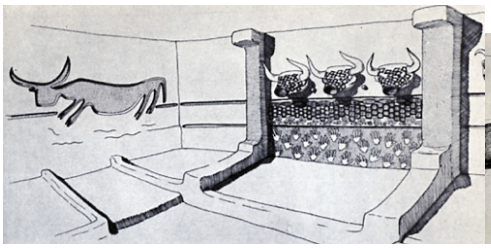
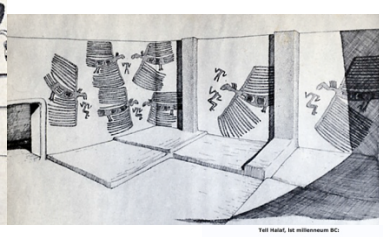
Appearance of the **Araire** (fossilized furrows of Khuzistan). The increase in agricultural product leads to population growth. The size of the villages is increasing. The collective storage of cereals in impressive granaries preceded the **construction of large buildings, with central and annex rooms intended to bring together the community of farming families**.
The village fabric is increasingly dense, organized around common areas. The vernacular buildings house a habitat that testifies to an accentuation of social stratification, perhaps a transition to forms of family property.
The houses are approximately rectangular in shape, built of **moulded mud bricks and wooden chaining, they have foundations of stone or baked bricks** depending on the territory of installation. This model of housing spread throughout the "Near East" area.
The houses include: a room with benches and a fireplace, an adjoining store and an uncovered courtyard; a device that suggests that the agglomeration is made up of lineages that are co-managers of the entity (Councils of Elders).

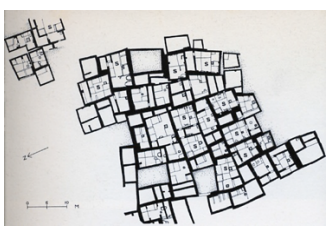
- **FOCUS**

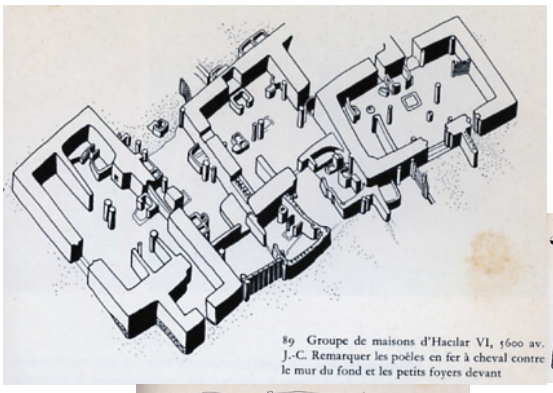
_____ ÇHATAL ÜYÜK (7000 BC to 6500 BCE_____

The buildings are attached to each other according to an "agglutinating plan". The entrance is by means of ladders through the cob roof terrace, the walls are pierced by small windows placed very high under the projection of the roof (some villages in Anatolia are still built on this principle today). The interiors, floors, posts, benches are plastered and frequently stained. In the first half of the 6th millennium, the average agglomeration developed over 12 ha.



89 Groupe de maisons d'Hacılar VI, 5600 av. J.-C. Remarquer les poêles en fer à cheval contre le mur du fond et les petits foyers devant





101 Établissement fortifié d'Hacılar II A, 5400 av. J.-C., et vestiges de la forteresse postérieure d'Hacılar I, 5250 av. J.-C. c, cour; g, grenier; gr, corps de garde; β, ateliers de potiers; w, (well) puits; s, sanctuaire



Dependent company with delegated governance

The passage of the village to the beginnings of the city - **Obeid** (-5000 to -3500 BC)

- **SOCIETY**

  It was during the period of the "Obeid" that humans began to **channel the water of the rivers to the lands** that bordered them (former fertile riverbeds), by the technique of spreading during periods of flooding and flooding of the rivers crossing the sub-desert regions, and consequently **to have a greater food resource**.

  At that time, there was a growing need to **protect and defend**: the first surpluses of agricultural production, the products of nascent crafts, and livestock farming...

  On another level, the growing need to manage and organize the different components of the productive forces leads to the creation of a regulatory authority financed by the surplus of production. Associated with the authority, **embryonic services** are then created that make it possible to carry out the tasks assigned to the Working Community (missions carried out by the executive that will evolve over time towards the form of a mission conceded to intermediary bodies).

  These two millennia preceded the emergence of the urban phenomenon.

  From the society of the first agricultural villages, built on a self-management basis, we move to a progressively hierarchical society where **the councils of elders will give way to a class of local chiefs, patriarchs, and then notables with various positions.**

  ECONOMIC ACTIVITY

  The existence of an elite is manifested by the development of a body of specialized craftsmen capable of producing precious goods consumed.

  The mutation of the sphere of production manifests itself in the form of a dissociation of the roles of actors between producers, managers and leaders. The group detached from production is responsible for: managing stocks, organising production, conducting inter-territorial trade, ensuring the protection of the common good.

  In this way, he is in a position to form a class of **elite** servants over time.

  The strong **increase in the population of the villages and towns made it possible, under the authority of a new organising power, to raise major hydraulic and defence works, to proceed with the construction of administrative buildings and residential or religious constructions within the most developed agglomerations.**

- **IRRIGATED AGRICULTURE**

  As the spreading of water in the fields was water-intensive and difficult to control, water supply techniques were replaced during the 4th millennium by a **network of hydraulic structures** that ensured controlled water supplies on cultivated territories with increased surface areas (between the water intake from the river, the large canals, the distribution ditches, etc.). and valleys).

- **CITY**

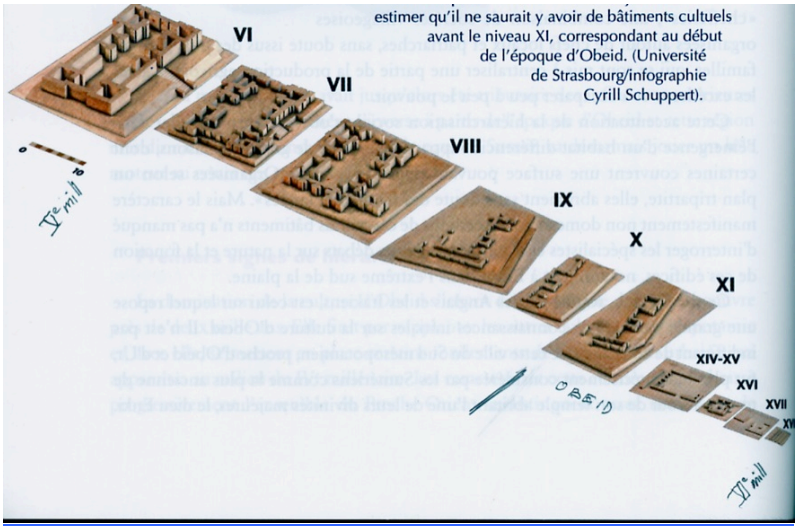
The craft of tools and art, commercial exchanges, the new form of production management, the accentuation of the division of labour, the growth of the population and social differentiation, led to a redefinition of the community agglomeration.
It was revised on more orderly routes, associated with the insertion of new functions and a progressive sectorization attributing **specific neighborhoods** to the populations of notables and elites.
Hierarchical distribution of habitats within the perimeter of the City and differentiated funerary practices in collective necropolises. The tombs bear witness to significant income gaps.

- **ARCHITECTURE and domination, the birth**
The new power over the city was ostensibly installed above **the overall fabric and was equipped with an orderly and architectural complex within which it brought together the administration and the symbols linked to its office.**

FOCUS

_____ERIDU_____

Eridu --- Traces of an incipient inequality: Ordinary houses are made of reeds and other less numerous dwellings built on a tripartite plan are made of brick.
A building (common house) with a tripartite plan and terrace (15mX10m) with multiple openings is located within the village fabric, in order to bring together the "inhabitant" population.



estimer qu'il ne saurait y avoir de bâtiments cultuels avant le niveau XI, correspondant au début de l'époque d'Obeid. (Université de Strasbourg/infographie Cyrill Schuppert).

_____ SUSE _____

Susa 1 (4200 BC to 3800 BC) --- At its foundation, Susa was made up of a group of villages spread over 10 ha and dominated by a masonry massif built on a Tell (a necropolis massif housing tombs). Over the centuries that followed, the area was equipped with a complex of buildings (80m of linear façade) based on a large stepped terrace: the administrative and religious heart of the agglomeration. The extent of the work done for the construction of the High Terrace indicates an organized and hierarchical society, a hypothesis confirmed by the selective distribution of valuable objects in the tombs of the period, without the presence of an authority exercised by a single figure being acquired. In the second half of the fifth millennium BC, the **first metallurgy was established there: that of copper**. At the same time, the objects (scissors, chase needles, flat axes, mirrors) were made by a specialized craftsman who mastered a complex technique that required two types of kilns. The first

were raised to 850°C to reduce the native copper alloyed with arsenic in crucibles and the second for a 1100-degree remelt to cast it in moulds.

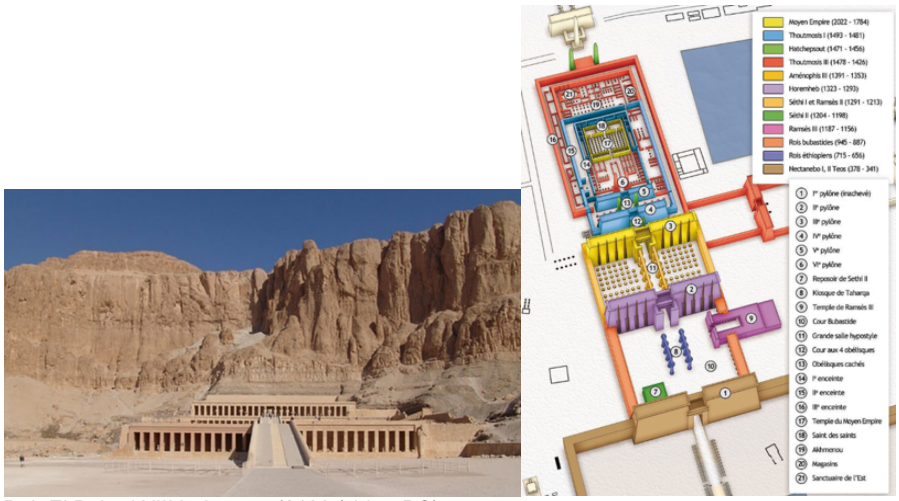


LARSA



Egypt - Significant Eras

Around 4000 BC - 3800 BC an organized agricultural life appeared in the Fayoun oasis (grain silos, ceramic manufacturing). Around 3400 BC The first fortified cities (Hierakonpolis, Nagada); c. 3000 BC Foundation of the State, a theocratic and autocratic state, appearance of highly pictographic hierographic writing and then ideographic, the exchange of goods is practiced by barter; - 2785 creation of the 365-day calendar; - 2750 Pyramid of Saqqara; - 2000 simplification of writing in hieroglyphics; - 1960 Wadi Halfa, model of military architecture.



Deir El Bahari XIIIth dynasty (2133 / 1455 BC)

Tributary company with conceded governance

Proto-urban period (3500 BC to 2700 BC)

- **SOCIETY & GOVERNANCE**

A hierarchical, directed-administered-controlled world opened up that outlined the state structures of the future... Civilization is becoming more complex because of the diversity of functions to be fulfilled: a multiplicity of issues to be dealt with outside the family or individual sphere; transformation of

decision-making systems; reform of the management framework of a changing mode of production and social relations in recomposition; control of the terms of trade (commercial relations).

The ruling oligarchy now controlled all areas of activity (civil, military, religious), it was gathered in assembly around a leading figure (referred to as "***EN",*** a term used, in the eras that would later follow, to designate the "leader", the "president").
This authority seems to be (at the stage of the present archaeological discoveries) the defender of his people against "savage and hostile" forces. In the phase (3100 BC to 2900 BC) this role will extend to religion. The "En" has an armed force that gives him power that goes beyond simple moral authority.
The Temple, integrated into the City, has an ideological and religious vocation, it is a socio-economic body invested in the forces of production in conjunction with the Palace and proceeds in concert with it to launch major works by mobilizing populations.

- **ADMINISTRATION & MANAGEMENT**

To manage a workforce, permanently employed on major irrigation works, the construction of urban settlements, agriculture on seasonal cycles: it is necessary to find a mode of organization and rational control that exceeds the capacities of simple human memory, a code, a marking on the nature of exchanges
Accounting on clay tablets appears in the early 4th Mill in the form of clay "Bubbles" covered with a seal containing accounting tokens called "Calculi". This was followed on engraved clay tablets by the first writings bearing the indication of the contents in the form of pictograms (known appearance in 3300 BC).
In the **first half of the 4th Millennium**, writing (the **tool** and not the language) was used to record transactions, the entry and exit of goods (food, livestock, textiles), to establish receipts, and inventories of managed wealth.
The clay wafers wet at the time of notation are used as a support for the plotting of numbers, **pictograms and later ideograms**, to be then dried and stored.

- **PRODUCTIVE SPHERE - Economics & Technology**

At the time, agricultural yields increased thanks to: the extension of irrigation networks; the use of the plough and the use of draught animals; to the birth of horticulture.
This accumulation of inventions and consequently of resources, greatly increased the birth rate, and allowed the development of "dependent sectors", such as: crafts, administrative services (management means, accounting, then writing), and the army. At the same time, pastoralism developed. The number of inhabited sites is increasing in the Mesopotamian plain.
The village communities in place on the land to be cultivated own their own land and remain socially free. However, they were in a tributary relationship with the city insofar as they gave up part of their labour power for general work.
Inland **waterways** were developed as well as the **mass production** of ceramic pottery.
As part of a large-scale development of buildings, a **standardization of construction methods and the components** implemented is instituted.

- **AGRICULTURE**

Agriculture is equipped with **the animal-drawn plough** which makes it possible to plough and sow long plots. The **wheeled trolley** is introduced.
In the climatic conditions of the time and taking into account the ancient yields, it was considered that for a group of 600 people, it was necessary to irrigate 1000 ha.
The ultimate balance of cultivated soils has been achieved. Excessive grazing, intensive deforestation, and over-irrigation, lead to the rise of salts present in the substrate.
The intensive continuation of cultivation on the Tigris and Euphrates plains is in the process of eventually leading to the abandonment of certain urban settlements in the territory.

- **EXCHANGES AND MOBILITY**

Since the previous period, an economic and commercial network has been established throughout the Euphrates-Tigris area.
The long-distance circulation of goods and raw materials is increasing, to satisfy the significant needs for materials and precious materials called for by the dominant centres of activity.
The **construction of the first** canals parallel to the Euphrates made it possible to create, thanks to towing, the **first upward and downward river transport**.
Accounting instruments appear in the form of **accounting tokens** on which the quantities and types of foodstuffs traded or stored (jars or bales) are recorded.
Marks **of ownership** or control of the goods are also marked by means of cylinder seals unrolled on clay surfaces.

- **TECHNICAL**

Ceramics became a masculine craft (the painted form disappeared) and was mass-produced using two processes: the lathe and or the stamping with a fist into a form.
Metallurgy developed poly-metalism. Craftsmen began to work with lead, gold and silver (early goldsmithing) and alloys (copper-arsenic-tin for mirrors).
Construction: The materials used in the construction are limestone for the foundations, mud brick, plaster. The building elements obey precise modules, the bricks are square in cross-section.

- **ART & CULTURE**

  - Art changed its expression by focusing on a "humanist realism" and was based on sophisticated representation techniques (sculpture in the round or in bas-reliefs).
  Writing - At the **end of the 4th millennium**, **syllabic signs and grammatical signs** were elaborated, pictographs replaced by **cuneiform signs**. Little by little **, the commented economic memory aid writing will take care of transcribing the history and thought of men, then archiving them.**

- **LA CITÉ - Structuring Developments & Architecture**

  The cultural change that is taking place is manifested both by the development of architecture and by a recomposition-expansion of the resource territory.
  While taking up the tripartite plan of the previous period, the dimensions of the buildings became hypertrophied and left the isolated settlements of the previous period to be arranged in **structured architectural complexes**, arranged on either side of a central space (Acropolis Terrace **at the top of the Tells**).
  Standard **plans** also appeared: square plan, labyrinthine plan, or elongated plan for the stacked halls.
  The facades are decorated with niches, redans, columns or pilasters, terracotta mosaics.

- **FOCUS**

_____ ARAD (3100 BC to 2650 BCE) _____

The topography of the hill forms a natural hemicycle, which drains runoff water in its centre and allows it to be kept in the open air. It is a device that can still be found today in the heart of the villages on the edge of the desert. The passage from the open village to the small fortified town was made around 3100 BC.
The **stone wall**, 1200 metres long and 2.50 metres wide, bears witness to a planning approach on the scale of the site. The enclosed area is 10 ha, it is reinforced at intervals by semi-circular towers.
The interior built fabric is sparsely dense, it is organized on a **radial plan** with the streets directed towards the basin below the site.
The typical house consists of **a main room and several annexes arranged around an open area**, it is a habitat with rural affinities. The habitat is hierarchical (the surfaces vary from one to four), it presents strong differences in the richness and abundance of the furniture.
Foundry waste attests to the existence of workshops in the fabric industry.



_____ URUK _____

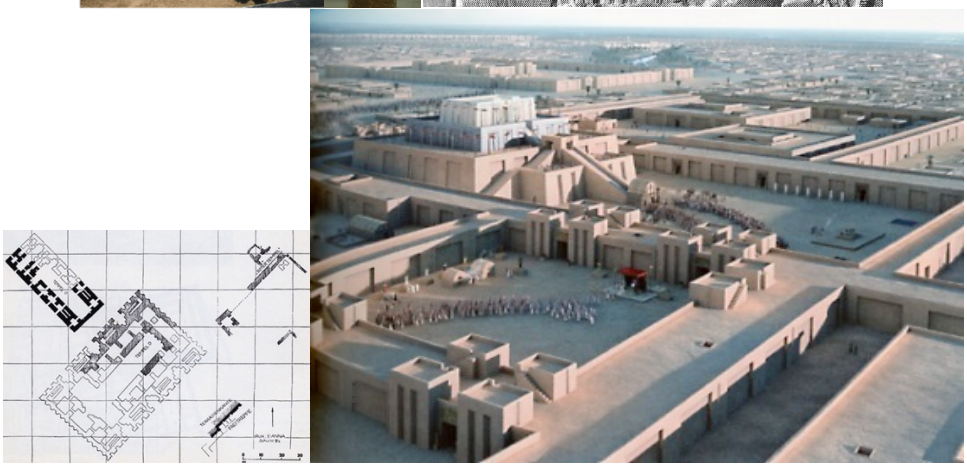
The site of **Uruk** developed in the last centuries of the 4th millennium (Obeid Period) to form two neighboring towns, Uruk and Kulab, around 3500 BC. It then extends over an area of 230ha. At its peak (2900 BC), the Uruk site covered around **400 ha and was home to nearly 10,000 inhabitants.**
During the second half of the 4th millennium, urban growth increased, marked by: the new form of urban fabrics, by the technical progress made by crafts, by territorial expansion, and a new social organization that led to writing, and **to the invention of state structures**.
The City of Uruk is headed by a diverse social elite, guarantors of the established order, whose members sit in councils or assemblies. This **oligarchy** was led at the end of the Uruk period to cede its authority as a constituent assembly to a **Potentate**.
Its development in urban areas will go through three periods.
- Around 3100 BC, the two groups were grouped together and equipped with two "poles" (quarters) inserted into the existing fabric, one dedicated to a god and the other to a goddess. The spirit of innovation is emerging in architecture (plans, materials, mouldings and size of buildings).
- The "Eanna" complex on Uruk, the economic and intellectual center of the city, is divided between the headquarters of the administration (a building more than 80m long), the prestigious buildings inhabited by the oligarchy, and two temples.
- The "Anu" on Kulab occupies a high terrace on which a succession of buildings with a central nave is gradually erected, then a ziggurat nearby.

The agglomeration is surrounded by walls like other sites of the same period and of an equivalent level of development (Susa).

The irrigation of the Pays d'Uruk, carried out on the basis of controlled "low-tech" hydraulic structures, increases cereal production fivefold.
After redistribution to farmers for their consumption and the needs of the animals, two-thirds of the harvests are allocated to the central body to finance the social uses of the agglomeration.
The establishment of a form of **state, a regulatory and redistributive power, made it possible to support the development of crafts and to create a number of tools and new techniques for processing raw products.**

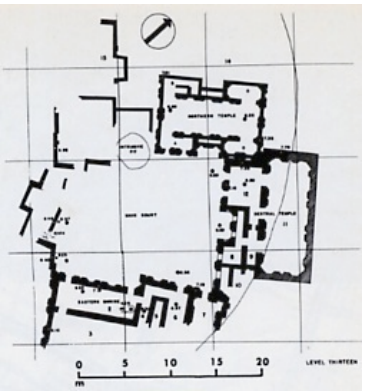
Model of the state of the city of Uruk in 2900 BC

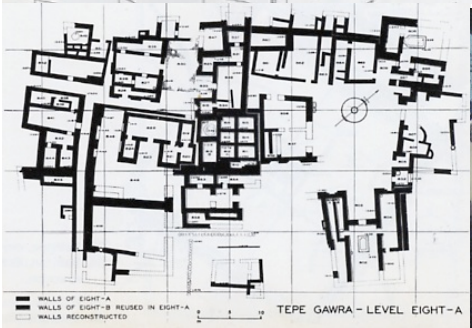




TEPE GAWRA









In Europe...

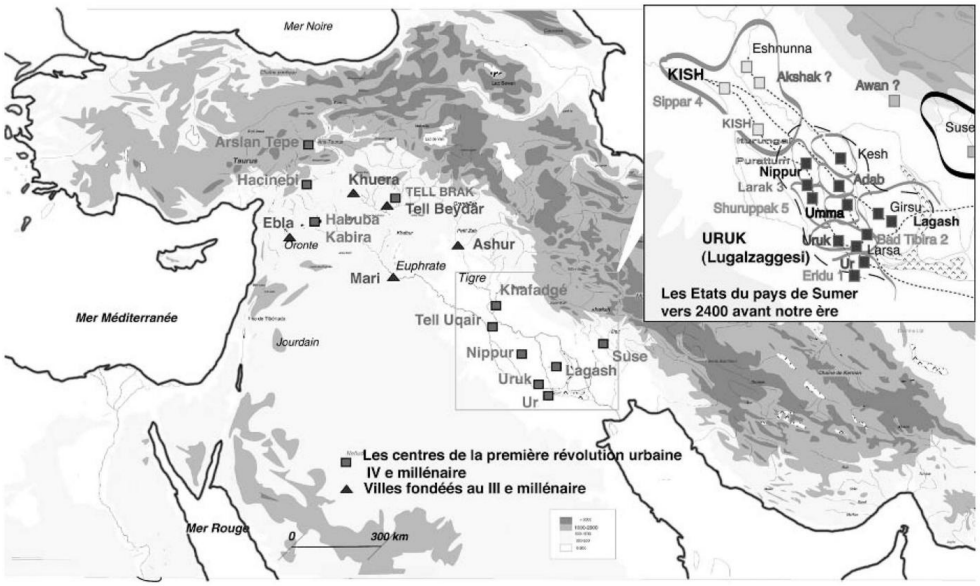
The Araire: appearance in Cyprus in the 3rd millennium; Large groups of standing stones in alignments and menhirs around 2200 BC in France; around 2350 BC in Greece, appearance of buildings of significant size, collective facilities (fortifications, cisterns, street layouts) Burial of the dead outside the habitats; - 2100 Aegean world, use of the potter's wheel; -1900 Western Europe, mastery of bronze metallurgy; - 1700 birth in Crete of the syllabary script; -1900 Aegean world, brick gradually replaces cob.

The "City-States"
Archaic dynasties. Third millennium (-2900 to 2340 BC)

Society becomes urban; A tight network of cities structures the large territory on a specific model of economic and social organization.
The social hierarchy was accentuated, and buildings acquired specific functions.
Writing is reaching maturity and is used for economic transactions, administration, and the transcription of cultural, historical, and religious facts.
War is now an endemic phenomenon
The first empire was constituted as a territorial state encompassing the former city-states
The social inequality observed in the new organization of the Enclosed City is confirmed in the funerary setting where some tombs are the subject of a deposit of precious materials or furniture.

- **SOCIETY & Governance**

The **civilization of "Sumer**" developed over three periods from 2900 BC to 2300 BC.
The workforce was large and made it possible to launch major irrigation works from the two major rivers. **The territory is divided between sedentary agricultural practices and nomadic livestock farming.**
The territory of Sumer is divided into about fifteen city-states, each with a tutelary god and a holder of executive power: the supreme judge who oversees the maintenance of the canals, the construction of temples and the protection of the populations.
Protective ramparts and professional armies divided into specialized corps, bear witness to the occurrence of conflicts.
The system of city-states was built around fortified points under a double aspect: control of an agricultural territory exploited by the villages of farmers, and looser symbiosis with an extensive pastoral hinterland where mobility remained a rule. **Sedentary agricultural practices in villages organized around an "urban" center and pastoral nomadism are there, as complementary aspects of land management.**



- **RELIGION**

The Gods respond to cosmic entities: god of the sky, god of water, god of the atmosphere, god of the moon... or female deities. Each one bears the mark of a city.

- **ADMINISTRATION & MANAGEMENT**

Cities have bodies responsible for their management. The temple and palace located in the main city constitute the main political, administrative and economic centers. The monarchical system does not exclude a certain collegial exercise of power.
Alongside it is a network of local authorities, representative of the various urban communities.
Municipal **authorities** vary according to the region, the time and the local context.
Within the city and its neighborhoods, there are holders of responsibilities and "assembly councils" that are held when it comes to deciding on specific cases such as marital disputes (Code of Hammurabi). The merchants form a separate urban community. Municipal officers took part in these meetings.
The leaders of the Urban Community are under the orders of the governor of the province or the king. These "Mayors" were responsible for the organization of public works – maintenance of canals, construction or renovation of public buildings – and the mobilization of the workforce and armed troops.

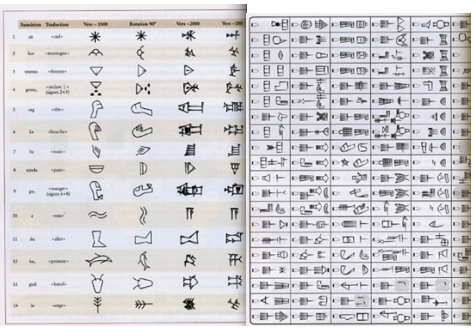
- **PRODUCTIVE SPHERE - Economics & Technology**

Agriculture - The territory of Sumer (South Mesopotamia) has only a low and irregular rainfall regime (100 to 200 mm/year) which requires the use of crop irrigation. The plants cultivated are above all cereals, legumes, flax for oils and textiles. Cattle and pigs are raised
Construction - The basic element is a parallelepiped mud brick with a domed upper face, fitted in a "fishbone" shape and ridged with a clay-lime mixture
Metallurgy - Production increased due to imports of ores (tin, copper), metallurgy from bronze to tin appeared.
Trade – The trade circuits set up between city-states branch out. Navigation on the north-south axes (Tigris and Euphrates) is provided by a lateral network of diversion canals (towpaths).
Relations were forged between southern Mesopotamia and Syria (Suze).
Sumer was rich in cereal agriculture and organization, but lacked the raw materials and refined products essential to asserting the prestige of its new elites. The **development of long-distance trade** responds to this: Afghanistan (Lapis Lazuli), Anatolia (gold, silver, tin), Iran and the Indus region (carnelian).

- **ART & CULTURE**

Cuneiform writing became faster and more flexible, in several stages and was transformed into abstract signs. The texts are mostly of an economic nature but also appear to be lexical and literary texts. Despite a difficult assessment of time, months and years are carried there.
The **library** of Ebla (Syria) has documents classified and grouped by thematic rooms, there is a **bilingual dictionary** on the Sumerian and Eblaite languages.
Art is expressed in: goldsmithing (gold filigree decorations, cloisonné jewellery), mosaic (on wooden panels) fixed to bitumen, statuary linked to religious practices, and wall decorations made by affixing seals with geometric motifs or stylized scenes.





- **CITY & TERRITORY**

The "**City-State**" includes a city and a hinterland. The terms "Uruk-country" and "Uruk-enclosure" constitute a single territorial entity: the city of Uruk.
An ever-tightening network of cities structured the great Mesopotamian territory (Sumer).
Increase in urban areas (average 100 to 200 ha);
Partition of the city into districts protected by walls within the wall.
The largest cities reach 400 ha and command a satellite set of towns (50 ha) and villages (6 ha).

In the previous built fabric, a set of larger dwellings was inserted, isolated by a perimeter wall (subdivision?). The tutelary figure of the city-state occupies the part of the territory designed for administrations. The buildings that include one floor are organized around interior courtyards.

Before the third millennium, religious establishments were on an oval ground plan (Tell-Asmar), away from the urban fabric. They are made up of a stack of two levels of "courtyard terraces". The lower

courtyard is lined with shops, kitchens, workshops, wells and welcomes gatherings, the upper courtyard gives access to a terrace that carries the sanctuary accessible by a narrow staircase. It was not until the end of the 3rd millennium that typical religious buildings were built that dominated the cities (Tours, or ziggurats).

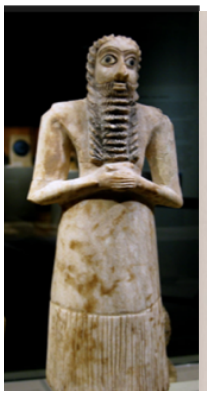
FOCUS

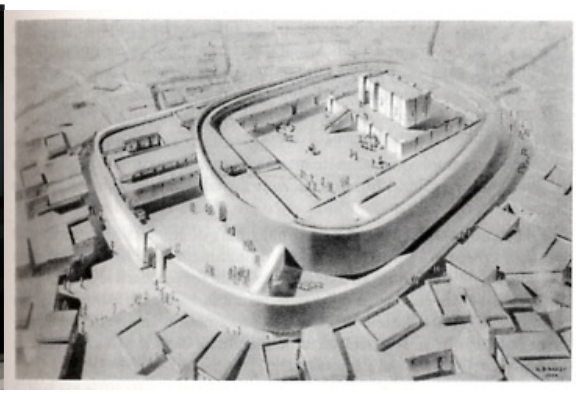


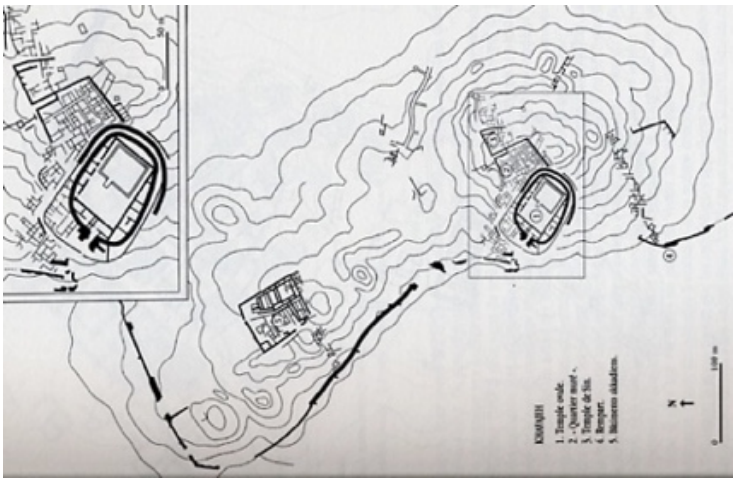
TELL-ASMAR

The plan gives a representation of a residential area of the city at the end of the Sumerian period.
A large east-west street runs through the neighborhood. The houses are grouped into two blocks bounded to the north and south by streets with a curved layout. These main streets are connected to secondary roads and alleys.
Dead ends lead to houses not directly accessible from the main streets. The houses are huddled together, separated by party walls. The plan of each house is dictated by the previous state, the walls of a given state rest directly on the older walls. The size and plan of the plots dictate the plan of the houses that stand on them, whose contours are sometimes irregular.
Some houses have a large room, with two smaller rooms added to the back. In the case of larger, more elaborate houses, rooms are added on each side of the large central room. Rarer are those whose plan marks an extension made up of the addition of a neighbouring house (inheritance, purchase? The construction of earth (mud brick and earth-lime plaster) facilitated these changes.
Most houses cover less than 40m2, while others in small numbers are nearly 140 m2. As a sign of a social hierarchy, the latter gathered in the districts where temples and large public buildings were located.
Over time, a district of large, regular houses gradually gave way to narrower and more spartan houses, one succeeding the other.

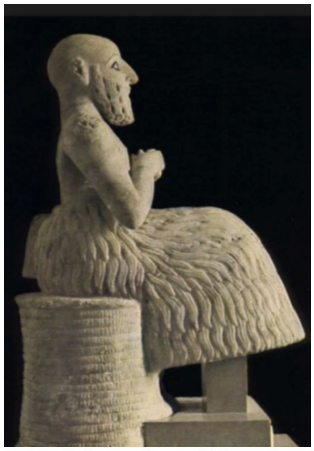
KHAFAJEH

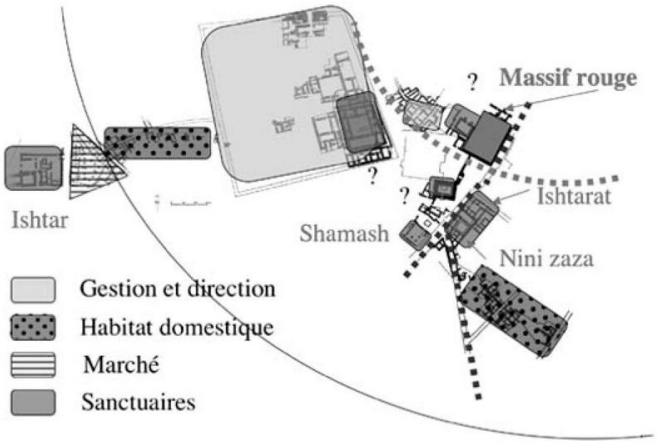




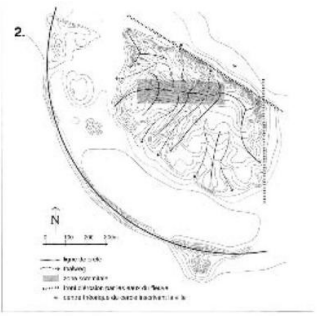


MARI (- 2900 to .....)

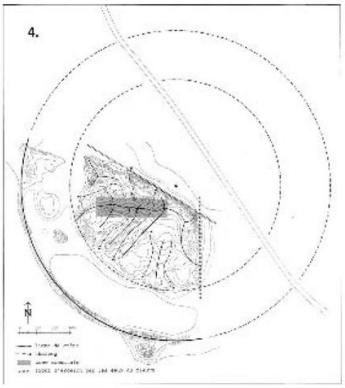


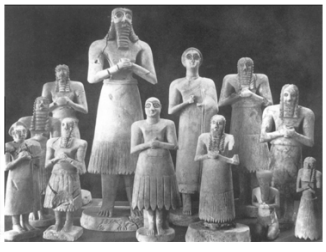

? Massif rouge
Ishtar
Shamash
Ishtarat
Nini zaza
Gestion et direction
Habitat domestique
Marché
Sanctuaires


1.

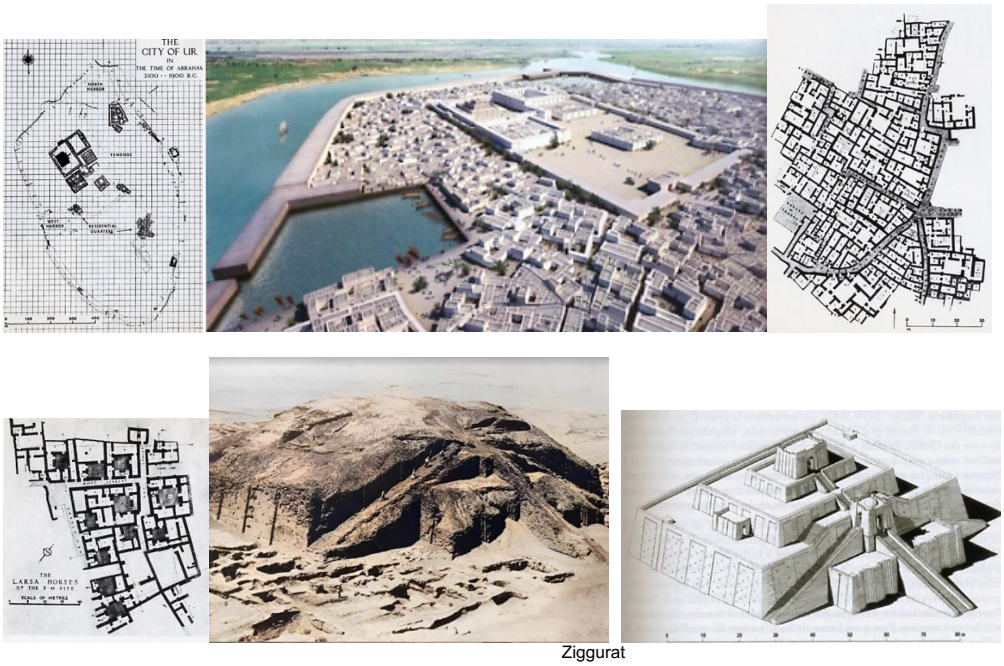

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Ziggurat

Second Millennium - Imperialism (2000 BC to 1000 BC)

This was the period of a great **cultural mix** that extended around Mesopotamia, from Palestine to Iran and from Anatolia to Egypt, to the point that in the artistic field a **composite style appeared.**
The times are: seasonal movements of herds over long distances; commercial movements by donkey caravans and river transport conducted by diversion canals parallel to the Euphrates (hallages); diplomatic contacts and epistolary exchanges in **the Akkadian language between peoples**; pilgrimages and movements of deities.
Hammurabi (1792-1750 BCE) had **a Code** drawn up in the Akkadian language, **which governed Babylonian society in terms of the organization and practice of justice, family law, property rights, social status, and forms of economic activity.**
The "**Iron Age**" began around 1450 in northern Persia.

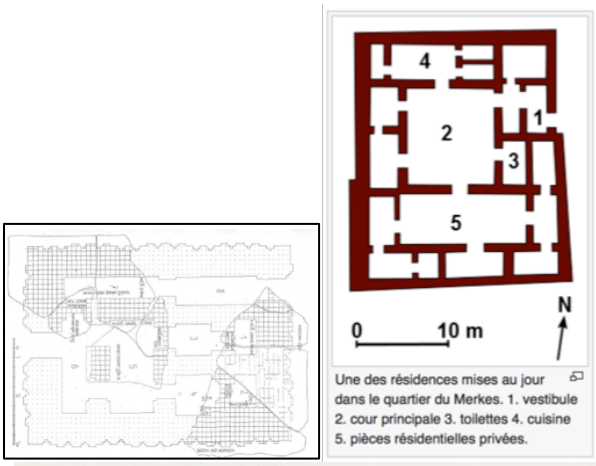
Where the palatial system prevailed in the 3rd Millennium (over almost the entire Middle East), the 2nd Millennium ended in the 12th century, when all the powers in place collapsed under the repeated and armed incursions of nomadic peoples (Arameans), who benefited from the implosion of an inadequate political system centered around the Palace and based on administrations that had become inoperative

.
HARADUM - NIPPUR - ASSUR - EBLA - MARI

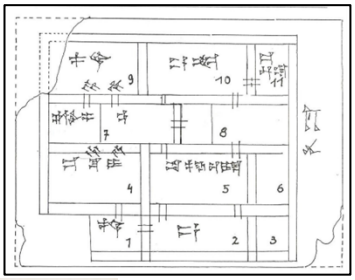
First Millennium - Imperialism (934 BC to 700 BC)

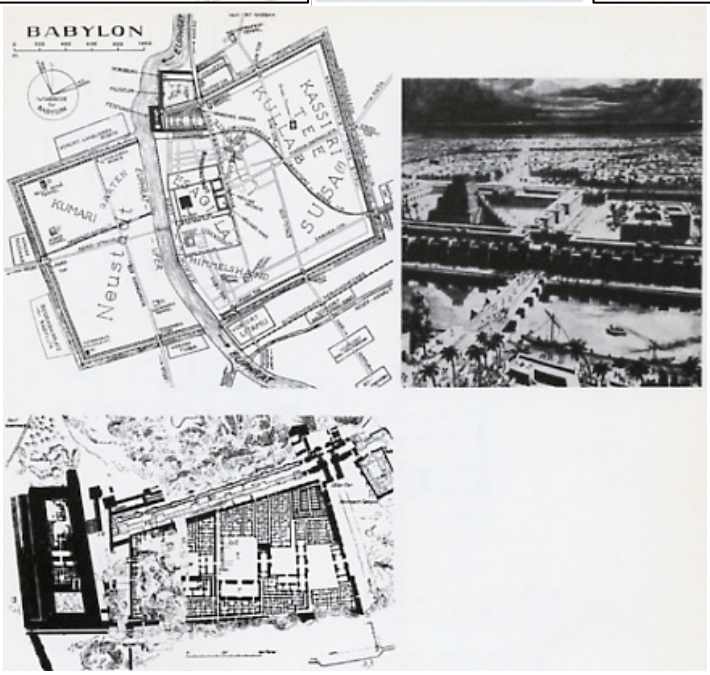
The situation changed with the arrival of the **Assyrian Empire,** which took over the City-Territories and administered them as Provinces, Colonies or Protectorates.
The Assyrian Empire was succeeded in 609 BC by the Babylonian Empire, then the Achaemenid Persian Empire (551 BC / 331 BC).

BABYLON
(-626 -539)



Une des résidences mises au jour dans le quartier du Merkes. 1. vestibule 2. cour principale 3. toilettes 4. cuisine 5. pièces résidentielles privées.







I. 2 In the thickness of time: state of play and knowledge ...

01 – Territorial change and the social effects of productive growth

___ The effect of miscegenation on the development of human groups

Research carried out since 2010 on the human genome and more specifically on "ancient DNA" reconstructed from bone samples taken from various sites in the Middle East, sheds light on the reason for the rapid disappearance of Neanderthals in the territory, around 40,000 BCE.
The restored DNA of the Neanderthals, a population that appeared in the territory around 400,000 BC, made up of small communities of about a hundred men and women, reveals that the strict practice of endogamy kept them away from interbreeding.
The DNA of the "Modern Man" group, hunter-gatherers and newcomers, reveals the presence of fragments of Neanderthal DNA and attests to their exogamous practices on the territory (kidnapping, capture, etc.).
On the basis of this work, we can now explain the phenomenon by which the growth of the second group and the extinction of the first to strictly maintained inbreeding took place in the same period and in the same territorial framework.

In the following periods, the settlements of peoples belonging to this new human group multiplied on this vast territory, and at the same time a network of links with a growing network developed.

A hypothesis is being formulated today that attributes, compared to other civilizations, the unusual speed of the deployment of ties between foreign peoples to their common practice of exogamy and its associated effects.
To this continuously maintained movement, based on the exchange of resources, social ties, technical knowledge; the 3rd Millennium brings "the written language", which opens the field to mutual understanding between strangers, and makes it possible to bear a trace of the common time that passes and dies...

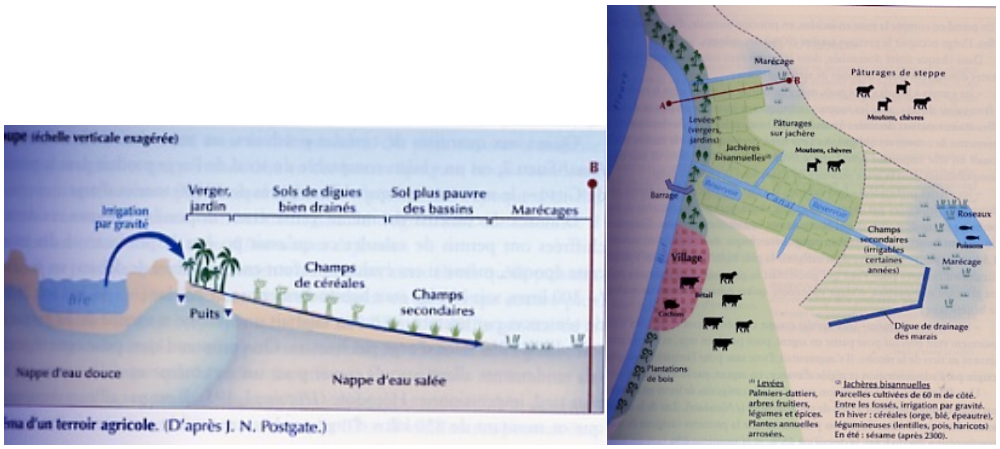
Traces of the benefits of a certain ethnic mix can be seen as far as the violent Assyrian, Babylonian, Medes, and finally Persian Empires, when a rule was established in 550 BC that required the imperial line to take as a wife a Medes (a people foreign to the territory of the 5 Seas) and thus obtain a mixed lineage. … This in spite of everything: will not extinguish the desire for wars and massacres for the rest of time.

Agricultural activity and irrigation

"Mesopotamia", the "Land between two rivers", is bordered by: the wooded Taurus and Zagros Mountains to the north and east; by the Arab-Syrian desert to the southwest; the Shatt-El-Arab marshes in the south; and the Levant steppe to the west.

Mesopotamia at its peak - 3rd millennium - was a great cereal land; The climate of the region is dry subtropical: rainfall occurs almost exclusively in winter. For the most part, the cultivated fields along the two great rivers and their tributaries are planted with cereals.
First and foremost among them: Barley, for its adaptation to the relatively dry, saline soils and hot weather of the region. It is the staple food of the population; it also served as a standard for commercial exchanges before the introduction of silver money. Emmer wheat is grown there, but in smaller quantities, as is spelt. It was in the first millennium that rice was introduced into the deltas, but it remained not very widespread.

In Mesopotamia, over the course of the different millennia, rivers frequently changed their course, shaping their valleys into alluvial plains (the City of UR lost the Euphrates during its growth). The large alluvial load carried by the rivers then places their beds in elevation of the older soils. It will lead the population to invent artificial irrigation techniques during hot periods and to extend the cultivated areas



d'un terroir agricole. (D'après J. N. Postgate.)

"*...At one time, the upstream parts of the Tigris and Euphrates watersheds experienced significant deforestation and overgrazing, which caused strong erosion. The slope of the rivers decreasing downstream gives rise to important deposits of sand and*
Silt. Deposits over centuries and millennia raised the level of the beds and banks in relation to the lateral terrain of the valleys.
Based on the observation of the phenomenon, indigenous peoples imagined the interest of gravity-fed irrigation, bringing the water resource to the land below the beds, which allowed a profitable second one.
"This water supply will raise the level of the salt-laden water table, and through the phenomenon of evapotranspiration increase the salt levels in the surface soils over time.
As the rainfall regime remains insufficient to leach the reclaimed soils, gradually the problems of

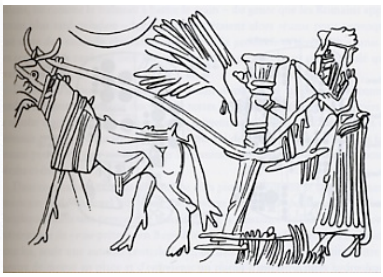
salinity and sodicity (sediments) will degrade the structure of the land over time and reduce yields. As a result, the populations will gradually abandon the land downstream and migrate to the upstream parts of the watersheds... ".

Article "Land degradation in the world"
http://unt.unice.fr/uoh/degsol/irrigation-sodicite.php

The refusal to grasp the fragile relationship between the soil state, its vegetation cover and the formation of seasonal microclimates, in order to favour yield to the degradation of the resource, will contribute to the progressive desertification of the vast alluvial basin fed by the Tigris and Euphrates rivers
The phenomenon will be repeated in other times on all continents driven by monopolization ideologies, which consist in making people believe that the biosphere was given to Man by the gods to continue his activity on Earth. A cycle of "repetition" that takes us to the contemporary era, that of the ultra-consumption of addicted masses, blinded to the manifestations of a committed planetary disruption: falsely called "climate transition!

According to a study by E. Eckholm, the harvest went from an average of 1.7 kg of grain per hectare at the end of the Archaic Dynasties (XXIVth century) to 900 kg under the Third Dynasty of your (XXIInd century) and then to 600 kg at the beginning of the first millennium.
The intensive irrigation of the soil combined with the destruction of grassy or forest biotopes, are the causes of excessive development followed by the collapse of many civilizations over the centuries that followed.





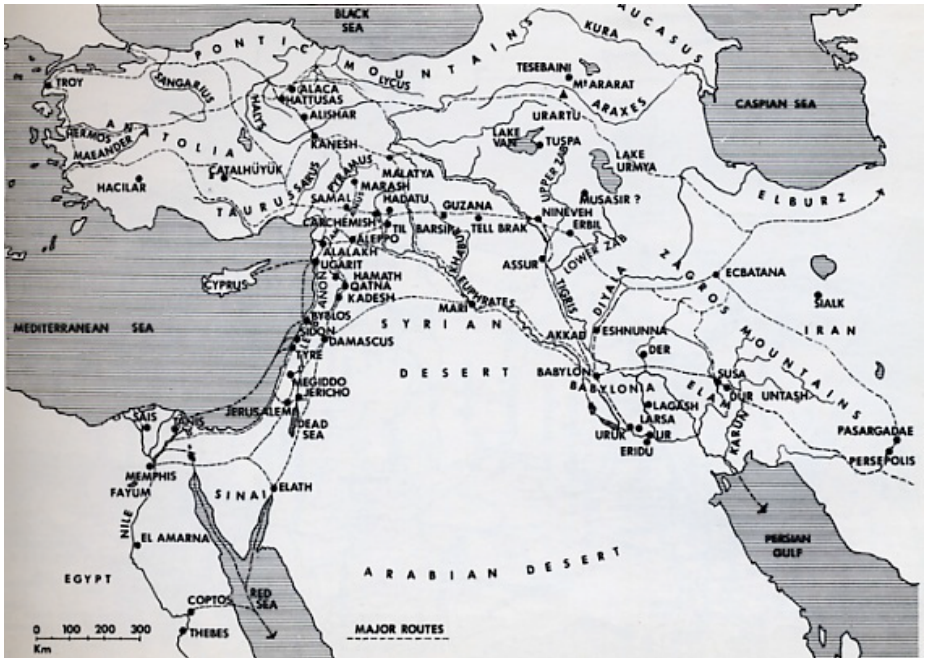

"*... In agriculture, the increase of production and the higher yield of labor are bought at the price of the destruction and drying up of labor power. Moreover, every advance in capitalist agriculture is a progress not only in the art of exploiting the laborer, but also in the art of stripping the soil, and every progress in the art of increasing fertility for a time, a progress in the ruin of its lasting sources of fertility* . »

- Book 1 "Capital" K Marx -

_____ Mobility, Trade and Trade Networks _____

The acceleration of the process of evolution of the latter is mainly due to two factors:
Human groups with distinct cultures, in a position to correspond and exchange material goods, techniques, raw materials.
Geographical and physical specificities that offer diversified and dispersed resources, and the presence in a central position (Mesopotamia) of the two powerful rivers: the Tigris and the Euphrates, providers of water and sediments conducive to the birth and development of agriculture.





At the end of the **5th millennium** , the construction of various and multiple civil engineering works attests to the acquisition of a mastery of hydraulic techniques, such as: the beginning of the digging of navigation canals, in the diversion of the Euphrates and the construction of water intakes on the great rivers to supply the irrigation networks.
In this way, a North-South traffic in goods and raw materials is born, a new engine of social and economic development.

From the **3rd millennium** onwards, natural waterways were developed into river transport routes and combined with the general network. The caravan tracks and the sea lanes (Persian Gulf) constitute a vast network of "international" exchanges at the economic, technical and cultural levels.
The extension of networks is reflected in the intensity and variety of materials transported (abiotic resources, agricultural and livestock products, handicrafts and tools) and the notion of transport changes role and meaning to become a tool of commercial trade.
The shift in meaning is linked to the crossing of a new stage in the transformation of the social structure of societies, which now have distinct categories of actors: agricultural workers, transporters, craftsmen, soldiers, civil servants, etc.
The urban-rural divide is underway.
The wealth derived from the trade is manifested by a movement of spin-offs of the model.
At the beginning, driven by the large cities of southern Mesopotamia (Uruk, etc.), productive growth encouraged the creation of New Cities, at the crossroads of caravan trails and on the edge of the navigable artery - the Euphrates -; then the expansion spread to the confines of Anatolia and the Free Cities around the Mediterranean.
These are Major Civil Engineering Works, which use sophisticated and mastered techniques. The town of "Mari", one of the elements of the system, is associated with a 120-kilometre-long diversion canal to allow navigation by towing barges, freeing it from the Euphrates, in the opposite course, to maintain a continuous flow of commercial and craft activity.

From the 2nd millennium BC, **the civilization of the Ancient Middle East inaugurated** a territorial policy that accentuated the ecological footprint of cities throughout the territory.

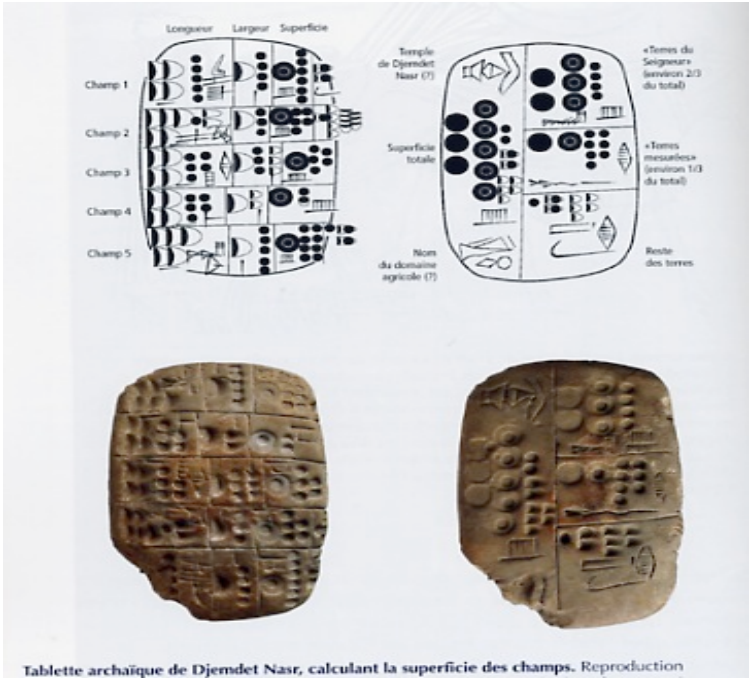
Thus, in the first millennium BC, the Babylonian Megalopolis monopolized a territory of more than 120,000 km2 in order to survive, not counting the forest land of the Sagros and Taurus massifs that it exploited.
The change in the economic paradigm was embodied in the following eras by the Assyrian Empire: a new state without a productive base or social or cultural heritage, constituted in the movement of lucrative long-distance trade and whose accumulated financial power came from the trading of its trading posts. Its etymology designates a port on the banks of a river or canal and brick walls, raised on the edge of a defensive ditch...
The contemporary model under drip, unrelated to the laying ground.

From Accounting -3200 to Entry -3000 ...

In this vast territory, with its varied and dispersed natural and fossil resources, writing is born from the exchange maintained over several millennia by neighboring peoples who are obliged to exchange and converse in order to mutually improve their living conditions in an unexplained world.

The accumulation of an important cultural, technical, social and symbolic baggage led during the Halaf period (6th Mill) to the design of a system of marking and counting on clay stamps the materials produced and exchanged by the communities
Astonishing observations: the birth of writing is not the result of intellectual research commissioned by an established city. It was born out of a period of effervescence when communities, seized by a desire to find a form of census, of evaluation of their work, were looking for a modus operandi that would allow them to: quantify production and its distribution; to account for transfers of resources between cooperation territories in units of exchange, etc. Looking for a code understood by all spoken languages.

It was the technique of the "soft paste" of clay, engraved and dried, already widespread throughout the Mesopotamian Basin and its peripheries, which inspired the idea of marking the products stored, or exchanged, accompanied by a seal indicating by drawn signs (**Pictograms**), the nature and quantity of the contents.
An intellectual revolution that very quickly made it possible not to inscribe a few pictorial signs, but to use a graphic code of images or concepts (**ideograms**), which was itself replaced by a **syllabic alphabet** and a grammar.
This last stage then focuses on transcribing the phonetics of the language, and more broadly allows for the establishment of correspondences with other regional languages.
This momentum continued until the Akkadian language became a common vehicle language for inter-peoples' exchanges.



Tablette archaïque de Djemdet Nasr, calculant la superficie des champs. Reproduction

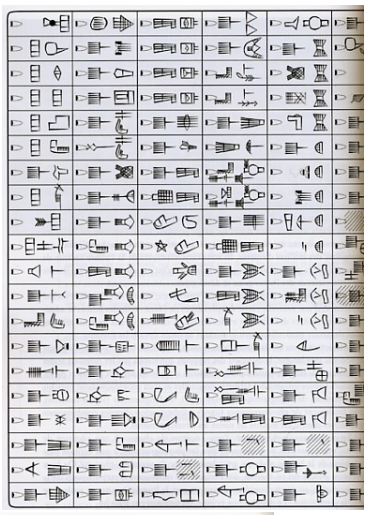
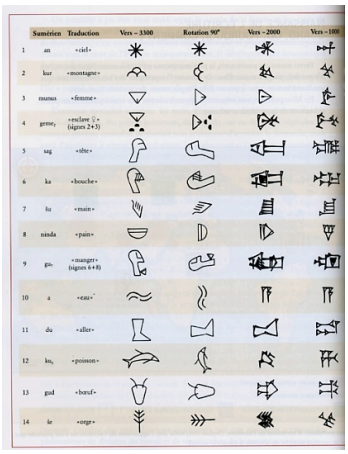
Writing

Writing, a consequence and culmination of the "urban revolution"?
Writing, a tool for the transformation of knowledge and the mutation of society?
Writing as a tool of domination?

The City does not create Scripture, it is the commercial exchange that sees its usefulness. The evolution of the cuneiform writing system took place in several stages: first by pictograms (**signs-images**), then enriched by association of logograms (**signs-words**), then by ideograms (**signs-notions**) and finally by phonograms (**signs-syllables**), according to different graphic combinations.

3300 BC - Signs are **logograms**, words conveying a sound of the Sumerian language, associated with a meaning representing objects or actions in the form of pictograms. For each word a sign is created.
The evolution towards phoneticism made it possible to simplify and perfect the system: Signs were retained only for their sounds, and the "rebus" type notation made it possible to transcribe the spoken language and its content ("cat" and "pot" designating a hat).
A sufficient stock of **phonemes** has made it possible to note the various articulations of the Sumerian language and to transcribe words or phrases from the languages carried by the different peoples of the "Land of the 5 Seas".
At this stage, the Scribes will equip their libraries with bilingual dictionaries made of clay.
During the 1400s BC in Ugarit, a cuneiform alphabet made it possible to reduce the number of signs needed to write a text to 30.

At the time of the "Archaic Dynasties" ... cuneiform writing became a real instrument for the exercise of power.
It was from 2600 BC that written sources diversified, previously massively attached to building **dictionaries of words: "lists".**
The texts of Mesopotamian history appear with identifiable historical figures. Some are designed for propaganda purposes to increase legitimacy, others are more literary, recounting epics such as that of "**Gilgamesh**", or reporting legends evoking mythical countries. Humanity then began to describe its life, its history, and propagated it.



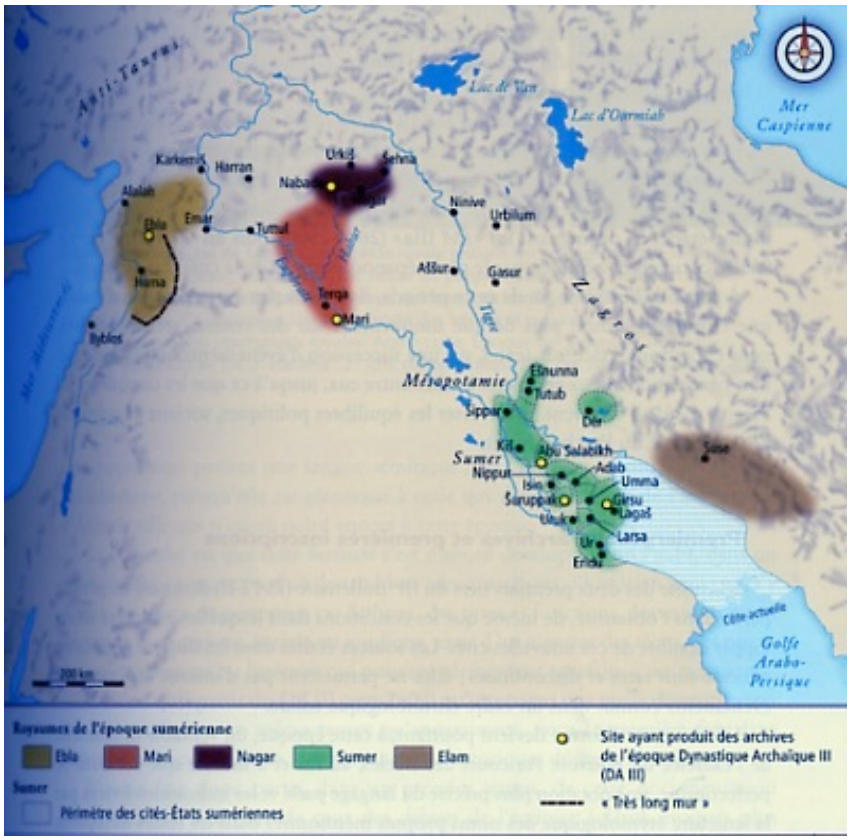
_____ Foundation of the _____ city
And the transformation of the territory

For seven millennia within this melting pot, the Akkadian, Sumerians, Hittites, Elamites, Assyrians, Babylonians, Hurrites, Persians... with multiple origins and cultures, correspond, exchange, create, associate in an uninterrupted way.

This very particular context of **fluidity of exchanges**, within the "Territory of the 5 Seas", between Communities makes it possible to continuously develop new techniques and tools while **combining their activities with the natural contexts experienced**, until achieving food security and practising forms of inter-site exchange (caravans, waterways), in **reciprocal advantages**.

From a certain stage of development of the bio-territory, the fabrics of grouping emerge, and **the frugal conception of the relationship between Man - Territory - Nature** that guided the practices of breeding, agriculture, social relations and organization of space fades, to give way to a productivist and competitive conception that extinguishes the dynamics of life in the Community.
The change that took place in the territory resulted in the transfer of the collective domain of production to the emerging royal and religious powers (the birth certificate of private property), under the guise of obtaining existential well-being by strengthening the power of the community within the "great territory"?

The concept of **the border** gradually appeared in the territory, which was only composed of agricultural sites attached to the different forms of water resources, and of unaffected, abandoned open spaces, occasionally traversed by nomadic herders.
The process that dispossesses the group of direct producers of the mastery of technical knowledge and forms of production and management, inaugurates a form of economy based on the increase of yields, the accumulation of goods and wealth, for the benefit of ruling groups, and the rise of tensions between co-tenants of the "Five Seas".



From natural evidence to societal evidence
Urban Planning and Architecture

Territory, Villages and Towns

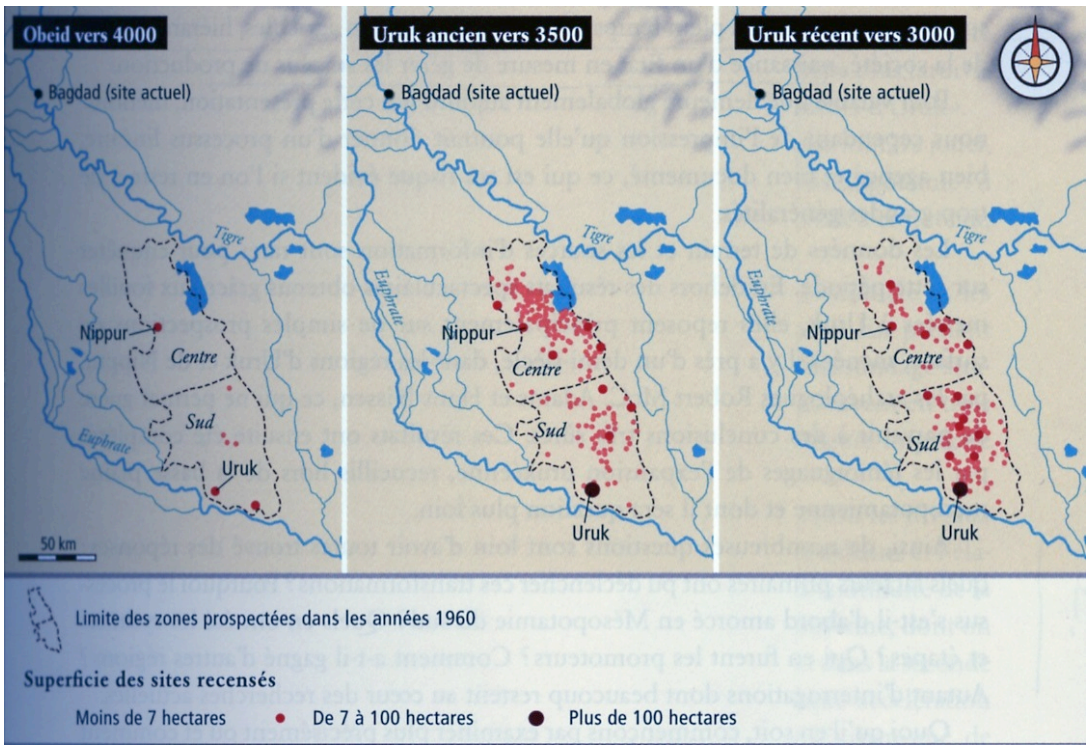
From the moment that the stored surpluses became part of a circuit of exchange, gradually during the **5th Millennium**, the agglomerations left the steppe or the alluvial plain for the hills and other natural elevations.

During these repositionings, urban plans become more complicated. The first signs of family reunification around a patriarch were the construction of large dwellings with entrance halls. Village localities develop in a spider's web, in circular or elliptical mode, when the agglomeration is reformed around a temple. Similarly, the road network attests in its conception to the social, cultural and religious changes that have taken place within the life group.
The beginning of the **fourth millennium** was the beginning of a "regulatory urbanism", which expressed the constant evolution of the relations between the local power and the working components of society, by conceding a right of ownership to the Palace and the Temple on the territory previously the domain of the "Common-Sharing"

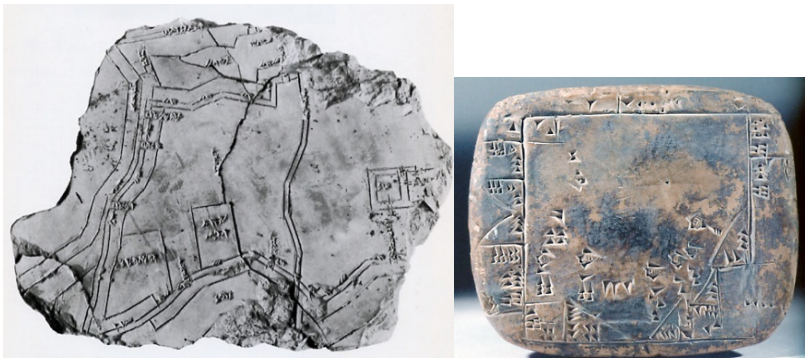
In Mesopotamia, cities appeared gradually from the **second half of the 4th Mill and over the 3rd millennium**. Their surface area varies from 100 to 200 ha. Most of them were small "Principalities" (autonomous or in groups), surrounded by their villages and agricultural estates and organized around a center, most often the seat of a previous settlement.

The Dynaste, or the representative of the Fellowship, shares their power with a God who protects the City, to whom a Temple is assigned. Is not the exercise of power over humans easier for impostors when they claim an order collected from God or his assessors?

Between **3500 and 3000 BC**, the most important of the excavated cities was **Uruk**.
Executive power at the time was still a semi-collegial exercise. Uruk has two assemblies, that of the elders and that of the young men. The city is mainly home to people who live off resources other than the land. It is an artificial place where a concentration of inhabitants is active, exchanging goods and ideas, and producing something other than foodstuffs. The population was mainly composed of craftsmen, merchants, scribes, employees of the Palace, priests, and soldiers.



Architecture is the privileged witness of the emergence of a power that organizes and interprets the "beyond".
Some of these small and nascent states were quick to develop expansionist aims, a behaviour largely generated by the stagnation of their agricultural resources; This is due to the overexploitation of soils, which increases their salinity and lowers yields.



_____ The architectural and technical design of the built environment_____
The Steps

Between the **12th and 10th millennia** the sedentarization phase began. The built environment can be dismantled because of itinerancy, and is expressed in the camps in the form of structures with a circular base.
These times were followed by an **orthogonal construction** system that led to a movement towards closer family units to later give rise to the village agglomeration (food self-sufficiency / population growth).

After a period of technical innovations, which aimed to stabilize the walls and strengthen the connections to the floors, floors and roofs during the **seventh millennium,** the construction until the **third millennium** acquired a verticality, and orthogonality, which allowed both the aggregation of the fabrics of the nascent cities and the introduction of distribution routes and intramural connections, promoting the development of productive activity.



The "**tripartite" plan**
It is composed of a rectangular room 3 to 4 m wide, flanked by two aisles composed of cubicles, the partitioned lateral spaces are responsible for supporting the first floor.
The ground floor, the level of uses, is intended for storage and the first, equipped with zenithal lighting, is intended for family life.
In the **4th millennium** the ornamented "Tripartite" formula was transposed into public buildings, the residences of city councillors, and temples, until the **2nd millennium**. During this period**, the central power gave birth to the "Prestige" Architecture, in the centre of the City and if possible on an elevation, and protected its exercise of power and its property by building ramparts on the outskirts of the agglomeration.**

In the same way, the Temple "house of God" has three parts: the vestibule, where the contact between the sacred area and the profane space is made; the holy place, for the daily service of the god, with the seat of the god (throne, statue or symbol) on the podium; It also has one floor. The temples in the city are scattered in the neighborhoods or gathered in a sacred neighborhood in the heart of the city.
Around **2000 BC**, the main cities of Mesopotamia were equipped with a ziggurat that can be considered as a distant avatar of the ancient terrace-sanctuaries, where in earlier times the Necropolises had been established: places where bodies were deposited for a return in clay dust, according to the belief of the time.



FOCUS

_____ARAD_____

It is a form of passage from the village stage to the stage of a small fortified city is provided by the stratum dated to 3100 BC in **ARAD.**
The site has an area of about 10 ha. Placed on a slope, it is protected by a wall punctuated by towers and has two gates (East and West).
The whole space is not completely built-up.
The network of streets is not regular but partly responds to a radial organization that converges towards the open-air reservoir (rainwater collection on the lowest and most recent part of the site), concentric circulations follow the contour lines.

The house (standard model) is characterized by a central room and several annexes around an open space, sometimes a courtyard with an enclosing wall; it is a habitat
Of rural affinity. The buildings seem to have freely occupied a space that has never been measured, respecting the natural circulations imposed by the topography and the vital necessity of rainwater collection.
The habitat is undeniably hierarchical, there are large differences in surface area (from one to four) and a marked abundance of wealth (furniture and metal objects). Foundry waste attests to the existence of workshops.
The area adjacent to the reservoir is the seat of the most important public buildings as well as the temple and residence of the Potentate and its services.
The site is developing a commercial activity attested by raw materials that are absent in its region...

Water supplies
It is carried out: by canals or rivers for cities near the Tigris and Euphrates, or by single or quadruple wells (**Ugarit),** by tunnels tapping into the water table (**Habuba Kabira**), or by reservoirs included within the city (**Arrad**).



Neighborhoods
The well-to-do houses (130 to 140 m2), those of the local elite, tend to be grouped near large public buildings (temple and residence of the potentate) while poor families (housing: approx. 40 m2) live away from these sites.
Over time, the modes of occupation vary. The large houses give way to poorer and narrower dwellings; or some houses (the construction of earth is the basis of the fabrics) annex the neighbors. Later, residential areas were surrounded by a wall within the wall.
In the same way, the overall fabric often remained labyrinthine until the appearance of the regulated model of Sumerian "ZAC".
The commercial activity takes place outside the city near the gates.

_____ Case Study: MARI Foundation of a New City _____

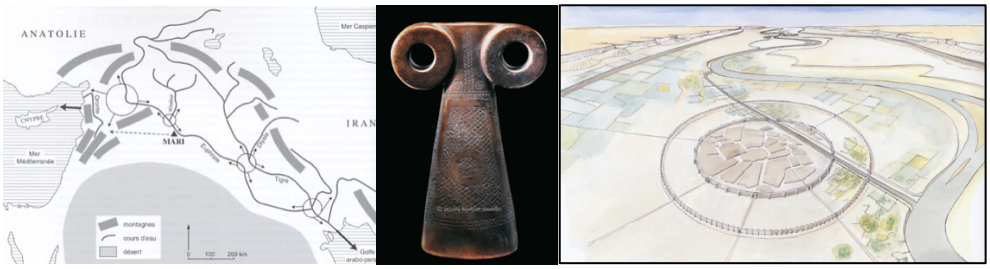
Texts and documents taken from the book "Mari, metropolis of the Euphrates"

The City of **Mari** is an artificial creation that was established on the Euphrates valley where pre-existing villages of cultivation (legumes) also benefited from the presence of a trade route, between Syria-Anatolia in the north and Mesopotamia in the south. A political power existed before the foundation of Mari.

The territory is both a commercial lock and a confluence of the Euphrates with the Khabur River.
The "Artificial City" was established there in 2970 BC on the basis of an unoccupied Tell set back from the course of the river.

- It adopts a **circular plan** (embankment over a radius of 950 m) to protect itself from the powerful currents carried by the river in flood to the melting of the snow and completes this continuous dike with a second **defensive enclosure** of stone and brick;
- When it was created to produce weapons and tools in central Mesopotamia, it devoted most of its activity to the processing of ores (copper and tin from the North), thanks to the wood resources of the Zagros Mountains (Anatolia);
- To direct river trade over the central part of Mesopotamia, it created a **diversion canal** on the Euphrates that crossed the city and an **intramural port** (halt and trading platform);
- It is placed alongside the caravan axis ensuring the control of North-South land exchanges, and institutes the **right of passage** on the country's lands, in both directions of traffic;
- The impossibility of drawing drinking water (saltwater from the salt water table) on site led to the adoption of a regulation plan capable of allowing the storage of **captured rainwater on** reservoirs, by means of a network of watertight roads that gravitationally conveyed the resource to the storage facilities at the foot of the Tell;
- It benefits nearby, on two **fertile terraces**, from wheat and legume fields that provide most of the city's food needs.

The city experienced one birth and two rebirths between 2970 BC and 1740 BC

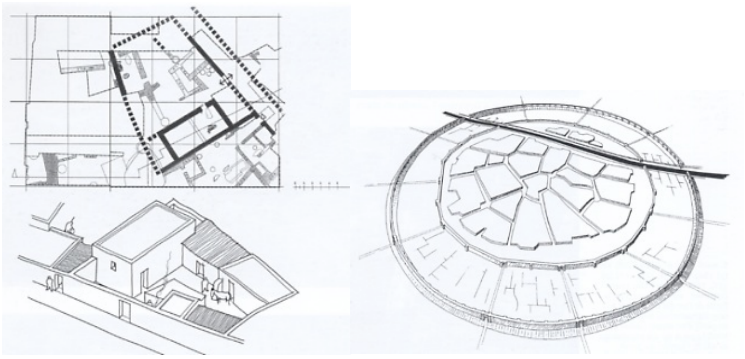


Mari - city 01 (2970 BC to 2690 BC)

The city is home to craft facilities including metallurgy workshops, ceramicists' workshops and dyeing activities on asphalt basins
The buildings are made of mud bricks and have only one level, they appear on the whole relatively modest, the floors are covered with plaster.
The houses are not oriented in a regular way

The tomb furniture, often of great value (also built of mud bricks), reveals a real **wealth of the districts devoted to crafts**.
The presence of wheel prints and donkey skeletons attests to the development of land transport in competition with river transport at this time.
An **800 m2 building** with gypsum limestone foundations and brick walls with one floor, with rooms of 13m x 5.50m and 4.50x 5.50m is supposed to fulfil an administrative function of the palatial type. It is indicative of a high degree of technicality.
No temple appears on the site but there are many cult shells.

".... One might think that what provoked this foundation was a territorial organization that forced us to go beyond a local approach to move to a **regional vision**, this period was not that of a fledgling civilization. The principles implemented for the choice of the site, for the **definition of the city in space** and for the realization of its location express a real **mastery of the urban phenomenon** ... »
"Contrary to the ideas expressed in the past and sometimes still in progress, this period at the beginning of the 3rd millennium acknowledges the fact that writing was born neither with the period of appearance of the urban form (it disseminated its concepts), nor during the development of inter-regional exchanges (it recorded them).
The disappearance or disappearance of Mari around 2690 is attributed to a collapse of trade relations throughout the basin. - JC. Margheron -



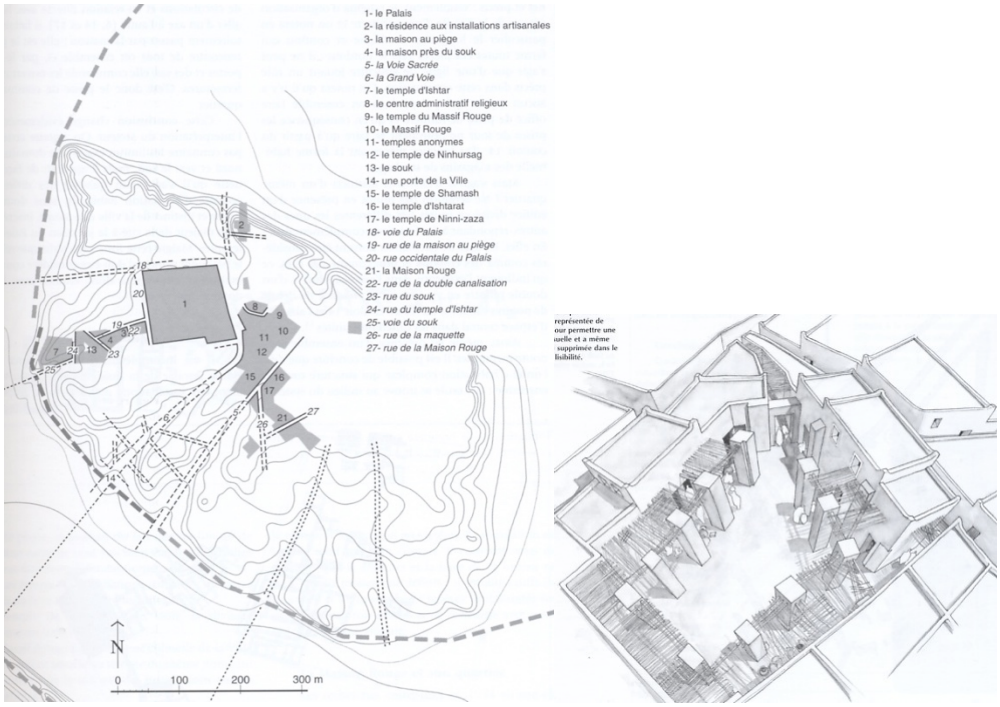
_____ Mari - city 02 (2540 to 2290 BC) Birth of a new _____ city

After conquest and partial destruction by a rival power of the Mesopotamian South.
The refoundation is based on populations of the same origin as those of the previous City (with **multi-ethnic Asian-, Melano-African, European origins). These traits concern the entire Middle Eastern population.**
The thesis adopted is that of a sudden revival of the region around its capital and a systematic redevelopment of the urban organization according to a plan dictated by a new voluntarist power determined to take advantage of a dominant position.

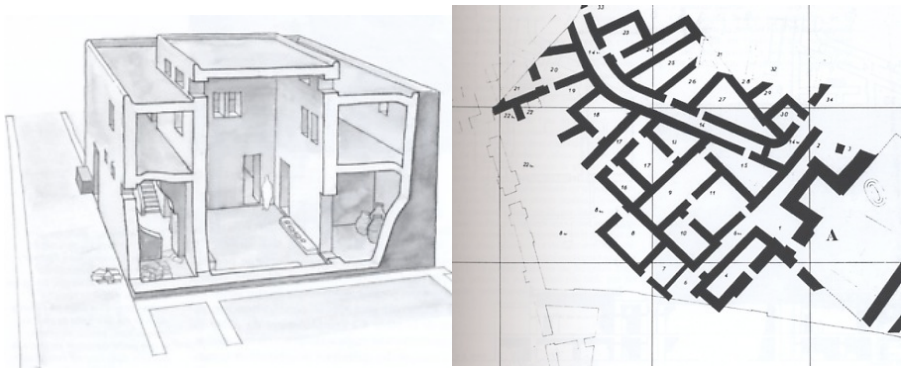
The reoccupation respects the circular shape, reactivates the canal and the connection to the river.
The main **monuments are located on terraces made after embankment,** or levelling, of the previous built substrates. At the top of the Tell, surrounded by a polygonal enclosure, is placed the decision-making centre: a **palace with a sacred enclosure** with a sanctuary. The religious sector is located in the same sector but outside the palatial perimeter.

- The road network -
The entire road network is similar to the structure of a spider's web composed of streets that give shape to the parcel of houses and structuring roads, it is a prerequisite for **subdivision operations**.
The routes of the main radiating arteries of the City 01, responsible for evacuating rainwater to the foot of the tell, were preserved, but the oblique streets that connected them were rebuilt using the technique of **the absorbent pavement** filled with pebbles (to **delay the flows**). A third device, consisting of buried stone and ceramic pipes, was intended to **collect the roof water from the main buildings separately and conduct it into underground tanks** between the two fortifications.
The architecture of the neighborhoods is made of earth, hence the sophisticated hydrology attached to the road system to protect them from storm rains.
Wastewater is discharged into the houses on private sumps. The "**toilet areas**" are made up of asphalt floors and connected by pipes to the sump.

- The neighbourhoods -
There are souks with courtyards, shops, storerooms and galleries, closed by doors.
On either side of the supply and link canal crossing the city, there are districts linked to port activities on each bank.
The palace adjoins the south bank in order to facilitate its water supply and allow it to ensure direct control over transactions and tax payments.

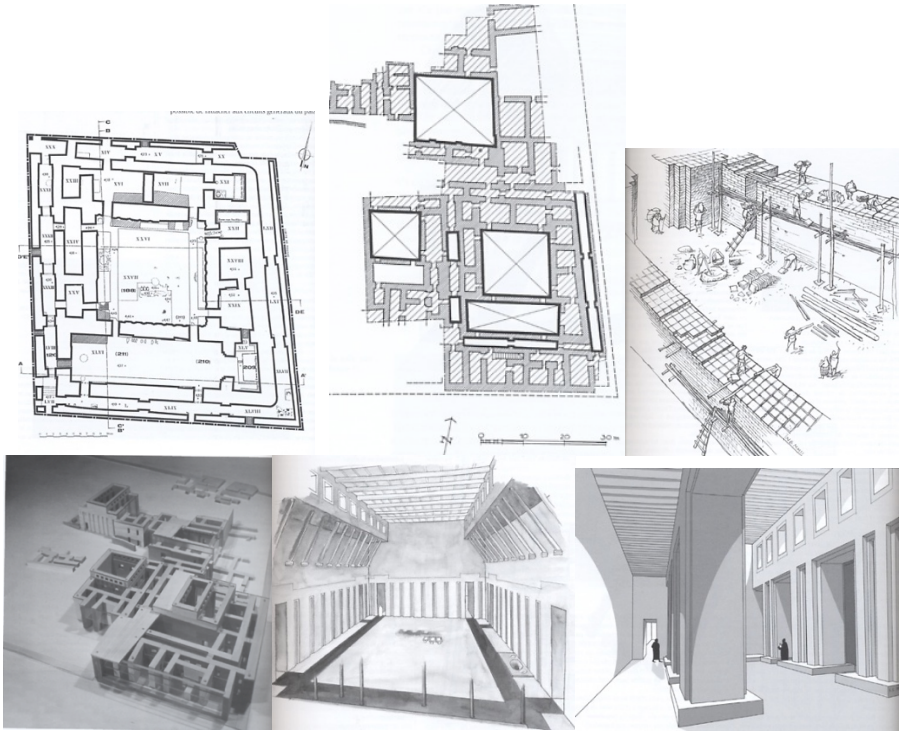


- The dwelling house -
The classic plan of the house is based on a central space which distributes in a crown of 5 to 10 rooms of various functions (120 to 170m2 of surface area). Between the covered courtyard and the street is a vestibule intended for domestic activities. The vestibule is linked to the central room and to a shower room connected to a sump, it also leads to the first floor by a staircase. Earth benches are placed in the different rooms of the house as well as niches within the walls.



- The Palatial establishment -
The palace of Mari is characteristic of its time; It implements an architecture that makes it possible to combine within a single structural concept, rising on two levels, central spaces with administrative, meeting or celebration functions (on the ground floor) and private apartments overlooking it. This modular base (16m) fully covered integrates air and light intakes by roof interplay (zenital) and side corridors.

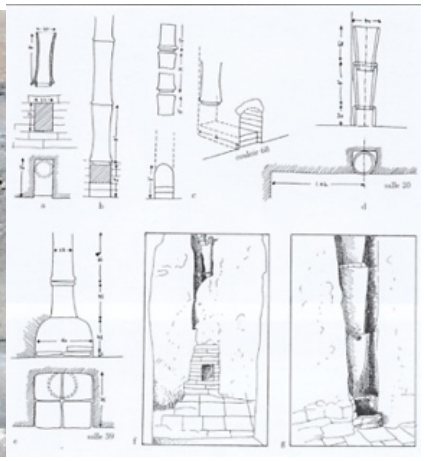
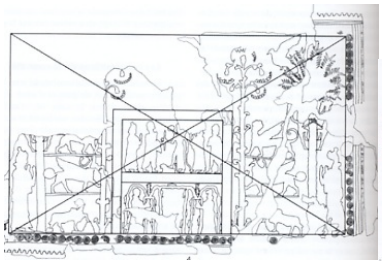
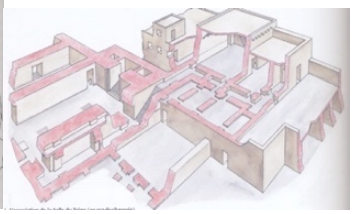
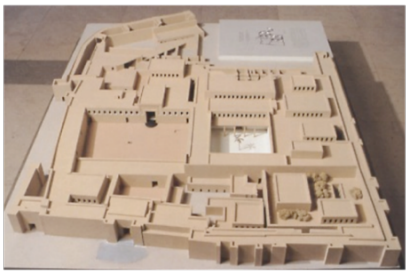
Functionally, this "maze" brings together the places of the profane and those of the sacred in distinct portions and levels. The god of the city and his king cohabit.



_____ Mari - city 03 (2200 to 1740 BC) the reconstruction of the city _____

The shifting of the centers of balance took place in Babylonia with the construction of an empire following a period of reconquests of the Mesopotamian South over the Assyrian North for unification. The city of Mari went through a century of uncertainty before being subdued.
Temples, important residences and the Palace were burned down by the emerging empire (Shakkanakku) which took over the governance of the city and its "lock" territory.

After a transitional phase, the new dynasty proceeded to modify the Palace, the temple sector was **rebuilt after levelling the old works;** and before the 3rd dynasty of your, one of the most refined palaces in the Near East was built.
The reconstruction and development that followed were based on an administration, with competent personnel, and on the economic development of the networks it administered.
The **prefect of the palace, governor of the city**, was responsible for the various services under the control of the king, he was also responsible for the administration of the city and the district.
The road network remains that of the city 02. **The city is divided into districts where the inhabitants are listed on lists, each one is under the authority of a leader, the districts seem to be linked to the gates of the wall "... may be assigned to different skilled trades."**

Technical Innovation

The Ancient Middle East accumulated, like no other at the same time, technical innovations.
- agriculture with **the plough** ;
- the idea of firing clay and then ceramics **with the potter** 's wheel;
- **transport with wheel and sail** ;
- construction with **brick, bitumen, lime, plaster** ;
- metallurgy with **copper, bronze, the beginnings of iron**;
- Tools and materials for **transcribing language and data quantification** ;
- The invention of **glass**

… A field of inventions made possible by the convergence of several factors:
- A **dispersion of natural resources** over the living area;
- A **topography favourable to travel** due to the central position occupied by a plain (vast valley), a natural crossroads for travel and a privileged place to settle human settlements;
- Numerous **raw materials** : clay, wood from mountain ranges, limestone, gypsum, copper (metallurgy around the 9th millennium), iron (metallurgy around 1300 BC), manganese, clay, bitumen; and other products from livestock farming (furs, leathers, etc.) or agriculture (flax, straw, etc.).

An example of the density of innovations developed over this period: **Clay**.
The Mesopotamian civilization is a civilization of the earth, a raw material that can be used at little cost *"... The gods themselves borrowed it when they fashioned Man out of dust, as men did in the Paleolithic by making figurines... ».*
The first terracotta pottery dates from the beginning of the 6th millennium, the potter's wheel to the 4th, and earthenware to the 3rd.
The other use of clay in the Mesopotamian basin was aimed at construction, first of all the construction of vernacular buildings, and then prestigious architecture with more complex technicalities.



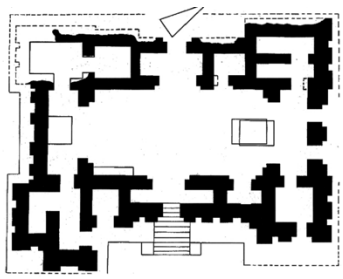
Clay - A Land to Build

Its use was born with the period of temporary sedentarization of populations in the **11th millennium.** It is then used **as a binder and plaster** associated with reed or branch slats covering the first circular habitats.
The first walls in the "lowlands" were made of **hand-modelled rammed earth** before being raised in **dried mud bricks** and grouted with clay.
It was **in the 9th millennium that the orthogonal construction was developed, using the right triangle at 3-4-5 cubits**, and by creating the corners between peripheral walls by a connection assembly in dried flat brick and shaped by hand.
A stabilization of the structure that makes it possible to build a flat roof on beams, and to obtain a densification of the buildings that can achieve an ideal of compactness (Çhatal Hüyük) with beneficial effects: defensive reinforcement of the village and regulation of climatic effects by limiting the areas of exchange.
The exterior plasters are made with lime, and the interior is with lime or plaster.
In the **6th and 7th millennium,** the technique was perfected thanks to the pressing and molding of the **brick component into a template**
From the **4th millennium** onwards, the **fired brick** appeared in the standard format 3x10x20 (the ancestor of the 5.5x11x22). At first, it was used to make tanks; The installation is carried out by **grouting the bricks with bitumen** and completed by a waterproof coating on the internal walls, also in bitumen. As their production increases, they are installed in **the basement of buildings and then in wall and floor coverings.**
A technique of **plaster cast walls** appeared during these periods
In the **1st millennium**, entire buildings were built in **baked bricks of different sizes, with mouldings on the façade with enamelled reliefs.**
… When a public building is founded, the sovereign seals the first brick...
Finally, the summit of knowledge applied to Uruk It appears in the ziggurat: chains made up of beds of reeds and anchors made of braided reed ropes (anti-seismic measures on this tectonic plate), and the core is made of **mud brick crossed by tunnels (ventilation or drying systems).**



The architecture of large buildings and monuments requires the implementation of more sophisticated construction techniques than for vernacular and domestic architecture. It was then noted that the modulus of sun-dried mud bricks was reduced (from an average length of 60 to 35 cm), with proportions twice the width. These proportions and the use of half and quarter bricks are necessary for the implementation of complex devices combining **bricks in panneresses and bricks in headers**. The half- and quarter-brick components make it possible to make the elaborate decorations of the pilasters and redans (Pg. 3) that characterize the monumental architecture of this period, the "trademark" of Mesopotamian monumental architecture throughout its history.





Innovations in the field of construction in the era of the urban revolution

In the Uruk period (c. 3500-3000 B.C.)

«… At this time, the use of kiln-fired bricks, bonded to bitumen, appeared to be used for the construction of hydraulic installations: basins and pipes. The sun-dried raw bricks themselves are now made in several types depending on their use. Excavations of the eponymous site of Uruk were carried out at the beginning of the twentieth century.
There are large rectangular bricks (40 to 80 cm long) "Patzen". These bricks (the largest of which must have weighed more than 80 kg) were used to make foundations, foundations and terraces. The walls were raised with quadrangular bricks with a square cross-section: the "Riemchen" measuring 20 cm long and 10 cm high and wide. These bricks were mostly arranged in headers with a few rows of panneresses; most often on the façade, to limit superimposed vertical joints. This device, the Rienchenverband, most likely allowed for faster implementation, especially for the thickest walls where it was more systematically used. »

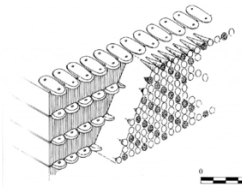


Fig. 9 : Reconstitution d'un mur de béton de plâtre, crampons de terre cuite et décor de mosaïque de cônes, Uruk (Huot et



Fig. 6 : Habuba Kabira (Syrie), Osthaus, relevé des murs avec brique à brique, Uruk récent (d'après Strommenger, 1980, fig.

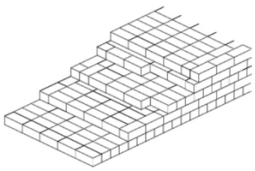


Fig. 7 : Riemchenverband : appareil caractéristique des Riemchen à l'Uruk récent (dessin M. Sauvage).

In Late Uruk (c. 3000-2900 BC),

«… Tests have been carried out on the material itself: in fact, on several sites in lower Mesopotamia, there are bricks made from an artificial material based on plaster (Huot and Maréchal, 1985) and no longer from "building earth", as well as walls made from moulded plaster sections (Pg. 8 and 9): the ancestors of our cinder blocks and concrete. However, these innovations were not preserved afterwards, probably because of the high cost of fuel required to make plaster by calcining gypsum.
An architectural innovation, characteristic of this period and which was not to be continued, was the decoration of the walls with mosaics of terracotta or stone cones. »

These different construction characteristics, Riemchen bricks, plaster bricks, mosaic decorations of cones, make it possible to define, among the sites that are located in the area of influence of the Uruk culture, those for which we can presume the presence of Urukian masons and therefore of a real colony.

In the Protodynastic period of urban expansion

"... The first half of the third millennium in central and southern Mesopotamia corresponds to the Sumerian Golden Age, it is also the time of the **generalization of the urban phenomenon over most of the Near East**. With the very rapid development of urban constructions (houses, administrative and religious buildings, ramparts, etc.), construction techniques evolved.
The Sumerian period is characterized, in terms of construction, by the use of plano-convex bricks and a fishbone device that L. Woolley, the excavator of your, had described as "architectural monstrosity". Indeed, the shape of the bricks, with their rounded top, and the fishbone apparatus seemed anachronistic in the evolution of Mesopotamian construction techniques, to the point that they had for a time been put down to non-native populations coming from the Zagros and settling in the plain. These interpretations have now been abandoned. It has been shown, in fact, (Tünca, 1984; Finkbeiner, 1986; Sauvage, 2000), that the plano-convex bricks and the fishbone apparatus are in fact part of an evolution starting at the end of the Uruk period where we find "plano-convex

Riemchen".
The **plano-convex bricks** were probably made from a mud roll cut "with a cookie cutter" using a technique known until recently in Yemen, a technique that allows for much faster production.
The excess earth protruding from the mould was not removed, which gave the bricks their characteristic domed shape. »

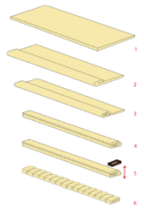


Fig. 12 : Proposition de mode opératoire pour le moulage « à l'emporte pièce » des briques plano-convexes (dessin M.

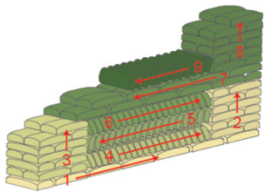


Fig. 14 : Mode de construction des murs à appareil en arête de poisson (dessin M. Sauvage).

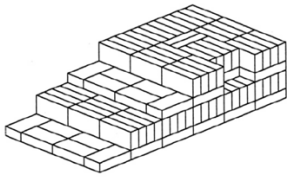


Fig. 16 : Šuruppak (Fara, Iraq), FH, maison c-a, fin de la période Protodynastique (dessin M. Sauvage)

«… The implementation of these plano-convex bricks is that of a fishbone device. The corners and door or window jambs are mounted in bricks laid flat, and for the wall sections the bricks are arranged in edge headers by inclined courses with the regular insertion of courses of bricks laid flat to avoid "sabre blows" due to superimposed vertical joints. It has been shown (Sauvage, 2000) that the fishbone apparatus, characteristic of the Protodynastic of central and southern Mesopotamia, is an evolution of the Riemchenverband of the Uruk period. Bricks with a Urukian square section (Riemchen) become bricks with domed tops (Riemchen plano-convexes) at the end of the period and are placed on the edge of the walls. The device then evolves with bricks laid at the edge and inclined, the rows of panneresses are transformed into courses of bricks arranged flat. »

The fishbone device was not chosen for aesthetic reasons, it is often quite irregularly made and always covered with a thick coating. Here again, it seems that it was for profitability criteria that a lower quality production method was favoured (as for the manufacture of bricks). The main defect of this device is the frequent appearance of "sabre blows", or vertical dislocation of the wall, most often directly above a pillar. Over time, this encouraged masons to increase the number of flat brick courses and to make bricks that were less and less domed; At the end of the period, we arrive at **flat bricks arranged flat or vertically**. This can be related to the search for a **more** prestigious and above all **more permanent architecture,** linked to the appearance of royal power which was manifested at this time in the building material itself with commemorative inscribed bricks.

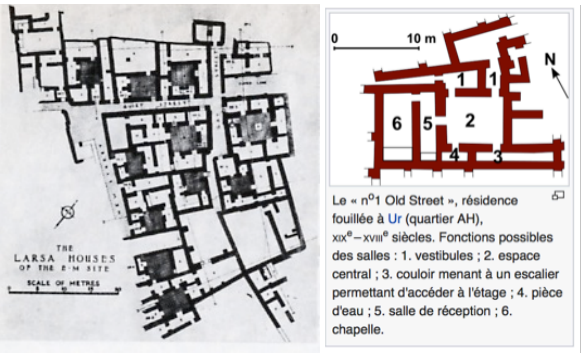
_____ of the culmination ... Imperialist cities and ideologies_____
(2330 BC to 610 BC)
The Assyrian/Babylonian/Persian Models

Akkad (2330 BC to 2100 BC)

This was the first attempt to establish an imperial type of power, consisting of implementing a project of economic and political domination over vast territories conquered militarily. A project accompanied by the submission of the settled populations to an unchosen cultural, social and economic regime and to the confiscation of part of the resources produced.

Your. Third Dynasty (2110 BC to 2003 BCE)

This second attempt to create wealth, by dispossessing neighbouring territories of their gains through violence and submission, attempts to draw lessons from the failure of the "Lagash" kingdom, ruined by the inability to manage distant conquests.
The era of the "your-Namma" kingdom began with a period of expansion and negotiated monopolizations between city-states, which had belonged to the regional kingdoms of the Sumerian area. The annexed cities were thus placed under the tutelage of governors subservient to the kingdom of your.
The period was accompanied by a vast new political, administrative, and economic reform. The **first "code of laws" in history was promulgated**, a clear element of a desire to reorganize the functioning of justice **applied to a new social order**.
A new form of standardization of writing was introduced. It was during this first reign that the first **Ziggurats were built**, imposing towers with floors attached to the temples of the great cities.



Le « n°1 Old Street », résidence fouillée à Ur (quartier AH), XIXe–XVIIIe siècles. Fonctions possibles des salles : 1. vestibules ; 2. espace central ; 3. couloir menant à un escalier permettant d'accéder à l'étage ; 4. pièce d'eau ; 5. salle de réception ; 6. chapelle.

From 2092 BC, under the "Sulgi" king, the following accelerations: **land reform, the standardization of administrative procedures, a new reform of writing, the creation of new canals as well as the development of a network of royal roads within the 4 regions of Sumer** managed by the central power, military power was strengthened; an **imperial calendar established over 12 months was introduced.**

Following the reforms, from 1968 BC onwards, **military offensives were carried out** in the north of the kingdom as far as present-day Iraqi Kurdistan and in the south-east (Iranian plateau). The texts of the time mention the many **riches taken away and the taxes levied on the river and road communication network extended to the new annexed territories. Defensive constructions accompanied the annexations**.
The period also saw an **artistic and cultural renaissance** marked by new genres of literature, the creation of new epic or mythological compositions, scientific texts, the formation of **schools of scribes**, etc.

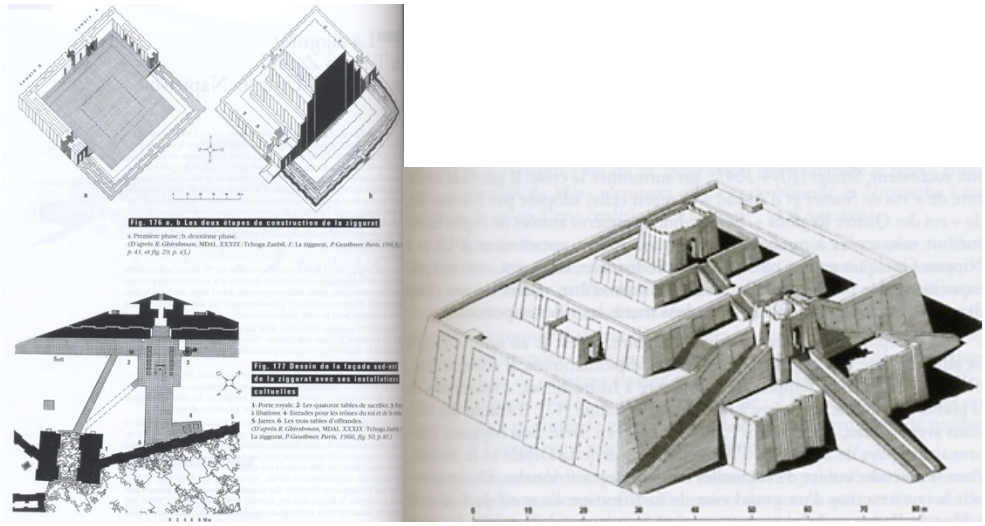
The kingdom gradually adopted a model of a **strong and segregated territorial state** operating in two categories of territories: the peripheries assigned to a specific mode of administration, occupied by **military and administrative colonies** (the gun mada) responsible for collecting taxes and surplus production, and the **heart of the country** (the kalam) benefiting from the manna levied.



- Work, social regulation and bureaucracy---
The vast majority of the population depended on the large bodies (palaces and temples), all subjects provided a service to the institutions under royal control, in exchange for their work.
The state provided them with either land to cultivate or material maintenance in the form of regular distributions of standardized "rations" of barley, clothing, and oil.
There were several categories of "dependents": **at the bottom of the social ladder was a workforce employed full-time in productive work that received rations throughout the year, including day labourers.**
The intermediate category, the largest in number, consists of **part-time workers, working under the authority of foremen**, who in exchange for their temporary service benefit from land to be cultivated and maintenance rations during the period of exercise of their obligations. In times of war, they must serve as soldiers.
The elite category **is employed in non-productive work**, it receives land from which it benefits by having it cultivated by people of the second class.
Prisoners of war, debtors, convicts are comparable to **slaves**.

The expansionism developed during the period of the Third Dynasty of your is above all an approach that aims to consolidate a stage in the development of an **economic model with imperialist aims. It ended in collapse.**

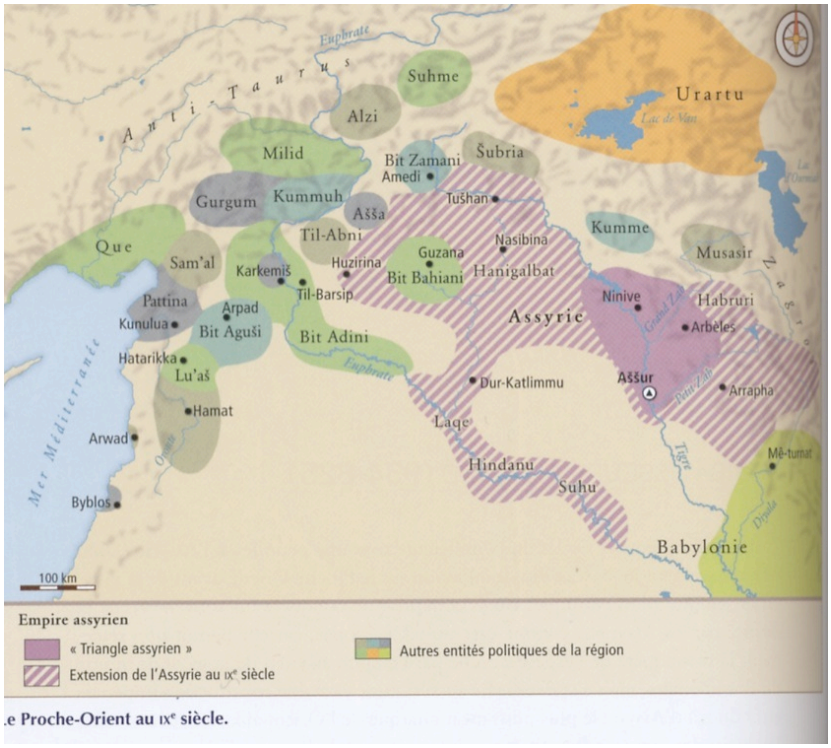
The collapse after a century of existence of the new regime is attributed to several factors:
An environmental factor due to a convergence of circumstances (reduction in river flow due to a temporary decrease in rainfall and overexploitation of soils leading to salinization); **resistance by colonized peoples to the occupier**; **a revived hostility of the external states,** for a time soothed by the dominant power of the Mesopotamian territory, but still of a greedy nature.



The Assyrian Empire (934 BC -745 -610 BC)

A long period developed during which the different **peoples entered into conflict and through war tried to expand their settlements to monopolize fossil resources, arable land and trafficking routes, from rival states**. It was from this unstable context that the kingdom of Assur emerged at the beginning of the first millennium, located north of the Tigris-Euphrates basin.

From the **14th century** onwards, the territory dominated by the kings of **Assur** continued to expand, reaching the Euphrates valley in the west, the upper Tigris in Turkey in the north and the foothills of the Zagros in the east.
This military expansion is supported by an **imperialist ideology** marked by the attention paid to the organization, control and management of grabbed land. The ambition to found a Territorial State is expressed in the titles given to the first kings ("king of the other regions of the world", "king of the totality").
"Assur", the tutelary god, orders kings at their coronation to wage war and conquer new territories every year. Christianity took up this instruction and its nobility made it a rule until the 18th century.

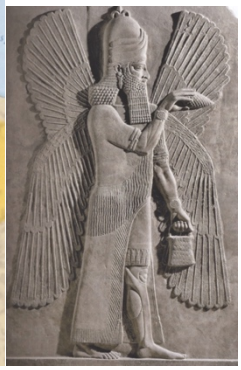


- Expansion - Search for fertile agricultural land, located in regions where rainfall allows Sumer to free itself from the constraints of irrigated agriculture practiced on its resource territory (subject to a variable rainfall regime over the years). Its **expansionism also aims to control the routes of trade and supply of goods and raw materials and to make most of the inter-territorial trade dependent on its rules.** The Empire had a solid ideological foundation and an efficient organization that allowed it to engage in a process of occupation and sustainable exploitation of the resources it had stolen.
In this process, the occupied "**peripheral regions**" were controlled in an Assyrian administration. At first, in certain cases of rapid capitulation, it was represented by "submissive vassals", gradually replaced by viziers from the Assyrian administration, appointed at the coronation of each king.
These Viziers, members of the elite, were themselves controlled by royal emissaries.
A set of codes governs the "multi-ethnic empire".
The "**Periphery**" was considered an **area of exploitation** under a regime similar to the "**protectorate**", its function having a strategic character beyond the eventual entry into the Empire through a process of assimilation.

The military strategy consisted of gradually weakening the enemy by returning every year to lay siege to his capital, systematically burning his crops, and plundering his herds. Massacres and looting accompanied the destruction of cities by fire.

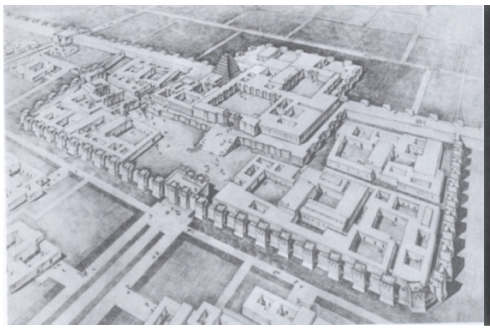
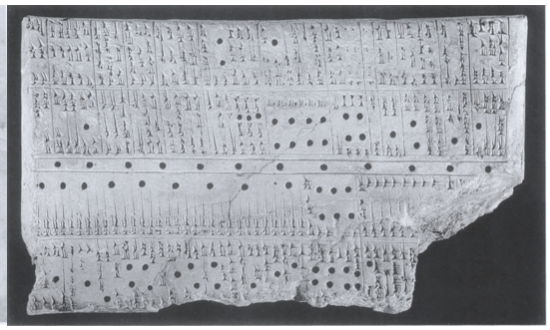
The populations likely to provide labor were deported to Assyria to carry out major infrastructure and prestige works. The system became institutionalized in the form of deportations that became massive over time.
Turbulent regions are being emptied of part of their population, with exchanges from one region to another.
In three centuries, it is mentioned in texts relating to a quarter of the displacements, the deportation of 1,200,000 people. This was a way for the empire to abolish particularisms and hotbeds of resistance.
When the adversary submitted, he was forced to pay an annual tribute, and the Empire installed Assyrian colonists there. Eventually, the peripheral principalities were annexed and incorporated into Assyrian territory.





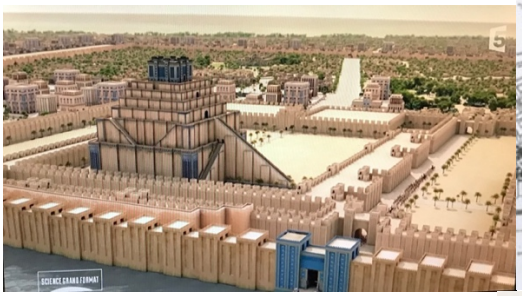
Assyria in **720 BC** was characterized by a strong polarization between a few hypertrophied metropolises abandoning the countryside and a rural occupation of the territory marked by its fragility This fragility is the result, on the one hand, of a **demographic imbalance produced by the mode of deportation** , which largely influences the maintenance of family nuclei, and on the other hand, of a **decline in agricultural yields under the effects of the desertification of part of the land that has been over-irrigated** over the centuries (the process of rising salts).

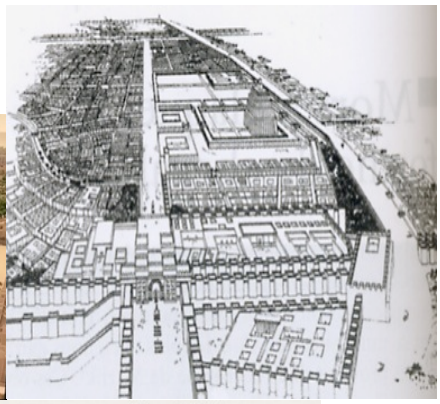
As a consequence of the centralization of power and the importance given to the state apparatus and the armies, **the increase in the ecological footprint of metropolitan cities** extended with the annexation of colonized territories and the increase in the resources extracted by the extensive agriculture developed in the Euphrates-Tigris Basin

The collapse.
The methods of **permanent** Assyrian warfare with **mass massacres, deportations** and the extent of the tributes collected, provoked the spread of general hostility throughout the Near East.
The accumulated wealth intended for prestigious uses, a centralizing system that did not lead to a redistribution on the scale of the Empire, the effort to maintain order in the plundered territories, the human expenses caused by the regime of permanent war led under the combined assault of the Medes and Babylonian peoples to the collapse of the regime.

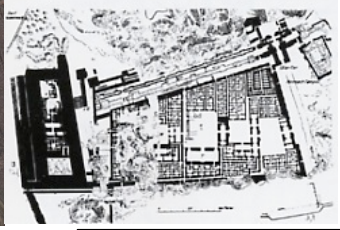
The Babylonian Empire (626 BC to 539 BC)

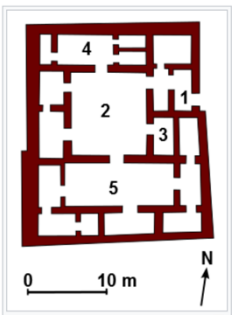




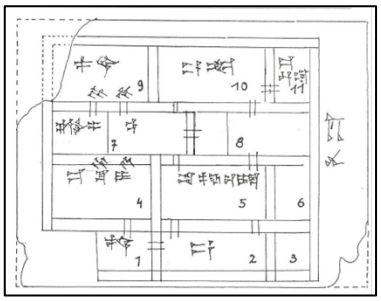


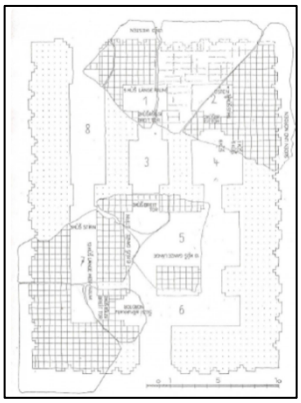






Une des résidences mises au jour dans le quartier du Merkes. 1. vestibule 2. cour principale 3. toilettes 4. cuisine 5. pièces résidentielles privées.







Greed coupled with greed opens up rivalries that express themselves in wars, pillaging, exterminations, destruction of cities, deportations, enslavement of populations.
The cities confront each other and their ruling powers discover that **supreme enrichment is obtained by an imperialist conception of the domination of territories and men.**
This observation was frequently verified later**: the tribute (now profit) levied increased when the area of domination extended to the living space and resources held by neighbouring or distant peoples.**
The first condition of the exercise is to have military **supremacy and organizational mastery.**
And this until reaching the ultimate point of growth of a domination and the collapse of the Empire suffocated by its ambition... **Before the reappearance of a new copy…**



02 – On the civilizing process...

_____ Stages of evolution of construction systems_____

12,000 BC / 10,000 BC At **Proto-Neolithic** When human groups are able to allocate a feeding territory to their seasonal movements, the **Stage Homes** are built of branches, foliage and clay mud taken from the ground and are embedded in the ground

-10 000 / - 8 000 Then followed the times when plant-based food resources diversified and became denser. The type of tent with a circular base is enriched with heavier and more resistant frames. Clay and animal and plant fibers are combined to make up the cladding of the external walls. The **habitats are far apart on the settlement area**, testifying to the sedentarization of the community. The interior floors of the houses are plastered with lime and surrounded by a bead of earth. This is the last phase in the general evolution of the habitat where the construction marks an embeddedness in the ground (an **imprint**).
These envelopes obscure the view of the outside. The smoke from the central fire escapes at the top of the cone where the structural pieces are tied. Only the access door establishes a visual link with the outside.

- 8 000 / - 7 000 In these early days of agriculture, community establishments kept sparse settlements in the space where the community was established. During this period, a new technique was introduced that erased the circular focus and embodied protection for eternity: the "Wall". The wall, load-bearing, vertical, thick, depending on the region, made of clay and stone or clay and cereal waste.
The circular shape evolved into partitioned quadrangular variants, with flat roofs made of branches and earth.
The size and flexural strength of the elements available to support the heavier earth roofs act to place the load-bearing walls on approximately parallel lines that announce the later interest in orthogonality.
The compactness of the fabrics is born from adjoining **party walls** that have become possible. The new configuration of the built environment also contributes to strengthening protection against the intrusion of predators attracted by food reserves.
The period of entry into agriculture, due to the deepening of knowledge on the forms of plant reproduction and the beginnings of irrigation along watercourses, led to the strengthening of the community and to the concretization within the built fabric of spaces specifically intended for collective life: assemblies, festivals, shared activities.

- 6900 – 5 300 Chatal Huyuk, an emblematic site of thermal engineering in a semi-desert climate marked by its compactness, high inertia and inverted day/night comfort.

The built volumes are blind, and you **enter through the roofs (by a ladder course** progressing towards the village centre). A hole is drilled in the roof to evacuate the fumes and give access to the living space of the cell. Another originality of the system, beyond its "horizontal density": All the roof surfaces are used to store part of the fodder, and to dry the foodstuffs (figs, apricots, dates, seeds, etc.).
The concept offers an ideal response to the day/night climate subject to significant temperature variations, allowing the retreat during the hottest hours within the high-inertia cabin, and at night the rest on the cool terrace. A habit maintained today in the traditional villages of the former "territory of the 5 seas".

- 5 300 - 3 500 The phase, marked by the ever-increasing mastery of fire (firing of clays and melting of the first metals), sees the appearance of a component of "good building": the **brick** dried raw. It is also marked by the invention of the right angle and its materialization in the cross-assembly of bricks at the corners of the walls, definitively establishing self-stability in load-bearing wall construction.
With the advancement of knowledge (sophistication of hydraulic systems, agricultural instrumentation, animal traction, integration of livestock farming into peasant activity), agricultural production increased to reach or exceed the desired level of food security. The stored surpluses were first exchanged between neighbouring territories, then the approach with the extension of the areas of exchange would shape **"trade", a factor of another form of enrichment** monopolized by the leading groups of the communities.

The town is made up of a dense network of buildings arranged on an **orthogonal plot of land** It is reformulated by integrating within it gathering places: **squares and enclosures for festivals or assemblies, and ways of penetrating** the fabric (roads that were still labyrinthine at first and then gradually more straight).

The modular material of raw earth and then baked brick allows these evolutions with flexibility with reuse of materials during deconstruction.
The typology of the buildings is unique, applying in the same way to small dwellings as to those of the governing bodies and services. The dwelling is rectangular in base, surrounded by four blind walls that determine the area of use (today a traditional Arab dwelling).
The space is composed of three bays: a central open-air bay and two covered side bays, where open or closed rooms are arranged that meet the functions sought by the occupant (domestic service and work activities). **The street wall is only open by a door** that gives access to a vestibule room with various functions.
The two lateral spans have a width dictated by the width of the beam trunks available (palm trees, etc.) and are wider when the territories approach the Taurus and Sagros forests, or when the wood is imported by caravan routes.
Earthen roofs are always assigned to the uses described above. This enclosed habitat always takes its light from the sky and is protected from the heat by the thermal inertia of the thick earth/straw walls enclosing the cubicles arranged around the edge.
Today, mosques in the Middle East (Iran, Iraq, etc.) are still quite often rectangular in plan, closed on the adjoining sides, with an open central courtyard bordered on its two lengths by Iwans (rooms open or hidden by hangings). Apart from the entrance portico on the outside, the outer walls have no opening.

At this stage of development, the rational exploitation of the territory (water, abiotic resources, fauna and flora) is reconciled with the maintenance of global natural balances.

- 3 500 - 2 700 This was the time of the installation of a hierarchical society that was differentiated in terms of its income and activities (crafts, agriculture, major works, transport and trade, management of the new mode of production).
Once again, the fabric of the most developed town in the territory was remodelled to be endowed with three entities: The seat of the local God and the Executive Power (Potentates and Dynastes), with its administration installed in a dominant position on the terrace; civil society assigned to thematic neighbourhoods around the Acropolis; and a defensive zone around the agglomeration with a wall.
Outside the Bourg, which has become a city, are the villages scattered over the territories of cultivation, and the routes of transport of goods belonging to the commercial network that unites the cities and the peoples settled in the great territory.
The technique of **the vault and dome** would respond much later (the first appearance of the vault in Mycenae – the "tholos" of the temple of Agamemnon dated 1,250 BC) with elegance and efficiency to the **manufacture of an interior climate, sophisticated with air humidification devices** (water jet fountains under ventilated domes at the crossing of the galleries, or wind chimneys) still present in the ancient architecture of the Iranian plateau).

In the second millennium BC The palaces are made up of a set of buildings built of baked bricks, raised on a platform. They took up the model with three elongated bays by adding a floor to the standard model of the ordinary dwelling and constituted in the centre a covered nave, raised in relation to the two side aisles to introduce a **natural illumination by zenithal and also create a thermal draught.**

Of the City as an instrument of domination

The Community mode, which has made it possible to get humans out of precariousness and uncertainty about the near future, is gradually evolving towards the **beginning of the specialization of sedentary populations and towards a new understanding of the resource potential represented by the territory at its different scales.**
Over time, this civilizational path accentuated the resource produced in place, obtained the growth of populations and provided a larger mass of labor, allowing the governing bodies to introduce an organization of production based on a growing division of labor

At this stage, the society of equals is defeated. The process of **production-accumulation** has modelled the initial social relations to the new social relations of production, constituted a social hierarchy and a **division of labour**, transferred power to elites and dynasties of executioners, and created a mode of distribution of wealth by inventing **private property** over ill-gotten gains.

In the pre-Cities period, the population's living territory consisted of: the City, sites for the exploitation of natural and fossil resources (in Mesopotamia). **The wild areas** of the unknown planet have no status, since they are **not supposed to provide exploitable resources. They are attributed to nomadic communities: herders.**
Population growth, the introduction of agricultural implements, and the evolution of irrigation techniques increased the agricultural resource and the share of stocks that could be traded on increasingly large territorial scales.

This phase of **economic and organizational change** is accentuated, allowing the implementation of a new stage of installation-appropriation of the territory: the **City, the domain of the grouping of produced and exchangeable resources, the seat of decision-making.**
Distinct functions were assigned to the territories, in or outside the city: farmers moved to the periphery of the villages of cultivation, craftsmen and merchants carried out their activities in the districts of the lower city, administrative elites were located in protected districts, and the powerful sat on highly symbolic heights between men and gods. Artists, architects and builders contributed to transcribing in form, size and decoration the vanity of their patrons and the gap to be expressed between the subjugated people and the governing power.

The establishment of **trading posts** that were veritable new towns that applied taxation on products in transit on their territories, and the generalized extension of irrigated land that introduced **conflicts of interest** between communities over the sharing of land, led to the invention of the concept of the "**Frontier**".
This new barrier definitively acts the partition-appropriation of the great planetary territory, it becomes a generator of conflicts that call for the creation of a new service corps: the military within society.
From this stage onwards, economic conflicts are settled by **predation-war** and its share of destruction and looting.

Later, driven by this unsatisfied need to accumulate resources, **the sanction war** was imposed, opening up to multiple forms of **plunder and enslavement** of the defeated peoples (Assyrian Empire).

The City within the Mesopotamian Empires, and particularly under the Assyrian Empire, reinforced its symbols of **Massivity and Power** (strength and wealth).
Each war ends on the rubble of defeated cities, destroyed punitively to the point of making a succession of archaeological layers. The revival under the new regime consisted of building on the previous substrates, until the next disappearance.

In this context, the Persian king Darius built Persepolis in the first millennium BC, as a Setting City serving above all to impress the vassal peoples called to this theater to perform the play of allegiance and payment of tribute. The capital city was Susa, located at the crossroads of arteries, profitable land, producer populations and other strategic resources. At the crossroads of trade between the 5 Seas, because the economic-financial and political system is based on the exchange value of products in circulation (surplus production).

°°°°°

The irresistible desire to accumulate wealth and power through the acceleration of the production of market goods, the overexploitation of cultivated soils, the exploitation of man by man and the destruction of biodiversity, is part of a pattern that has been reproduced in each transition from the primitive Community mode of production to the Tributary, then Feudal, then Capitalist mode of production, at all times and on all continents... Could it be genetic?
While this Humanity has continued to progress in its scientific knowledge of the global world, why is this cosmology still in place, when it is proving to be counter-evolutionary and incompatible with the survival of the Species in the Biosphere?

E Canetti - The Ground-Power Bond
"The propensity of a mass to increase in number leads it to expand its influence over space and time and consequently gives it an increase in power. A sovereign position in the mastery of reality that leads to paranoia *... »*
« … If there is one belief to which the peoples of the Earth, full of vitality, successively abandon themselves, it is the belief in production, this fury of multiplication.
The increase in production has resulted in a desire for multiplication of men since primitive times. The more we produce, the more it seems necessary to have consumers.
Man in the primitive pack is anxious about living. Its numerical weakness in an environment where animal species reproduce in greater numbers threatens its existence and the survival of its species. ***The activity of the primitive pack is aimed at becoming more numerous and, therefore, everything on which it lives must multiply****...*
Machines produce more than anyone has ever dreamed of. They have brought multiplication to a high degree of development. But since in general they are objects much more than living beings, man abandons himself intensely to their number at the same time as his needs increase, and as he adapts himself to them new needs arise. It is this aspect of production, multiplication for its own sake, without restraint, in all directions, that is most obvious in the capitalist economy... ».

_____ of the future: growth / decay _____

The city, as its growth to date attests, encloses all the decision-making and control centers of the territory, it is the place of diffusion and consumption of most of the volume of goods, it agglomerates around its nerve centers the majority of the population in all components.
Is it possible in this situation to imagine re-establishing natural balances without resorting to its degrowth, dismantling or abandonment, in order to find a territory of exchange, diffusion, invention between "equals", opening up to exploration the mechanisms of self-management and sharing: To be able, without domination, to constitute in stages a territory capable of sustainably accommodating intercontinental migrations (in the area of climate change) and actively restoring natural ecosystems... This forgotten but necessary condition of keeping the fragile Human Species alive?

The entry of the Internet into everyday life, the satellite link, digital technology...
Already allow certain categories of the population: To invent new forms of work and relationships in a nomadic setting; partially impose consumer rules ("Free Apps and Networks"); communicate through software with other territories in other languages; to develop a new agriculture that respects the environment through groups, to engage in renewed campaigns to denounce investments that generate pollution or the depletion of fossil resources.
The involvement of the "greatest number" in the framework of a reactive initiative seems to be the key to the alternative to change in order to found:

A planet of equilibrium corrected for past deterioration...
A territory of links, of collective creation... a cosmopolitan global territory...
A territory where it would not be forgotten to count man as a "Resource" and the rest of the living as an inalienable heritage by Humans...
A planetary public domain co-managed between vagabond peoples (*Planet: etymology of the Greek planetês - vagabond, wanderer*)

Intrinsic Wealth - A Gorz Ecologia -
"Intrinsic wealth" is, for example, the quality of the living environment, the quality of education, the bonds of solidarity, the networks of aid and mutual assistance, the extent of common knowledge and practical knowledge, the culture that is reflected and developed in the interactions of daily life ***– all things that cannot take the form of a commodity,*** *which are not exchangeable for anything, which have no price but each one has an intrinsic value. It is on them that the quality and meaning of life, the quality of a society, depend.*

_____ Should we dissolve... deconstructing the "City-Territory" _____
To discard the "Flood" or charter a second "Noah's Ark"

At the present, populations are displaced from the centre to the periphery, in order of decreasing income, and according to their rate of mobility, with, in order of dispersion: sedentary owners, semi-nomadic tenants, non-status migrants and displaced people from the "phony city", hungry or terrorized wanderers...

Even today, megacities and metropolises with **an active population growth generate an overexploitation of the planet's soils and the accelerated elimination of biodiversity. Nature has become an industrial product, the climate is changed in its equilibrium...**
Tomorrow? The tribunes of the world economic system seem to be considering using only clones fed on artificial intelligence, to constitute a "Civilization" that has reached the "digital" stage, organized in networks of immaterial exchanges, and essentially occupied with consuming illusory dehumanizing commodities...
Will the cities correspond to the one depicted in Terry Guillian's film Brasil, or will they be a ruin sheltering wanderers, when a few schizophrenic elites in dispersed communities enjoy under high protection a frugal happiness, outside society, outside humanity, outside the planet?

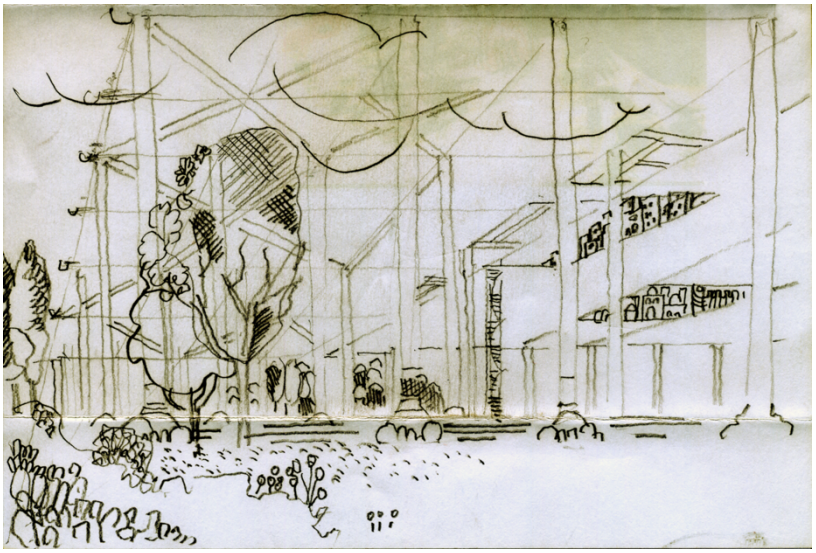
A certain dehumanizing "Research" pursues its work with private funds with ardor, under the guise of scientific research on health: Engages in genetic manipulations, which involve DNA to cut genetic sequences in order to insert programmed cells.
Work in neuroscience is being carried out on artificial intelligence, which aims in a sublimated future to "connect human brains", or which envisages with a robotic after-sales to make these humanoids benefit from the progress made on "sex robots and "social robots", to lead them to keep themselves alive in a universe of relational vacuum.

To break the current attempt to debraine the human, to put it in storage in order to isolate it and prevent it from building a counter-fire to the greedy march of accumulation that is coming in the bath of words: globalization, liberal privatization, segregation, racism...
Should the City be preserved?
To make it a bastion of humanity and diversity: By basing the relationship on sharing, creativity, world cultures, access to knowledge for all; by opening the walls to display life in a continuity of high and low; by rethinking the notion of collective property at the expense of the "Commons"; by discarding Caesarism; by renaturing the territory inside–outside; by sharing knowledge and opinions in "free" networks open to all without storage in data centers; by feeding a debated counterculture?

But this time by understanding that we are only a Piece-Species of the Biosphere, one of the most threatened, because it is one of the most fragile, placed on a trajectory that deviates from a compatibility with the living as a whole and from the physico-chemical laws of the enclosure.

The City of Baucis...

"After walking seven days through the woods, he who goes to Baucis does not succeed in seeing her, and he has arrived.
Poles that rise from the ground at great distances from each other and are lost above the clouds support the city...



Nothing of the city touches the ground except for its long legs on which it rests and, on days when there is light, a jagged, angular shadow is drawn on the foliage.

Three hypotheses are made about its inhabitants: that they hate the earth; that they respect it to the point of avoiding contact with it; that they love it as it was before them, and that, with the help of telescopes and telescopes pointed downwards, they never tire of reviewing it, leaf by leaf, rock by rock, ant by ant, contemplating in fascination their own absence. »

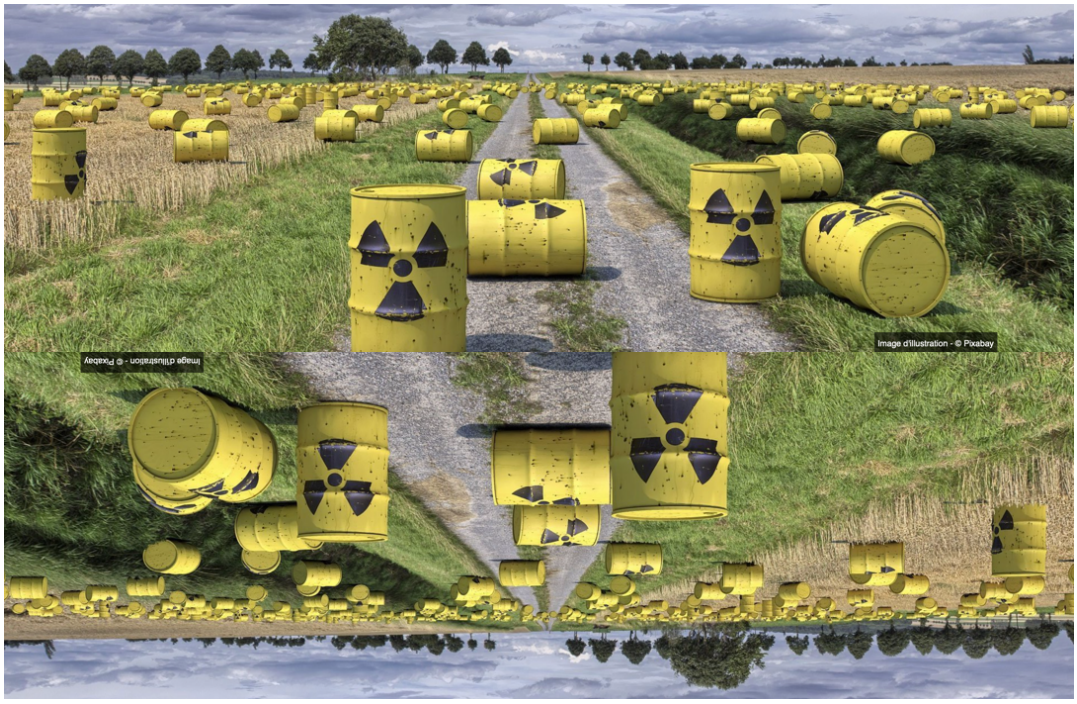
Marco Polo to the Great Khan

"The Hell of the Living is not something to come; If there is one, it is the one that is already there, the hell that we live in every day, that we form to be together.
There are two ways not to suffer from it.
The first is easily successful for most of them: to accept hell, to become a part of it to the point of no longer seeing it.
The second is risky and requires attention, continuous learning: to seek and know how to recognize who and what, in the middle of hell,
is not hell,
and make it last,
and make room for it. »

Italo Calvino – The Invisible Cities

II. IN THE THICKNESS OF TIME

THE SO-CALLED "MODERN" TIMES...



Past events, near and far, which are supposed to provide material for human reasoning and constitute a bank of experiences to approach the future, seem to be carried away by a sustained volatility that prioritizes the moment, to the point of gradually leading existence towards a form of amnesia about the real Earthling.
Before evoking the Steps in progress that are experimenting with the paths of an Alternative leading to a co-evolution with the Living as a whole, this observation leads us to reread some stages and highlights of the human saga and its almost asymptotic acceleration in the last two centuries, in an attempt to grasp the drivers of a transformation that leads to the degradation of planetary conditions and consequently human.

II. 1 - Memories, memories ...
On the initial error in the relationship between the Species and the Biosphere

Let us proceed to a leap in space-time following that of the Neolithic phase, to leave the Ancient Middle East, moved and undone by the gradual adoption of the Tributary mode of production, and find ourselves in what is presented today as the continuation of the so-called "civilizing" processes of yesteryear: those engaged in the exploitation of the biospheric ecosystem and the greedy accumulation of resources.
Having reached a stage where from the present we can know a part of the future and that it questions us about the continuation or almost complete redefinition of the path followed for nearly 12 millennia; It may seem useful to return to the chronological examination of the events that led to the emergence of the existential question of the "no future", to deal with the "what to do" about the next 30 years and the decades beyond.

Will it be necessary to disobey Humanity for the hostile and harmful link it establishes and persists in maintaining with a living planet and protector of the unknown cosmos?

A few summary reminders of the last steps

Carbon concentration in the atmosphere 650,000 years before our era: 200 to 300 ppm

5th / 12th century _
At the beginning of the feudal period: The territory is essentially made up of scattered villages and towns practising subsistence agriculture. The economy is mainly present at the local level and is mainly oriented towards the exchange of foodstuffs; the infrastructure network is bled dry; thermal energy is provided by wood; the force available to carry out the work was provided by man, horse, ox, and also from the end of the 11th century by hydraulic energy (in France one water mill for 250 inhabitants)
The population was illiterate, except for the members of the clergy and the nobility... The landowners (**property was then a conditional right**) rented their land to the peasants in various contractual forms, and the peasant communities worked mainly on **"Communals", collective property**.

13th / 16th century
It was in the time of the sun, water, wind, wood, in the time of an embryonic stage of capitalism.
The new economic force was then focused on the "Franche" city. The Cities movement, after having detached itself institutionally from territorial suzerainty, gradually freed itself from the feudal economy.
The period is that of printing (1454), mechanical inventions, innovations in metallurgy, wool weaving on looms, the development of agricultural technologies (three-year rotation, moldboard plough), the spread of hydraulic energy (from the 12th century there were 20,000 water mills in France, or one for every 250 inhabitants), and the nascent wind power (the first windmill built in 1185 in Yorkshire); A renewable and omnipresent wind energy therefore independent of the goodwill of the local lords.

The city was the place of concentration of craftsmen organized into guilds (weavers, dyers, masons, blacksmiths, gunsmiths, jewelers, porters, etc.), **bankers, clergymen, a population of usurers, labourers, students, bourgeois and vagabonds.**
Its development over the centuries calls for an increasing supply of food which has an impact on the surrounding rural territories.
The phenomenon of urban demand for foodstuffs, combined with the development of sheep's wool weaving in the 1500s in Europe, alerted the owners of arable land and led them to accelerate the process of grabbing communal land in order to gradually institute **a regime of private land ownership of the land** (a regime that cracks the nobiliary regime, built on the concession of biogeographical units and which is remunerated within the framework of emphyteutic leases inherited from the Roman era).

Society marks its transition from an old order to a new order: by the institution of **private ownership** of land, exchangeable on a market regulated by a legal code; by the commitment of the **market economy**, and the forced creation of a **workforce dispossessed** of its secular rights of use, whose existence depends only on a negotiable labor power per individual.

Market + Private property: another rung is missing that will be climbed by an ideological-religious re-examination: Protestantism.

Enunciated by Luther and Calvin, the vision of the world was not the cosmological doctrine of Catholicism at the time, which was: "**A rank and a place for each one, and rights and duties corresponding to his rank**" (Thomas Aquinas).
Luther initiated a reform of this doctrine by supporting a worldview based on the personal relationship of each believer to God, "**A believer-individual before God**." All "believers" are priests who refer directly to God and take responsibility for interpreting His word.
Calvin then went on to elaborate on the fact that the faithful must take action to improve their lives and progress professionally. Explicitly, this consists in maintaining that **the contribution to the economic progress of each person is a condition for the improvement of his relationship with God during his existence.**
Soon the homo economicus! It will be enough to move from the formula "each facing the lord" to "each facing the market".

The individual / Property / Progress through accumulation / The market ... Everything was said, it remained to be done!
During these centuries, **the cities** gathered within them a force of invention, technical mastery and production, but also drew from trade and long-distance exchanges, the resources necessary to invest, hoard and magnify a new power.
In Europe, the **15th century** was the century of the compass; that of the arrival of the Empire of Charles V in America (1492), of Gothic cathedrals (1200 - 1400); It is also the time when there is a vast deforestation of the territory to build, open the land to pasture, develop commercial and military fleets, etc. The Roman Empire's rule of keeping 30% of the land under forest cover was then set aside.

The exploration of the seas, which led to the conquest of the "New World" by the Spanish Empire, had disastrous human and ecological consequences: Transmission by the Conquistadors of the smallpox virus and microbes leading to the elimination of a large part of the Indian populations of Mesoamerica, deterioration of the ecosystem cultures practiced by the indigenous populations in favor of the installation of extensive monocultures...
An Eco-Genocide that generates for the monopolizing country, an overproduction of tradable goods, additional enrichment, and for the indigenous peoples an economic and physical plunder, a disruption of the balance attempted between Man and the natural environment.
The formula will be repeated in other places and circumstances by nations in search of accumulation-power.

At the end of the Middle Ages, Europe had nearly a **thousand "Free Cities", these times marked the first stage of the dependence of the rural by the urban.**

A domain with financial resources, engaged in an economic development movement that is itself attached to the growth of its population, must find the supply of foodstuffs, and to do this engages in a process of annexation or subjugation of the peripheries.
The city of the time revived a process inaugurated in Ancient Mesopotamia. It can only exist by increasing its ecological footprint coefficient, thus by carrying out territorial expansion and by instituting "serving" territories.

To meet the demand of the Cités, the transformation of the agricultural territory was accentuated at the beginning of the **16th century**, and generated a vast rural exodus in Europe. An exodus caused by the expropriation of many peasants who rented communal and tenant land. An expulsion, carried out on the initiative of the powers in place or by decision of the "Communiers", undertaken in response to the lucrative supply of foodstuffs in the cities and the development of sheep farms (textile and wool industry).
Ownership of land became exchangeable on a market controlled by the large landowners, and landless peasants, after expulsion, were forced to sell their only labour power. For the rural world, it is the point of **transition from the subsistence economy to the market economy.**

At the end of the 16th century**, in order to bypass the craftsmen of the guilds and increase the profit margins of the nascent small industry,** the **outsourcing of work in rural areas** was developed, a new means of introducing a less expensive workforce into the production process. These initiatives were extended by the creation of factories located near energy resources, such as a water mill and windmill, or near cultivated land planted to supply the textile industry. Factories that employ workers under one roof, on machines owned by the manufacturer. This process continued until the beginning of the 20th century (assembly of taps and bicycle parts at the farm workers' house in the Somme)
Feudalism began to dissolve in this context of the installation of new social relations of production, and the transformation of the nature of financial exchanges (accentuation and diversification of inter-city exchanges).

Cities are the new places where finance and power are installed, at the crossroads of the circulation of traded goods, and the invention of new techniques for the production of commodities.
(Mesopotamian phenomenology since the 4th millennium BC. JC to: Uruk, Eridu, Samarra, Hassuna)

17th century atmospheric carbon concentration: 280 ppm

The 18th century

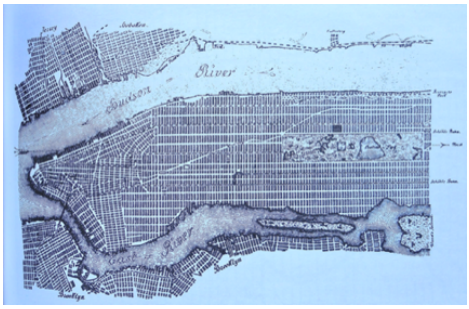
The infancy of capitalism ... water, wind, wood and the appearance of charcoal
In the middle of the 18th century, massive deforestation in Europe, following the development of large-scale industry, made wood energy more expensive and led to the search for **a fuel alternative in coal mining**.
The appearance of the **steam engine** imposed exclusive recourse to this new source of energy – (In fact a discovery made in China by Marco Polo which was then used to produce heat in certain homes) –
1763-1788 James. Watt developed the **steam engine** in stages on the basis of a "steam pump" invented in 1712 by "Newcommen".
The thermal energy of water vapour is obtained by burning "earth coal". In England, the new technology was quickly integrated into the various production apparatuses, including the cotton industry, and in 50 years, English production was multiplied by sixteen.
The first capitalist industrial revolution accelerated the development of the steel industry and associated technologies, such as the **steam locomotive**, with coal energy. Steam locomotives reduced space-time and once again transformed the nature of commerce. In 1830 their speed reached 100 km/h, in 1850 in the USA private railway companies laid 33,000 km of track.
1787 - Constitution of the United States approved by the Convention, implemented in 1789
A separate executive and legislative power constituted in two chambers. Only the chambers vote on laws and the federal budget.
1789 - France - Storming of the Bastille - 1793 By the "Convention" approval of the "Declaration of the Rights of Man and of the Citizen" - Abolition of slavery - 1793 Beheading of the royal family.
Slavery - Between 1701 and 1810, more than **60 million Africans were deported** to the American continent to serve as slaves on farms, mainly cereals and sugar fields. In addition to the inhumane approach taken, the exploitation of the land is based on intensive deforestation which accentuates the disappearance of tropical rainforests (Yucatan, Caribbean, North-East Brazil, etc.). An Ecocidal phase modelled on the deforestation previously carried out in Europe.

The 19th century, an adolescence

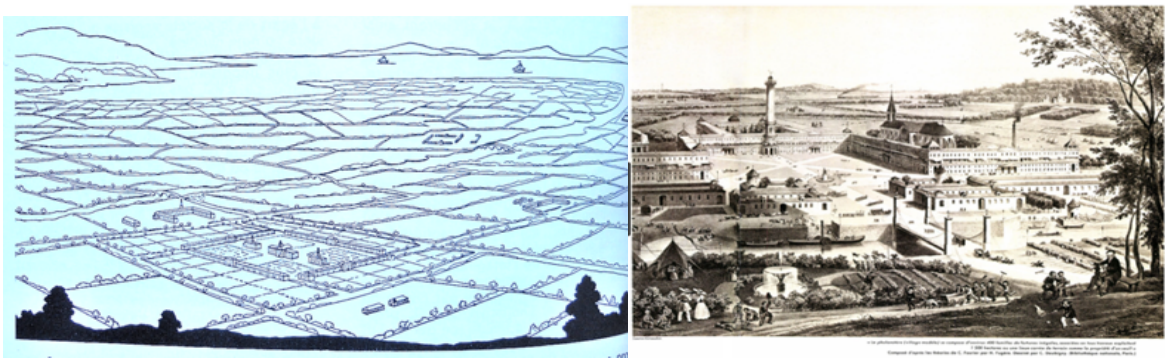
Coal power is the first industrial revolution

1810 - Louis Vicat, manufactures the **first hydraulic cement** and from 1830 onwards multiplies the use of cement in construction.
1833 - (1765) N. Niepce - Engineer and physicist - Inventor of the **first internal combustion engine**
and photography
1852 - François Coignet, built the first building with coated profiled iron, and Flat roof on slab
1856 - Iron and steel industry: Invention of the **Bessmer process** which makes it possible to replace cast iron with
Steel in construction
1867 - Joseph Monier, files the first patent for a construction system based on iron and cement In 1929, Eugène Freyssinet invented **prestressed concrete**.
1865 - Constitutional abolition of slavery in the United States, but substitution of it by a legal system of racial segregation.
1875 - Construction of the first "**Skyscraper**" in New York - Height 79 meters.
1880 - Replacement of the sail by the engine in maritime transport. Trade International tripled in volume
1876 - Invention of the Telephone
1885 - Invention of the internal combustion engine
1889 - EJ Marey invents the first instant tape shooting suites –
1895: first public screenings on the big screen by the Lumière brothers


New York City 1880


Map of New York 1810

Around **1810,** thanks to **coal energy**, the steam press appeared.
The steam printing press through the distribution of newspapers created a wave of literacy in Europe.
In the time of coal, the new economic system was rapidly transformed: **printing - rail transport - telegraph** ...
Railways, freight and passenger transport, determine their destinations according to the existing poles of activity that are cities and sites of exploitation and processing of resources, and participate in the economic and residential growth of existing or newly created urban complexes.


1817 - Village Harmonie Owen / 1820 Fourier Phalanstère

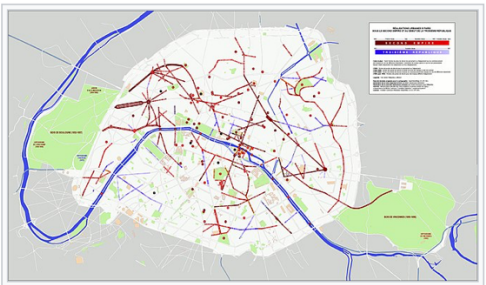
Owen, a textile manufacturer, elaborated an "ideal" model of living together or: "agriculture must be the occupation of the entire English population, with industry as a complement". To this end, he created a village for a small, self-sufficient community that worked collectively in the countryside and in factories and that was equipped with all the necessary services on site.
This **Utopia** , in connection with the earlier construction of the Bourg de Ferney by Voltaire (Switzerland) and then the Saltworks of Arc-et-Senans by Claude-Nicolas Ledoux (France), inspired concrete experiments, from Oward to Letchworth and from Godin to Guise (France) at the beginning of the 20th century...



1859 - Phalanstère Godin - Guise -

The period **1850 - 1870** saw in Europe the real estate market of cities, entirely subject to speculative private initiative, benefit from the major demolition-reconstruction projects launched by the ruling classes at the head of the States: such as the remodeling of Paris during the Second Empire led by Baron Hausmann (Prefect), and the Engineer of Bridges and Roads JCA Alphand.
During the last years of the century, poor populations continued to flock to **urban agglomerations, which provided jobs but lacked a supply of decent housing accessible to the miserable incomes granted to workers.**

Great Britain was the first nation to pass the Housing of the Workers Class Act (1890). Laws that grant loans to Local Authorities to expropriate land and finance the reconstruction of low-cost housing. Private **philanthropic initiatives** also accompanied the movement to reduce insalubrity in urban areas and to "extinguish pauperism" during these periods, at least in the sphere of visibility of the wealthy.
In Germany (Federal State) the legislation is not uniform. The answer is provided in part by the cooperative movement, whose real estate initiatives are financially supported by the State. Public interventions cover only part of the demand and also give priority to private initiative in the construction market. The administration steers the actions on the basis of a "master development plan" that globalizes the initiative.
In most of the large cities of "Planet Capital" growth plans are established by modifying or extending the fabrics.
Hausmann's partial development plan for Paris (1851) was completed in stages and confirmed in 1900 at the Universal Exhibition.



Les principaux axes créés ou transformés sous le Second Empire et au début de la Troisième République.



Destructions nécessaires à la percée haussmannienne • *Crédits : BnF*

1876 - USA - Development of the telephone (*Bell **1876***), and even more so that of oil-energy (*Rockefeller – Standard Oil **1868***). The complex process (exploration-extraction-refining-marketing) requires a mobilization of capital never before carried out, it leads to the development of a new **model of listed joint-stock companies** and to the organization of companies in the form of **vertically integrated companies and centralized management mode.**
With the development of the telephone, private companies created a network of power plants in the territory that supplied electricity to factory machines and lighting to homes.
The arrival of the car, accompanied by the development of a vast road network, which extended its network of links to fine scales of territory, favoured the movement of freight and passenger transport between rural areas and agglomerations, and fed and innervated the peri-urban area in its formation. This "suburb" where the productive activities of transformation gather, and the workforce in search of employment gathers.

1886 USA - 2500 electric lighting companies and 2700 power plants are in place, in **1910**, one in ten homes has electricity, in **1908** the "Ford T" is built on an assembly line and in 1916: 3.4 million cars are on the road...

1870 USA - Thanks to the invention of new turbines, hydropower provides 75% of industrial energy.

By the end of the century, the capture of **renewable energies** such as wind and solar was effective. Six million rotor wind turbines are thus participating in the development of agriculture and livestock farming on the plains of the Midwest. In the rural world, they are the use **of a decentralized mode of electricity production.**

Colonialism
Colonialism in part proceeds from the assembly of three unfounded assertions:
- All peoples must submit in order to assimilate the same historical and universal schema carried by the draped power of modernity, which is "civilizing work".
- Forms of organization and division of land are abandoned as well as cultures reinterpreted for the benefit of the colonizing power so that it institutes for its own benefit a perpetual present conducive to the maintenance in place of its civilizing and commercial work.
- The military-administrative occupation is the guarantor of "pacification". A form of police and military regime with the functions of administration and management of territories and indigenous populations (protectorates, colonies, guided dictatorships).

The purpose of the system was to ensure that the proper functioning of the command economy, a high profitability of metropolitan investments, and the supply of raw materials to the colonizing nation were guaranteed.
Enslaved peoples are obliged to contribute their labour power to the new mode of production.
In the nineteenth century, a **geopolitics** was rebuilt oriented towards the monopolization of new resources (raw materials, arable land) and the control of the planet's maritime trade routes.
The movement was based on two combinable factors: on the one hand, the available reserves of capital awaiting profitable investments in metropolitan France, and on the other hand, a reservoir of rural national populations condemned to internal exodus after the initiation of productivist agrarian reforms.
In addition, there are large military arsenals proportional to the high economic tension between neighbours (UK - France - Austria/Prussia - Russia - Spain).

Imperialism - The world map changes colour: Baltic Russia annexes the territories to the Pacific by means of the railway, France via the Mediterranean occupies North and Central Africa, the UK by the seas North America, South Africa and Southeast Asia and Spain expands its possessions on the Central and South American continent.

The 20th century The second industrial revolution

1903 - Nobel Prize in Physics for the discovery of radiation phenomena (X-rays) awarded to H. Becquerel and Marie. Curie.
1911 - Nobel Prize in Chemistry awarded to Marie Curie for her work on radioactivity Polonium and Radium.
1904 - 1908 Genocide of the Herero and Nama peoples (Namibia) - Second colonial power Reich – Governor Heinrich Goering (Father Herman G.)
1905 - Publication of the Theory of Special Relativity - A. Einstein
1909 - Crossing of the English Channel by plane - L. Blériot
1910 - Publication of the theory of continental drift - Taylor
1911 - F.L.Whright and A. Loos, develop the concept of the impersonal city, space by excellence in penetration of the consumer economy and mobility by generalization of motorization.
1913 - Publication of the Theory of General Relativity - A. Einstein
1916 - Publication of the book "Introduction to Psychoanalysis - S. Freud

1900 – Paris – Inauguration of the first line of the Metropolitan rail network intended to relieve congestion on the surface network. The approach is intended to "create a network of local interest with a reduced gauge" (F. Bienvenue).

1900 - American companies distribute thousands of mail-order catalogues for use in homes, and railroads transport prefabricated houses purchased by the mail...
In the last years of the 19th century, it was the discovery of **oil in the** USA and Europe that launched the **second capitalist industrial revolution**.

With the discovery of this new fossil resource, the invention of the internal combustion engine and the first telephone networks was invented, and it was the transition to a new stage of economic growth, where energy derived from oil was added to that from coal, and where communications crossed continents in an instant, facilitating the way for the export of the Western political-economic model.

1900 - Universal Exhibition in Paris
216 ha, 51 million visitors, 83,000 exhibitors, 40 countries. Located between the Eiffel Tower, which is eleven years old, and the Trocadero. The exhibition can be visited on a moving walkway (American mechanics). The first metro line is open on this occasion.

1903 - Howard begins construction of a Garden City in Letchworth.
The concept is nourished by two points of view, that of Owen: to shape a perfect and self-sufficient community: a synthesis of the city and the countryside and Howard's contribution: to insert a private residential estate of the type of single-family house in order to "remove the family from promiscuity and disorder fuelled by industrial production".
Some will be surprised by the contradictory nature of the Social/Private assemblage...
But American Keynesianism will find the appropriate formula to reinforce the domination of Capital over Labor while artificially relaxing the tense, vindictive relationship between capital and labor, by creating a middle class of worker-consumers:
A "**middle class**".

1911 - National Popular Theatre
Creation in 1911 by F. Gémier at the Palais du Trocadéro (built during the Universal Exhibition), of a Public Theatre Service, "Like that of gas and electricity", which is accessible to the greatest number of people (associated with the associative circuits, works councils, student clubs), and which has a magazine...
It is intended to bring 2000 people every evening at reduced prices, to present them with the great French and foreign texts. The initiative was continued by Roger Planchon in Villeurbanne (Quartier des "gratte-ciel"), then taken up by Jean Vilar from 1951 in Chaillot (Théâtre National Populaire).

1917: the proletarian revolt that was simmering on the planet (the Paris Commune and repeated revolts in Europe, the revolutionary workers' unions, Internationalism, etc.) blossomed in 1917.
St. Petersburg, supported by neighborhood assemblies (Soviets), to conclude with the foundation of a Union of Republics.
The capitalist regimes, starting with the actors of American development, were then worried about a possible "Communist" epidemic that could affect the trade union movements active in their countries and set out to find antidotes to possible protest movements.
This obsession will accelerate the orientation previously experienced in the USA ("Fordism"), and push Capital to develop on the scale of the Dollar Empire an economy in partial redistribution of industrial profits in order to form a "buffer" of security in the face of the spread of proletarian ideals that agitate the population of factories and mines.





"New credit techniques (Instalment Sales) are naturalizing the motto "buy now and pay later." the companies producing "durable goods" (Ford, General Motors, General Electric) became major creditors.
During the crisis, banks are also engaging in this lucrative market.
The development of **mass consumption in the United States is done on credit**.
In 1926, half of American households had a car.
"The consumer society, developed as an alternative to the collectivism that agitates employees and workers, designates a new relationship to objects, to the environment and to a new form of social control that makes the relationship desirable.
"Disciplinary hedonism plays a fundamental role in the acceptance of mass production and its disastrous consequences."

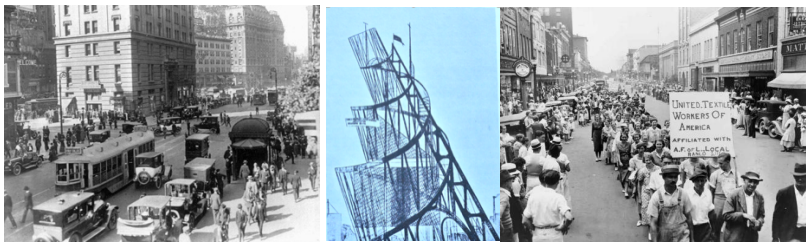
"In exchange for access to the commodity, the individual must accept an increased routinization of his work and his painless dependence on the new model of society, thanks to credit." - *Fressoz-Bonneuil excerpts* -

1919 - Foundation of the Bauhaus in Weimar (W. Gropius – Maholo Nagy – Kandinski – Itten – Klee – Meyer – Schlemmer).
The School was founded on a program that affirmed the need for a "methodology of study based on the laws of nature and those of the human mind, in which thought and action, material and spiritual requirements, must find their balance by overcoming abstract oppositions."
For Walter Gropius (Architect) teaching must have three characteristics: "*Parallelism between theoretical and practical teaching, continuous contact with the reality of work, presence of creative teachers*".
"*...We propose to educate men and women to understand the world in which they live, and to create forms that symbolize it*."
"**For the 'Modern Movement' *(Bauhaus approach),* rationality means humanity, as long as the definition of Man as a rational animal is considered valid**" - L. Benevolo -

Excerpt from a comment by Walter Gropius on the design of residential buildings for students studying at the "Bauhaus":
"The separating partitions chosen to separate the living units from each other were not chosen to provide sound insulation in the separative but on the contrary this loss of acoustic performance was sought so that the movements of the interior life keep a music in all the living spaces, whatever their functions, from the interior layouts to the facades.
The protruding position of ***the balconies on the façade*** *is designed in the same spirit so that the dynamic exchange continues outside the building envelope, in internal/external conversation.*
In the same spirit, natural ***light and the distant outside view****, due to the large size given to the windows, contribute to this transparency. »*



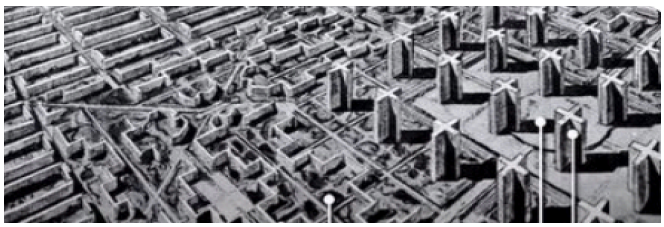
1920s - The industrial-financial complexes of the United States, associated with the ruling political class, which intended to profit primarily from their investments in the massive exploitation of fossil fuels, accentuated Taylorist production, to the point of discouraging the factory workforce
(Ford in order to hire 100 workers on its assembly lines had to recruit 963 people in 1920 - *Crawford - In Praise of the Carburetor*).
The change in the remuneration policy of the workforce is characterized by the term Disciplinary Hedonism.
The economic-political system (**household consumer credit**) accentuates measures to stimulate individual ownership of goods by placing on the market standardised consumables produced in large series: such as: the **car** for all, the standard "Sweet Home" house heated electrically for a low cost of equipment, the use of material components, and many other market products related to those previously used by the wealthy classes.
In the 1920s, in California and Florida, the remoteness of coal production sites led to the rapid development of the solar water heater with a payback period of three years.



1924 - Lenin dies
1925 - Publication of "Mein Kampf", a manual of "Nazism", disguised as National Socialism - A. Hitler

1922 - "The New Spirit" - Le Corbusier
First residential district built in Pessac "The **house is a machine for living** ... »
In 1922, Le Corbusier prepared the first **project for an ideal city** for 3 million inhabitants. The buildings are of three types, cruciform skyscrapers in the center of green islands, R+6 buildings with recesses in the intermediate zone and "Building-Villas" on the periphery. The basic plan is **bi-axial symmetry**, with orthogonal and diagonal streets.
"...**The building-villa** (project not realized) is a complex of 120 duplex housing units each with a **garden terrace**, the floors are accessible by elevator, It is equipped with **common services** (including a cooperative food store provided directly by the producers located on the outskirts of the city. On the roof is a 1000m track for running in the open air, and solariums. Doormen watch over the "Unité d'Habitation", announce visitors and channel them to the apartments.





1926 USA: President Herbert Hoover, in order to protect the value of the private property of the owners, has the American Supreme Court enact a law instituting the "**of**". The tool makes it possible to territorially separate industrial areas from subdivided residential areas and areas allocated to ethnic minorities.

Peri-urbanization or urban sprawl leads to the authorization of the migration of housing outside cities: It leads households to acquire an individual car and consequently increases household consumption, sterilizes the soil, reduces ambient biodiversity; At the same time, it led to an accelerated development of the oil and automotive industries.
This choice leads cities to divest themselves from public and public transport developed in tramway mode (electrified network), and from the maintenance costs of the roads used, in favor of the networks of private gasoline-powered urban transport companies, massively put into service by the Petro-Automobile Lobby.
The creation and maintenance of streets and boulevards is the responsibility of the citizen via urban taxes and duties. Pollution takes place and so does congestion.
Between 1915 and 1927 in New York, the number of vehicles on the road increased from 40,000 to 612,000.
In 1926, half of American households owned a car.
From 1930 onwards, households were equipped with a washing machine, a vacuum cleaner and a refrigerator.

The success of the large companies set up to carry out this form of growth is attributed to their **structural ability: to put ever cheaper goods and services on the market; to create jobs; and to raise the standard of living of the population in the industrialized "new world"...**

The policy put in place constitutes a new choice of society of a technical, financial and ideological nature, it inaugurates a variant of anthropocapitalism by conceiving a form of impregnation of the world population, through the stimulation-addiction to the consumption of material goods, and by the permanent maintenance of a state of war with regard to recalcitrant or migrants considered excluded from the game.

1926 - Two-thirds of American households own their cars **on credit**.
1926 - First TV trials - Baird
1928 - Discovery of penicillin and its antibiotic properties - Fleming
1929 - Cosmology, formulation of the hypothesis on the continuous expansion of the Universe - Hubble
1929 - Stock market crash and explosion of unemployment among the working classes in the USA and Europe. Incidence

on social movements and their varied treatment by the ruling classes of the countries until the outbreak of the Second World War

1930 - Oil overtakes coal as America's primary energy source

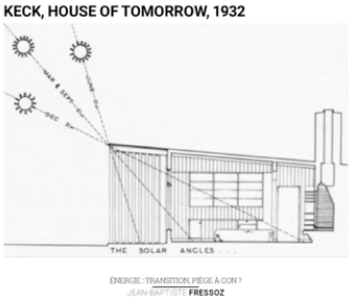
1930 - Suicide of the Russian poet Mayakovsky

1932 - Industrial launch of double glazing.

1932 - Use of the first particle accelerator in Great Britain - Watson

1933 - Athens Charter: Translating the New Ideology into Spatial Planning
"Rationality, hygienism, modernism, behavioral transformation... For the shaping of a new **"buffer" social layer: the middle class**.

1933 - FD. Roosevelt launched the new interventionist policy, the "New Deal".

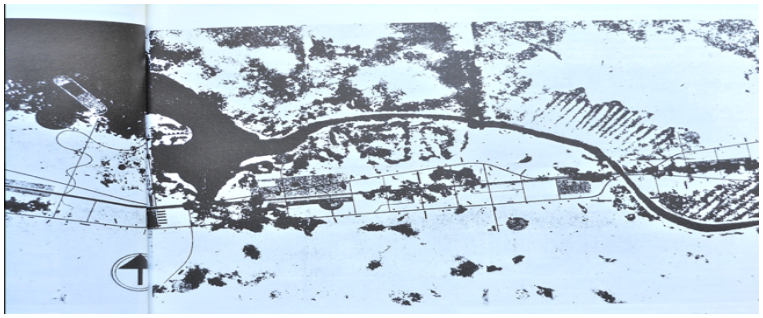




1930 - Oil surpasses coal as the primary source of fossil energy used in the United States.
In the 1930s, Passive Energy Villas were built on the outskirts of North American cities, distinguishing the nature of the facades according to their orientation to the sun...

1930 - Launch of the first five-year urban planning programme in the USSR
The revolution of 1917 eliminated the institutions of the old regime and established the premises of a new social organization, creating a new political space with as yet unknown limits. In Architecture and Urban Planning, the Soviet Union appeared during the 1930s as the most favorable terrain for realizing the current ideas debated in Europe within the framework of the "Modern Movement".
It is stated in the New Towns programmes open to competition, that it is a question of defining and creating "social capacitors" in the political and social conditions of the country.
Three social capacitors are stated that must be integrated into the general capacitor that constitutes the city
- "**The Collective House**". Translated in many ways in projects: By declining the modes of integration of housing with common services, by proposing typologies of buildings integrating distinct forms of housing distribution (external or internal stairs, corridors, corridors, corridors, etc.).
- "**The Workers' Club**" responsible for offering services of a higher level, not included in the housing to complete the urban fabric. Major health, education, culture, sports facilities...
- "**The Factory**", a flagship element of the productivist system, left to the choice of the technical-political authorities as to its location and functional organization.
A wide range of solutions that were unusual at the time were proposed by the groups of architects and urban planners consulted.

This is the case with Guinzberg's concept of the "Green City" with a habitat scattered throughout the countryside along the communication routes, an approach that introduces an alternative to the opposition between collective and individual organization, with high and low densities, belonging to the model of "centralized distribution".
It thus provides an **"**egalitarian**" linear distribution** model where the mobility of the population is ensured by different modes of public transport.
Another path is opened up with the project of the new city of Magnitogorsk, for which a continuous urban-rural agglomeration is imaged without opposition between centers and peripheries: "The city can dissolve into the territory without losing its value as a place of exchange and production... **The city as an infinite aggregate of spaced elements** in contact with the countryside**"**.
Stalinism will put a stop to these experiments and research aimed at **developing a territory that is neither an instrument of power nor discriminatory**...



1930 Ginzburg – Proposed Countryside Settlement Along the "Green City" Thoroughfares (extension Moscow)

The 30s in the USA "The Great Depression"

The stock market crash of 1929-

- Excerpt from the Larousse encyclopedia - - "... The economic crisis predates the stock market crisis, but it is aggravated by it: ruined speculators empty their bank accounts, banks cannot cope, especially since other depositors, worried, demand to be reimbursed. About 600 establishments went bankrupt in 1929, 1,300 in 1930, 2,300 in 1931. Those who survive are restricting credit.
As ruined speculators are no longer possible customers, production and consumption suffer. Businesses closed: 22,000 in 1929, 26,000 in 1930, 28,000 in 1931. In 1932, four times fewer cars arrived on the market than in 1929, American national income had fallen by more than half, the wage bill had also fallen, and unemployment, total or partial, hit a quarter of the working population.
This further aggravates the poor sales, hence a drop in prices that triggers other bankruptcies, other layoffs, other poor sales. **Industrial production fell by 30%.**
Agricultural production was reduced by 60%, many farmers were ruined, expropriated, and left to **flee** to other territories - Steinbeck*, the Grapes of Wrath*.
In the year 1930, the whole of the New World, Australia and New Zealand were affected. States stopped paying in gold and depreciated their currency. **The so-called "developing" countries are the most penalized:** they derive their income from a monoculture, which can no longer be exported. Europe, and especially France with a centralized state, resists longer than the federal regimes. However, in May 1931, the closure of the *Kreditanstalt*, the most important Viennese banking institution, marked the end of the remission.
At the end of 1932, **40 million people** were unemployed in the industrialized world. In 1935, world trade was less than 40% of what it had been in 1928.
This was one of **the main causes of the Second World War** ... »



USA 30s - The Dust Bowl Exodus - Photos D. Lange + Alamy images

The drought of the Dust Bowl.

The phenomenon comes from intensive **exploitation** of the central Great Plains, which causes soil friability coupled with sterilization, and partly contributes to the **triggering of repeated droughts** accompanied by strong winds (*Editor's note: perpetual motion?).* The land was deported, the crops were destroyed.
The fall in the price of agricultural commodities completes the ruin of the farming families already in debt by the mechanization of the extensive cultivation they practice. They abandon their homes en masse to try to beg for food, shelter and work in a great migration to Western California (see photos).

1936 "Modern Times" - Movie by Charlie Chaplin
1936-1938 - The "Popular Front" - May-June 1936 outbreak of the General Strike with occupations of factories and organisation of strike committees throughout France. 12,000 strikes are recorded, including 900 with occupations and about 2 million strikers. "The strikes of joy" according to Simone Weil. Balls were given in the occupied factories and shops, Jacques Prévert's "October" group gave plays... After the election of a new Parliament with a majority of socialist, communist and centrist elected representatives, the following were appointed:

the "Blum Government". Subsequently, the parties and unions worked to lift the evacuations and activate the resumption of work.
The "**Popular Front" government,** within the framework of the so-called "Matignon" Agreements, between the State and the social partners (trade unions and employers), instituted: **the 40-hour week**, **paid holidays**, **trade union rights** in the company, and the constitution **of collective agreements between employees and employers** within the branches of companies.





The other Europe
After repeated economic crises of the capitalist system increasing the misery that afflicts the working masses (fall in wages, loss of work, general worsening of living conditions), a **new variant of the "Societies of "Domination"** is developing, with an ideology that aims to curb the audience taken since the 19th century by the European workers' movement on the line of thought of socialist internationalism. This **counter-ideology, "National Socialism**", pushes on the terrain of **Anti-Semitism and Racism, and advocates the exclusion, eradication, and dispossession of humans for the benefit of a self-proclaimed superior, German-Western "other species".**

The fascist movement of indoctrination of the "masses-packs" *(according to Elias Canetti)* led to the seizure of power by the state apparatuses in Germany, Austria, Hungary, Italy, Spain, Romania, Bulgaria... and the **development of an expansionist military-industrial Germanic power**. Fascist ideology consists in affirming that the human species is made up of hierarchical "races" with categories of sub-humans (neo-slaves) and superior ruling races.


Image from the film "The Great Dictator" (1945) by Charlie Chaplin

- In 1933 in the **German legislative elections, the "Nazis" obtained 43.9% of the votes in favour of the Länder**, and in the Bundestag 2/3 of the deputies granted full powers for 4 years to Adolf Hitler, the "Führer". The 3rd Reich is founded – Wikipedia -
"Nazism" was a totalitarian political regime that eliminated communist, socialist, humanist opponents... And populations deemed "undesirable" such as the Jewish, Gypsy, Homosexual and other ethnic minority communities... More than six million people were exterminated in five years in "Concentration Camps".
Other forms of exclusion-submission were also carried out, by force, on the populations of the annexed, colonized territories of Europe.

1936 - Publication of the "General Theory of the Use of Interest and Money"
Deciphers the economy through the prism of finance and the dynamics of capitalism and formulates the hypothesis of the financial instability of the system - Keynes
1939 - "The Grapes of Wrath" - Steinbeck
1939 - Market launch of the **electron microscope** - Siemens / Bories
1939 - (1856) Death of Sigmund Freud Neurologist, founder of Psychoanalysis – The term of "psycho-analysis" appeared in 1896 in one of his writings ...
1941 - Construction of a **machine that precursor to the modern computer**:
The "Marki" - Harvard University
1942 - **First nuclear fission** - Ferni - Univ. Chicago
1944 - DNA identification - Avery/Carry/ Leod
1944 - Construction of the **first electronic computer** - Harvard Univ / IBM

1944 - Creation of the "IMF", International Monetary Fund and the World Bank (participated in the to the financing of reconstruction).

1944 - Women's right to vote (France)

1937 and 1945 – In Asia, the imperial dictatorship of the Japanese regime which develops an **ideology**
fascist, invaded Chinese, Korean, and Southeast Asian territories, and subjected to **genocidal exploitation**.

The Japanese administration resorted to the organization of famines in the cities, carried out a policy of mass extermination in the countryside, to the point of destroying crops, or only allowing crops leading to the weakening of the health of urban populations showing resistance to the occupation (Chinese cities). This period caused the death of 12 million people in China.

1939-45: The new German-Fascist industrial power lacks raw materials and fossil fuels (oil) necessary for a project of domination of peoples. To do this, it embarked on a campaign to monopolize the "resource territories" on the Western (UK, Netherlands, Belgium), Southern (France) and Eastern (USSR) fronts.

The Second World War ended with significant destruction in the territories of the conflict (Eastern and Western Europe) and the death of **60 million people, killed** during bombings, or during exactions and mass extermination of a Genocidal nature.

1939 – The **first**
house using solar panels converting the sun's energy into electricity and on the cooling of indoor air (summer)



Image: MIT News Office and the MIT Museum

1942-1943 – Nazi Germany is stopped in its attempt to conquer Soviet Russia, and its army on the Eastern Front of Europe is defeated at Stalingrad. This battle caused nearly 2,000,000 casualties on the Russian side, it marked a decisive stage in the war in retaliation against the fascist powers in league.

1943-1945 – The armies of the USA, Russia, Canada, Great Britain (French colonies) undertake to liberate the continents from the "fascist" yoke.
Surrender of the German "3rd Reich" and the Japanese Empire of the "Rising Sun"

1945 - Creation of the United Nations, on the basis of a Charter approved by 51 states, and constitution of a Security Committee bringing together the victorious nations attached to Communist (China and the Soviet Union) and capitalist (USA, UK, France) ideologies.
The Organization takes action to address the many problems facing humanity, such as: human rights, peace and security in the world, nuclear disarmament, humanitarian and health crises, gender equality, food production and other issues of common global concern.
The **UN** is also a **forum** where its members express their views to the General Assembly, the Security Council, the Economic and Social Council and other bodies and commissions.

Nuclear energy - military & civil -
During the second half of the 20th century, American industry manufactured nearly 70,000 nuclear warheads and produced about 89 tons of plutonium and 500 tons of enriched uranium, the main highly radioactive materials used in nuclear weapons. Their manufacture is accompanied by a significant production of waste contaminating the soil and the atmosphere.
1945 - Two nuclear-powered bombs are dropped by the U.S. government on the cities of **Hiroshima and Nagasaki** (Japan): They will cause 250,000 civilian deaths, not counting the subsequent cases of cancer and other side effects. This is the first **genocide perpetrated with nuclear weapons against civilian populations**. A deliberate action (used without prior warning) to target inhabited civilian sites...
This act of mass extermination has never been brought before the competent international tribunals for investigation or trial.
After the two nuclear explosions, nuclear industries developed in the USA, the USSR, Great Britain, France...



1945 Invention of the microwave oven (S. Spencer)
1946 Creation of the **first computer** with recorded programs (30 tons)ENLAC - USA
1945 Marshall Plan to Europe: In order to extinguish the workers' movements that had grown in power after the collapse of Germany and the appearance on the international scene of another victor of the conflict (the USSR), American financial aid for the reconstruction of Western Europe's infrastructure was aimed at: introducing equipment with advanced technologies (for example in agriculture: tractor and combine harvester), and above all the **"Atomic" consumption model** as it was called at the time, which was accompanied by a jump in the consumption of fossil fuels (Oil and Gas) by industry.
The **socio-economic model** that applies as a remedy for Europe's recovery is of the "**Keynesian-Fordist**" type. It aims at the macro-economic regulation of the world capitalist system, by including in the political priorities of the American state: the use of the dollar currency, the management of the income redistribution mechanism by introducing taxation by brackets, social protection, and full employment.

Two industrial systems are formed. The gas and oil sectors are competing on the planet to monopolize the world's strategic reserves available and necessary for the accelerated growth of "Western Societies".
A post-colonial movement where it is a question of creating puppet regimes, which guarantee the plundering of the resources of "raw materials" necessary for the growth of the dominant nations.



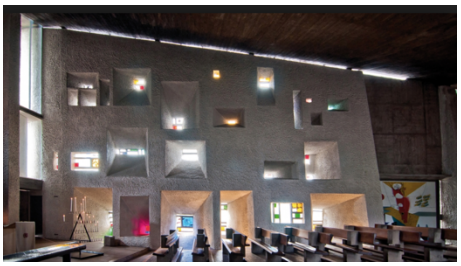
1945 ... Post-conflict Europe, in its western part, is being rebuilt under the good offices of the so-called "liberal" economy (phase of productivist revival), under the guidance of the financial and technological power of the United States; while the eastern part is being built up to East Asia on so-called "Communist" models.
The consumer society propelled by the Marshall Plan was introduced with its shock marketing: the Salon des Arts ménagers, the Salon de l'Automobile, the distribution of hypermarkets (1960) and the flagship products of the American food and clothing model (Ice-cream, Cocacola, Hotdog, Chewingum, Jeans, Television, Holywood film productions,...
It is: "the American Way of Life" (life, liberty and the search for happiness**),** "The post-war world as a technological and consumerist paradise" (*General Electric Advertising*).

This model of life is built on the degradation of the planet's ecosystems and on an accelerated depletion of non-renewable energy resources, which pollute and disrupt the planet's global climate regime.

In the USA, the first inexpensive solar house, marketed in **1945, went unnoticed**

1946 – In Europe, Le Corbusier (Architect) enunciates the concept of "**Unité d'Habitation**", which he will partially shape in 1922 with the "Building-Villas".
He proposed to build deeper buildings crossed by an interior street serving duplex housing separated by reinforced concrete splits. Where each dwelling independent of the others is dual-oriented. The building houses all the services complementary to family life (parking, shops, nursery, laundry, leisure areas and sports field.
For its designer, it is **the fundamental cell of the fabric of the modern city**.
It frees up green spaces on the ground by allowing the separation of traffic forms, and it simplifies the road network. The "Radiant City" housing units will be built in: Marseille, Nantes, Berlin, Briey-en-forêt, Firminy.

The intention is to "Bridge the gap between the dimension of the modern city and the dimension of singular buildings, thus not to think of the City in terms of an accumulation of walled houses, offices-factories, shopping-leisure complexes but: To **introduce a sub-multiple of the city that ensures exchange and sharing in places designed to carry dynamics and social creativity, places installed on islands intended to be invented horizontally by their occupants, and vertically without ownership other than that of a shared interest".**

1948 - France an urban approach to the housing problem.

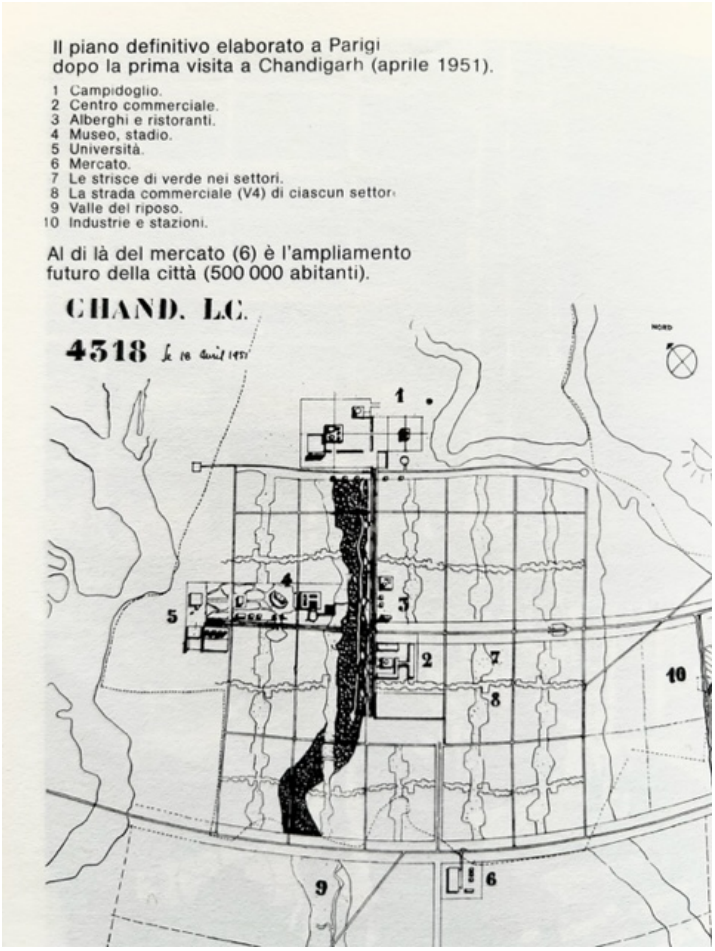
In France between 1940 and 1945: 900,000 homes were affected (i.e. 18% of the real estate capital) and entire cities were destroyed: Le Havre, Caen, Saint-Nazaire, St Malo, etc.
120,000 industrial establishments were also destroyed as well as 250,000 farms...
Firstly, the reconstruction is financed within the framework of the General Plan for Equipment and Modernisation of the State.
On a second front, it was a question of fighting against the generalized dilapidation of the private built heritage developed during the interwar period, and on a third front, it was a question of anticipating the demographic boom that accompanied the post-war period.
The Reconstruction Plan responds to the urgent need to create jobs, to compensate for the lack of private initiative in real estate investment, and to lead to a revival of industrial potential: "When the building industry is going well, everything goes!"
Vast collective housing operations referred to as "Grands ensembles**" (Strasbourg, Saint-Etienne, Angers, Lyon, Le Havre, Amiens, Poissy, etc.)** are launched from time to time throughout the country.
The Minister of Reconstruction and Urban Planning at the time declared: "**Large housing estates represent the only way to reduce both production costs and achieve quality improvement, which ensures the supremacy of integrated industrial production**... ».
In 1954, the Construction and Housing Code was approved, and between 1958 and 1962 the lists of "ZUP (**Zones to Urbanize in Priority**) built to contain an average of between 30 and 40,000 inhabitants (Aulnay sous Bois 2000 dwellings, to house 70,000 inhabitants, La Courneuve 4000 log, Sarcelles, Poissy, Toulouse Le Mirail, Reims ...) Each has a shopping centre, schools and colleges, and socio-cultural and health facilities.

The implementation of heavy prefabrication techniques (inspired by those of the Soviet model) by construction companies led to the generalization of a Habitat concept, which uses the infinite duplication of a housing combination extending from the Studio to the housing of five main rooms on the same building.
The territories assigned to operations are "Outside the City", and the open sites are comparable to factories. The buildings are aligned to allow the crane paths to be elongated, and the cells constituting the parts are made of steel "tunnel formwork" (sliding), to make walls by pouring reinforced concrete.
The workforce is largely immigrant, it is qualified on the job to handle tools and supply construction sites.
The "**Grands Ensembles**" policy continued until the return of expatriate nationals from the North African colonies. The second ZUP programme plan was launched in 1962 to house them after the independence of Algeria and the return of the French population.
The context of "Reconstruction" has led to the imperative of a quantitative commitment without questioning a qualitative evolution of the demand for housing once the period of deprivation is over.
These so-called "Grands Ensembles" territories, built in the 50-70 period, are intended to support the development of a "Middle Class" through a rental offer, before developing in a second period an offer of subdivisions of individual houses accessible for home ownership. This marked the beginning of a phase of change in the offer of the Public Social Housing Organizations (OPHLM), which was aimed at categories of the population with modest incomes: workers, employees, service staff.

From a social springboard, the "social housing estates" became dead ends in the **80s**, then isolates.
In a filmed documentary, filmed in part with teenagers from the Cité Hlm Aulnay 2000 *(Department of Seine Saint Denis),* they confided to the interviewer, while looking from the top of a Paris residential tower (located 5km as the crow flies from their home): that they had never been there.

1948 - Arab-Israeli War and creation of the State of Israel - Displacement of 700,000 Palestinians (Sce: Amnesty International.)
1948 Universal Declaration of Human Rights
1947 Invention of the "Transistor" electronic component, marketed in 1955
1949 Simone de Beauvoir writes "The Second Sex"
1950 The foundations of artificial intelligence are laid - A. Turing
1950 (1889) - Death of Vaslav Nijinsky - Dancer and Choreographer: The Afternoon of a Faun (Debussy), The Rite of Spring (Stravinsky)...
1950s – In the USA, 80% of houses built are in peri-urban areas.
The developer-builder "Levitt" simplified the construction of the individual house by using prefabrication on assembly lines inspired by the forms of production of military equipment. The subdivided houses are sold in thirty-year loans, the monthly repayment of which corresponds to three days' wages.
Mass consumption is presented as an alternative to Communism (the USSR has a GDP growth of 5% while that of the USA is "3.3%).
In 1965, the USA produced 11 million cars per year.

1950 - Chandigarh
Chandigarh - Le Corbusier is in charge of building the administrative capital of Punjab to accommodate a population of 150,000 inhabitants, planning to extend it to 500,000.
(The State finances the construction of public buildings and the housing of 50,000 employees)
It places the **project in a formal consideration of climate and substrate data**.
The "**regulating line**" of the new territory was established by backing up the first slopes of a mountain range that developed on a north-south axis, and was inserted between two torrents that flowed from east to west.
The site thus benefits from a **general natural air conditioner** given in hot periods by the upward air movements, it is **permanently supplied with water** by the mountain.



"LC applies its network design to the territory to be urbanised: a grid orthogonal to the orientations resulting from the site, i.e. (**N-E/S-W. NW/S-E**) WHICH CARRIES SEVEN LANES CORRESPONDING TO SEVEN FUNCTIONS OF THE URBAN REPORT, NAMELY:
- Three types of roads, of varying importance, form a **checkerboard of thirteen housing sectors with distinct forms of housing and settlement** that correspond to the thirteen social categories called upon to reside (measure of the program dictated by the religious and cultural imperatives of the country).
- A type of **road intended to accompany commercial activity crossing the large blocks**, **supporting two types of slow access roads to the houses** attached to the previous ones.
- A model of **"green mall" in strips placed perpendicular to commercial crossings**, which connect school **and leisure facilities**, some of which accompany **waterways**. - L. Benevolo -

1951 - The first **civil nuclear power plant** to produce electricity from a controlled fission of heavy atoms enters service in the United States. In 1954, a civilian nuclear power plant with a capacity of 5 megawatts was commissioned in the Soviet Union. In 1956 in France, the Marcoule nuclear power plant was created, and the first reactors for civilian use were built in the USA, then in 1957 in France in Chinon.
In 2019: 450 reactors represent a capacity of 400 GW, or 10.6% of global electricity production.
The major accident, with loss of containment and dispersion of radioactive gases and materials, was that of **the meltdown of the nuclear reactor core** (1969 France – St Laurent partial meltdown, 1979 USA Three Mile Island, 1986 Chernobyl, 2011Fukushima).
The Chernobyl nuclear accident led to the evacuation of 135,000 inhabitants of localities located within a radius of 30 km around the reactor (i.e. two cities and 70 localities), and the evacuation of other populations to a contaminated territory, known as "exclusion", extending over 300,000 hectares, i.e. a total displacement of 250,000 people.
The loss of agricultural land is estimated at 780,000 hectares and forests at 700,000 hectares.
According to UN agencies and the IAEA: in the local populations, 400 thyroid cancers were officially diagnosed between the time of the disaster and 2002, and nine thousand deaths are attributable to radioactivity.



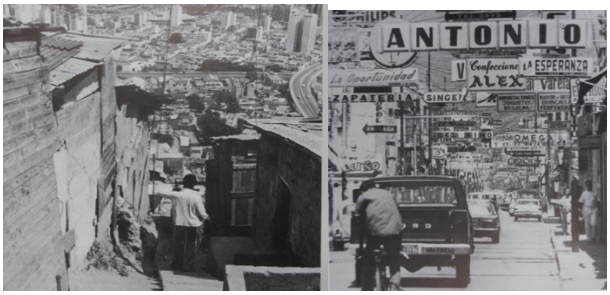


1951 First use of a computer for astronomical calculations - USA
1957 **Launch into space of the Earth's first artificial satellite** "Sputnik 1" USSR
1957 Creation of the European Economic Community - EEC
1961 First manned flight into space - USSR – Yuri Gagarin
1950 First movements for decolonization: Morocco, Tunisia, etc. 1962
Creation of the Algerian Republic
1957 – Decolonization of Morocco (Protectorate) and creation of the Kingdom of Morocco
1958 - Transcription of the Chinese hieroglyphic script, "Mandarin", into the Latin alphabet "Pinyin". A "Cultural Revolution" to allow a Chinese population, the vast majority of which was illiterate, to have

access to education. The established everyday language has reduced the 26,000 ideograms used by the "Literate" before 1958 to 3000 characters, with four hundred possible combinations.
In 1964, the "Little Red Book" (a collection of philosophical and political texts by Mao Zedong - President of the People's Republic of China) published in several hundred million copies, was written in Pinyin and was doubly inserted into the books of learning to read schoolchildren and in the instruction in Communism (Reflections and Poems of Mao Tse Tung).

1958 - Driven by the "Democratic" political groups, public administration in the United States becomes the guiding element of urban planning. This was the appearance of "City planning" in Boston and Philadelphia. Harvard's MIT theorizes about urban development.
However, the "satellite" New Towns were still conceived as commercial enterprises: the general and execution plans were drawn up by private agencies and then approved by the public authorities.
The projects try to no longer modify the general balance of the fabrics formed in the central part of the agglomeration, They propose separate pedestrian and vehicle travel networks to replace the mixed networks adopted previously. New types of houses (townhouses) are being consolidated into **neighbourhood units**, and commercial and recreational services are being integrated into residential neighbourhoods.
The copy was given in France by the "Parly 2" operation (Dept. Des Yvelines), with 7500 dwellings and 18,000 inhabitants, built in 1969, inaugurated by Jean Baudrillard, author of **"The Consumer Society"** (published in 1970)
"... Mass consumption structures social relations, it is for each individual the means of satisfying his immediate needs and of differentiating himself... !!!!

1950 -1962 - **"Third World" Demographic and urban expansion and discrimination**.
A United Nations report on "**poor housing**" reported a 40% increase in the population (rural and urban) in Asia, Africa and Latin America in 1962.
The initial phenomenon: A rural exodus caused, at the same time, by the agrarian reforms undertaken by the ruling classes associated with the **Agro-Industry** groups, and by a movement **of industrialization in the urban poles**.
The population of cities has increased from 750 million to 1 billion over a period of 15 years.
In 1962, the rural population, "**marginal neighbourhoods" detached from the "regular city**", settled **without property rights on land without networks** (Ranchos, Barriadas, Favelas), represented **50 to 60% of the occupants**. In these territories, the urban population doubles every 15 years and the "marginal" population doubles every 7 years... In 1960, there were 600,000 "homeless" people in the city of Calcutta.



1960 – Third Worldism and the Southern Hemisphere
The liberation movements demanded the transition to models of "national independence", essentially: To initiate a modernization of agriculture likely to favor the transition of the peasantry to new techniques of organization and production; to nationalize companies managing energy and mineral resources; and develop the associated industrial potential.
The 1980s were the years of failure. The model cannot develop independently of the financial, commercial, and technological interests of the global financial market dominated by the United States.
Countries with high debts are obliged to bow to the diktat of the International Monetary Fund and otherwise submit to the exploitation of their resources by multinationals.
Stirred up ethnic rivalries and various forms of corruption maintained by external economic powers (colonialism) hindered the use of a reasoned economy in political independence

1962 – Geneva Accords for the decolonization of Algeria and creation of the Republic of Algeria
1963 "I have a dream" - Speech in which Martin Luther King says he dreams of a country where blacks and whites would live as brothers...
1955-1975
The confrontation of the two Communist/Capitalist blocs.
The "**Cold War**" refers to the period of geopolitical tensions during the second half of the century and is partly explained by the fact that Russia (USSR) is consolidating its power in the world by

constituting for itself, in the manner of the USA (Latin American countries), an area of satellite states in Eastern Europe and Asia. **The two regimes simultaneously pursued an imperialist strategy of economic and military expansion on a finite "world territory".**
At the same time as the nuclear arms race, a strategy of reciprocal intimidation between the USSR and the USA in the form of ballistic weapons with nuclear warheads, known as the "Cold War", was developed.
The period had strong implications in the scientific, cultural, political, economic, sporting and military fields
The Indochina War and then the Vietnam War 1955-1975, after the Korean War, were the main grounds for a direct military confrontation between the two blocs.
1960 - Racial discrimination in the United States
Laws prohibit interracial marriages, impose a separation between blacks and whites in neighborhoods called "*colored districts*", transportation, public places, schools, stadiums, circus shows (Louisiana), at hospital entrances (Mississippi), in libraries (North Carolina) or in telephone booths (Oklahoma).
In the face of the segregation and brutality exercised by the racist movements in the southern states of 1910 and 1970: 6.5 million blacks migrated from the South to the North, including 5 million after 1940.
By 1960, less than 1% of black children in the South were enrolled in integrated schools.
The history of large cities in the northern United States is punctuated by race riots that most often occurred in contexts of racist prejudice fueled by housing shortages or competition for the most modest jobs with populations of European origin.
The Civil Rights Act was passed in 1964. It prohibits all forms of discrimination and segregation in public places, and grants the government new means by creating a commission responsible for ensuring equality of all in the world of work, without distinction of race, religion, national origin, or sex.
1965 – "Bloody Sunday" Peaceful march in Selma, Alabama against racism and equal rights between white and colored communities.
1967 – Martin Luther King Jr. Speech in New York on the United States' intervention in Vietnam, which he refers to as
"The largest provider of violence in the world today ...
... A true revolution of values would soon look in a shameful way at the stark contrasts between poverty and wealth. With justified indignation, it would look across the seas and see the individualistic capitalists of the West investing huge sums of money in Asia, Africa and South America, just to make profits and with no concern for social improvements in these countries. »
1968 – Assassination of Martin Luther King – Memphis – Tennessee
Segregation will continue in other forms - Residential segregation: In 2010, 45% of black children lived in neighborhoods with a high concentration of poverty, compared to only 12% of white children.
In 2017, the unemployment rate for blacks was twice that of whites.




1965-1973 - The Second Indochina War is waged by the U.S. Army, involving Vietnam, Laos, and Cambodia.
During the period of conflict, **the United States dropped three times as many bombs on these three countries as during the entire Second World War**; bombings were frequently carried out with the **spraying of chemical defoliants** ("Agent Orange" consisting of Dioxin, produced by the "Monsanto" firm: an agent promoting the development of cancer) and Napalm (gelled gasoline) intended for burning, crops, wood, homes and populations and pollute the targeted territories.
50,000 hectares of the country's southern forests have been poisoned by "Agent Orange".
The portion of tropical forest directly destroyed by the bombing of Vietnam has been estimated at 22,000 km2, or 23% of its pre-conflict surface. Deforestation continued after the war to rebuild 10 million homes and public facilities, leaving the land open to erosion and flooding. Arable land deprived of rainfall-retaining vegetation cover has thus been washed away by the hydrographic network for nearly 150,000 tonnes per year.
These harmful bombings had lasting ecological effects, which are still present in the food chain of several regions of South Vietnam.
"... This bloody madness will not change anything in the final outcome of the war, but it expresses very clearly where contemporary capitalism stands: **the cruel waste of productive resources in**

the imperialist homeland goes hand in hand with the cruel waste of destructive forces and the consumption of the commodities of death manufactured by the war industry."





1960 ... 1975 – Years marked by the **protest of transnational youth movements, committed against the "Vietnam War**" led by the American armada "**Make love not War!** and the denunciation of the acts of repression carried out by colonial nations against peoples engaged in the conquest of their autonomy.




1960 ... 1980 - "**The Green Revolution**"
Launched by the USA in the so-called "Cold War" period with the USSR, the Green Revolution was conceived with the support of: the Rockefeller Empires, the Ford Foundation and the World Bank. It consisted of "ensuring food security" in Latin America and Asia (India), countries with strong population growth, by modernizing agriculture (without resorting to an agrarian reform rejected at the time by the indigenous landowners), i.e. by introducing hybrid seeds (wheat, rice, corn) with the associated chemical soil treatments and agricultural equipment from the American companies "America One"...
This model increases the number of landless peasants who are forced to retreat to the urban peripheries, and consequently collapses the cost of urban labor on service, distribution, craft and business jobs.
The extensive monocultures practiced increase deforestation interventions, absorb groundwater, salinize soils, pollute land and living water, and harm the health of existing populations, ultimately leading to a lasting change in microclimates. (Let us remember the causes of the collapse of the Mesopotamian, Mayan, Kmer Empires...)
The green revolution accompanies the oil revolution.
After reducing the price of foodstuffs, partially eliminating shortages and increasing their consumption, the model subjects national production to the vagaries of world market prices for seeds, machine tools and inputs.
1967 - Military occupation by the State of Israel of the West Bank, the eastern part of Jerusalem and the Golan Heights, then annexation of the conquered territories (previously the soil of the states of Egypt, Jordan and Syria), and confiscation of cultivated land from the Palestinian populations by expropriation and expulsion. (The system of annexation of Palestine and expulsion of the native populations will continue in the 21st century).
1968 - Czechoslovakia **,** Prague Spring - The reformist government in place introduces freedom of the press, freedom of expression and freedom of movement. The movement towards the democratization of political life continued by reforming the previous command economy system.
The movement was stopped by the dispatch and occupation of the country by the army of the dictatorial "brotherly regime": the USSR. Despite repeated popular demonstrations, a second dictatorial regime, compatible with Russian imperialist doctrine, is reinstalled.
1968 - In France**, student agitation demands a system of co-education in the Cité universitaires, contests: elitist forms of education; social selection at the entrance to universities; the rejection of the parental and societal model of education; manifesto against the war waged in Vietnam by the American state (Napalm bombings...) and against the Algerian war led by the French government...**
The movement developed in a **context of workers' tension over the working conditions imposed on the "SO" (the so-called "specialized" workers) assigned to the industrial assembly lines and employed in repetitive tasks and rhythmic and timed gestures.**

The workers' tension over the inhumanity of the pace imposed by an industry in the process of automation is diverted by the strike-breaking trade union bureaucracies ("Fordists": General Confederation of Labour and Workers' Force and Christian Union, mainly) who negotiate with the employers for a temporary increase in the remuneration of industrial employees, on a "sliding scale" supposed to calm tensions and disarm a "Street" that denounces their company.
The adoption by the employers will not change the conditions of "**assembly line work**".
In France, the two movements, led by student and working class youth, came together for a time in demonstrations organized outside the institutional apparatuses. They go to the cities to find an audience, and to discover both the apparatuses of police repression used by the power of the Republic, and the media counter-information of the ruling class.
The Republican regime in place, experienced in terms of repression: Algerian War... and the death of men in 1962 following a peaceful demonstration in Paris by immigrant workers (- Metro Charonne - Repression ordered by the Prefect of Police Mr. Papon, previously in office under the Vichy regime).





As an extension of this agitation of a part of the youth, popularization initiatives were born that were extended to the national territory, such as: forms of **cooperation between workers, students and peasants**, which inaugurated "**short circuit**" models of food distribution; and forms of collaboration and cooperation between social classes, on the margins of fossilized institutional forms.
This was followed by the development of **civil disobedience, support for the peasants of Larzac, in struggle against the political state** committed to extending its military land on the agricultural plateau (1971...), and following the movement the creation of a union: the "**Confédération Paysanne" (Peasant Confederation), which promotes a social and agricultural approach, respectful of ecological balances.**
Also began the experiment of taking power by workers on a project to close the LIP watch factory in Besançon. A long occupation by a takeover of production by his staff, on a **line of self-management thought** (1970 ...)
Homosexual and lesbian movements are also being built and publicly expressed on "**freely disposing of one's sexuality" or on the recognition of gender equality.**

1968 - (1887) Death of Marcel Duchamp - "Ready made", "To choose is to make a work" - Nude Descending a Stairway 1912, Industrial Urinal Fountain 1917 - Production series industrial series by the affixing of the signature ... Where the sacralization of the merchandise product by the "Mark" affixed.
1969 Moon landing of the first cosmonauts – NASA US -
1969 Connection of the first computers between four American universities
1970 IRCAM - foundation by Pierre Boulez of the Institute for Coordinated Acoustic Research and Music
1971 Development of the first Scanner - Hounsfield / Cormack
1971 Death of Igor Stravinsky (Rite of Spring, Petrushka, Symphonies, concertos ...)
1973 (1881) Death of Pablo Picasso - Painter, sculptor, engraver, draughtsman, ceramist. To adhere to the Surrealist movement and Post-Impressionism. Considered the founder of "Cubism" with G. Braque before developing a sensitive art specific. Produced 50,000 works, including the denunciation of the war crime perpetrated by the fascist phalanxes of Francoism: Guernica (1937)
1976 Creation of the Ensemble Intercontemporain in charge of the interpretation and dissemination of works of the twentieth and twenty-first centuries.
1977 Launch of the first portable microcomputer - Hewlet Packard
1969 - Internet

The first "**ARPA Network**" link was created between two American universities and the network was extended to 213 hosts in 1972. As the networks are financed by the state, connections are restricted and reserved for universities and the US Army.
In 1980, the government in place authorized its extension to American companies that founded the first "access providers" companies...
In 1984, Europe began its conversion.

1978 – Green economy and growth.
Theories are pouring in that claim that a bio-optimized and dematerialized service economy will make it possible to continue global economic growth by solving the environmental problems that are in the news. It was also the time when the idea of setting up a "green economy" by putting a price on nature by creating tradable rights to pollute between actors (sulphur, carbon, etc.), including ecosystem services for the protection of a certain biodiversity, was put forward.
"Global change" under climate constraints, without renouncing the accumulation-concentration of capital. Some imagine that one way to generate nature would be to "securitize" the biosphere... "Green, an economic opportunity". "Nature as the World's Largest Company" 2009 IUCN.

The 1980s - The New Spirit of Capitalism: The Financialization of the Economy
Year 01 of neo-capitalism -
Shareholder capitalism calls into question the model of industrial capitalism developed on the basis of the Fordist organization of work, and an associated social policy. The activity of firms is refocused on their know-how and the outsourcing of tasks to subcontracting set up to reduce production costs. The first industrial groups to undertake this reorganization are those where the level of unionization is the highest.
The globalization of the market is expanding competition and the labor pool to low-wage countries.
"**Computer productivity**" is a Neo-Stakhanovist tool that is in line with the new intensification of work and the search for productivity gains.
Versatility introduces relative autonomy in the accomplishment of production tasks, but above all it introduces an increase in production rates.

1980-1981 Creation of the workers' union Solidarnosk and workers' strikes against the regime Soviet Union in place.

1982 (1917) Death of Thelonious Monk - Jazz pianist, composer
(Blue Monk – Round Midnight – Straight...)

1982 Discovery of the Abortive Pill - Baulieu

1986 Chernobyl Atomic Power Plant - Republic of Ukraine - Major nuclear accident of - level 7- is due to an uncontrolled increase in the power of a reactor monitored a core meltdown resulting in contamination by irradiation of part of the the population before its displacement.
The accident led to the evacuation of 135,000 inhabitants of localities located within a radius of 30km around the reactor (i.e. two cities and 70 localities), and the evacuation of other populations to territories contaminated by the radioactive cloud pushed by the winds. So-called "exclusion" territories of 300,000 hectares, and a total of 250,000 people were displaced. Losses of agricultural land were estimated at 780,000 hectares and forests at 700,000 hectares.
According to UN agencies and the IAEA, in the local populations 400 thyroid cancers were officially diagnosed between the 1986 and 2002 disaster; 9000 deaths are attributable to radioactivity.
The major accident, in the event of a loss of containment with dispersion of radioactive gases and materials, is the meltdown of the core of a nuclear reactor. Incidents of this type have been recorded: in 1969 France – St Laurent with partial meltdown, in the USA 1979 – Three Mile Island, in 1986 at Chernobyl, and in 2011 in Japan at Fukushima.

1987 - (1993) "First Intifada"
The "War of the Stones" marks the uprising of the Palestinian population in the form of (unarmed) civil disobedience. Repeated demonstrations by women and children and adolescents against the forms taken by Israeli rule. 1160 Palestinian victims and 160 on the Israeli side.

1987 - (1928) Andy Warhol - main instigator of Pop art and Abstract Expressionism

1987 - **UN -** World Commission on Development and the Environment
Brundtland Report-
From the Call to Action:
"In the course of this century, the relationship between the world of man and the planet that sustains him has undergone a profound change. At the turn of the century, neither the size of the human population nor technology had the power to radically alter planetary systems. As the end of the century approaches, not only have men acquired this power through their considerable population growth and activities, but there are unforeseen and important changes in the atmosphere, plants, animals, and the relations between these various orders.

Changes are occurring at a pace that is beyond the capacity of our current scientific disciplines and policy instruments to evaluate and correct, that thwarts attempts by political and economic institutions *born in a different and more fragmented world to adapt to and overcome new situations, and that is of serious concern to the many citizens who want to put these concerns on the political agenda.*
We have been careful to base our recommendations on the realities of the current institutions, on what can and must be accomplished today. However, ***for future generations to have the opportunity to choose between several options, our current generation must act now, nationally and internationally*** *."*

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The Urban Challenge?

*"**By the end of this century, nearly half of humanity will live in cities, and the world of the twenty-first century will be largely an urban world. It took only 65 years for the urban population of the developing world to grow tenfold, from some 100 million urban dwellers in 1920 to 1 billion today**. In 1940, one in 100 people lived in a city with a population of 1 million or more; In 1980, one in 10 inhabitants lived in such a metropolis. Between 1985 and the year 2000, cities in the developing world will have an increase of some 750 million inhabitants, which means that developing countries will need to increase their capacity to build and manage their infrastructure, services and urban housing by 75 per cent over the next few years. if they simply want to maintain the present conditions, which are very inadequate in many cases. »*

"Few municipal authorities in developing countries have the powers, resources and qualified personnel to provide the growing number of urban dwellers with the land, services and amenities that human beings need for a decent life: clean water, sanitation, sanitation facilities schools and transportation. Hence the proliferation of wild habitats with primitive settlements, where promiscuity reigns and the risk of diseases due to lack of hygiene. There is also no shortage of problems in many urban centres in the industrialised world, where we can observe the dilapidation of infrastructure, the deterioration of the environment, the ruin of old neighbourhoods or peripheral neighbourhoods. However, because most industrialized countries have the means and resources to solve these problems, the solution exists and ultimately lies in a political and social choice. This is a very different situation from that in developing countries, which are really facing an urban crisis of the utmost gravity. »

"Governments will need to develop clear land use strategies to guide the urbanization process, alleviating pressure on larger urban centres to develop smaller towns and villages that will be more closely integrated into their rural hinterland. Such a policy will require the reconsideration and modification of a number of other sectoral measures – in the areas of taxation, food pricing, transport, health, industrialization – which run counter to the objectives of the new land use strategy. »

"Good municipal governance requires the decentralization of funds, political power and personnel to local authorities, which are best placed to know and provide for local needs. The sustainable development of cities, however, will depend on closer cooperation with the urban poor, who form the majority and are the real builders of the city. This will mobilize the skills, strengths and resources of citizens' groups that are part of what can be called the "informal sector". Much can be done by implementing housing projects in which a plot of land with services is made available to the inhabitants, who also receive assistance in the construction of a house of satisfactory quality. »

1989 Fall of the Berlin Wall and gradual collapse of the Soviet productivist and
(Russian Federation and "Buffer States" annexed as a result of the
of the Second World War). A year of dissolution of the plans to enter into
the sphere of the "liberal" economy: East Germany, Romania, Hungary,
Czechoslovakia, Poland, Bulgaria, Albania, Yugoslavia, Lithuania.
Dismantling of the "Berlin Wall" built in 1961 by the East German regime
supported at the time by the USSR. The "Wall" was accompanied by a No-man's-land
electrified and mined to prevent the escape from the "East Block" to the "West Block**".**



1990 - The turning point of the Internet
1990 - Reunification of German territory.
1991 - (1925) Death Jean Tinguely Sculptor "New Realism" Art in Motion
Interpretation of productivism. The Cyclop, a fantastic paradise...






1989 - **Web** -
CERN researcher Tim Berners-Lee invents the Web, a project originally intended to allow scientists from universities and institutes around the world to exchange information instantly. In 1990 he developed the first operational server, in 1991 the first WWW software that runs on an Internet newsgroup, and in 1993 the first online browser.
The basic idea of the Word Wide Web is to combine the technologies of personal computers, computer networks and hypertext "**to create a free tool that can be used by everyone. A global, powerful, easy-to-use information system so that no one can become the sole owner. »**

1990 - **Alter-globalism**
Source G. Massiah –
"... Alter-globalization is a historical movement of emancipation that extends and renews *previous historical movements; the workers' movement, the peasant movement, the decolonization movement, etc. This movement began at the end of the 1970s with a new phase of capitalist globalization, that of neoliberalism and financialization. It is the anti-systemic movement. It has already gone through several phases: initially, against the imposition of structural adjustment plans and the debt weapon; then, the phase of contestation of the international institutions of financialization based on the global mobilizations against the G7 and the G20, the IMF, the World Bank, and the WTO; The third phase, which began in 2000, was the World Social Forums.*
Alter-globalism marks the evolution of the fields of thought and analysis of the global context, ***it elaborates a "New World Social Contract" for the establishment of another form of Humanity on the planet.***
« … The approach in political ecology and the climate issue call for a redefinition of the philosophical foundations of social transformation and emancipation.
"The strategic orientation of access to rights and obligations for all to benefit from them concerns: economic, social and cultural rights, intended to fight against social and discriminatory inequalities, ecological rights which directly concern ***the preservation of living conditions on the planet, i.e. the issue of safeguarding the human species or its finitude, and civil and political rights intended to guarantee individual and social freedoms. Thus****:*
- The right and obligation for each people to choose its own development and Multilateralist reports
- The reconstitution and constitution of solidarity (climate migrants, migrants displaced by wars...) ;
- The right and obligation of the planet "Pachamama" to preserve the whole of the and fragile renewable resources (water, energy, wind, biodiversity, climate, seeds...) and protecting depleted fossil resources;
- Land law, towards an evolution into (Common) rights of use, right of protection heritage (cultural, geographical, biodiversity, etc.), and in connection with a because of the notion of "Frontier / wall rejection".



1991 - Dissolution of the Union of Soviet Socialist Republics
1991 - The South African state ends the "Aparteid" regime, a racial segregation that applied to life, political, social, cultural, economic.
1992 - **1st Earth Summit** and establishment of the Agenda 21 action programme Rio de Janeiro / UN
1993 - Opening of the Web to the public domain - Tim Berners-Lee / CERN laboratory
1995 - (1910) Death of Pierre Schaeffer – Composer of experimental music electronic "concrete"
1995 - Assassination of Yitzhak Rabin, signatory of the Oslo Accords, by an Israeli citizen
1990 - Urban Alternatives

The Municipality of Hanover is embarking on a project for the overall recomposition of the urban area, which extends from the urban centre, which is the object of increasing disaffection and the withdrawal of its population, to the borders of rural areas free of urban pressure.
The objective assigned to the agglomeration project is to reverse the direction of the dynamics that lead the population to invest in the housing estates of individual houses, projected on the towns and villages of the agricultural periphery, by reinventing a city with a living environment more attractive than that of the peripheries: economically, ecologically, culturally, sportingly...
A project for a global city with short distances and short commuting times for living and working. A project that recomposes the relationship between town and country by requalifying the specificities of the two territories, in a new way of living them while reducing the ecological footprints made during the productivist expansion.
A project designed with a deadline: that of the 2000 Universal Exhibition.

1990 - 2000 - Berlin - Hannover - Freiburg - Berlin - Wageningen - Tübingen - Hamburg -Gelsenkirchen...

The Länder and the municipalities of German cities are competing with each other in terms of eco-urbanism and bioclimatic architecture. The approaches are carried out in collaboration between local institutions / associative movements / research structures.
Although they address distinct paths dictated by particular contexts, they all focus on the **creation of alternative living environments that link: the enhancement of the daily living environment through invention in the heart of neighborhoods, and various forms of awareness-action to the preservation of the physical and ecosystem resources of a Territory.**
This will be the innovative force of this movement which accompanies and integrates technical advances in the service of the global project (Renewable Energies - Economical Water Management Systems - Bio-sourced Materials in the Building - Passive Constructions - Protection of Biotopes and Redeployment of Biodiversity - Short Circuit Economy - Bio-culture...
The initiatives are carried out by populations wishing to **change collective life through the commitment of as many people as possible.**
They are strongly inspired by those developed since the 1970s in **the "walled-in" city of West Berlin**, where marginal youth (Conscientious Objectors "in residence"), free of initiative, within the old central districts still standing, with the remaining semi-abandoned populations, **have invented a living environment for themselves: sober, playful, ecological, friendly, experimental**, in the heart of a city with no future (a bastion city of the "Cold War").

2000 - (2005) "The Intifada"

"Return Marches" Mass protest on the "Gaza Strip" (with kites) demanding the return of the Palestinians to their land and the end of the economic blockade decreed by the Israeli government. In response once again: The Israeli army's fire with live ammunition, and civilian deaths, on the Palestinian side.

Genocides 20th century... *(the most devastating!)*
- Namibian ethnic groups - 85 thousand victims - **1904** +... (Germany - Second Reich),
- Armenian people – 1.8 million victims – **1915** +... (Turkey),
- Jewish communities and other minorities in Europe – 11 million victims – **1940** +... (Germany - Third Reich)
- Chinese people - 20 million victims - **1937** +... (Empire of Japan)

- Cambodian people – 1.7 million victims – **1975** +... (Khmer Rouge regime),
- Tutsi ethnic group – 1 million victims – **1994** (Utu ethnic group – Rwanda)
- Yazidi ethnic group and Iraqi Christians - **2014** (Islamic State troops).
- …



Chernobyl (Ukraine) photos 2019

Ecocides 20th century ...
"Ecocide is an act of destruction or significant damage to an ecosystem linked to an anthropogenic factor, in particular through the excessive exploitation of the ecosystem in order to support other processes or systems (Ecophagy)"
-Wikipedia-

After the destruction of nature carried out over time by Mesopotamian societies, the Greeks and Romans in the Mediterranean Basin, the Anazis of Chiacos in New Mexico, the Mayans, the Kmers, the Pascuans on the South Pacific and many others, **the modern assault on nature** is characterized by:

- **The erasure** of the cities of Hiroshima and Nagasaki and their civilian populations, and the pursuit of the sophistication of armaments (multiple atomic tests on the militarized deserts of Central Asia, the Sahara, Nevada, the Pacific Islands...)
- **Nuclear armament**: The nine nuclear-weapon states have a total of nearly 23,000 weapons (active, reserve or inactive nuclear warheads), 8,400 are operational and 2,000 are kept on alert by the USA and Russia. The countries with nuclear arsenals are: the USA, China, Russia, Great Britain, France, India, Pakistan, Israel, North Korea.
- **The drying up and pollution** of the Aral Sea by intensive cotton cultivation,
- **The deforestation** of Vietnam forests by Agent Orange under a false pretext of war (between 1961 and 1971: 40% of arable land contaminated, and 23% forest area lost)
- **The increasing deforestation** of the Amazon rainforest for the expansion of soybean crops or in Central America for highly polluting banana crops. Deforestation in Indonesia and Malaysia of the tropical forest and soils for a development of palm oil production
- **The depletion** of the fishery resource due to industrial fishing accessing the ocean shoals and valleys. Since 1990, the volume of fishing has decreased, and today only 10% of large fish communities remain in the ocean.
- **Periurbanization and Artificialization** of Territories in Urban Centers.
-Etc...

Jimmy Carter 1979: ***"Our identity is no longer defined by what we achieve but by what we possess****... Consuming no longer satisfies our search for meaning, we have learned that the accumulation of material goods cannot fill* ***our meaningless existences."***



2013 atmospheric carbon concentration: 400 ppm

Souvenir sequels: the 21st century, adulthood?

The "Greenhouse Effect" Issue.
The objective: the maintenance of the +1°5 ceiling scenario for global climate warming between 1990 and 2050 and a return to a stabilized climate over the centuries to come, **or** the failure and the beginning of an uncontrolled process of deterioration of the planet and living things?

The 2000s

2001 - Destruction of two twin towers of the World Trade Center in Manhattan by the Sunni Arab terrorist movement Alkaida: three thousand civilian dead

2004 - Tsunami on the coast of the Indian Ocean: 220,000 dead, and one million Refugees, Anka populations.

2005 - U.S. household debt rose from 60 percent of annual income in 1980 to 130% in 2005

2006 - Creation of the me Too movement, against violence against women

2007 - 1% of the U.S. population controls 34% of the country's wealth, while 50% of the country's wealth has only 2.5%. **Half of the world's population owns 1% of the world's assets world, while the richest 1% holds 40% (** the economic power and policy that they hold allows for continued growth in their holdings).

2007 - **The number of people living in urban areas exceeds for the first time that of people living in rural areas**. In recent years, the population of cities has increased by an average of 70 million per year**. By 2030, 60% of the world's population will live in cities**. The GDP of Tokyo (world city) is double the GDP of Brazil.
On a global scale, **a third of urban dwellers live in a slum,** i.e. nearly one billion people (more than one in six inhabitants in the world).

2007 Launch of the "Smartphone": miniature portable product, wallet format, combining: Telephone; Computer with applications provided by software in free access with web access and data storage; Camera, and photo library...

2008 Global Financial Crisis
In the USA, in the years preceding the event: the overproduction of housing encouraged poor households to go into debt to buy a single-family house on the large urban outskirts. To do this, they borrow and mortgage their property, which gradually builds a pyramid of loans with no monetary value that collapses and turns to the buyers, who are evicted from their homes and returned to a new level of poverty.

2010 – Refugees - UN-UNHCR estimates 15.4 million refugees in 2010 having crossed a border to flee wars and persecution, and nearly **150 million "climate migrants" per year**, who would join the previous ones if climate change were not controlled in accordance with the IPCC's 2050 scenario (ceiling+1°5)

2010 ... Increased manifestations resulting from the increasing deterioration of the Effect de Serre: Melting of glaciers on mountain ranges and poles; Thawing of permafrost over the Siberian and Tibetan Arctic regions... Accentuation of typhoons and tornadoes; Alternating torrential rains and droughts on the continents; Decrease in ambient biodiversity; Rising sea levels ... And the growth of carbon emissions generated by the globalized model of neo-capitalism, which dreams of exporting itself to the cosmic Universe

2011 - Peaceful demonstrations in Syrian cities against the dictatorial regime in place.

2014 - One billion computers connected worldwide.

2014 - (2018) Establishment of a Caliphate of Salafist ideology and declaration of Jihad on the territories of the states of Iraq and Syria. Responsible for numerous massacres and destruction, he is being prosecuted by the UN on the grounds of "Ethnic and religious cleansing" and "Crimes against humanity" - The leading group "Islamic State" was founded in 2006

2015 - January - : Salafist attacks in Paris at the headquarters of Charlie Hebdo, in Montrouge, Dammartin en Goële and hostage-taking at the Hyper Cacher store at the Porte de la Madeleine Vincennes, Paris .

2015 - November - Attack perpetrated in Paris by the "Islamic State" branch at the "Bataclan" and on the streets of the 10th and 11th Arr - 130 victims and 415 injured -

2017 – (1927) Death of Pierre Henry - Electro-acoustic music composer
Manifesto: "Music must tend towards the pure organic. From this point of view it is below poetry or painting. It has not yet dared to destroy itself in order to live. To live stronger as any living phenomenon does."

2019 – End of the "Islamic State Caliphate" proclaimed in 2014 and elimination of the leader of the "Islamic State" organization.



Photo of Aleppo city in 2016

2019 - 450 reactors represent a capacity of 400 GW, or 10.6% of production
electric world. The argument put forward to maintain or develop this energy production process, which is very high risk for the population, is the low carbon equivalent emissions generated by the sector to produce electricity. An argument that tries to hide the dangerousness of the process and the alternative offered by renewable energies, which are safe for humans and the climate, and without a significant drain on fossil resources.

2019 - COP 25 Santiago - International Climate Conferences, a process initiated
by the UN in 1992.
The annual conferences that have followed one another since the beginning try to lead nations to "limit the consequences of climate change" to limit global warming to no more than 2°C. IPCC studies released this year show that maintaining the rate of carbon emissions at the current level leads to global warming of more than 3°C in 2050

2019 - Growing mobilization of the population on Climate to the rulers
of "liberal" countries and the multiplication of civil disobedience actions (Europe
Western and North America)

2019 - Popular protests against national regimes practicing the liberalization of
their economy combined with a reduction in public services and an increase in the cost of daily life: Sudan, Chile, France, Poland, Ecuador, Argentina, Italy...

2021 - COP21 - Commitment of all Nations (195) to a global reduction in
greenhouse gas emissions, with the aim of limiting global warming
to a degree of five in 2050.

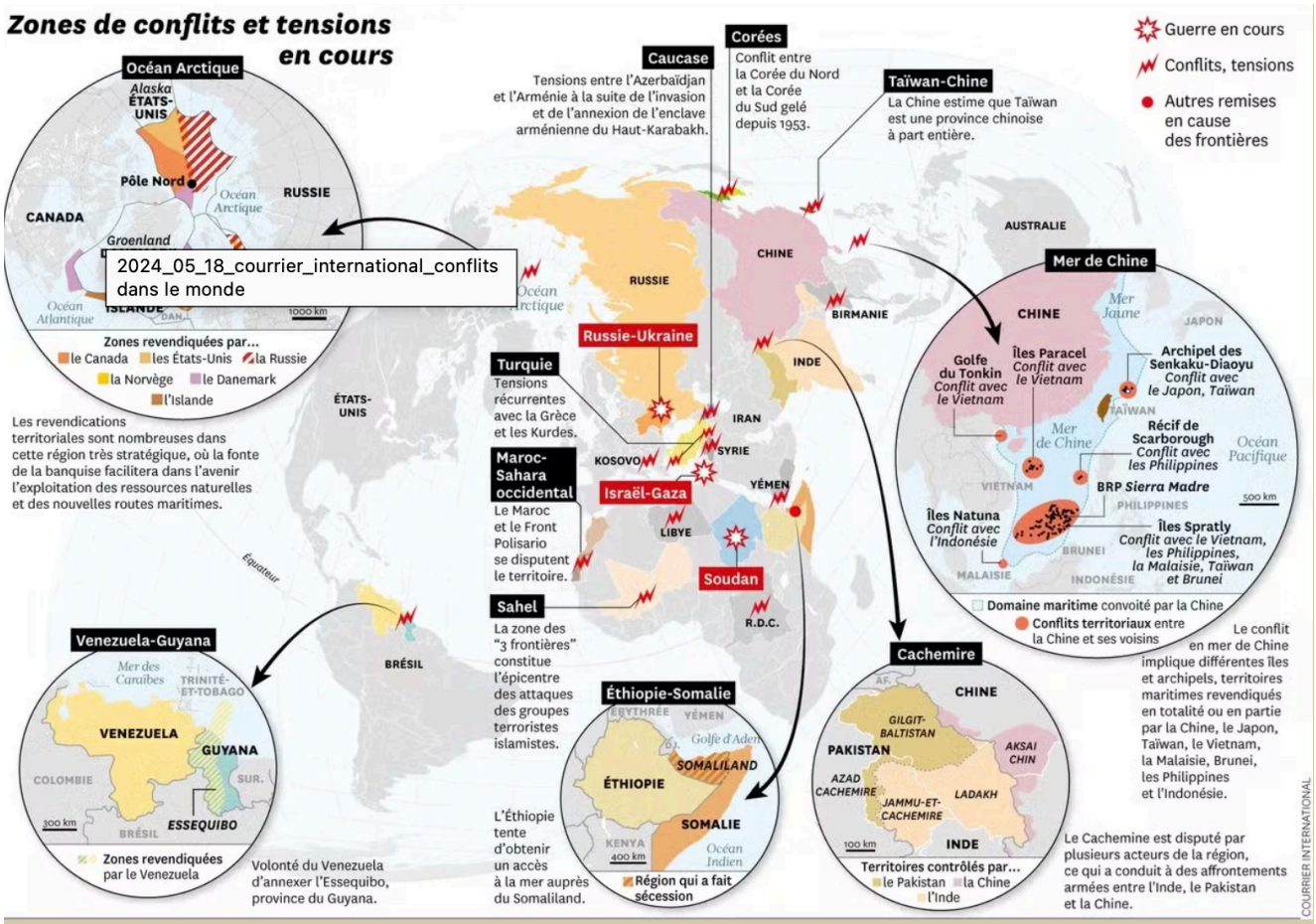
2022 - Start of the "invasive" Ukraine War, initiated by the Russian Republic
with a view to annexing a territory emerged from its economic and political yoke.

2023- 24- 25 - Gaza Territory -
1987 First intifada, 2000 second intifada, Palestinian uprisings against Israeli colonialism. Military repression. Mass imprisonments.
2007 beginning of the blockade of Gaza by Israel, 2018 Great March of Return of the inhabitants of Gaza... 2023,2024,2025 Ethnic cleansing in the West Bank + Genocide in Gaza: Destruction of the enclosed territory of Gaza for direct attack on the lives of the Palestinian civilian population who are inhabited, imprisoned, malnourished and homeless (In 15 months between 46,000 Palestinians and 60,000 dead provisionally counted and countless wounded including many children).
ICC international arrest warrants against the current Israeli rulers & Conviction of the State of Israel for "war crimes" by the International Court of Justice (UN) in a conflict between them and Palestinian armed movements.



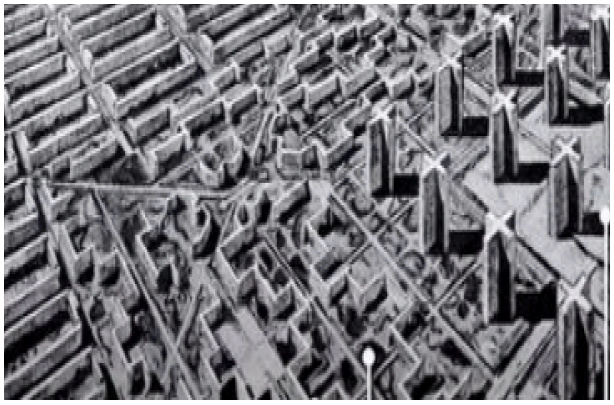
+More than 60% of the buildings have been destroyed, including nearly 250,000 homes. The devastated territory is covered with 5,000,0000 tons of rubble. Clearing could take more than 2 decades and cost up to $1.2 billion excluding destroyed infrastructure. Not to mention the cost of rebuilding infrastructure and demining. The total cost of reconstruction is between $50 billion and $80 billion. Nearly 70% of uncultivable agricultural land.
In 2025, the President of the United States (D. Trump) plans to deport-deport the 2,000,000 Palestinians currently in Gaza's grip, to "build a vast marina resort at this location on the seafront...
Thus denying an international law that ensures in these circumstances the right to self-determination of the Palestinians over their future, repeatedly recalled by the UN: As a serious violation of international humanitarian law and the law of war. The illegality of such an act is clearly established by the International Criminal Court: "**The forcible transfer of populations within or outside the occupied territory of all or part of the population of this territory is a crime against humanity. As well as a war crime, articles 7 and 8.** »

Extermination-domination for 10 millennia...



es conflits en 2024, carte publiée dans Courrier international du 18 mai 2024

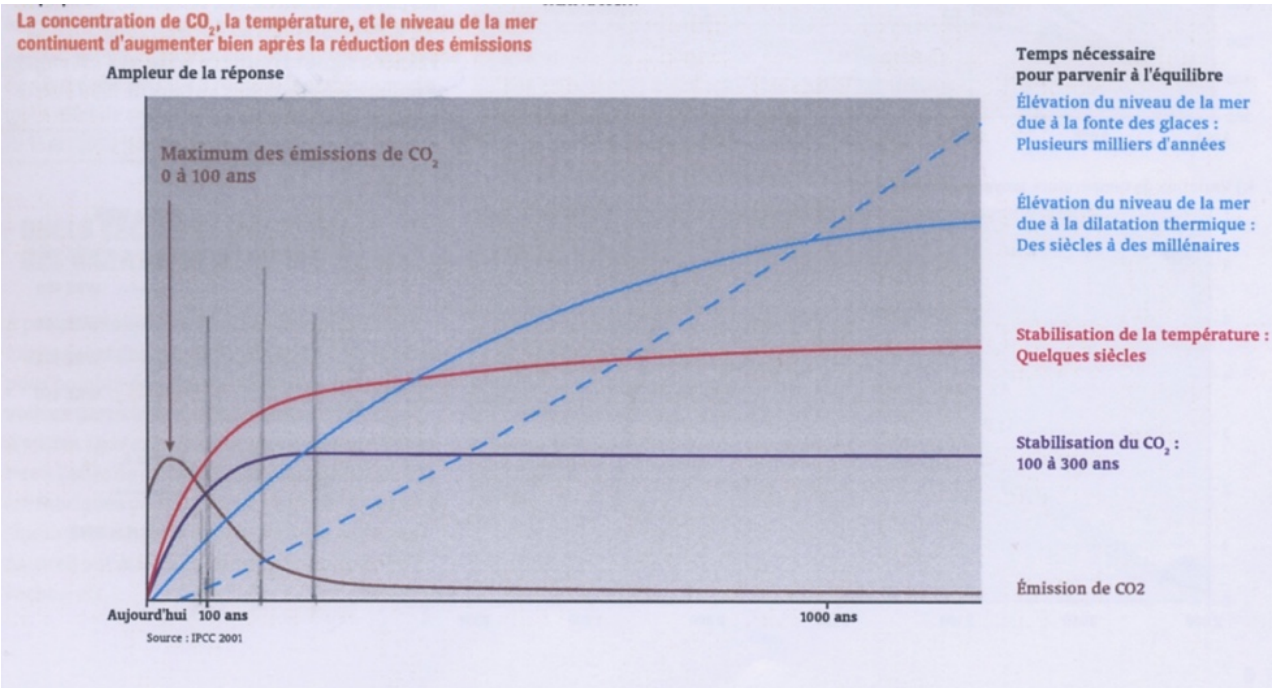
II.2 Appropriate… The World Societal System - State of a Civilization in profits and degradations

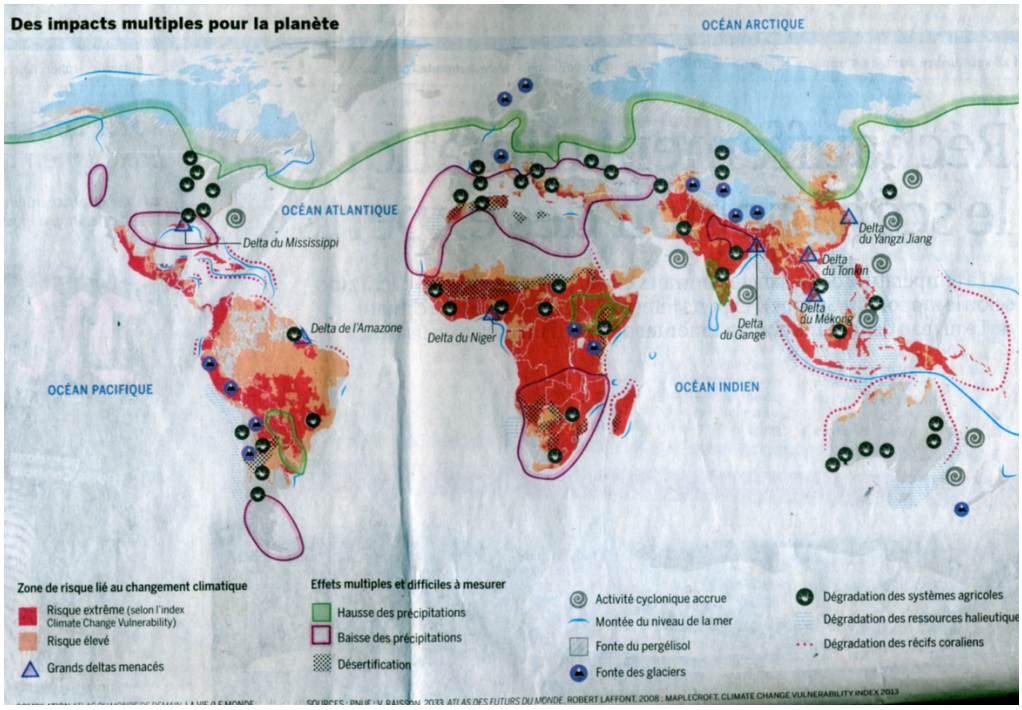


01 – Problems

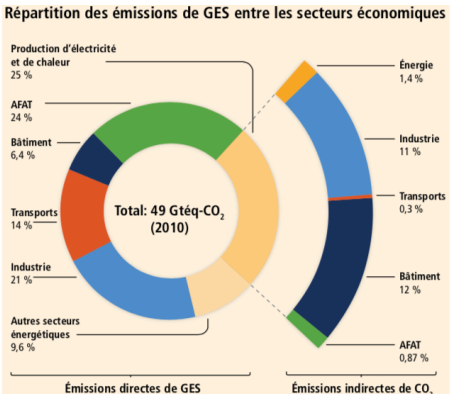
The IPCC -- A mission of the world's political and economic states, assigned to a group of international experts, which consists of studying and simulating the variability of the effects on the planetary climate, under scenarios compatible with forms of development of the Anthropocapitalist economic model... The output of the model is not in the assigned mission.

Excerpts from the **IPCC Report 2018**)





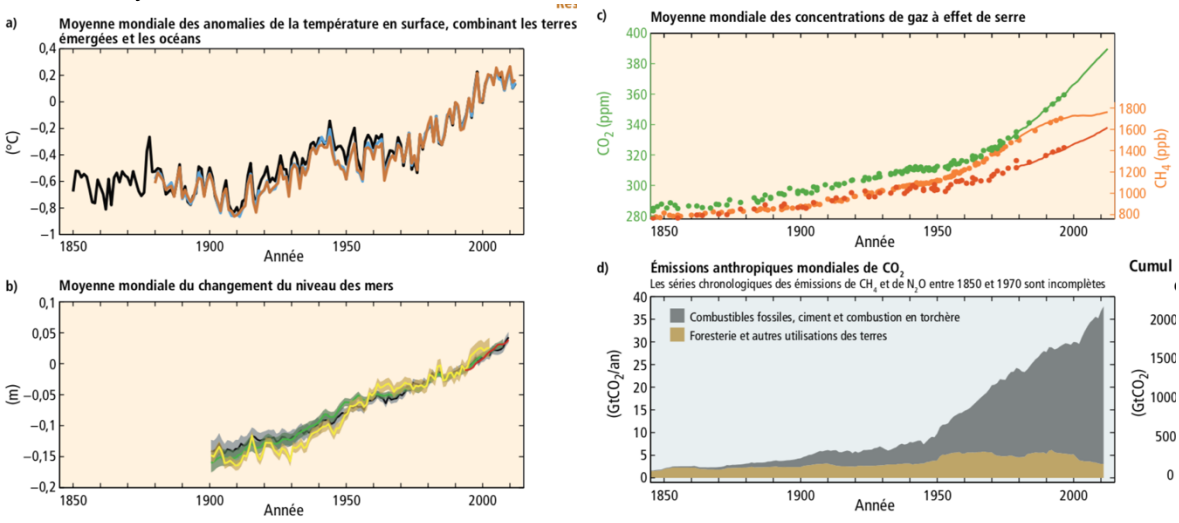
The causes of climate change *(The first IPCC report was published in 1990)*
"Anthropogenic greenhouse gas emissions have increased since pre-industrial times mainly due to economic and population growth (*and the progressive degradation by human societies of terrestrial and marine biodiversity - ChB****). They were higher than ever between 2000 and 2010. Past emissions have raised atmospheric concentrations of carbon dioxide, methane, and nitrous oxide to levels not seen in at least 800,000 years, resulting in net energy uptake by the climate system. Their effects, combined with those of other anthropogenic factors, have been detected throughout the climate system and are extremely likely to have been the main cause of the warming observed since the mid-twentieth century. If they continue, greenhouse gas emissions will cause further warming and a* ***lasting change in all components of the system***
which will increase the likelihood of severe, widespread and irreversible consequences for people and ecosystems*.*
To limit the magnitude of climate change, greenhouse gas emissions would have to be significantly and sustainably reduced, which, together with adaptation, is likely to limit the risks associated with these changes. Cumulative carbon emissions will largely determine the global average of surface warming towards the end of the twenty-first century and beyond. Greenhouse ***gas emission projections vary over a wide range depending on socio-economic development and climate policy.***



"The determinants of anthropogenic GHG emissions are mainly population size, economic activity, lifestyle, energy consumption, land use, technology and climate policy.
Representative ***Concentration Pathways*** *(RCPs), used to develop projections based on these factors, describe four different development pathways for the twenty-first century for GHG emissions and atmospheric concentrations, air pollutant emissions and land use.*
Climate change will amplify existing risks and create new ones for natural and human systems. These risks, which are not evenly distributed, tend to be greater for disadvantaged populations and

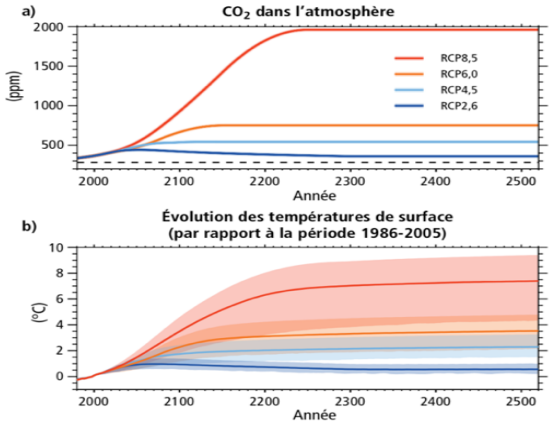
communities in all countries, regardless of their level of development.
When it comes to mitigation, there are many options that can limit warming to less than 2°C above pre-industrial levels. This would require ***significant reductions in emissions over the next few decades and close to zero emissions of carbon dioxide and other persistent greenhouse gases by the end of the century.***
Many aspects of climate change and its impacts will continue ***to occur for centuries to come****, even if anthropogenic greenhouse gas emissions are halted. The risks of abrupt or* ***irreversible*** *changes increase as warming increases.*
The warming of the climate system is unequivocal, and since the 1950s, many of the ***changes we have seen have been unprecedented in*** *decades, even* ***centuries or millennia****. The atmosphere and oceans have warmed, snow and ice cover has decreased, and sea levels have risen.*

Key features of the four SRES canvases and scenario families



Emission scenarios

Four different narrative frameworks were developed to describe the relationships between the driving forces of the emissions and their evolution and to add context for the quantification of the scenarios. The scenarios cover a wide range of key drivers, demographic, economic and technological, greenhouse gas emissions, and sulfur emissions.



"For each framework, several different scenarios were developed using different modelling approaches to investigate the range of results from a series of models based on similar assumptions about the driving forces. Six templates were used, which represent integrated evaluation frameworks in the literature.
Each canvas assumes a distinct direction of future development, so that the four canvases differ in an increasingly irreversible way*. Together, they describe divergent futures that encompass a significant portion of the underlying uncertainties in the main driving forces. They cover a wide range of key "future" characteristics such as demographic change, economic development and technological change.*

The A1 ***Canvas and Scenario Family*** *describe a future world in which growth*
The economic growth will be very rapid, the world's population will peak in the middle of the century and then decline, and new and more efficient technologies will be introduced rapidly. The main

underlying themes are convergence between regions, capacity-building and increased cultural and social interactions, with a substantial reduction in regional differences in per capita income. The A1 family of scenarios is divided into three groups that describe possible directions of technological evolution in the energy system. The three A1 groups are distinguished by their technological focus: high fossil fuel intensity.

- *The A2 Canvas and Scenario Family describe a very heterogeneous world. The underlying theme is self-sufficiency and the preservation of local identities. Fertility patterns across regions are converging very slowly, resulting in a continuous increase in the world's population. Economic development is predominantly regional in nature, and per capita economic growth and technological change are more fragmented and slower than in other frameworks.*
- ***The B1 framework and family of scenarios describe a converging world with the same world population peaking in the middle of the century and then declining, as in the A1 framework, but with rapid changes in economic structures towards a service and information economy, with reductions in material intensity and the introduction of clean and resource-efficient technologies. The focus is on global solutions geared towards economic, social and environmental sustainability, including greater equity, but without additional initiatives to manage the climate.***
- *The B2 Canvas and Scenario Family describe a world where the focus is on local solutions in the direction of economic, social and environmental sustainability. The world's population is growing steadily but at a slower rate than in A2, there are intermediate levels of economic development, and technological change is slower and more diverse than in the B1 and A1 scenarios and families. The scenarios are also geared towards protection.*
- ***Working hypotheses - Excerpts*** *(Editor's note: The edifying commitments of the mandate given to the IPCC by national governments and the International Financial Market). :*

  *"The report demonstrates that **the main driving forces behind future greenhouse gas trajectories will continue to be**: **demographic change**, **economic** and social development, and the pace and direction of **technological change**.*

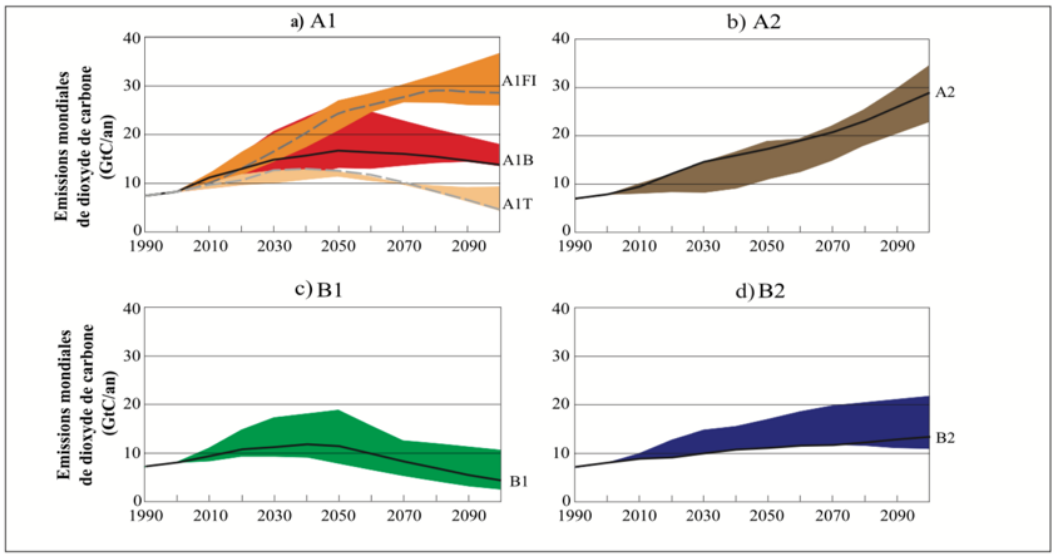
  ***All the scenarios describe futures that will be more prosperous than today**. The scenarios cover a wide range of future levels of economic activity, with gross world product 10 times higher in 2100 than today in the lowest, and 26 times higher in the highest.*

  *A reduction in **income** differences between regions of the world is assumed in many of the SRES scenarios. Two of the scenario families, A1 and B1, explicitly explore options that gradually reduce existing income gaps in relative terms.*

  *"Technology is a driving force at least as important as demographic change and economic development. They are forces linked to each other. In the A1 family of scenarios, scenarios where demographic change and socio-economic development are common driving forces, but where assumptions differ on technology and resource dynamics, illustrate the possibility of highly divergent paths for **energy system** evolution and land use patterns.*

  *"In most scenarios, the global forest area continues to decline for a few decades, mainly due to population and income growth. This current trend is then reversed, with the largest increase in area for 2100 in the B1 and B2 scenario families compared to 1990. The related change in **agricultural land** use is mainly due to new food demands and demographic and dietary changes. Many other social, economic, institutional and technological factors also influence the relative shares of agricultural land, forests and other types of land use.*

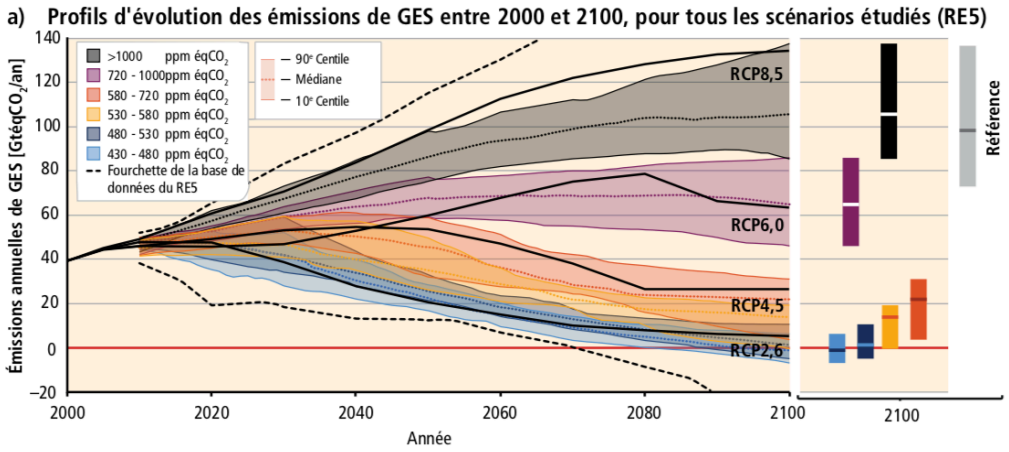
  Figure 3 shows in more detail the ranges of total CO2 emissions for the six groups of scenarios.



Total annual global CO2 emissions from all sources (energy, industry and land-use change) between 1990 and 2100, in gigatonnes of carbon (GtC/year) for families and six groups of scenarios. The 40 SRES scenarios are presented in the four families (A1, A2, B1 and B2) and in six groups of scenarios: A1FI fossil fuel intensive (including coal-intensive scenarios and oil and gas intensive scenarios), A1T predominantly non-fossil fuels, A1B in equilibrium in Figure 3a), A2 in Figure 3(b), B1 in Figure 3(c) and B2 in Figure 3(d). Each coloured band represents the range of harmonized and non-harmonized scenarios in each group. For each of the six scenario groups, an illustration scenario is provided, including the four marker illustration scenarios (A1, A2, B1, B2, in solid lines) and two illustration scenarios for A1FI and A1T (dashed).

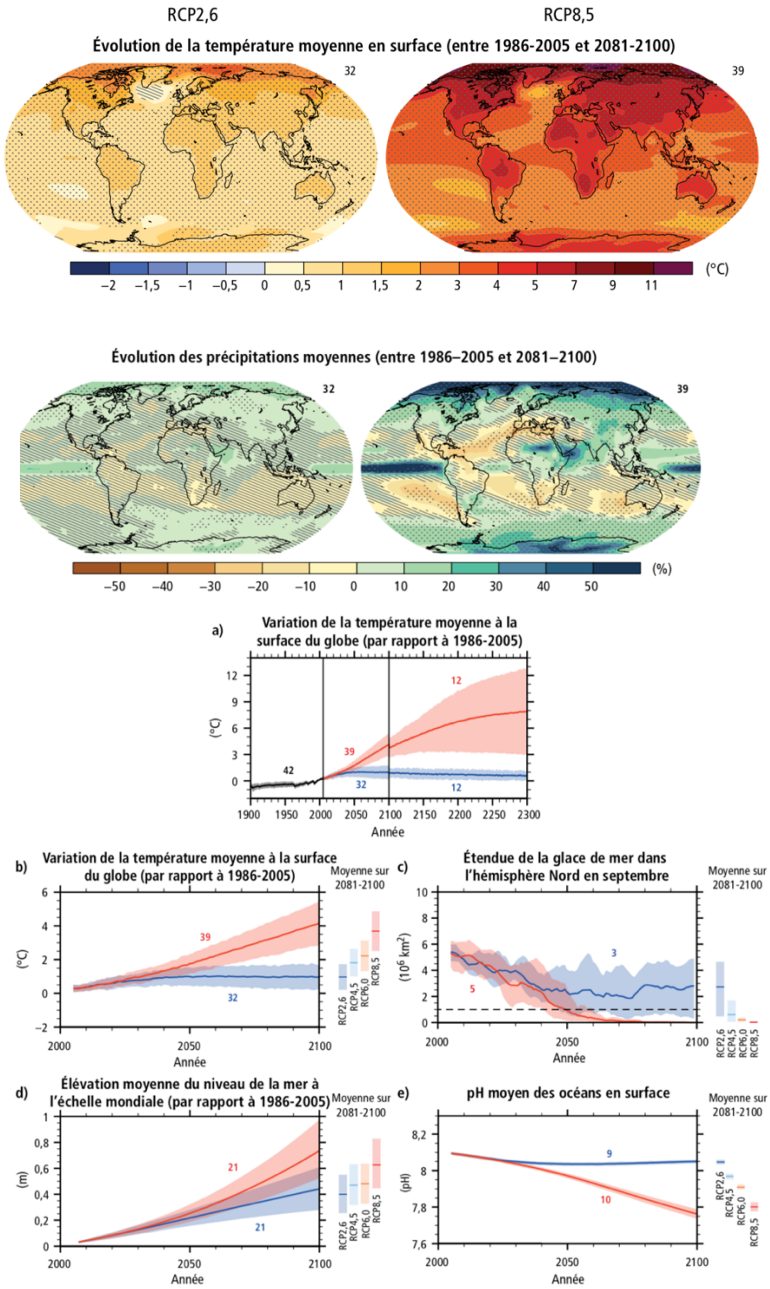
"By 2100 the world will have undergone changes that are difficult to imagine, as difficult as the changes that occurred in the 100 years between us and the end of the nineteenth century were to be imagined. Each canvas assumes a distinct direction of future development, so that the four canvases differ in an increasingly irreversible way. Together, they describe divergent futures that encompass a significant portion of the underlying uncertainties in the main driving forces. They cover a wide range of key "future" characteristics such as demographic change, economic development and technological change. For this reason, their plausibility or feasibility should not be considered solely on the basis of an extrapolation of current economic, technological and social trends.
"Balance" means that there is no over-reliance on any particular energy source, assuming that similar rates of improvement apply to all energy supply and end-use technologies.

Climate Change, Risks and Consequences: Perspectives
In all the profiles analysed, with the exception of RCP2.6, warming will continue after 2100.



***"Keeping global warming below 2°C above pre-industrial levels** in the twenty-first century will be particularly difficult **if no additional mitigation measures are taken before 2030**. Between 2030 and 2050, emission reductions and the use of low-carbon energy supply will need to be significantly accelerated, and the use of carbon dioxide removal technologies will need to be increased in the long term; This will result in major transformations and significant long-term economic consequences.*
The estimated global GHG emission levels for 2020 based on the Cancún commitments do not coincide with cost-effective long-term mitigation pathways, for which it is at least as likely as not that warming will be limited to less than 2 °C above pre-industrial levels, however, the possibility of achieving this goal is not excluded.
Surface temperatures will remain roughly constant, but at high levels for several centuries after a complete halt in net anthropogenic CO2 emissions."

A large part of anthropogenic global warming linked to CO2 emissions is irreversible over periods of several centuries to several millennia,
Except in the case of a considerable net elimination of atmospheric CO2 over the three decades... Is capitalist civilization then capable of giving way? Do you have to get out of the rail by pushing the switch?



Global mean sea level rise (relative to 1986-2005)

"Ocean acidification will continue for centuries if CO2 emissions continue. It will have a significant impact on marine ecosystems that will be further exacerbated by increased temperature extremes. Global mean sea level rise will continue for many centuries after 2100. The few analyses that extend beyond 2100 indicate that relative to pre-industrial levels, mean sea level rise in 2300 is expected to be less than 1 m for greenhouse gas concentrations peaking before decreasing and remaining below 500 ppm eq. CO2,

.....

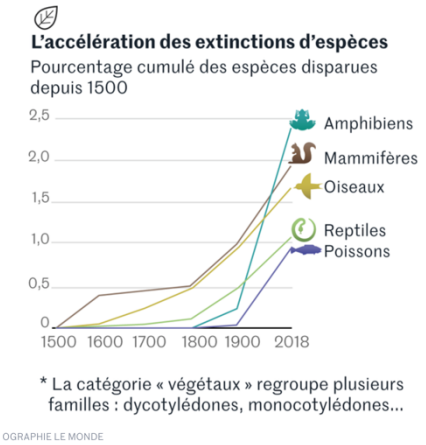
The IPBES report Excerpts

Intergovernmental Science-Policy Platform

on Biodiversity and Ecosystem Services

"State of the world's biodiversity in 2019"

Excerpts from the IPBES report -





"Three-quarters of the terrestrial environment and about two-thirds of the marine environment have been significantly altered by 'human action'.

The loss of biodiversity is 1000 times higher than the natural rate of extinction of animals. We are therefore going through the sixth mass extinction of species*, the latest being that of the dinosaurs, 65 million years ago. But* ***the current crisis is 100 times faster than the last one****, and* ***exclusively linked to "human activities".***
A quarter of the 100,000 species assessed are already threatened with extinction, under pressure from agriculture, fishing, hunting, or climate change.
From a pragmatic point of view, ***biodiversity provides us with food, drinking water, air, medicine and a large part of our energy. Its decline, linked to climate change, has direct consequences on everyone****, which are already being felt and will be drastically accentuated in the coming years, when many populations, especially Asians, will be displaced because of rising seas.*

"URBANIZATION AND LAND ARTIFICIALIZATION, A CAUSE OF RAPID BIODIVERSITY LOSS
– Urban areas have more than doubled since 1992. They are increasing faster than the Population.
– More than 500,000 terrestrial species now have insufficient habitat for their survival in unless their habitat is restored.
– There are more than 2,500 conflicts around the world over fossil fuels, water, food and land.

"AGRICULTURE, OFTEN SYNONYMOUS WITH ENVIRONMENTAL DISASTER
– ***More than a third of the world's land surface and nearly 75% of freshwater resources are now used for agriculture or*** *livestock. 12% of the world's land surface, not covered by ice, is used for agricultural production, and 25% for pasture.*
*– The value of agricultural production has increased by about 300% since 1970, but land degradation has reduced the productivity of the world's entire land surface by 23%. In addition****, 75% of cultivated plants face the risk of pollinators disappearing.***
– In agriculture, about 10% of all domesticated mammal breeds had disappeared in 2016 due to the standardization of livestock farming, the abandonment of less productive varieties. It is a loss of genetic diversity that makes livestock less resilient to diseases, and generally less adapted to local conditions. This pace is accelerating.
– ***100 million hectares of tropical forests were lost between 1980 and 2000****, mainly due to the increase in cattle ranching in Latin America (about 42 million hectares) and plantations in Southeast Asia (about 7.5 million hectares, 80% of which were used for palm oil). About 25% of greenhouse gas emissions are caused by this land clearing.*
– 68% of foreign capital that goes to the soybean and Amazonian beef sectors passes through tax havens.
– 29% of farmers practice ***sustainable agriculture worldwide, which represents 9% of all agricultural land*** *.*

"CLIMATE CHANGE AS A CATALYST FOR BIODIVERSITY LOSS
– ***Climate change could be the cause of the threat of extinction in nearly half of land mammals and nearly a quarter of birds.***
– The number of invasive alien species has increased by about 70% since 1970 on average, both because of the increase in trade (multiplied by 10 over the period) and global warming.
– Even with global warming of 1.5 to 2 degrees, the majority of terrestrial species' ranges are expected to shrink significantly.

– We have warmed the planet by 1.1°C since the pre-industrial era. Sea levels have risen by 21 cm since 1900 (3 mm per year now). However, ***the natural environments that are the oceans, soils and forests, absorb about 60% of anthropogenic greenhouse gas emissions.***
– ***Emissions have doubled since 1980****, increasing the average temperature of the planet by at least 0.7 degrees.*
– 8% of total emissions come from tourism (transport and food), which is increasing very rapidly.

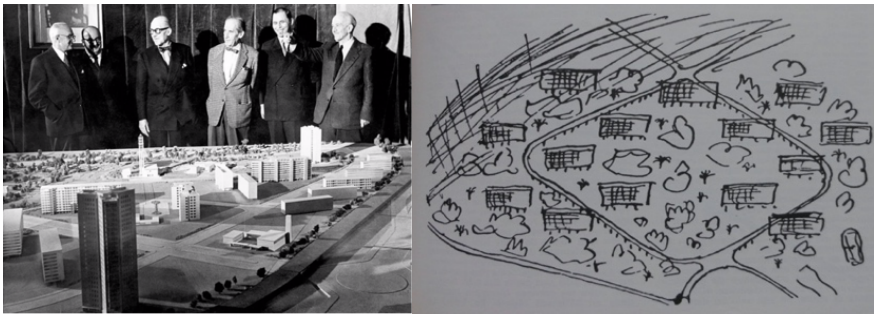
"THE EXTRACTION OF FOREST AND MINING RESOURCES, A PHENOMENON THAT IS ACCELERATING.
– 60 billion tons of renewable and non-renewable resources are now extracted each year worldwide. A quantity that has almost doubled since 1980.
• Global per capita resource consumption has increased by 15% since 1980, and the population has more than doubled since 1970*.*
– Plastic pollution has increased tenfold since 1980 and about 300 to 400 million tons of heavy metals, solvents, toxic sludge and other waste from industrial sites are dumped into the world's waters every year. ***Raw wood harvesting has increased by 45%*** *and 2 billion people use it as fuel to meet their primary energy needs.*
– ***50% of agricultural expansion has taken place at the expense of forests, which are now only 68% of their pre-industrial area.***
– 110 million hectares of forests were planted in addition from 1990 to 2015, almost twice the area of France. This pace is accelerating, thanks in particular to the efforts of India and China.
– Global subsidies for fossil fuels represent some 345 billion dollars per year and lead to global costs of 5,000 billion dollars (health, habitat degradation...).

"RIVERS AND OCEANS, PARTICULARLY VULNERABLE ENVIRONMENTS
– 55% of the oceans are exploited by industrial fishing and it is estimated that a third of marine fish stocks are overexploited, 60% are overexploited at the maximum sustainable level and only 7% at a very sustainable level.
– More than a third of the world's fish catches are illegal or unreported (2011) and 70% of the boats involved in this fraud are financed through tax havens.
– ***The reduction of seagrass beds, essential for marine animals and for sequestering carbon, has been 10% per decade since the 1970s. For their part, coral reefs have halved since 1900 and mangroves by 75%. However, these environments are real nurseries for fish.***
– More than a third of all marine mammals and more than 40% of seabirds are threatened.
– Due to climate change, fish biomass could decrease by 3 to 25% depending on the scenarios, regardless of fishing.
– Because of fertilizers, 400 dead zones have developed in the oceans, which represents about 245,000 km2, a total area larger than that of the United Kingdom, which is rapidly expanding.
– More than 40% of amphibian species are threatened with extinction, yet they have an essential role in the regulation of insects such as mosquitoes. In fact, wetlands are currently disappearing three times faster than forests, and nearly 90% of them have been lost since the 18th century.
– ***80% of the world's wastewater discharged into the environment is not treated****, especially in Asia and Africa.*

02 - About… Policies Territoriales.fr

From Péri-urbain.fr - Phenomology

In France, the Megacities, Megalopolises, Conurbations evolve according to the context in a game practiced between the State, led by political executives responsible for managing public resources and channeling social expression, and the economic operators of the Market.





Sequence 1950s - State intervention consists of rebuilding the economy and gradually relocating the workforce to distant suburbs.
It was a time when factories and workshops, slaughterhouses and wholesale markets... already pushed back in the nineteenth century to the borders of the City, they are retreating into a second circle of the urban fabric. The result was a disorderly land development characterised by the introduction of a built environment with various functions (services, trade-crafts, individual dwellings and small condominiums), apart from the central city corridors, which were maintained by an extension of the Faubourgs.
The operations are carried out, most often without the prior installation of the necessary infrastructure and transport networks, on the borders of large cities and near the areas where industry is relocated. These new "low-rent" collective housing fabrics committed to public funds are made up of "modern comfort" housing, with indoor sanitary facilities, natural light on the kitchen and main rooms, playgrounds, etc.

1960 ... Acceleration of the Keynesian period and expansion of proliferating mixed urban fabrics (rental and home ownership) towards the outskirts of cities. The aim is to create the adhesion and loyalty of the middle classes to the consumption of mass manufactured products (conceptualized by "Uncle Sam") and to acquire the land and the individual house or the "home sweet home" condominium by borrowing at high rates; A soft submission mode.
The essentially salaried nature of jobs over this period provides security for households and allows them to both increase the size of the family and move towards a growing real estate supply in condominiums or suburban areas (suburbs).

1960-1970-1980-1990
The handover phase between the State and the Market in terms of land use planning, and the silent privatisation of urban services (health, transport, care for the elderly, energy, water, etc.)
The growing intervention in the urban fabric of the private real estate and construction sector is decelerating the launch of social rental housing and home ownership programs in charge of public funds. The housing supply is gradually being restricted to a few concepts of habitability: the "Products", defined on the basis of the margins expected by private operators (banks, developers, construction majors).

The anarchic densification of the fabric took place and from the 90s onwards real estate operations dispersed, reduced in size (50 to 80 dwellings), and the Promotion-Construction sector approached the public authorities and the State, to obtain the "liberalisation" of urban planning documents (POS – PLU – PADD – Master Plans):
operability on virgin, natural, cultivated, flood-prone or supposedly insufficiently inhabited areas. The question did not matter at the time.
Private deconstruction-reconstruction operations in the "living territory" of the suburbs are multiplying. They allow operators to free themselves from the infrastructure and network costs generated by the overall creation of districts.
The post-densification of blocks increases the profitability of private operations, while increasing public spending on general networks subject to permanent resizing and malfunctions.
Property taxes consist in part of transferring to the inhabitant-occupant a forfeiture of participation by private operators in the costs generated by the anarchic densification of the land created by their structures?

The real estate products put on the market have insignificant thermal insulation, they use electricity for the production of heat, mainly produced by the nuclear grid (80%), ignore the environmental impacts of the operation over its entire life cycle, but not only.
The previous concept of Habitat, that of living together, "neighbouring", is transposed to conform to the ideological change introduced by "neo-liberalism" which places the individual at the centre of financial interests and the Market.
The building is thickened (from 9m to 13-14m) to contain: more m2 saleable, more housing, and fewer facades.
It was equipped with a multi-storey car park in the basement with direct access by elevator from the dwelling, all the spaces likely to meet were equipped with security remote surveillance (to erase the relationship between neighbours), the open ground spaces remaining in the land area were

concreted or asphalted to place a few containers of decorative plants, controlled total blackout devices were placed on the façade of all the bays so that the occupant could protect himself from "dangers". urban life", and more certainly weaken themselves psychically by hiding social life from them.
Sociological surveys show a rapid turnover of the populations housed in this way and an ignorance of neighbourhood life, a phenomenon linked to an immoderate use of the car during the time spent in a "UFO" neighbourhood.
Is real estate asocial?

1990 - 2000
The relinquishment of the urban question by the competent State services leads to the replacement of planning, which is supposed to coherence the actions carried out at the different territorial scales; by a "sight" management of Local Authorities, frequently without any vision of the induced effects (economic, social, spatial, environmental, cultural, educational) other than those emanating from the daily management of a territory subject to a growing shortage of resources.

In addition to this state of affairs, there was an effect of capital concentration over the period, which tended to gradually eliminate the players in the construction and real estate sectors, by absorption within groups restructured on a vertically integrated basis.
This results in a strengthening of the action and influence of lobbying exercised by the private sector on State governance, which allows them, due to the withdrawal of public authority from these markets, to intervene directly in the decisions taken in terms of development and construction policy.
For example: The energy policy conducted, in the context of repeated revisions of regulations, testifies in its successive objectives to a slowed down evolution of the performance to be achieved in terms of decreases in energy consumption and the reduction of carbon emissions.
Over time, it has been topped by the most ambitious terms: "High Environmental Quality", "Low Consumption", "Positive Energy", etc.
The national energy policy is set in stages agreed between financial actors and governments to keep household investment in acquisitions attractive, without eroding "profit margins" drawn from the market.

1970-2030 Urbanism & Construction.fr "Chaos"

The state policy in France consists of actively directing the middle class towards real estate rents in order to build up additional income on the speculative market. A classic solution in a period of recession for a liberal economy, but not conducive to financing a creative economic fabric.

In this context, "self-promotion" is an epiphenomenon characteristic of the 2000s context, which transposes a concept of "shared life" embodied in the 80s by the Self-Managed Housing Movement, interpreting it as an opportunity to take advantage of the marketing of a non-competitive housing concept, therefore "at a free price".
"Self-promotion. en": A name, a brand, an image, an alternative model for the well-to-do middle classes wishing to display their "real life"; a form of self-marketing of housing, which makes it possible, after the first years of installation-sophistication of the nest, to increase the financial resources of the household by resale on a more lucrative market than the standardised one of real estate companies attached to off-plan sales in VEFA *(sale in future state of completion*).).

Home ownership .fr – They occurred around 2010 in the "New Towns" and elsewhere.
The sales system in question appeared in the 80s and became more pronounced over time.
The process is as follows.
Once the property has been purchased and the building has been completed, two communities of interest are found: landlords and owner-occupiers (in Ile de France, generally divided into 40% and 60%). After the first years of the co-ownership's life, the "first generation" landlords who are able to repay their loans, thanks to the large rents levied (on populations in turnover) and the tax exemptions in force on new construction programs, sell to reinvest in new ones. New landlord savers follow them on the same pattern, still practicing the form of high rent associated with systematic opposition to the proposals for repair-maintenance work on the building issued by the group of owner-occupiers.
After about fifty years, the building reached an advanced stage of repair and deterioration (roofing, heating and fluids), and changes took place in the group of owners. Landlords with turnover have become the majority and a generation of "sleep merchants" has gradually emerged in this category who plunder the "undocumented and other forms of social fragility".
The process destroyed the income of the (minority) owner-occupiers and ultimately impoverished them in their shelter.
These private properties, of which there are many in the territory of large cities, are put on life support by local authorities for a while and followed in their misery by local non-profit associations until eviction and demolition of the construction...

City & Suburbs. fr
Each social housing estate seems to live and function autonomously
The cradle of the territory remains a safe place, a fallback point in the face of an uncertain future.
In the Cités, the most profitable legal trade is still the Bistrot-tobacconist's shop; Not for tobacco, but especially for scratch games. The ticking when you get out of bed, then the bingo, the trifecta... The inserted "Supermarket" works with a "Slate", or an "Account" to be paid at the beginning of the month.
During the many national demonstrations in Paris (République Nation, etc.) that crisscross the capital to denounce social inequalities, climate passivity, education funding, and which primarily concern these abandoned populations of the "Dormitory Cities" of the suburbs, do we see their inhabitants, adults and teenagers, participate? No!
The revolts initiated by the local gangs on their estates led to confrontations with the police, they were carried out from a pyrotechnic angle by setting fire to cars parked in the car parks at the foot of the building... Self-harm?

The "suburbs"
Multi-ethnic contemporary, multicultural, a window on the world...
Places of unemployment, but also places where an informal economy works in connection with the countries of the world: a field of eclecticism; an obligatory refuge of cosmopolitanism, a multicultural place where community solidarity is maintained.
A land of networks, encounters, social mixing and solidarity, which explains the apparent autonomy of neighbourhoods within the urban fabric that contains them.
The "Suburbs" is a territory of social and cultural mixing, carrying an under-exploited dynamic, probably conducive to developing on the soil of its differences, the path of collaboration, of "open source" sharing...
Neither city nor countryside, the cosmopolitan suburbs are now connected to the entire planet.
Wouldn't it be after the times of relegation, the time to discover the potential of resources it holds, because of its multiculturalism, its neighboring proximity, in various actors, in self-managing lands...

Eco district and greenwashing . fr
It is a Spatial Planning Mission that the real estate development has been tasked with conducting, to combine the new housing stock with a reduced energy policy in terms of carbon emissions, while (Northern) Europe has set itself a "Passiv" real estate model, powered by Renewable Energies, with a commitment to sobriety of consumption.
The "**French-style Eco-District**" model, according to the declarations, should promote the rebirth of an eco-social, inventive, collaborative dynamic...
These eco-districts are most often built on areas close to road or airport nuisances or on backfilled landfills, "abandoned" urban land
Could it not rather be a question of confining the new workforce to these sites: that of the "Auto-entrepreneurs" and "Tele-workers" of a new economy concerned with finding formulas for the individualization of the producer-consuming masses?

The suburban housing estate of yesteryear is evolving in France towards a "Quartier-Éco" formula, verticalized (4 to 6 levels, or much more), with a building supporting mono-oriented housing, accompanied at the foot by green spaces for joggers and dog walking...
These "free" grassy areas are often surprising in their size... Were they not rather land destined later to be requisitioned under a new policy that would take the pretext of "fighting against urban sprawl", to concentrate the Human...
These Eco Districts are accompanied by obvious shopping centres and car parks in the basement of the building to facilitate the travel by private car of the residential sequestered (residences monitored inside and outside under facial recognition cameras).

Construction- Eco .fr
The housing products inserted on these eco-pockets of the territory, with the exception of an insulating envelope (with undeclared grey energy consumption) are not very different in their concepts of ability and concrete-constructability, from those already produced in the 60s and 70s, apart from some equipment and additions to the envelopes:

- The types of housing are freed from the old nomenclature which imposed minimum living areas, for the studio, the two main rooms. They may be smaller;
- The openings on the façade are also reduced, and the balconies intended to get some fresh air or meet your neighbours are more and more often removed, leaving only a smoking console.
- The most profitable model to build because of its thickness (14 to 16m) is still relevant, although it produces single-oriented housing (the North protected from the sun's rays for 12 months, the West overheated, the Summer without sun protection other than sliding-blackout shutters: All this to end up with a blind façade six months of the year... Neo-cloisters.
  We know that this model of two-headed bar, abandoned in the 70s, generated social tensions because it placed sedentary owner-occupiers back to back on the solarized and overheated side,

and "turn-over" tenants ransomed by landlords, on the north face, sunless and cold, with the common service corridor in artificial light and sequenced timer as a line.
- Structures are wrongly proclaimed to be "Low Consumption of Fossil Energy" or even "Positive Energy" without having to go through the "Passive Construction" box. The latter remain marginal on the market because the buyers-lessors-rentiers present for a rapid resale are only interested in the shortest payback times on investment and therefore reject the construction of a large number of "products" with very low losses exclusively fed by Renewable Energies (wind, solar, biomass, etc.) and assisted natural ventilation.
- The approach used to evaluate the performance of a building is limited to following the regulatory calculation method and applying the bonuses and penalties indicated, but refuses to evaluate the overall impacts on the environment for the entire life cycle of the building (biodiversity, carbon emissions, nitrogen, ozone, radioactivity, waste, etc.).

Even today:
The **old building stock** is still not committed to an energy renovation plan on the scale of the problem and the variety and quantity of interventions to be carried out. Except to consume mechanical and electronic materials and equipment, without worrying about having systematically taken into account beforehand: the specificity of the built object; the specific uses and climatic states that their occupants derive from them during the seasons; the links to be maintained between the intimate interior and the plural exterior.
In some cities, financial aid is granted and global (and thermal) Technical Diagnosis processes are developed, allowing condominiums to launch thermal correction and rehabilitation work on their assets (Paris-Paris Climate Agency within the framework of the Coach-Copro Agency).

Urbanization.fr
A product and a site for the production of capital gains and financial investments
The radical expansion of the urban process, in the early 20th and 21st centuries, has been accompanied by extraordinary transformations in lifestyle.
Consumerism, tourism, the constant recourse to the economy of the spectacle, are an integral part of the ideologies inoculated into the middle classes of the planet; Quality of life has become consumption-addiction.
The post-modern trend that tends to encourage the formation of market niches, both in the choice of urban lifestyles and in forms of consumption, including cultural ones, lends the middle classes the freedom to indulge in the pleasure of accumulation (sharing the sensation-illusion of the dominant) in exchange for an ideological submission to the system.
Over time, the City fragments, disembodied, sees the life cycle of neighborhoods reduced by the acceleration of the pace of construction-deconstruction of housing and the turnover of populations locked in, and offers itself to climatic cataclysms without addressing their foundations

03 – Relevant… A state of the debates - Civilization ... Ideologies and Pseudo-Sciences – Techno-Fascism

- Excerpts about - "Critique of Collapsology" - Elisabeth Lagasse

"A current of thought that claims to use all genetic, physical, computer, nano-technological means to increase the physical and intellectual capacities of a **worker-soldier of the Universe**, and to escape the capitalist destruction of life on earth.
A thought, which tries to erase the march of the collaborative alternative in full awareness of the problems to be solved and the revolution of morals to be undertaken (productivity, power, accumulation, greed, predation...) »
"An ideology, for which the progress sought would generate inequality between the beneficiary elite and the others, where all aspects of life would be marketed and financed by "GAFA", where the common nature of all humans and the specific environment of each person would no longer be the only determinants.

"Two fields of research are developing in this direction:
- The so-called "weak" artificial intelligence: facial recognition; chess game software; personalized advice derived from the algorithmic exploitation of data (social networks, buyers' cards, etc.); Watson-IBM with voice recognition and home interconnect control; Medical robots etc.
- The so-called "strong" one, which aims to imitate or substitute for the human brain in order to integrate a reasoning model (that of the sponsor), to understand complex ideas, to enrich himself with his experiences...

"According to the stakeholders, the overall objective, in an intermediate phase of development, would be to improve the physical and mental characteristics of the species."

Tech-Experimentation - Dystopia

Talking to the Future is not in order, while "Libertarian" Techno-financial consortia (US Silicon Valley Barons, etc.) invest in applied research aimed at freeing them from the state and politico-economic systems in place, to develop for their own benefit new tools for surveillance and formatting of human thought under an illusory pretext. that of offering everyone the freedom to undertake (with the corollary: the subjugation of the other).
A subterfuge that serves to mask the maintenance of an inequality of access to universal means and knowledge and that deprives critical analysis of its sources.

This **ideology** declares itself against Equality, for discrimination.
It denounces the multiculturalism of nations, argues that demo-structures are a brake on progress and are contrary to the exercise of individual freedom.
It promotes a dissolution of global state structures and associated institutions, to allow an unbridled capture of human cognition and accelerate the "Free" techno-scientific development of private Capitalo-Techno-Cyber structures, and their derivatives (PayPal, Amazon, Valentir, Facebook...)

Its tools of domination lead the individualized human species to go beyond reality to enter science fiction and provide Avatars for Tech-experimentation.

Neurophysiology – Consciousness?

To remove or increase the doubt about the repetition of human error...
For fourteen millennia, human societies surprisingly followed the same existential scenario as that applied to Sisyphus, reported in Greek mythology!
After the hunting-gathering phase that makes life expectancy uncertain, the immutable cycle begins when surpluses appear, their accumulation, domination through the development of means, until the collapse and then the initiation of a new attempt on the same greedy process by maintaining ignorance about the planetary context and its reactivity.

- About and Excerpts - "The Human Bug" - S. Bohler

*"The process described in biogenetics is enlightening: Obtaining the **Safe-Surplus** generates the **Existence Insurance**; from assurance is born the desire for **Growth-management**; growth leads to **Accumulation-value**; accumulation to **Greed-enjoyment; greed to Power-delirium; power to** genocidal-ecocidal wars and wars always end in the partial or total **disappearance-collapse** of sandcastles and sometimes of species. »*
"It is a cycle, one might think, that is inherent in the 'Anima' since it has been repeating itself endlessly since the exchange-transaction was instituted between human groups."
An immutable phenomenon, it is hard to believe. According to Sébastien Bohler, this process may be due to **a "Bug" maintained**?

*"Neuroscience teaches us that two areas of our brain can build distinct evolutionary paths depending on the stimuli they receive. For external stimuli: **Society**, and for internal stimuli: **Consciousness**.*
*"- The **striatum?** – is the part of the brain that gives rise to **incentives**: it pushes action by triggering Dopamine, it produces the sensation of pleasure that accompanies an act, it encourages its repetition and accentuation.*
Its function is as much to provide desire as pleasure.
*"**In the concrete of a human society**, the action of dopaminergic neurons is the condition for commitment to perpetual growth through the creation of an organized dissatisfaction that activates the "Market" through the need of its actors to rush towards prosperity. Consume to exist?*
The montage made in the 20s of: Keynes, Hoover, Ford ... belongs to this process: the production of commodity objects of "desire-pleasure", accessible to the laborious employees and workers, then came in correspondence with the stimuli of a cerebral process waiting to hope to indulge in compulsive consumption mixed with an illusory hope of social elevation. »

*- J. Galbraith **-** "The main mission of the economy is to create the needs it seeks to satisfy".*

*- C. Darwin **-** "Living organisms are survival machines".*

*"- The **frontal cortex is the seat of will and planning, it gives access to fictions about the future, allows you to develop a capacity for forecasting**.*
*Social conditioning and learning allow us to extract ourselves from the instinctive impulse and to link our **striatum** to the commitment of rewarding behaviors that provide satisfaction (social ties, acquisition of knowledge, research, etc.), or on another aspect to denounce the shortcomings of a predatory financial and political system. »*

"Bringing the level of consciousness to a level comparable to the level of intelligence is a challenge for the future of the species."

These two necessary brain functions must not be unbalanced by societal processes aimed at building a domination of Man over Men, after his attempt to dominate the Living
Will we seek to escape from the consolo-productivist universe that develops various paths that are supposed to lead: either to the escape of the human to the point of abandonment-submission to a double: his Avatar, or to compulsive consumption on hyper-realistic online games monopolizing the mental faculties of a class of "diminished humans"?

Will the horizon be that of the development of shared knowledge called for by a frontal Cortex consciously solicited to: after the first cultural revolution of Man through writing/contact between peoples and the second through digital communication allowing simultaneous written and oral translation in all places and all existing languages on the planet, to continue an evolution in openly multicultural non-domination between peoples working for the reintegration of Humanity as one of the components of the abundant Biosphere...

The "Anthropocene" Warning

Excerpts and Comments - "The Anthropocene Event" - (2015) Fressoz and Bonneuil

*"... History offers us the space of intelligibility to grasp the situated, changing, and disputed character of **the ways of being in the world and of thinking about the place of humans within nature.** »*
*"The **Anthropocene** is a term proposed in 2011 by the Royal Society Britannic (Paul J. Crutzen) to designate a period in the course of geological time that begins when human activities began to have a significant global impact on the Earth's ecosystem, during the 18th century.*
***"The beginnings appear in previous periods and relate to the degradation of natural environments**. It is agreed that the period begins when Man begins to find the use of fossil fuels (coal). At this stage, it can then be assimilated to a **geological force** since it now impacts the biosphere through carbon emissions and other pollutants, sources of degradation without return to the "living" environments in place on the planet. »*


Anthropocene breeding: the "Pigs hotels"

*"The Anthropocene is to think about the contemporary situation from a historical and dynamic point of view, it is to hear the data and models of the Earth system sciences that announce more and more certainly **a disruption on the geological time scale that will radically disrupt the conditions of human existence**."*

*"Will our era, engaged on a countdown, proceed to replace fossil fuels with renewables to obtain an immediate halt to the rise in temperatures on the planet by reducing pollutant and toxic emissions; Or will it mark its failure to halt the process of physical degradation of the planetary enclosure that is underway? **Uncertainty about this still reigns** ! »*

Excerpt - COP24, Dec 2019

"For the first time on Earth, a Living Species is able to scientifically simulate a part of its future, to learn about the paths that open to it or that lead to its disappearance"

About and Excerpt - "The Anthropocene Event" - Fressoz and Bonneuil

"The carbon emissions emitted by the current level of economic activity, if it were not reduced, would lead to an average rise in temperatures on the planet of 3.3 degrees by the end of the 21st century.
*(The **"Target" scenario** of political states, for a possible return in the next two centuries to equilibrium climate temperatures (18th century), is capped at **1.5 degrees by 2050**)*
*"Following this **rescue scenario**:*
18% of insects and 16% of plants are expected to disappear from the face of the globe; one animal species in twenty will become extinct; 410 million people would be affected by the drought, leading

to flows of climate refugees to less affected regions; the oceans would warm, as they warm, increase the emissions of methane trapped at low temperatures in the high depths; the level of the oceans would rise by 56 cm with the disappearance of cultivated land with high occupancy density (Bangladesh), natural disasters, etc. »

Mutations - *"The reaction to these developments that is taking shape today, in the United States as in Europe, takes the form of* ***political movements that invoke the appeal to the people against the elites and against the liberal provisions intended to filter and curb the exercise of popular sovereignty****. One of the hypotheses most often put forward to explain this reaction is that it constitutes, in the words of the Dutch political scientist C. Mudde, "an* ***illiberal democratic response*** *to decades of undemocratic liberal politics".*
In other words, the growing rigidification of individual rights and the consequent undermining of collective sovereignty provoke a kind of backlash that also departs from the compromise reached in the middle of the twentieth century, but in the other direction: on the one hand, by rejecting the value of personal freedoms and individual rights, and on the other hand, by hyper-valuing popular sovereignty as pure will...

"Two breaks with compromise, reached in the middle of the twentieth century, have therefore followed one another: the first provoking the second in return.
First, there was the development of an anti-democratic liberalism, that is, a government of the elites attempting to impose the supremacy of a regime of absolute rights — hastily named the rule of law — which promotes their own interests by depriving the people of the possibility of expressing and making prevail their aspiration for an equal distribution of wealth. But ***this de-democratization, or this capture of power by money****, was itself made possible by a veritable intellectual revolution prepared for a long time, which* ***mixes the praise of a largely imaginary classical liberalism with the indictment of the welfare state presented as the gravedigger of the rights and freedom of individuals.***
We are now seeing the emergence of supporters — and soon practitioners — of an illiberal democracy, the concept of which was initially introduced by Fareed Zakaria and to which a leader like Viktor Orban explicitly claims to be."
… Donald Trump, Elon Musk, Vladimir Putin, Benjamin Netanyahu, etc. .
"This form of political regime, which overvalues popular sovereignty, would thus be the sign of a reaction by the peoples against personal rights and constitutional mechanisms which, more and more, appear to them as obstacles preventing them from making their aspiration prevail, if not to a growing standard of living, at least to an ***equitable sharing of the scarce fruits of this growth****, and to control elites who try to impose their interests by means of low growth and a process of globalisation from which they would be the sole beneficiaries.*

"The post-war compromise*, on the other hand, was based on a double moderation between a liberalism that refrained from absolutizing rights—in particular the economic rights of property and contract—and a controlled democracy that accepted the private power of capital to the extent that it agreed to share its profits.*
But in the late 1970s, the two partners began to drift apart, and by breaking free from the bonds of compromise they had forged through reciprocal concessions, they lost the moderating aspects that resulted from their association and that alone made it possible...
The rest is too well known because it has been repeated many times: wars, mutual exterminations, telluric effects, climatic deterioration...
To finally hope to find a place in the "Ark of 50 cubits wide and 300 cubits long?"



The "Internet Society " - Objects, Energy, Logistics, Communication

"Internet: A set of digitized data constituting a universe of information and a communication environment, linked to the global interconnection of computers" - Definition Petit Robert

About and Excerpts - "The New Zero Marginal Cost Society" (2018) J. Rifkin

« … To function, every society needs a means of communication, a source of energy and a form of mobility": Internet?
***On the flip side**, a system capable of **ensuring the exchange, in the moment**: of images, conversations, texts, between all humans through satellite location; **On the flip side**, the geolocation of all beings and objects connected by the military and police bodies of the dominant state powers of the planet and firms holding economic and financial power sometimes superior to a state, such as Google, Linkedin, Amazon, Facebook, Microsoft, Apple, Netflix, Twitter, Uber....*
***"The socio-economic models built since the Neolithic have not stopped exploring the paths that lead to accumulation in order to rise in power and domination**.*
***Cyberspace** is today the means to **divert or** develop awareness of the "Greenhouse Effect" issue, **to make this new "Public Square" work, to extend in any place and at any time, to the point of being able to try to change the organizational foundations of** society or, conversely, to falsify reality, to distil a lack of knowledge...*

*"**To this day, it is above all a social space in which everyone connects, connects, collaborates and creates new ways of interacting on a planetary scale**, the unimaginable even 40 years ago.*

*"It is a path already explored by millions of Internet users who bypass the traditional commercial channels of the market, who create their own virtual or physical meeting places in unlikely territories (the unthinkable roundabouts-demonstrators of the "Yellow Vests" -CB), who share ideas, information, and even objects among themselves on **a new "Common" territory** by **dodging all intermediaries**, additional costs and margins of the value chain of the neo-capitalist economy*
(The AMAP farmers' movement and urban consumers - ChB).

*"**It is a Territory of sharing and also of confrontation with the addictive model of compulsive consumption and mental confinement distilled by the dominant ideology**.*
"It is a tool that perhaps participates in the birth of another Culture, of another People, by inventing a new form of exchange,** another market. We know that **there is no example in history of a people who have created economic markets before having shaped a Culture.

***"The Internet, the "New Place of the Adult People"** capable of transforming Humanity by allowing the overcoming of national identities, affiliations to beliefs, the understanding of the diversity and richness of knowledge and cultures accumulated by peoples, the discovery of other actors of life who ensure the maintenance of a macrocosm compatible with our presence: to move forward finally towards a planetary consciousness, towards the creation of a new path of global understanding of the biosphere and of the self. »*

*"It is the invention of the Internet by civil society in the 20th century, which should eventually force the pair of actors created by capitalism (State + Market) to **admit the "commons" in a network and orient the new entity towards the development of social capital, to support an economic mode with lateral** integration and no longer vertical. (The new economic entity under the Internet regime requiring less financial capital), a mode capable of piloting research and exchange initiatives in an "Internet of Things" universe.*
By connecting all human activities in a smart global grid, an entirely new economic entity is created.

"It is the 'Commons' that allow us to unite as a cultural entity.
***It is the rise of social commons motivated by collaborative interests and the desire for sharing and relationship that is giving rise to open-source innovation**, which pushes for transparency and community research, which seeks synergies: an ideal technological framework to promote the social economy, universal access, values to maintain and create the social capital of civil society...*

*"If the current system favors autonomous self-interest in the capitalist market, the new kid on the block **would favor the in-depth collaboration of the networked "commons" within an open public domain**.*
Culture could be recreated by everyone in this new public domain.
*At the Anthropocene stage: the printing press is a private communication tool, the commercial media select their products according to a targeted panel of consumers. **The Internet, which dissolves borders, multiplies collaborative creators, frees speech, equips itself with writing tools under a free "creative commons" license...***

- The Internet of Things -
"Inserts the built environment and the natural environment into a functional network, it allows all humans and all objects to communicate with each other to seek synergies and it facilitates these connections with a view to optimizing the energy efficiency of society. This technology is disrupting the way we organize economic life: the Internet of Things helps to reinsert ourselves into the complex choreography of the biosphere.

The key features are: using fewer resources more efficiently and productively in a circular economy and switching from carbon-based to renewable energy. At this stage, each becomes a node in the nervous system of the biosphere.
While the Internet of Things makes possible a global transformation of humanity's way of life on Earth by placing us in an approach compatible with the laws of physics and nature, it raises worrying questions in terms of privacy and data security. »

"At the current stage of technological research, we can envisage that the conjunction of the 3 Internets in an Internet of Things will eventually make it possible to constitute the cognitive nervous system and the physical and material means necessary to integrate all of humanity into interconnected global commons that cover the whole of society.

Mackers and "open source"
"Concretely, by way of example: The invention and development of the "3D printer" gradually reduces marginal costs significantly by making the exchange of goods on the markets superfluous for many products. ***This movement of partial democratization of industry, giving access to the means of production, forces us to re-examine the question of the ownership and control of the means of production,*** *which will then lose its meaning.*
*This innovative process took its first steps in 1980. The pioneers "**Hackers**" had a vision: to bring the open source format from the field of computer science and information technology to the production of objects: Open source equipment worn by Mackers, Universities and Non-Profit Associations to make models, handicrafts, surgical models of facial reconstruction, to print concrete and fibre houses today.*

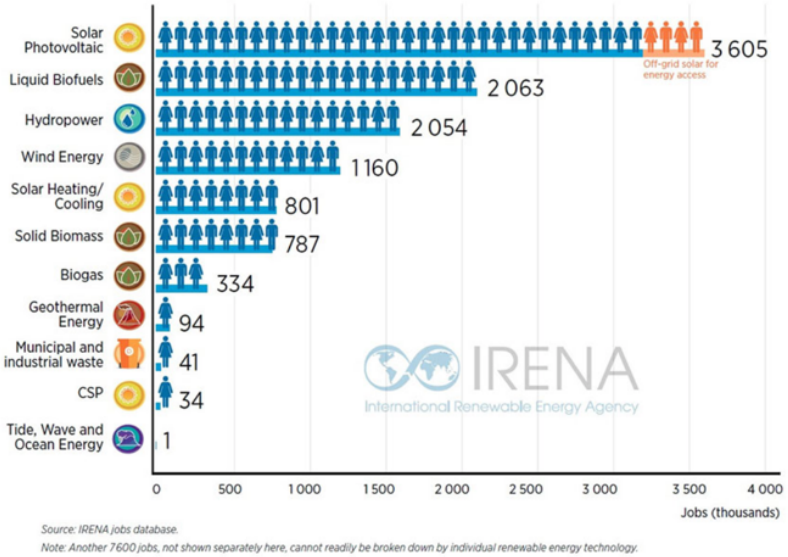
Humanity in "open mass"
*"Among the many initiatives that are committed to the advancement of Humanity in "open mass": the "**MOOC**" at zero marginal cost.*
A mass course, open to online that for millions of students and free auditors transmits knowledge without a classroom as conceived by the "Class Society" led by a knowledgeable foreman, and led by facilitating teams.

The Internet of Energy, towards free energy
"The gathering power of renewable energy technology is experiencing its exponential growth curve in solar and wind, geothermal, biomass and hydroelectricity, it should follow in the same way that of computer science driven into the irrepressible process of competitive capitalism condemned to pursue the production and sophistication of commercial objects until it reaches a ***marginal cost of production and distribution almost zero*** *(E.g. the Smartphone concentrates more and more uses, for a cost unrelated to the value, ten years ago, of the technologies that are assembled in it).*
As with the Internet of Communications, where the initial costs have been considerable but the marginal cost of producing and distributing information is negligible, the initial costs of creating an Internet of Energy are significant but the marginal cost of producing each unit of solar and wind energy is almost zero. Once funded, the fixed costs of research and development, deployment, renewable energy, and information, are almost free.

"The reasoning is compatible with the fact of ***combating climate change*** *by drastically reducing carbon emissions into the atmosphere over these 30 years,* ***if*** *renewable energies, mainly solar, are substituted for fossil fuels oil, gas and coal, and if photovoltaic technology obtains the yields achieved today in the laboratory by new approaches.*
The solar potential shunned by capitalism for more than a century is immense, ***the sun's rays send 470 exajoules to earth every 88 minutes, that's the entire energy consumption of humanity in one year.***
Being able to transform 0.1% of the solar energy received from the sun into electricity would allow human activity to use six times more energy than it does today for its uses. In 2014, the share of solar energy in the total energy mix was still only 0.2%. This energy was still very expensive due to the low yields of the technology used, but this is no longer the case.
Currently , cell yields in operational plants are in the order of
19 %.
"Among the new technologies (tested in the CEA laboratory) are: the superposition of layers of solar cells optimized for each color of the solar spectrum; By combining this solution with concentrated solar power, yields of more than 40% are obtained in average conversion efficiency (capture of incident energy).
Two different technologies are used: polycrystalline cells and monocrystalline silicon cells, which have lagged absorption spectra and are therefore complementary.
In 2018, in Germany, the production of solar + wind energy (22% of national production for all energies combined) no longer made coal-fired energy production profitable.

"Internet technology and renewable energy technology are beginning to merge into the Internet of Energy to change the way electricity is generated and distributed in society. People will produce and store their own renewable energy regardless of the activity, sharing green energy on an Internet of Energy like today's online information. When Internet communications manage green energy, everyone becomes their own source of energy with the alternative of sharing it as part of the pooling of production-storage facilities.
The energy transnationals and private and parastatal gas and electricity companies are blocking the creation of the Internet of Energy by imposing a smart grid with a centralized architecture to allow a commercial lock-in of renewable energies.
***"The Internet must remain an open, Communal-Global network of Bio-regions of countries and continents, to maximize the social and economic benefits of its lateral architecture**... »*

Source: IRENA 2019 – Distribution of the workforce employed in the different technological segments in the field of Renewable energies



From mass production to mass production... Do it yourself

About and Excerpts - *J. Rifkin - "The New Society of Almost Zero Marginal Cost"*

*"... The emergence of the infrastructure of the third industrial revolution, the Internet of Things, with its open architecture and distributed features, allows social enterprises in the collaborative commons to break the monopoly grip of **the giant vertically integrated companies** that operate in capitalist markets, as it makes **peer-to-peer** production possible in lateralized continental and global networks at almost zero marginal cost.*
***The Internet technology platform is based on renewable energies that are everywhere under the sun and that must be distributed in a collaborative way by sharing them peer-to-peer between localities and regions to obtain economies of scale**; On the other hand, collection technologies are becoming cheaper and will be as cheap as mobile phones and computers in the coming decade... ".*
"Let us imagine a scenario in which the operational logic of capitalism succeeds beyond the wildest hopes. The play of competition then leads to extreme productivity and to the optimum of general well-being.
*"At this final stage, fierce competition, by forcing the introduction of ever more economical technology, boosts productivity to an optimal point where each additional unit put on sale approaches the '**almost zero marginal cost**'.*
In other words, producing each of these additional units costs nothing – if you only count the fixed costs, which makes the product almost free. If this scenario were to come true, the profit would dry up. In economics, profit is made at the margins. »
*In the case of books today: an ever-increasing number of authors write books that they offer at very reduced prices, or even free of charge on the Internet bypassing publishers, distributors, retailers. Marketing and shipping costs next to nothing, the only costs are the time spent creating the product and the price of the computer hardware plus the connection to the web. **An e-book can therefore be produced and distributed at almost no marginal cost.***
*"Today, more than a **third of humanity produces its own information** on complex, miniaturized mobile phones and computers, and shares **it in video, audio, and text formats** at almost zero*

marginal cost in a relatively inexpensive, networked collaborative world. The movement is spreading to other economic sectors: renewable energies, 3D printing of machines and constructions, free online higher education MOOCs.

"Currently, Free is a trick that allows you to either secure a customer base to attract them to the Paid, or to engage in collaborative relationships or disseminate knowledge in the interest of the greatest number.
In an economic universe where most economic services are almost free: profit, the driving force of accumulation, property becomes absurd and the market superfluous?
Keynes, Heilbroner, and Leontief meditated on the crucial contradiction that propels capitalism. They wondered whether the increasingly advanced technologies would not one day be able to stimulate production to the point of reducing the price as it is beginning to take shape today, before being taken over in 1936 by Oscar Lange: "Will private ownership of the means of production stimulate economic expansion indefinitely, where will we see at a certain stage of technological development, the success of the system become an obstacle to the continuation of its "progress" (fructification of investments). »
The question then arises ***, of an aftermath****, towards* ***another mode of social relations of exchange, collaborative and eco-compatible with the natural and physical environments*** *of the very small planet.*

"There are ***three ways of organizing the economy****: the* ***capitalist market****, the* ***state****, and a nascent path that has been growing rapidly over the past three decades: the "****Contemporary Commons****" which offers space to millions of self-managed organizations, in Associations (1901 in France), in Service Cooperatives, NGOs, Foundations, Sports Clubs, Cooperative Societies or Workshops, Charitable Associations... to which are added the "Traditional Commons", mainly rural communities managed democratically, scattered on all continents: all of which create the social capital of the Society of the World.*
It is on the ***social commons*** *that the goodwill that* ***allows a society to unite as a cultural entity is born****. The market and the state are in part extensions of the social identity of peoples.* ***Without the permanent reconstitution of social capital, confidence would be insufficient*** *to allow markets and states to function.*
If the ***capitalist market is based on self-interest and driven by material gain****, the* ***Social Commons*** *are* ***motivated by collaborative interests and energized by a deep desire for a relationship of sharing with others*** *and understanding. While the former promotes private property rights and the quest for autonomy, the latter prioritize open-source innovation, transparency, and community research.*

3D printing
*"In 2005, the Mackers movement made it possible to take a step towards the democratization of digitally produced objects by introducing the "****Fab-Lab****", a manufacturing laboratory designed at MIT, where anyone could come and make their own tools to make their own 3D printing objects, in open access and peer-to-peer learning.*
The "Mackers" movement is driven by ***4 principles****:* ***the open-source sharing of new inventions, the promotion of a culture of learning, the belief in local self-sufficiency and the attachment to Sustainable (eco-compatible) construction practices to change the way civilization is organized.***

3D printing has thus become the model for an ***"info-invoicing" production*** *that accompanies the nascent economy of the Internet of Things.*
Three-dimensional printing (created in 2009 by A. Bowyer, University of Bath) differs from conventional production processes in several ways:
- Most of the human participation is attached to the creation of the software;
- The programming and printing software for physical products is open source so that "producer-consumers" can share innovative ideas with each other in networks of amateurs who are adept at "doing it yourself";
- Thanks to the principle of "open design" and its dynamic nature, the production of goods develops among millions of actors who learn from each other by making objects together. All intellectual property is eliminated, helping to significantly reduce the cost of printing products compared to traditional manufacturing companies;
- Info-manufacturing is done by adding the base material, unlike traditional subtractive manufacturing.

"The ***3D printing of buildings*** *is underway, the construction materials used can be, earth, sand and aggregates, lime, etc. It avoids high costs in materials and transport logistics and can be powered by renewable energy on site. A Canadian company is developing an "Urbee" car built in 3D and operating in a solar-powered hybrid.*

The costs of shaping a small building in North America start to approximate the costs of collecting materials if they are located close to the construction site. Open-source home programs are already almost free.
The first 3D printed automobile "the Urbee" (urban electric, developed by KOR Ecologic - Canada) has passed the stage of initial testing, it is a hybrid electric vehicle designed to run on solar and wind energy that can reach a speed of 65km/h with two passengers

The Fab-lab
"In the third industrial revolution, the Fab-lab is the people's research and development laboratory. It takes innovation research and development out of the laboratories of universities and globalized firms and into neighbourhoods and localities, where it becomes a collaborative activity and an expression of lateral power, peer-to-peer at work.
The democratization of production disrupted the centralized, vertically integrated manufacturing practices of the Second Industrial Revolution
Through the multiplication of ***"Fab-labs", "democratic industry" gives everyone access to the means of production; the question of ownership and control of the means of production loses its meaning*** *and so does capitalism.*
The ***"infrastructure for Mackers" movement*** *marks the most recent stage of development of initiatives, focusing on poor urban suburbs, small isolated towns and rural areas where infrastructure is scarce, access to capital is problematic, and technical skills, machines and tools are virtually non-existent.*
"Among other actions, the open-source ecology network led by Jakubowski, made up of farmers and engineers, used 3D printing to make prototypes of eight of the fifty machines: bulldozer, rototiller, microtractor, backhoe... as well as a computer-controlled blowtorch workbench for precision cutting of metal sheets. All the drawings and instructions for these 3D printed machines are "open source" on the group's website, so that anyone can reproduce them, "do it yourself". Then, for these tools to be useful, they must be connected to an electrical infrastructure and micro-grids must be developed. »



Of the Biospheric Consciousness

About and excerpts - J. Rifkin - "The new society of almost zero marginal cost" -

"*After having passed from mythological consciousness to theological consciousness, then to ideological consciousness and finally to psychological consciousness,* ***can Humanity still move on to biospheric consciousness and to the extension of its empathy to the whole of its evolutionary family****,* ***the rest of life?***
"A next leap in the human journey, a new intelligent infrastructure, composed of an ***interactive Internet of communications, energy and logistics****, spreads in nodes, crosses continents and connects for the first time all peoples allowing them to develop empathy and general conviviality within a single expanse; The* ***connection of everything with everyone****.*
The last generations will be able to study in globalized classes (Skype, MOOCs, etc.), exchange around the world on Facebook, produce and share green electricity on the Internet of Energy, etc., and gradually ***divert the human journey from an allegiance to unbridled and limitless material growth.***

This transformation is accompanied by:
A ***change in the human psyche, based on biospheric consciousness and the collaborative era.***
This ***collaborative spirit****, now "****open source****", is now beginning to extend to the biosphere. It* ***helps to eliminate the ideological, cultural, and commercial boundaries*** *that have long separated*

"mine" from "yours," in a capitalist system operating through private property relations, market exchanges, and national borders.

"The new generation inserted into the collaborative networks of the "Commons" is the bearer of ***a "New Spirit"****, which consists in being: less focused on the autonomy of the individual and more interactive, less concerned with advancing financial interest and more attached to improving the quality of life, less passionate about the accumulation of market capital and more about that of social capital, less eager to possess and have and more eager to access and share, less quick to exploit nature and more committed to sustainability and stewardship of the earth's ecology.*
"Isn't the new economic paradigm temporarily a hybrid project: democratic states, commons, a market led to almost zero marginal cost and almost free service goods?



Digital city and neo-governance
About ... Excerpts - Governing the Digital City - Courmont and Le Galès

"Data is at the center of transformations in city government. *»*
"The appearance of ***big data*** *marks a break in digital technology. This regime of quantification has three characteristics that contribute to the recomposition of urban government:* ***data has become an economic resource****; it takes the form of* ***traces recording individual practices****; and it* ***circulates between and within organizations****. As such, they participate in the transformation of urban capitalism, amplify the governance of conduct and transform the relations between the actors of urban governance. However, the data of the city is not without risk and without limit. The deployment of technologies comes up against the intrinsic contradiction between digital formalism and informality that characterizes urbanity.*

"The 2010s marked the penetration of IT in all our environments and the entry into the digital age. Local authorities are multiplying data sensors and diversifying sources in urban space to ***detect, measure, and record what is happening in the city****. Companies record a multitude of transactional data. Equipped with mobile phones, individuals produce digital traces that are information about their behavior, preciously preserved by companies in the digital economy.*
This ***digitization of cities*** *(and their occupants -cb-) must be analyzed in relation to the recent transformations of capitalism. Considered by some to be the new black gold****,***

Data is seen as both having value in itself and as creating value.
At the city level, these developments are manifested first and foremost by the appearance of players in the information and communication technology sector in urban governance, on the one hand by firms (IBM, Cisco, etc.) that offer municipal administrations technical infrastructures and services for optimizing urban networks through data analysis; and on the other hand ***platforms that offer intermediation services between offers and requests through their algorithmic matching capacity.***
The latter are a new type of company whose model is based on the collection, processing and use of big data to connect supply and demand in different markets. ***Through their informational resources, these platforms guide behaviour and transform social relations.*** *They* ***modify power relations*** *and coordinate actors independently of local authorities, making their regulation particularly delicate.*

"Data" is at the heart of the processes of restructuring urban capitalism, through the appearance of players in the digital economy sector in the management of urban infrastructures and networks, but also through the strategic repositioning of traditional urban firms. ***By accumulating data, these private actors are testing the power of public institutions. These developments question the models of urban capitalism: how will big data, by influencing urban firms, transform the ways in which the principles of public action are combined with the market economy?***

"Digital technology" *has developed via new non-urban players, from platforms to start-ups, everywhere cities are developing experiments, concentrating incubators that are trying new services, new algorithms, inventing new futures. Aggregators combine all data from a specific sector. Large and small operators are trying to steer flows or influence entire sectors in energy or real estate.*

Conversely, against the globalizing and centralizing discourse, ***urban digital mobilizes associative actors and residents who seize it to create common goods, to develop new solutions, to deliberate, to remake politics outside of institutions, as evidenced by the civic-tech movement and the multiple applications offering forms of participation.***
The entire social and solidarity economy movement is being strengthened by social networks and the swarm of local solidarity initiatives. Precise on power relations, they advocate open, decentralized, free, horizontal systems, citizen or democratic initiatives. »

About ... Excerpts - Digital modeling of the city: SidewalkLab-Google in Toronto, Muni-Mobile in San Francisco, Virtual-DS Singapore –

"In 2016, the city of ***Singapore*** *launched a partnership with Dassault Systèmes for the development of a* ***dynamic three-dimensional model*** *and the creation of a* ***collaborative data platform.***
The platform is expected to enable users from different sectors to develop sophisticated tools and applications for testing: concepts and services, planning and decision-making, and research on technologies to solve emerging and complex challenges for the city. A three-dimensional graphical representation of the city with layers bearing the relevant information from the municipal services: from the layout of the heating networks to the prices of real estate and works in progress.
The landscape is populated by objects whose characteristics can be examined in order to optimise maintenance operations and with which it is possible to interact to test interventions on the urban environment (street furniture, trees, infrastructure elements, etc.).
The platform is expected to participate in the management of risks such as fires, natural disasters or crowd movements.
"Virtual Singapore" requires data to work, which also involves the participation of residents. Some layers of the 3D model were completed by the distribution of 40,000 individual sensors to students, recording their movements, the noise to which they were exposed and the quality of their Wi-Fi connection. The inhabitants thus take part in the experiments, as components of the laboratory's infrastructure. The way of taking part here is not insignificant, it distributes collection capacities, while making the inhabitants sensors that add to those stationary deployed in the city.

"The place of international networks in territorial public initiatives -
The urban experiments cited are technical and scientific, but also political and economic, insofar as ***the private operators commissioned propose both to offer levers of action to the city, and commercial opportunities to urban service companies (on the basis of data collected and resold on the data market).***
These approaches, under the guise of "urban experimentation", highlight ***an ongoing process of transition from the public governance of cities to an interventionism of the private economic market, thus placed in a position to impose its own urban strategies****. »*

About ... Excerpts - Internet interrupted Journal "Le Monde" 20 Nov 2019 Interview by Michaël Szadkowski • Published

"... In the face of the ongoing protests, the Iranian regime of the mullahs has decided to brutally prevent Iranians from accessing the global network. This measure is made possible by the very architecture of the Iranian network, explains researcher Frédérick Douzet – (Professor at the French Institute of Geopolitics - Paris-VIII)
Since Friday, November 16, Iran has carried out an unprecedented Internet shutdown. In order to combat the ongoing protests in the country, the government said on Tuesday 19 November that it did not want the Internet to be "misused" by the population. The country's operators (there are three – IPM, ITC and TIC – directly controlled by the regime) blocked, in the space of a day, access to almost all connections between the Islamic Republic and the outside world.
"While a form of local Internet remains, accessible to government agencies and certain banks or companies, the population can no longer exchange on the network with the rest of the world, and vice versa. Access to international services and applications, based on servers outside Iran (search engines, social networks, etc.), no longer works. As a result, Iranians' share of Internet connectivity has been around 5% of their usual activity in recent days, according to measurements made from outside the country by the NGO NetBlocks.
Such a country-wide Internet shutdown was made possible by the specificities of Iran's network infrastructure.
What have the Iranian authorities done to effectively cut off Internet access for the population?
Iran's network is connected to the global internet through only three entry points. These three entry points are state-controlled operators [IPM, ITC, ICT] that can cut off access to the global network. Iran's network has been reconfigured in recent years to allow these three operators to select categories of traffic that can flow between the inside and outside of the network, or to block them altogether. This does not prevent the network from continuing to operate internally.

"The Internet is a network of multiple, independent, interconnected networks. They are linked together through a series of physical connections and a stack of protocols, which allow them to exchange digital data packets
*The Iranian **network** is **designed to allow authorities to control the paths that data takes so that they can be selectively blocked**. Inside the Iranian network, the connections are rich and ensure good resilience, as data can take a multitude of different paths to get from one point to another. The passage to the outside, on the other hand, is under control and is limited to a few paths. It is a form of territorial control of the digital space. It just goes to show that, in the digital age, geography is still used to wage war!*
"The internet is two-way, so service and application providers may see a drop in their traffic from Iran. Can Iranians use solutions like VPNs [Virtual Private Network] or proxy apps [programs to connect to the Internet through intermediaries] to bypass the current block?
Under the current blocking, VPNs wouldn't be much help, as the blocking operation is very sophisticated. Satellite connectivity could be a solution, but it is difficult for Iranians to access. The proximity of a border can potentially allow a connection to a neighboring foreign network.

"From the outset, China designed its network to limit the points of connection to the outside, so that it could exert control over the content that circulates in cyberspace.
"Russia is now seeking to map its networks to understand how to regain sovereign control over the flow of data.
"Are other countries in a position to be able, in twenty-four hours, to cut off Internet access to their inhabitants in such a clear way?

***"In France and the United States, the network was built in a free and open way, totally decentralized, in order to promote the circulation of data. It is connected to the rest of the world through multiple channels that cannot be abruptly closed**.*
Does the fact that a country can carry out a blockade of such magnitude, and so quickly, threaten the existence, or the balance, of the global Internet?
*"We are in a context of strategic competition in which **states use cyberspace as a tool for power and assertion of power, at the risk of threatening its stability**. **Routing is an essential infrastructure for the proper functioning of the Internet but also a real point of vulnerability**, which is why **the World Commission on the Stability of Cyberspace will propose to protect the public heart of the Internet**, which is included in the European Cybersecurity Law. »*

04 - About… Alternative paths

Civilizations contradicted

In the fourth month of 2019,
the media announce that if all 8 billion people on Earth started to consume the same amount of energy, food, water, and processed products as in the United States: it would take 5 planet Earths for one year of consumption, 3.2 for Russia's, 3 for Germany, 2.2 for China... But only 0.7 if humanity lived in tune with the population of India.

It is estimated that **1.75 planets would be needed to meet the annual needs of the world's population** (submerged land represents only 1/3" of the Earth's surface).
What if a child today asked us why? The answer would be: "Because all men are not equal on Earth"... and we would have to admit that we accept an economic system that exploits the poor, overproduces, pollutes, intoxicates, destroys men, fauna and flora and now engages the imbalance of the small 50km of Troposphere that allow us to still exist.
Some young demonstrators, high school and university students of the "Climate Marches" do not fail to denounce the responsibility of their elders for not having acted while knowing for nearly 50 years the nature of the disaster and its causes. .
Is this an observation that leads us to look for answers?

The Khmer Empire ...

It developed from the 9th to the 15th century in the tropics. It benefits from a monsoon diet, the indigenous populations feed mainly on rice. Through its Tributary-type organization, it mobilizes farmers for major hydraulic works each season and gradually through the sophistication of hydraulic techniques (elaborate storage of rainfall and rational management of irrigation) obtains two rice harvests over the year.
Its population is growing, production surpluses are being exchanged between territories, cultivated areas are continuously being increased and taken from the forest cover and its ecosystems.

Political and religious elites claim abundance for themselves, and the greed that undermines leaders pushes them to grab the land of weaker neighbors. The vast irrigation system produced during repeated campaigns of major works is no longer the main engine of wealth production and is under-maintained... The climate gradually changed due to massive deforestation on rocky substrate, and over a long decade a drought set in that ruined crops and developed famine and insecurity. The following period, marked by devastating rains, ended up destroying all the infrastructures and civilization itself....
The cause of the phenomenon: The massive deterioration of the nourishing soil by a human group eager for productive growth, expansion, greed, and power... This modifies a climatic regime that is fragilely linked to a tree canopy, developed over a long period of time on a rocky base

The Maya kingdoms of Yucatan (-2600 BC – 1500 BCE) ...

In Tikal, the population completely abandoned the urban site at the end of the 9th century.
While the management of water reserves for cultivation benefits from sophisticated and multiple technical devices (reservoir, cenotes, sealed soils of the central territories intended to capture runoff and lead it to cisterns, etc.), the capital city (90,000 inhabitants) and gradually all the cities of the Yukatan peninsula are abandoned under the effect of prolonged droughts and cataclysmic rains. For the same reasons as the cities of the Khmer Empire... Later.
An increase in the human footprint (population growth) that is not adapted to the natural environment chosen by civilization, which results in an intensification of exploitation and an extension of cultivated areas exceeding the capacity of the natural environment to regenerate itself (sterilization of the soil), and consequently leads to the degradation of a micro-climate that resulted from a decimated plant cover.

Is Man amnesiac to repeat the same mistakes eternally or is he endowed with a genetic weakness that would irremediably lead him to accumulate in order to destroy, without limit, the natural resource and achieve his own extinction after a few exterminating wars?

The Brazilian Amazon deforested ...

Here, it is a question of increasing the production of soybean meal to feed a continuously expanding "hamburger" herd and knowingly engaging in the sterilization of cultivated soils in the 21st century, i.e. the desertification of the Territories, Conservatories of Primary Forests" and associated ecosystems.
What questions us?
The sickly repetition of the catastrophic pattern, duplicated to the point no longer of threatening one society among others, but of leading Humanity this time to tip over on a path of no return, even before having understood that it was a commitment to "Finitude".



Popular modes of expression-action and movements

The new world that is slow to appear
About and Excerpts - Article G. Massiah

« … The proposal is to be attentive to the revolutions underway.
There are several revolutions underway, but they are incomplete and their outcomes are uncertain. There is no guarantee that they will not be crushed, diverted or recovered. However, they are turning the world upside down; they are also bearers of hope and already mark the future and the present. These are long-term revolutions whose effects are inscribed over several generations.

To illustrate this point, let's start with five revolutions underway. These are the women's rights revolution; of the revolution of the rights of peoples; the ecological revolution; the digital revolution; of the revolution of the population of the planet.

***The revolution of women's rights** is the most impressive. It calls into question millennial relationships. Struggles for women's rights have always existed. The recognition of women's rights has come a long way in the last forty years. We are gradually measuring the upheavals it causes. This **revolution was incomplete** and led to resistance of great violence. This can be measured by the violence of the reactions of certain States to any idea of women's liberation and by the resistance in all societies to the questioning of patriarchy. The women's rights revolution has already brought about a great change in the strategy of the movements; it is the refusal to subordinate the struggle against the oppression of women to other struggles. Their refusal to consider their demand as a secondary contradiction has been taken up by all the movements and reflects the recognition of the diversity of social and citizen movements.*

The revolution of peoples' rights** is also striking. It is incomplete and in the grip of attempts to reconfigure imperialist relations. The second phase of decolonization has begun. The first phase, that of the independence of states, has reached its limits. The second phase is that of the liberation of peoples. It opens up new questions with the rights of peoples which take different names; indigenous, first, indigenous. They **renew the question of identities with the eruption of multiple identities,** as the poet Edouard Glissant described them. It **questions the relationship between individual freedoms and collective freedoms.

The ecological revolution**. It is shaking up the understanding of transformations and the meaning of change. It introduces **the notion of finite time** and the notion of limits in relation to unlimited growth. **It calls into question all conceptions of development, production and consumption**. It **reimposes the discussion on the relationship of the human species to Nature. It calls into question the limits of the planetary ecosystem. The ecological revolution is a philosophical revolution that overturns the most established certainties.

***The digital revolution** is a decisive part of a new scientific and technical revolution, combined in particular with that of biotechnology. It opens up very strong contradictions in the forms of production, work and reproduction. It is impacting culture by beginning to disrupt such vital areas as language and writing. Financialization has succeeded in instrumentalizing the upheavals of the digital world, but the contradictions remain open and deep.*

***The revolution in the settlement of the planet** is in the making. All the great historical upheavals have had consequences on the population of the planet. Considering it makes it possible to avoid qualifying the issues of migration and refugees as a migration crisis that could be isolated and that would eventually be resolved.*
***Changes in the population of the planet are prolonging previous ruptures**. That of urbanization and the global urban framework with the multiplication of precarious neighborhoods.*
*Climate change will not only accentuate **environmental migration**. Sea level rise could reach up to one meter by the end of the century. According to the United Nations, 60% of the 450 urban areas with more than one million inhabitants in 2011 – or some **900 million people – were exposed to a high natural risk**. The schooling of societies modifies migratory flows. Graduates who leave stay in touch with their generation through the internet. The others feed the unemployed graduates, a new alliance between the children of the working classes and the children of the middle classes. Social movements are trying to articulate the struggles for the rights to freedom of movement and settlement with those for the right to stay in the country and work. They check that **the desire to stay is inseparable from the right to leave**. The very notion of identity is challenged by the evolution of territories and by the **mixing of cultures. »***



The transformation of cities and urban policies
About and Excerpts - Article G. Massiah

« … The global urban framework is characterized by metropolization
*Urbanization is characterized by the **explosion of the population of cities** and by the increase in the number of millionaire cities and megacities (more than ten million inhabitants). The global urban framework reflects a trend towards metropolisation.*
*A first level of the world's urban framework includes the **twenty-seven megacities** with between ten and twenty million inhabitants. There are only four in the north; the other twenty-three are located to the south. Megacities are "city-states", whose populations and wealth, as well as public services, are greater than those of many states. Urban planning and programming in these megacities is new. All the more so since they are linked together by a global urban framework. There are therefore sketches of urban planning on a global scale.*
*The second level of the urban framework is that of **the metropolises**. It is more the function than the number of inhabitants that counts. The metropolises are linked to the organization of the national territory, and administrative functions are important. In metropolises, the question that arises is that of **the evolution of these cities in relation to their peripheries**. The third level is that of central or secondary cities, which, much more, are cities of articulation and organization of space that we now hesitate to qualify as "rural", as this category has become so difficult to define. Let's say that these **cities structure a region** and give it its dynamics.*

"The productive base of cities is changing.
Industry is no longer the reference for the productive base of cities. Companies are being restructured based on the trend towards financialisation. Multinational companies control the most profitable companies and rebuild the economic fabric through subsidiaries and subcontracting. National companies are being privatized, particularly in public services. Local companies form the economic fabric. New forms are progressing; On the one hand, "start-ups" combine technological innovations, especially digital ones, with know-how in accessing the financial market. Individual entrepreneurship is renewed by "Uberisation". Trade and crafts are marked by the continuity between small businesses and the informal sector.
*Cities will be turned upside down by technological change. Let us remember that the current generation of urban systems was marked by a series of discoveries that unfolded over twelve years, between 1877 and 1889. These are steel and high-rise construction, elevators, indoor plumbing, electricity (light bulbs and trolleys), combustion engines and automobiles, metros and telephones. There is now a new technological package that will shape the city of the future. Examples include digital, robotics, communication satellites, lasers and optical fibres, microprocessors and memory, biotechnology, new materials and high-strength ceramics, renewable energy, etc. Technological revolutions cannot be deduced from innovations; There is no **scientific and technical revolution without a cultural revolution**.*

***"The housing issue** is no different from the urban issue*

The current city is marked by the break between urbanization and industrialization that characterized the industrial and urban revolution of the 19th and 20th centuries. The extension of the wage system, initially understood as a social relationship, had become a social status.
However, the generalization of this model on a global scale has come up against a double limit. The first is that of ***the limits of the planetary ecosystem,*** *the fragility of which is measured. The second limit is that of the quantitative and qualitative evolution of employment and the crisis of the wage system.*
This social organization was obviously reflected in the urban organization. Housing policies were directly linked during this period to the generalization of wage labor. The place in the city and access to housing are intimately linked to the nature of income, even more than to its level. A stable wage gives social status, access to credit, housing, individual and collective consumption; it is the key to integration. Without a stable income, our societies no longer know how to recognise the right to security, enshrined in the Declaration of Human Rights, and wrongly confused with security and security slippage.

"The trend towards ***precariousness accentuates urban exclusion and segregation****. A significant proportion of urban dwellers in developing countries, sometimes the majority, are excluded from legal channels for access to land and housing. She lives in a precarious land situation, in under-equipped neighbourhoods, most often referred to as "irregular". It is estimated that* ***irregular housing*** *contributes 20 to 80 per cent of urban growth, depending on the region and country, and affects between 15 and 70 per cent of urban dwellers in developing countries, with an average of around 40 per cent. It is in the large cities that the problems are most acute. Access to land, which is in fact another way of talking about access to the city, is the most difficult obstacle to overcome in the realization of housing projects.*

"The ***destabilization of the wage system*** *and the disengagement of the State make access to housing more difficult. Social housing does not relieve the increase in land values. For these reasons, there is a very significant deterioration in housing conditions.* ***Slums and slums*** *developed. The new urban concentrations take place in the most sensitive areas: on the banks of urban rivers, along railway lines and motorways, on garbage dumps, in other words, in all the areas that can be occupied and which are generally the most dangerous, generally tipping urban ecology towards insoluble situations. »*





Newspaper "Le Monde" 08-11-2019
Results of the "Yellow Vests" demonstrations from November 2018 to June 2019: 10,000 police custody, 3100 convictions, 1000 prison sentences including 400 farms, 1240 suspended sentences, 920 alternative sentences, and 2500 injured. » …

Past -present: The democratic issue
About and Texts - Michèle Riot-Sarcey, historian

« … Roundabouts, supermarket car parks, roads, dehumanised crossroads: the "yellow vests" have taken over places where, usually, only shadows and anonymous people pass. Then, a whole world is revealed, a world of forgotten people who self-organize for their rights, refusing to delegate their power to governments who are more managerial than democratic.

« … The advent of a historic event is always unprecedented. Comparisons, analogies, similarities with the events of yesterday: revolts, insurrections, uprisings are sought only in order to give meaning to the event that intrigues and worries. Movements were always the subject of an interpretive stake at the end of which one or the other meaning prevailed and determined, after having constructed it, the meaning of history; but the movement that makes history is very different. Contradictory, with elusive protagonists, with conflicting expressions, it presents itself, unexpected and without becoming apparent. The analysis of its complexity is therefore all the more important because its reality, with

its many facets, is masked by the partisan discourses that cover the singular actions and words whose expression is blurred. From this point of view, the "yellow vest" uprising is no exception.
If we accept to grasp the event as it is seen, the movement is perfectly intelligible. Predictable, it is as a symptom of past failures; that of the political and trade union "workers'" organizations, dispossessed of their power to act and reduced to preserving acquired rights; but also that of a "liberal" state whose promises of social justice have been constantly postponed. The often disputed coherence of the movement is no less legible. Taken together, with nuances, the demands converge towards much more equity. However, in the absence of an identifiable leader, the fear that the uprising arouses muddies the waters of commentators, who see them as nothing more than "gaseous" or chaotic expressions. Because nothing is as before, everything becomes murky. The eruption of protest is all the more destabilizing because the population that expresses it exposes unloved people, excluded from the debates and benefits of a financialized economy.
First of all, the places of gathering: roundabouts, supermarket parking lots, roads, dehumanized intersections, so many places in a falsified world. By donning this fluorescent garment, the "yellow vests" give a clear visibility to their presence at the same time as they warn of the imminence of an accident or disaster, if the world as it is does not come to a halt.
The forms of grouping then, by small collectives that know each other, or recognize each other, inhabitants of the same territory, or living the same struggle, in their own way, reinvent a sociability that fades away after the desertion of city centers and the abandonment of public services. A whole world is revealed, a world of forgotten people, through the acceleration of precariousness and misery. In 1808, Charles Fourier already observed that "the civilization of abundance breeds misery". Soon, he said, addressing the victorious revolutionaries of 1789, "if civilization lasts only half a century, how many children will beg at the doors of the hotels inhabited by their fathers.
***The refusal of any "representation" on the part of the "insurgents"** annoyed the political world and surprised by its resistance. How can we not see, behind this rejection, the veil of the illusion of the delegation of being able to tear itself apart in the eyes of all. The words used in the sphere of power always have a different content from that which expresses the desire to improve the lot of those who have failed social progress. The vocabulary is so well disguised that the distance between the discourse and the real has widened to the point of making it impossible to understand other meanings at work in the past. Diverted from its truly reformist meaning, for example, the word reform is now understood as an adaptation to the ultra-liberal economy, eager for productivity despite its destructive effects.*
"... At the beginning of the NINETEENTH century, before the industrial revolution confiscated the idea of progress, put at the service of the privileged, the word reform, in the spirit of the "utopian" moment, announced the transformation of social relations deemed necessary by the "most numerous and poorest class," according to Saint-Simon's expression. The latter had been kept away from the promises of the Enlightenment until then. It is true that we were at a time when people still believed in the irreversible march of human progress, and the whole of humanity, whose destiny was the common happiness, had to organize itself in this direction, according to the wish of another utopian named Condorcet.
Time has passed and, in the last century in particular, the effectiveness of representation by delegation of power was considered relevant because it met with the apparent approval of the greatest number. Now, at the dawn of the NINETEENTH century, the nascent working classes without political rights, in the absence of any social protection, had learned to self-organize, like the canuts in 1831 who surprised the Lyon bourgeoisie discovering in the streets of their city a new world composed of "proletarians"; a new word, but an ugly word that had to be wiped off the map of the political vocabulary. according to the expression of Alphonse de Lamartine, future Minister of Foreign Affairs in the provisional government of the Second Republic of 1848. Poorly paid and badly fed, these "proletarians", journeymen and workshop managers, dared to do it again three years later, in 1834, despite the particularly violent repressions. Social networks did not exist and yet the canuts had managed to consult each other and demonstrate their existence in the streets of Lyon. In the 1840s, once again, workers from Paris and its region converged in masses in the center of the city. No observer understood how they managed to consult each other when meetings of more than twenty people had been forbidden since 1834. Surprisingly, still without rights, they organized themselves and presented demands identical to those that would be at the origin of the Revolution of 1848. There was also an insurrection of anonymous people.
The history that follows was written in a different light, that of acquired rights, without any real power to exercise them directly. It is the history of a singular democracy that was founded on the permanence of a delegation of power from the citizen. Women are excluded from the public sphere. The one-off elections weaved together the structuring elements of this representative democracy. The gap between social and political was then bridged by party organization and trade union representation with its political counterpart, at the origin of the welfare state. Here again, the world of work, as a whole, learned largely to hand over its sovereign power to those who were supposed to know how to represent them. The revolutionary vanguards did not escape this henceforth practice of directing men, whatever the emancipatory or liberating discourse that accompanied it. Little by little the idea of a freedom conquered by oneself was lost. Taken up by the First International (1864), the project of emancipation of all those who were subject to the doctrinal shackles, to the tutelage of all

kinds as well as to the economic powers of capitalist structures could only be the work of the interested parties themselves. Despite its obviousness, the idea was abandoned in favor of the programs of organizations whose ideology determined the time of struggle as much as that of revolutionary deadlines. Self-organization was relegated to the rank of utopias, which were consequently classified as chimeras and evacuated from history. It was forgotten, for example, that as early as the 1830s, women were saying: "Women will owe their definitive emancipation only to themselves."
The failure of this world built on the illusion of representing the interests of all, today is collapsing in the face of the tenacity of an ignored social category. The so-called representative system appears as it was but was not spoken. We are living through a particularly revealing ordeal of the lies of the past disseminated in the aftermath of the French Revolution. Progress was to benefit everyone. However, industrial and then technological progress alone triumphed, and the human dimension of the future of societies was forgotten. Technology was first put at the service of the force of things. This slow process has accelerated; It is now not only leading to an ecological disaster, but is leaving a large part of the world's population by the wayside. »

Action / Justice Movement
About & Texts - International Call for a Climate Strike **-** *Youth for climate*

"... Temperatures are soaring. Biodiversity is collapsing. Hurricanes and droughts are becoming more and more violent. The air becomes unbreathable. Sea levels are rising. The forests are burning. ***The current model of society leads to self-destruction****. Scientists have made it explicit. No*
Today, we are in a climate emergency. We, the young people, in the name of future generations, demand that it be recognized and treated as such: that is, that this crisis must be dealt with completely, immediately and at its source! Some governments and municipalities have already declared a climate emergency, but we need these words to be followed by the implementation of concrete measures and actions. »
"Already today, climate and biodiversity degradation are affecting people around the world unequally. Richer countries have contributed the most to the crisis, but poorer countries are suffering more, due to their greater exposure and lack of funding to adapt. We will not accept a "solution" that only serves to protect the rich and leaves the poor to suffer. We demand that global solutions to the crisis be based on principles of justice and equity, because no human life is more valuable or important than the others.
To manifest our vision of climate justice and turn it into reality, we are mobilizing! »
"Don't be part of the problem, be part of the solution."




About and Texts - Appeal - Movement for action in justice: The Affair of the Century...-

« … Climate change is here: it is already affecting our lives and sparing no one. We are witnessing rising sea levels, melting ice, and more extreme weather events, while animal and plant species are inexorably disappearing. Droughts and floods are becoming more and more devastating. Our farms are in danger. The air we breathe is polluted. The price of our energy bills is exploding. Everywhere, in the countries of the South as well as in the countries of the North, vulnerable populations are the most exposed.
While we have known the causes of climate change since the 1960s, successive French governments have always postponed courageous decisions that make it possible to avoid catastrophe. While the investments needed to remedy this should be financed mainly by the wealthiest, the middle classes and the poorest are now contributing to it in an undifferentiated way. The fight against climate change must not be to the detriment of the most vulnerable.
"France has fallen significantly behind. ***By public admission, it is not meeting its climate targets for reducing greenhouse gas emissions****. »*
"This inaction makes us believe that nothing is possible anymore. And yet, together, let's take legal action to protect our lives from climate change. It is " ***The Affair of the Century*** *".*

*Four associations, Notre Affaire à Tous, the Foundation for Nature and Mankind, Greenpeace France and Oxfam France, have decided, in the name of the general interest, to take the French State to court so that it respects its climate commitments and protects our lives, our territories and our rights. It is the "**Deal of the Century**".*

Call: Climate change is here: it is already affecting our lives and sparing no one. We are witnessing rising sea levels, melting ice, and more extreme weather events, while animal and plant species are inexorably disappearing. Droughts and floods are becoming more and more devastating. Our farms are in danger. The air we breathe is polluted. The price of our energy bills is exploding. Everywhere, in the countries of the South as well as in the countries of the North, vulnerable populations are the most exposed.
Obsessed with short-term issues, states and economic actors remain deaf to the countless cries of alarm from the most vulnerable, scientists and associations. While the investments needed to remedy the disaster should be financed mainly by the wealthiest, the middle classes and the poorest are now contributing to it in an undifferentiated way. The fight against climate change must not be to the detriment of the most vulnerable.
*France has fallen significantly behind. By public admission, it is not meeting its targets for reducing **greenhouse gas emissions**. Inequalities in the face of climate change are worsening.*
***"The State** has an obligation to act.*
It must take the necessary political measures, while guaranteeing social justice. It must reduce our dependence on oil and provide us with transport alternatives. It must invest in the renovation of housing and promote the use of renewable energies, abandoning the use of fossil fuels and nuclear energy. It must provide access to sufficient, healthy and quality food for all, guarantee a decent income for farmers and fight against deforestation. It must also put in place the measures essential to the adaptation of our territories and the protection of our coasts. All these measures will have a positive impact on our lives. However, what is on the table today is largely insufficient.
***"Justice** is a real lever, it can finally force action.*
All over the world, citizens are taking legal action to ensure that their fundamental rights are guaranteed in the face of climate change. In the Netherlands, the courts have ordered the Dutch government to revise upwards its greenhouse gas emission reduction targets. In Colombia, 25 young people have had the Supreme Court recognise the need to act against deforestation and for climate protection. In Pakistan, a farmer's son asked judges to force his state to adopt climate legislation that would protect his parents' farm and their right to food. Let's act for social and climate justice, let's take legal action so that France finally respects its climate commitments. »



Des tentes abritant des migrants, porte d'Aubervilliers, à Paris, le 9 avril. CHRISTOPHE ARCHAMBAULT / AFP



SOS Méditerranée "explore déjà activement les options pour un nouveau navire et un nouveau pavillon". © PAU BARRENA / AFP

From the Border - Land and Sea

About and Texts - The new "Iron Curtains" and migrant cemeteries-Mediterranean, Wall-Trump,

Session 4 and 5 January 2018 Permanent Peoples' Tribunal
"... Now the figures are known; they are regularly published in the media. Whatever their origin, for the exiles who try to cross to Europe, from the Strait of Gibraltar to the Aegean Sea, especially via Libya, the crossing of the Mediterranean is deadly: the clandestine passage on precarious boats provided at great price by smugglers caused 3283 deaths in 2014, 3785 in 2015, 5143 in 2016, 3116 in 2017 (out of a total of 5362 exiles and deaths in the whole world: figures provided by the International Organization for Migration – IOM).
Since the beginning of the 2000s, the disappearances of exiled people in the Mediterranean amount to nearly 40,000 men, women and children. Exiles fleeing situations of extreme distress, exiles who, since the installation of sorting centres that are the "hotspots" in Greece in the autumn of 2015, have been forcibly divided into two discriminatory categories: on the one hand, refugees, i.e. applicants likely to very eventually access refugee status; on the other hand, migrants, who are considered "economic refugees" and, as such, liable to immediate expulsion.
This sorting and rejection of women and men in extremely precarious situations is only one of the manifestations of the closure of the European Union's external borders. The most dramatic consequence is the death every year of several thousand refugees, migrants, men, women and children, whose only crime is to try to escape situations that threaten their survival.
Indeed, since the signing of the Schengen Agreements (on 26 March 1995), the EU has combined the principle of the free movement of persons within the EU with a ban on entry into its territory, in a

general way, of any non-European national who does not have a visa. In this case, nationals of sub-Saharan Africa, refugees from Eritrea and Sudan, not to mention exiles from countries at war in the Near and Middle East, are particularly targeted. »
"This policy of closing the borders to people now accused of 'illegal immigration' has been translated in different ways:
- By the erection of barriers and physical walls from Ceuta and Mellila, Spanish enclaves in the extreme west of the Mediterranean to the wall on the Evros River between northern Greece and Turkey or the barbed wire barrier on the Turkish-Bulgarian border in the north-east of the Mediterranean basin;
- Through coordinated and reinforced police controls by the "Frontex" agency, which has become the "European Border and Coast Guard Agency", which provides logistical and practical support to national border police;
- By filtering irregular entries, such as the repressive operation "Triton" which replaced the Italian "Mare nostrum" campaign for the reception of migrants in November 2014, or such as Operation Sophia (Eunavfor Med) to destroy boats used by migrants under the pretext of fighting against smugglers and traffickers of migrants;
- By extensive externalisation measures of the EU's borders, with a treaty between the EU (the European Council) and Turkey of March 2016 under which this country retains on its territory, in exchange for six billion euros and silence on the non-respect of human rights, no less than three million refugees;
- And by agreements recently made with Libya with the "Sophia" operation of military collaboration with the Libyan coast guard, supplemented by negotiations with local militias, to strengthen the "detention camps" they hold and in which they subject their detainees to slavery and possibly torture..."

It is not the first or second millennium BC, at the time of bloody empires, this set of measures is indeed enacted by a Union of countries losing democratic consciousness to "sort" migrants from the other world according to their domestic needs in terms of labor. An act of non-compliance with the Convention on Human Rights (already so often flouted)?

"... The forty thousand disappearances and deaths resulting from this policy undoubtedly place this grim figure in the global (and not legal) definition that has been given of a crime against humanity: "the ***deliberate and ignominious violation of the fundamental rights of an individual or a group of individuals inspired by political, philosophical, racial or religious*** *motives »; and this through deliberate political action (Feldman 2003). - Claude Calame – EHESS*

To these motives could also be added: a deliberate attack on the climate, due to greed
.



Eco-Indianness and Temporality
A cultural, political, social, and ecological rebellion that tries to re-establish a relationship of compatibility between humans and the terrestrial ecosystem "Pachamama".

About and Texts Excerpts - "Undoing the Tyranny of the Present" J Baschet

"... Indianness is no longer reinventing itself, no longer as a stigma, but as an ***emancipatory subject,*** *as a* ***historical destiny****, as an alternative political project.*
Indianism ceased to be an ideology of resistance to domination and expanded to become a globalizing worldview, which sought to challenge the neoliberal ideology of society for the cultural and political direction that had prevailed over the previous two decades.
The approach to the deliberative culture within democracy from the dual angle of the manifest convergence of equals and the dependence of representatives is relevant... We are dealing with a movement that combines the defense of resources that existed before (water) and the demand for resources that did not exist, in other words, democratic rights and political power."
- Excerpt from Ivaro Garcia Linera

The Indian Communities of Chiapas - The "Zapatista" experiment is unfolding in the eastern half of Chiapas, a region where the Indian population is very much in the majority, on an area equivalent to that of a region like Brittany. There are two political systems in the same territory: that of the Zapatista Autonomous Communes with their councils of good government, and that of the Mexican state. The municipalities receive no funding and have no contact with the political state other than in terms of education, in terms of infrastructure.
These two political systems occupy distinct territories: the City (San Cristobal de las Casas) is under Mexican administration and control, and the territory of the towns and villages of the region is under a ***regime of self-management of the Communes,*** *without the Mexican administration being authorized to mark any presence on their territory.*

What are and how do "good government councils" work?
The "Councils of Good Government" are the regional bodies of Zapatista autonomy.
Autonomy is first organized within the villages, each Commune brings together dozens of villages. The main body is the community assembly. The Region includes 3 to 7 municipalities, its size is equivalent to that of a French department. There are five councils of good government in the Zapatista territories, each of which sits in a regional center called a "caracol" (snail).
Good government councils, like autonomous municipal councils, are elected for 3 years, for non-renewable mandates that can be revoked at any time. They interact with a regional assembly to develop decisions. The main projects that are not the subject of broad agreement within the regional assembly are sent back to all the villages for discussion to obtain opinions and amendments, with the task for the next assembly to draw up a summary of all the feedback reported by the village delegates. This sometimes involves several back and forth trips before a project is adopted.

Autonomy *is a mode of political functioning that is built from below, from the villages, then by federation or coordination of these at the level of the communes, then the regions. It is a form of* ***democracy, based on a principle of "de-specialisation"*** *of politics and the participation of all in the bodies that decide on common affairs. It implies that we go beyond a strictly local level – forms of delegation. These forms of delegation maintain the primacy of the assemblies and work to avoid the risk of dissociation between those who temporarily assume political responsibilities and the rest of the inhabitants of these territories.*
The Zapatistas prefer the vocabulary of rebellion to that of revolution. Because they want to distance themselves from a classical conception of revolution that was closely linked to the conquest of state power and the centrality of it as an instrument of social and economic transformation.
As far as the productive field is concerned, the Zapatistas intend to defend a peasant agriculture revitalized by ***agro-ecological practices*** *: rejection of chemical pesticides, defense of native seeds, consideration of ecological issues, etc. This means that they produce most of their traditional food themselves, based on corn, kidney beans and squash, to which are added farmyard animals and various products such as rice, fruit or honey. These are life forms that thrive on collectively owned land for the use of the residents of the Commons.* ***A cultural, political, social, and ecological rebellion that tries to re-establish a relationship of compatibility between humans and the terrestrial ecosystem "Pachamama".***
Today, the ability to sustain collective autonomy depends in part on the Zapatista uprising, which in 1994 took back the land held by the big landowners of Yukatan.
In Chiapas, the land is the material basis for autonomy, and it is thanks to it and the collective work carried out on it that the needs of the health care system can be met, as well as those resulting from the exercise of self-government and autonomous justice.
The ability to produce by oneself is also being developed within the framework of craft cooperatives in the fields of textiles, shoemaking, carpentry, ironwork or building materials.
Finally, Chiapas is an important coffee-producing area: Zapatista families have small plots of land whose production is marketed through cooperatives and, above all, solidarity distribution networks that have been organized in several countries in America and Europe. This is a very important support that can be provided to Zapatista families because, in addition to self-subsistence crops, it is what provides them with modest monetary contributions that allow them to buy the basic necessities that they do not produce.
Amerindian populations continue to show that another path of radical transformation is possible. It is the one they call autonomy, which combines popular self-government and ***self-determined forms of life****..."*

The right to the production of space
The public spaces of the city have always been the business of the state power and the public administration and do not necessarily represent a Commons. The political action of citizens and the people is essential for them to change their meaning and use.
The street, the squares, in history have never ceased to be reinterpreted in the sense of an urban commons, when people have gathered there to express their political ideas, to demonstrate their demands, to revolt, to revolutionize the societies that condemned them
Tahrir Square in Cairo, Plaza Catalunya in Barcelona, Greece, Sudan, Chile, Ecuador... In Paris, the

Avenues and Squares (Colonne Vendôme, Place de la République, Bastille...) and the roundabouts of France... In Iran, the great square of Isfahan, gradually becoming in the 20th century the place of expression of the natives and under the regime of the mullahs' dictatorship, has since been covered with large basins of water...

Civic movements in search of "Freedom" to think and do have constantly tried to divert the constrained use of the Space-City, have reinterpreted it or sought to make its symbols disappear by dominant classes falsifying the history of Humanity.
In response, the Powers that be thwarted; the one eradicating the "Paris Commune", or closer to us that of the City of Palmbeach USA which expelled the populations from the hills, refuge for immigrants from the Caribbean, to rebuild the city center gradually submerged by the rise of the waters during hurricanes and tornadoes linked to the degradation of the Greenhouse Effect: These established powers shape the new storage space of peoples, that of the City-Megalopolis which undertakes a mutation from the "Persona" Man to the "individual" under psychotropic confinement and vertical piling, without fear of tomorrow.
The front line, however, is perhaps able to shift, because of the flow of exchange developed between the so-called "individuals" interconnected to all the scales of life on the planet, and in return generate a coordinated movement of action-expression on micro-territories that are then interconnected, while the era of cognitive capitalism is not yet at the establishment of its foundations.

*- Paralyzing **the metabolism of the city**, by cutting off supply routes and modes of transport, by interrupting the flow of food and other basic necessities, but also energy and water, is to affect the organizing bodies of the territory and the vulnerability of the wealthy classes because of the value of the assets they hold in the territory.*
A new fact disrupting these eternal conflicts: The struggle of the "demonstrating classes" contained to this day by the "locked" states via the militarization of urban conflicts is no longer the main threat of a capitalism in the process of creating the conditions for its own extinction by exceeding the limit of elasticity of its monopolizations by an Icarian process that has never been abandoned. who too late grasped that he was in "counter-evolution" to the rules of the domain that housed him.



The popular movement at the crossroads

About and Excerpts - Gérard Noiriel, historian, director of studies at the EHESS and author of "A Popular History of France"

« … The denunciation of the contempt of the powerful almost always comes up in the great popular struggles and that of the yellow vests has only confirmed the rule. We have heard a large number of remarks expressing a feeling of humiliation, which feeds the strong popular resentment towards the leader of the Republic: "For him, we are nothing but shit". The President thus sees class ethnocentrism boomeranging back.
The similarities between social struggles from different eras mask profound differences, they allow us to understand what makes the specificity of the yellow vest movement.
The first difference with the medieval "jacqueries" lies in the fact that the vast majority of the individuals who participated in last Saturday's blockades are not part of the most disadvantaged sections of society. They come from modest backgrounds and the small middle class who own at least one car. While the "great jacquerie" of 1358 was a desperate outburst of beggars on the verge of starvation, in a context marked by the Hundred Years' War and the Black Death.
The second difference, and in my view the most important, concerns the coordination of action. How do individuals manage to link up with each other to participate in a collective struggle? No one has insisted on what really makes the yellow vests new: namely the national dimension of a spontaneous movement from the outset. It is indeed a protest that has developed simultaneously throughout France (including the DOM-TOM), but with very low local numbers. In total, the day of action brought together less than 300,000 people, which is a modest score compared to large popular demonstrations. But this total is the sum of the thousands of small group actions spread throughout the country.

*"... This characteristic of the movement is closely linked to the means used to coordinate the action of the actors in the struggle. It was not the political and trade union organizations that ensured it by their own means, but the " **social networks** ". **New technologies thus make it possible to***

reconnect with old forms of "direct action", but on a much larger scale, because they connect individuals who do not know each other. Facebook, Twitter and smartphones are broadcasting immediate messages (SMS), replacing written correspondence, in particular leaflets and the militant press, which were until now the main means available to organizations to coordinate collective action; the immediacy of the exchanges partly restoring the spontaneity of the face-to-face interactions of the past.
However, social networks, on their own, could never have given such a magnitude to the yellow vest movement... It is the complementarity between social networks and continuous news channels that has given this movement its national dimension from the outset.
See "Principle of representative government" - Bernard Manin - In ***the democracy of the public*** *, voters decide according to the political offer of the moment, in the same way social movements break out today according to a conjuncture and a specific news (modification of the pension system, etc.).*
From this perspective, the French Revolution can be seen as a very special moment, because the old tradition of local revolts was then able to combine with the new practice of protest conveyed and coordinated by writing (cf. the cahiers de doléances).

«… To defend a conception of citizenship based on direct action. The yellow vests blocked the roads, in this they confusedly assumed the tradition of the Sans-culottes in 1792-93, the citizen-combatants of February 1848, the Communards of 1870-71 and the anarcho-syndicalists of the Belle Époque.
It is always the implementation of this ***popular citizenship*** *that has allowed the irruption in the public space of spokespeople who were socially destined to remain in the shadows. The yellow vest movement has brought out a large number of spokespeople of this type. What is striking is the diversity of their profile and in particular the large number of women, whereas previously the function of spokesperson was most often reserved for men. The ease with which these popular leaders express themselves today in front of the cameras is a consequence of a double democratization: the raising of the level of education and the penetration of audio-visual communication techniques in all strata of society. This competence is completely denied by the elites today; This reinforces the feeling of "contempt" among the people. While workers still represent 20% of the active population, none of them is present today in the Chamber of Deputies. We must bear in mind this massive discrimination to understand the extent of the popular rejection of political politics.*
History shows, however, that a popular struggle is never completely in vain, even when it is repressed. The yellow vest movement is making the unions and left-wing parties face up to their responsibilities. How can we adapt to the new reality ***of "public democracy" to ensure that this type of social conflict – which is expected to recur frequently – is integrated into a broader fight against inequality and exploitation? This is one of the big questions they will have to answer... »***



Plus de 170 mobilisations auront lieu, samedi, dans le cadre de la « marche du siècle pour le climat et la justice sociale ». LP/Guillaume Georges

II.3 Alternative Paths - Urban Eco-Movements and Neighbourhood dynamics: "Doing it yourself"

The fourth quarter of the twentieth century saw civil society begin to worry about the harmful effects of the economic system on nature, health, and in particular on the deterioration of the climate observed by the scientific community and attributed to (in)human society.
Only a small part of these populations is involved, the one most aware of the dangers incurred due to the destabilization of the Greenhouse Effect.
From the 1970s onwards, in the wake of urban struggles, anti-colonial struggles, demands on working conditions and social protection (Renault, Lip, etc.) and other protests, the idea was born in Berlin to **redefine the territory shared on a daily basis, in this case the block, and to mobilize the hidden resources of the neighborhood in knowledge for this purpose. dynamics, and practical ideas.**
Initiatives will abound at the scale of the block, among other things: **redefinition of mobility in the city, maintenance of local services and shops** (curbing the Hyper Marché-Discount movement on the outskirts, destroying the neighbourhood shopping fabric), **creation and organisation of**

selective waste sorting, integration of energy-saving equipment (electricity, heat) into the home, etc.
This will result in the design of equipment that is more water, energy-efficient, less polluting or harmful, and **experiments in eco-construction and bio-climatism,** etc.
The notion of collective responsibility will gradually develop at other territorial scales to address other fields such as Mobility-Public Transport, Renewable Energies, Organic Agriculture, Decarbonization of the Atmosphere, Biodiversity, etc.

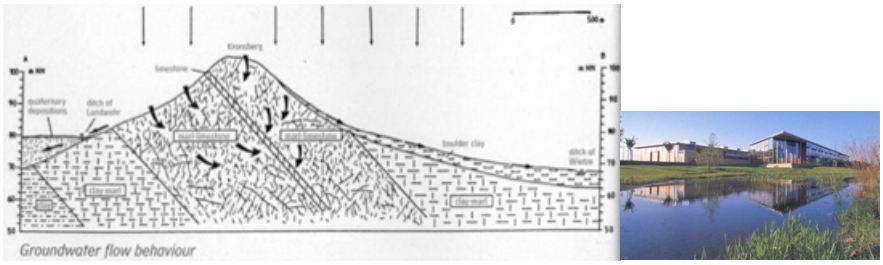
A beginning towards the recomposition of a Territory where the pieces of the puzzle to be created will be called: Bio Sphere - Bio Territory - Eco City - Eco Neighborhood - Eco Block - Eco-Habitat.



Eco-Urbanity: Alternative Experimentation, in Eco-Länder Europe, Eco-City ...
No anti-sobriety neighborhoods called "E+ C -" (France) in concrete covered with repainted wood, no recourse to deceitful private real estate, but an approach attentive to all the factors that condition the existence of All, and the relationship to ambient and distant environments.

A history that was born in the 70s and whose initiatives taken in Germany by the Länder and the Cities were to be peddled and enriched and then spread to the Netherlands, Switzerland, Austria, Scandinavia...
On a critical basis of the productivist society, we are looking for a more convivial and autonomous way of life. We are trying to invent another life and why not another society on another soil.
A few urban experiments will carry and materialize these approaches, such as those of Hanover, the IBA Emsher Park, Culemborg, and many others.





- Hannover - The alternatives

Hanover is a central city rebuilt after the Second World War on its rubble. A city that lost again in the 70s and 80s its occupants attracted by dream posters, which boasted of life in the countryside through the subdivision flourished. This famous idea promoted in earlier times by the ideological trio Keynes-Ford-Hoover: Private individual property for all but with planned obsolescence and series...

As a result of this massive migration to the "peri-urban" of the cultivated countryside, the city is desocialized at its heart and sees the concentration of tertiary and industrial economic activities on its territory...
On the "rurban" side, there is a gradual deterioration of the natural spaces that have been preserved until now, and an incompatibility is manifested: that of allowing a tractor-driven and polluting farm (air, soil, water) to coexist with a hoped-for relaxing and healthy stay at the gates of the Urban.
The suburban model adopted creates: an overload of schedules among displaced people; the costs of accessing public and private services scattered throughout the urban area; a saturation of car traffic which generates increasing pollution and continues to increase unwanted carbon emissions; an exponential growth in public investment in equipment and infrastructure, taking into account the scale of the territory to be distributed; the dispersion of employment centres and public services; an obvious increase in the consumption of various energies, a fauna and flora pushed to disappear, etc.

At the end of the 80s (following a change of municipality), the local authority and the public authorities of the Land set about studying, analysing and evaluating the social counter-performance of the sprawling territorial model in place, which was strongly criticised.
All themes are covered:

> Micro-climate, Hydrology, geology, pedology, biodiversity, pollution, public health, food, education, social dynamics, consumption, energy potential from renewable sources, economic dynamics, bloated road network...

On the basis of the assessment carried out, a strategy for the overall regeneration of the territory is built, aimed at **reversing the previous urban escape**.
The strategy adopted is intended to remedy the physical, social and natural degradation created by the phenomenon of "exodus" to the peri-urban area. It is developed on two time scales (short and long) and on four corrective themes: improved quality of life, compatibility with the bio-territory, low-carbon emissions from activities and reduction of the overall ecological footprint.
The choice made consists of rebuilding the local link lost by the former city dwellers by offering them advantages on sites adapted to the City that cannot be provided to them on the subdivided village peripheries:

> An extra time of stress-free life, respectful discovery of nature, learning to "Do" (Farm of initiation to organic farming, Cooperative workshops of inhabitants, home social assistance, Associations of sharing and mutual aid), vast relaxation or sport-leisure parks conducive to social and cultural discovery and, etc.

Within the new reception islands inserted in the districts made up of the City or attached to its periphery: specific links are created adapted to various forms of "short distance" travel; the interconnections between the different means of transport (tram, bicycle, rail, car) are organised within the districts; and also introduced rules on the maximum distances allowed between the front doors of homes and the nearest public transport stop (300m).
All means thought out, to **strengthen social ties, to reconsider "living together" in the encounter, the sharing of services and activities, to gradually promote the development of co-responsibility and co-action in public decision-making in terms of the enhancement of the "Commons", with the consequence: a restoration of natural balances in spaces outside the new contraction of the urban area.**

The IBA Emsher-Park Project (1990-2000)





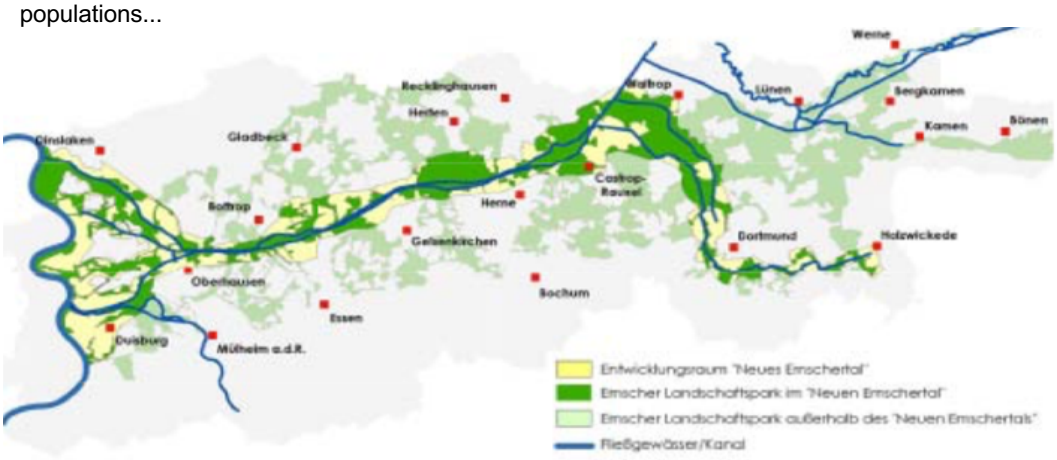
The end of the exploitation of the Ruhr mining basin was marked by the departure of the large steel complexes to countries with coal and iron resources. The abandoned land is very heavily polluted, occupied by the skeletons of "big industry", and the population in place is still waiting for a policy of reconversion of the territory. At the time, this situation was comparable to that of the mining basins of Lorraine and Nord-Pas de Calais.

This is the first successful approach in Europe to re-evaluate a devastated industrial territory in the Bio-Region, following the passage of the two "industrial revolutions".
A territory that has combined the establishment of the steel industry, chemicals and mining on its soil. The Ruhr, on the Emscher basin in the early 80s, is no longer the industrial flagship that used to drain a vast workforce to its facilities. The majority of the population who live there are waiting for jobs and are demanding access to new standards of quality of life and health.

To respond to this emergency, the Land of North Rhine-Westphalia and the seventeen agglomerations of the Emsch Basin, which have two million inhabitants on an area of 800 km2, are taking up a process experienced in the City of Berlin, which consists of reconsidering all the social, economic, cultural and environmental issues of a territory, in order to identify the foundations of a new socio-economic-ecological development.
To accomplish this task, the public institution IBA (International Building Exhibition) was created in 1990. It is responsible for programming, coordinating, animating and disseminating 80 neighbourhood projects and territorial projects awarded in the context of ideas competitions open to the international community.
The projects called fall into five areas:

The ecological redevelopment of the Emscher River hydrological system;
The modernisation of workers' housing estates and the construction of new housing, after re-equipping fallow land, and redirecting research and development activities:
The development of renewable energy sources and the digital economy;
The safeguarding and new use of industrial monuments that bear witness to history, in cultural facilities, concert areas, sports areas, collaborative workshops, etc.;
The reclamation of the devastated landscape of the Ruhr in a landscape park project extended to the Emscher area with preservation of undeveloped areas.

The operation is expected to develop over ten non-renewable years (apart from the operation to restore the Ecosystem-River, which is obviously slower). It must demonstrate, through concrete action, the feasibility of overcoming the industrial era by removing the pitfall of the relegation of settled populations...



Element paysager des rives de l'Amscher "Emschertal" inclut dans la structure paysagère globale

The **IBA** has adopted a Manifesto with ecological, social, economic and urban vocations, which commits to defining transformation/revitalization programs with the inhabitants and their elected representatives.

The institution is responsible for organizing communication on the procedures launched for "Ideas Competitions" open to Europe, awarding Architecture and Planning contracts for the targeted territories, and for continuing at all levels of the territory during the progress of the work, events and communications held on the action sites: Eco-Habitats, neighborhood public facilities, soft technology infrastructures, renewable energy networks, reforestation, stabilization of mining soils, requalification of workers' housing on site, water decontamination in phyto-purification, redesign of the sanitation system with reuse of collected water, etc.

The IBA has a deliberative assembly made up of Orientation Colleges which brings together elected officials, associations, banks, companies, craftsmen, in the manner of the city of Leicester in the UK, at the same time.
These colleges are responsible for examining inventories and evaluations of the resources and handicaps of the area of intervention, and participate in the validation of action programmes and monitoring of construction and development operations, launched on the basis of environmental/energy performance criteria. They also ensure control over the coherence of the interventions carried out simultaneously at the global and local levels.

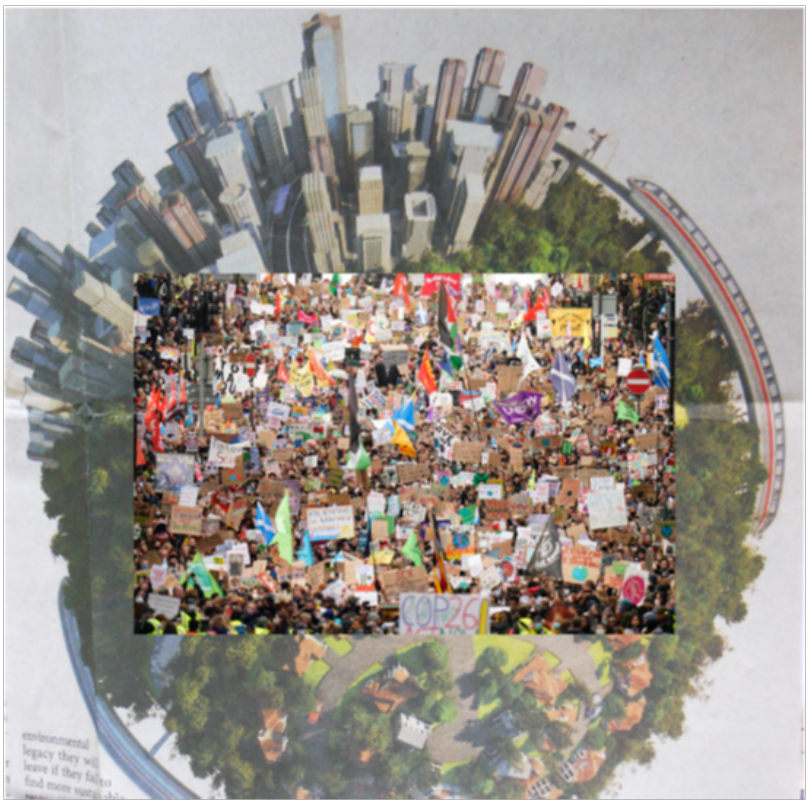
The overall project built over the ten years allotted was developed on three axes:

- Depollution of the Emscher valley (the Emscher river is a tributary of the Rhine) with a "zero pollution" objective of the water discharged by the tributary into the river. This consists simultaneously of decontaminating, regulating, reconstituting biodiversity, Hydro-electrifying the territory of the watershed;
- Reconditioning of disused industrial sites:
These "Castles of Industry" are decontaminated, restored and reequipped in various ways into sites for leisure use, festival spaces, concert venues, artistic centres, fair-exhibition areas, eco-museums, vocational training centres, business platforms focused on the digital economy, the water industry, and energy, etc. All of these elements are likely to place the employment fabric and the populations of the Ruhr on a territorial dynamic capable of capturing and fixing a new digital and "green" economy;
- Renovation of the existing built environment (mainly the former workers' and mining estates that do not comply with the new requirements of comfort, consumption and waste discharge (energy, water, pollutant emissions, waste collection, etc.), and launch of new performance housing operations (Passive) in the existing urban fabrics.

Extracts from the mission assigned to the IBA (1990)

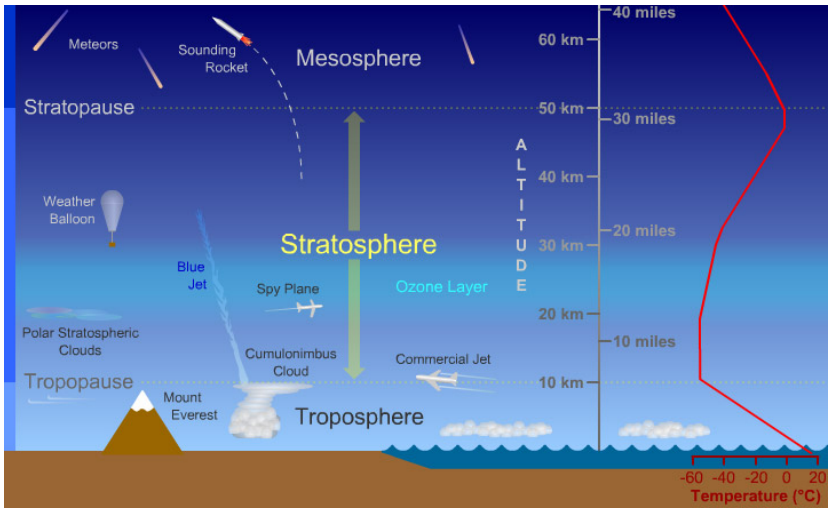
- "Taking into account the outdoor climate in the quality of the indoor climate of all habitats existing and to be created;
- "Health, safety, conservation of natural resources, recycling and disposal will be the first criteria for selecting the materials for construction;
- "Reduction of the need for land for urban development, as a prerequisite a better balance between nature and urbanization;
- "Regeneration of the campaign by rapid and visible increase in the number of recognized sites to accommodate nature reserves;
- "Creation of new free spaces by the reconquest of land previously or abandoned land and effective protection of undeveloped areas the nature of the soil has been preserved and the level of contamination is low;
- "Selection of high standards for services and technologies for the treatment of rubbish;
- "Reduction of energy and drinking water consumption by deploying the most recent technologies and through the active involvement of consumers;
- "To convince and satisfy users: their needs and skills will have to weigh as much as the technical requirements related to environmental objectives, this in order to all stages of project development and implementation
- "Green building is not just a construction method, it is a Behavioural change to conserve energy, reduce pollution for all types, restoring ambient biodiversity...
- "Preference is given to the execution of projects by local contractors of small and medium-sized and vocational training;
- "All the means to promote the return to work, the improvement of knowledge- and job creation will be implemented.
-Etc...

III. FOR BIOSPHERIC ECO-COMPATIBILITY



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PROLOGUE



- The Earth rotates on its axis at the equator at 1700 km/h and around the sun at 107,000 km/h (the sun is located at 400,000 km), which leads to exerting a tangential force of 0.02 m/s² on the bodies placed on its surface.

The centrifugation phenomenon on Earth is cancelled out due to the existence of a gravitational force of attraction that attracts nearby masses, including its atmosphere, towards its center with a constant acceleration of 9.8 m/s.
- The stratospheric layer protecting life on Earth is only 50 kilometers thick

Of the formation of the living?

"Originally, the solar system was formed from clouds of gas and dust and a lot of chance.
The planets gradually grow by capturing materials, gas and dust in space and gradually approach the sun, the central star.

"For 4 billion years, the earth has been favorable for the creation of life. Initially, it was a ball of ice and dust.
The singular Earth is unique in the universe, it is located in a hospitable area, neither too close nor too far from the sun.
The Earth is at a sufficient distance from the sun to possess liquid water.
Where did the water come from?
Jupiter is a planet in migration, its growth allows bodies formed in the distant solar system, rich in water, (asteroids and comets) to distribute themselves in the solar system, migrate, collide with other bodies including the Earth and insert elements (water molecules) that will remain trapped in the heart of its Magma.
Volcanoes, much more intense than today, proceed to a permanent rise of magma and a charge of water inserted into the mantle (the percentage of water vapor in the ejected gases is usually 85%). They then hydrate the planet in the form of clouds.

"The following times are marked by intense and constant rains over hundreds of millions of years and load the planet with liquid water while volcanoes continue to emit gases until they create an atmosphere of sufficient density (atmospheric pressure) to keep liquid water on the ground and form oceans.
The release of CO2 and oxygen accumulates in the atmosphere at this time and creates a greenhouse effect that protects the Earth from part of the solar radiation (30% weaker than today) by creating a stable climate conducive to liquid water.
Ocean water works as a safety valve: it balances the excess CO2 by gradually dissolving it. It is involved in the formation of limestone, in mineral form on the seabed. The level of CO2 trapped is a function of the amount of water present on the Earth's surface.

"Throughout its existence, a thermostat appears.
The risk is to trap too much CO2 and lose sufficient sun protection.
The mechanism that hinders it is that of plate tectonics (fragmentation of the crust). The mechanism drags the rocks into the Mantle and recycles the limestone rocks by overlapping the ten plates. The molten core then recomposes the limestone into carbon dioxide that it releases from volcanoes.

Variable external climatic conditions allow the partial reabsorption by the oceans of carbon dioxide and methane.
Plate tectonics has only occurred in the solar system on Mars, but too low a temperature due to insufficient mass, and too weak gravity have not been able to retain water emissions in an atmosphere.

"The Earth, a few tens of millions of years after its birth, receives additional hydration accidentally following its impact by a planet the size of Mars. The two nuclei are forced to fuse, increasing the hydration of the Earth's core.
A very massive Moon is born from this collision and creates an original double planet system. This new planet influences the Earth (at the beginning, 15,000 km away), it produces an effect on the Earth's axis (inclination of 23° constant), it stabilizes the climate by giving stable alternations of seasons that allow the slow evolution of life.
The Earth-Moon System is a unique couple in the solar system.

"The basic ingredients of life are the basic carbon-based building blocks.
These organic molecules are present in the interstellar medium (meteorites wandering in space are composed of 60% organic molecules), they are kept in the outer and cold zone of the solar system.
The comets and asteroids that come from them are the vehicles, during their journey they are subjected to various conditions, undergo molecular modifications that make them of varied compositions.
They are the amino acids present in all living molecules as well as the sugars that are essential for the construction of our DNA.
This matter is found in the oceans that receive comet particles in a particular environment that is necessary for the passage of molecular matter to life. Life appears at 3.8 billion years ago.

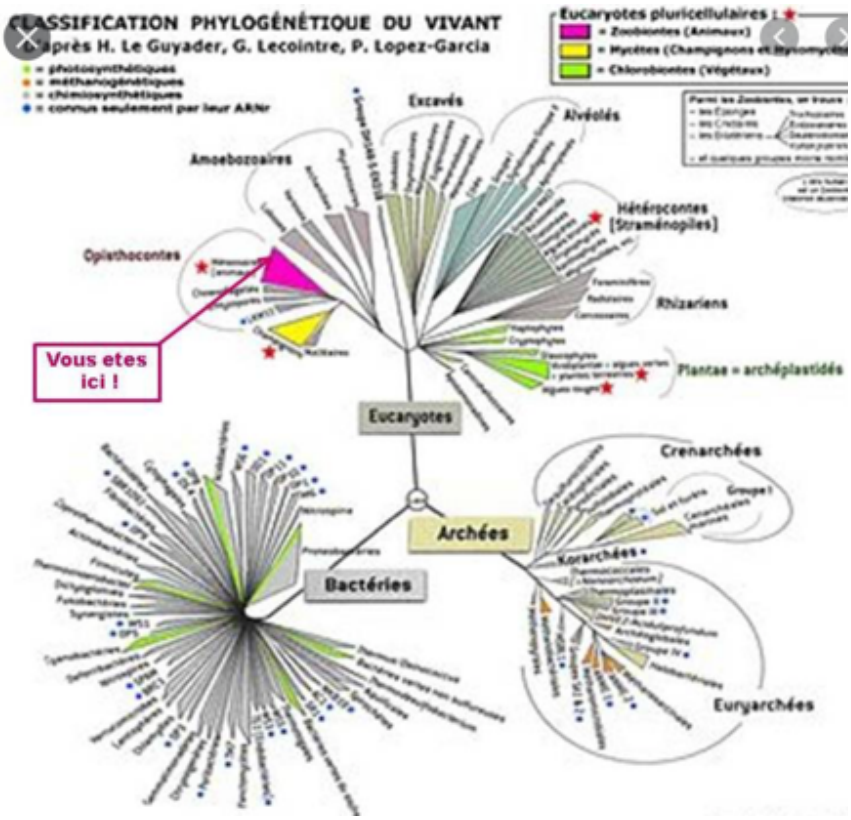
"The chemistry of life is made possible by a water balance that makes it possible to maintain emerged continents and oceans.
Water + Heat + Chemical elements from the subsoil allow molecules to assemble over several hundred thousand years, to gain in complexity to evolve into life, until the invention of the cell membrane so that the chemical elements are isolated from the external environment.
The first individual can form. If this individual is led to cut himself in 2, then life appears diversifying from several departures of life.
Everything is based on the same biochemistry, the same genetic material is now based on the same proteins.
There is a primitive earth made up of 60 to 80 amino acids. We use only 20 of them in the living world on earth.
Chance and various combinations are capable of founding other worlds that could constitute living beings composed of amino acids to give rise to other forms of life.

"2.5 billion years ago, the first microorganisms associated with the calcareous structures they created appeared in the oceans: calcareous "Stromatolites" produced by micro-bacteria: the "Cyanobacteria".
These use solar radiation as a source of energy, their green pigment works in Photosynthesis (absorption of carbon from the atmosphere and production of O2 emissions). They are able to form their own food (glucose) from 3 elements present on earth: water, CO2 and light. Cyanobacteria secrete a jelly, this jelly surrounds them, and can precipitate soluble bicarbonates into insoluble calcium carbonates. This limestone production protects them from the harsh environment and allows them to form colonies.
Photosynthesis produces oxygen, which is poisonous to other organisms that populate the Earth. It allows Cyanobacteria compatible with both O2 and CO2 gases to decimate other bacteria, and to leave them free to settle on earth and grow.

"The atmosphere oxygenates and transforms in the upper atmosphere into ozone, under the effect of ultraviolet radiation. The ozone layer provides a vital shield against solar radiation and promotes the growth dynamics of bacteria controlling photosynthesis on Earth.
New life forms develop with oxygen.
It is life that changes the earth, the green earth of chlorophyll.
The first multicellular organisms appeared (animals) and new organs were formed: muscles, brains, etc.
Evolution shapes the planet, it is inseparable from life on Earth. A world of interactions and natural selection.

"The ecosystem is a dialogue between life and the environment, a long dialogue orchestrated by the laws of evolution.
Competitive advantages? The environment has selected the individuals best adapted to the environment in which they are found and the environment itself will be modified by the biological activity of these individuals.

Evolution is a permanent back and forth between the environment and its inhabitants.
Evolution explores over billions of years the space of possibilities in biology, the encounter between chances, genetics and the environment, which produces the unique, the random without copy.
- ***Documentary excerpts FranceTV 5 "What if the Earth were unique" broadcast 06-01-2022*** -



Each individual is himself a symbiosis

« … The fundamental unit of living things is represented by the cell. There are single-celled living things, but the plants and animals we see are multicellular. »
The first cells to appear on the planet were prokaryotes (cells without nuclei), like today's bacteria.
The eukaryotic cell, with a nucleus housing its chromosomes, could then be born from the fusion of two prokaryotic cells (e.g. a bacterium and an archaea), one becoming the nucleus of the whole.
We can imagine the countless exchanges and mutations created within living things over geological time.
"... Only plants with ***chloroplasts*** *(ancient bacteria that have become symbionts, essential for plants unable to live without them) are autotrophic, i.e.* ***capable of generating their own organic matter****.*
The rest of the living, heterotrophic, must consume another living thing, plant or animal, while trying not to become prey itself.
By having photosynthesis, the plant kingdom is the only process with the capacity to oxygenate the planet*. "Neither technology nor humans can replace photosynthesis"*
*"****Predation and feeding represent the main route of transmission of germs between species****, it therefore leads to the imposition of the bringing together of individuals of different species.* ***The adaptive immune system*** *appears with jawed vertebrates and leaves the door open to oral contamination...*
The rest of the animal kingdom has only an innate immune system.

"Life works in networks, in interrelations*, whether it is symbiosis, parasitism, prey-predator type relationships, etc.* ***Each individual is himself a symbiosis.***
A human cannot live without the bacteria, the viruses of his microbiota, and the mitochondria (endosymbiotic bacteria) of his cells or the viral sequences integrated into his genome. ***There is therefore a link between biodiversity in the broadest sense and the health of individuals, populations, species and ecosystems****. This association allows the evolution and adaptation of each level of organization of living organisms in the face of changes of any kind, geological, climatic, pollution, destruction or encounters with new microorganisms, species, ecosystems.*

*"**The human species** is one among many others (518 species of primates, 6,495 species of mammals at the last census in 2018), tens of thousands of vertebrates, millions of animal species. It itself comes from the animal world and proceeds from the same phenomena. This is how its microbiota and parasites must be understood and visited by thinking of its prey, its predators, but also the rest of the living things it has encountered in the various ecosystems inhabited throughout its history... ".*
Each individual is himself a symbiosis.
- *Zoonoses, between humans and animals - François Moutou -*



III-1 HUMANITY AND THE BIOSPHERE: A DIALECTICAL RELATIONSHIP

The almost established relationship between **Humanity and the Biosphere is a dialectical relationship, which is based on the principle of tension-opposition.**
It was born of an ancient cosmological ignorance that gave credit to the fact that in time immemorial the invisible Gods of the Universe would have created and arranged the Earth in such a way as to provide their fragile creatures, placed there, with the resources necessary for survival, and evolution *(Note - Cuneiform text of the 3rd millennium BC - Preface of the 3rd chapter).*
The Earth-Planet, because of this shamanic intuition, has become, without further ado, the self-proclaimed property of the Sapiens "Wise Men", and appropriated, transformed according to the needs of these "social animals", in accordance with these mysterious extra-terrestrial deities, so talkative.
The relationship of tension-opposition, of **the Nature/Man and Dominant/Dominated** type, was built and developed in voluntary ignorance of the biophysical principles on which the functioning of the components of the Pachamama is based, to reach today the limit of tolerance of the reception system, without any room for negotiation.

This **time, the Stakes** concern the very existence of the Species within the planetary Living Organism and require us to leave the counter-evolutionary path carried out over nearly 10,000 years, in order to **develop relationships of non-domination and eco-compatibility with the whole of the Earth's Living Being, in strict compliance with the phenomena and chemical-physical laws of the basement and the envelopes.**

Would the **human species,** because of its ardor, to **disrupt the Greenhouse Effect,** to **engage in the conquest of the cosmic vacuum**, to play with nuclear weapons, to stubbornly pursue the extinction-eradication of the bio-diverse living organism still in place, would it now try by a last "Shift" to **free itself from biological and physico-chemical** conditions that determine its survival within the Biosphere?
In the previous chapters we have endeavoured, following in the footsteps of contemporary Anthropo-archaeology, to examine the first manifestations of the civilizing Species over the "Long Time", and to follow the cycles of growth-domination-collapse of models, and their tools: Religion, Mode of production, Spatial organization, ecological footprint, etc.

The exploration of the "Long Time", from the Ancient to the Modern, reveals that the malaise that runs through the world today was initiated and amplified by a certain "Humanity" and is not the responsibility of this or that epoch of the civilizing process , as Nietzsche argued in his time, or Marx, who was committed to clarifying the cocktail of predation, domination and biospheric incompatibility of a developing Capitalism.
It reveals a repetition of the same process at all times and continents, without any attempt to draw conclusions about the reasons for falls and relapses.
Could this be a phenomenon of complacency on the part of the human species in abusing its Striatum to maintain itself in an addiction to domination, rather than conducting an analytical approach focused on grasping the objective conditions of its presence on Earth?

The beginning of the phenomenon dates back to about 10 millennia in Mesopotamia (Territory of the Five Seas), approximately at the end of the Proto-Neolithic. It has been amplified to the paroxysmal Empires designed on a model of growth-over-exploitation-predation, exerted simultaneously on physical resources, on the ambient biodiversity, and on the Man-Mass, to develop a **parasitic mode of evolution**.

After each fall, the new masters have worked to maintain, or re-establish past symbols, to testify to the power of the ruling lineages, committed to establishing their domination-degradation-exploitation over the whole of the living, whatever the cost. : "hanging gardens" of Babylon, Ziggurats, Pyramids, the Triumphal Arches, Palaces...
These facts, now established by Archaeology, Anthropology, Climatology and other associated disciplines, contradict the assertions repeated over and over again about the birth in the middle of the 18th century in Europe of a Geological Era different from the previous ones, the so-called "Anthropocene".

The "**Capitalocene":** only marks the end of an era in which the financial and industrial powers, after having exhausted the wood resources of the forests located in accessible territories, have tried to find alternative energies and to invent mechanical processes capable of making fossil fuels usable.
On the one hand, Humans do not cease to live by creating or seeking to remove the unknowns, and on the other, their system of economic-political and ideological conduct is only concerned with erasing them, in order to increase in a schizophrenic way the yield of the productive forces in a growing extinction of the living.

Over the past six millennia, in repeated falls and amplification of the degradation of the surrounding living environment, each re-establishment of the (variant) anthropo-model has been the subject of a renewed sophistication of the modes of exploitation-appropriation of animal and abiotic plant resources until the last one, which consists: Playing **with the Greenhouse effect;** to send Mr. "Musk's" car into the infinite Universe; to play with bioethics in an attempt to have a Humanoid who is supposed to set off, like Don Quixote, to conquer the Cosmos.

And then comes the promise of a Golden Age, under "AUGMENTED Artificial Intelligence..." ".

This ultimate act of predation of knowledge that places humans under a regime of deprivation of consciousness of the real world and servile unconsciousness.
Hidden human intelligence - "Alienating Intelligence" consists of transforming data that has been monopolized and then repackaged into formulations that can be directly assimilated, but established on the basis of criteria oriented by the predatory human system that makes the product.
The European Parliament gives the following definition**: "Any tool used by a machine capable of reproducing human-related behaviours. Such as reasoning, planning and creativity."**

Should we bring out Noah's Ark?
Some wonder if it is still possible to correct the parameters of retro-evolution of this dehumanized system, in co-evolution of the Living as a whole, and then replace: appropriation, greed, greed, submission, domination... Through curiosity, sensitivity, free inventiveness, coexistence, sharing and solidarity, creative collaboration, eco-systemic awareness...?

… Greenhouse effect, pandemics, depletion of abiotic resources, erasure of biodiversity, mass climate migrations... In this context and in the face of the extreme urgency of remedying the drifts that have always existed: A correction of trajectory in the required time seems to have to be exercised against a financial-ideological oligarchy.
A new elusive "Supreme Being", who plays at speculating on the market of raw materials, natural resources and Humans, prepared to submit to an "Artificial Intelligence" straightening their thoughts, reforming the characteristics of language, to be exported as test material in the intergalactic Universe towards illusory tomorrows.

The Assets **that bring about change are available intellectually and materially**. They present themselves in the field of social initiative in the form of physical or digital links (50% of the world's population already accessed the Internet in 2020).

- The **digital generation** gives life to free software, (Creative-Commons books, 3D printers, access to Knowledge Banks - Wiki...). A certain industry implements inter-communicating itinerant technologies (computers, wifi, handsets, smartphones, etc.), which often have resources that are deliberately reduced by the media market.

In the field of renewable **energies**, **mobility** is supported by transportable solar components that can be used anywhere to rebuild micro-grids, micro-clusters, etc.
We have previous knowledge: **Frugality**, which consists of cultivating by learning from the soil-climate adaptations developed by ecosystems in action; from **bio-climatic and vernacular construction,** adapted to the diversity of micro-climates and the specificities of indigenous populations, to bio-based and geo-sourced materials; and multiple construction techniques designed to meet the needs of use, recycling, and transport of nomadism, semi-sedentary lifestyles or residential fixity.
- **Self-creativity in consciousness,** outside the field of market exchange, has led to the invention over time, in all latitudes: irrigation; agricultural wind turbines, windmills and water mills; coolers with thermal inertia (in deserts); breathable walls in monsoon countries; envelope walls, made of brick (the first modular component that was born in the 8th millennium BC), in adobe, rammed earth combined with insulating and structuring plants... An infinite and unclosed list.

In 2050, the UN estimates that the continuation of the current socio-economic and political model will concentrate 70% of the world's population estimated at around 10 billion in the world's megacities, it was 7.5 million in 2020. In the year 1000, it was about 260 million, and in **1900 it was 1.6 billion**.

Faced with the apathy of world powers to halt the deterioration of the "greenhouse effect", **a challenge is opening up for an eco-responsible political people to commit themselves on all horizons to change their cosmology by making themselves compatible with the conditions of development of the Living and the biophysical and geophysical rules of the planetary enclosure.**
It is a change that cannot be done without an insurgent dynamic to obtain a general awareness among humans of all conditions and cultures.
It is a Neo-evolution to reinvent oneself as an "Associated Species" and to find the frameworks for an ecosystem co-evolution within the biosphere:
By introducing a principle of non-domination in the relations between humans, and those of Humans to Living;
By reseeding the path of the creative Commons and life in collaboration and co-management;
By working to reduce the forms of production and exchange of values by shifting social and cultural activity towards the construction of a symbiotic model of evolution that is no longer parasitic and segregative.

The irrepressible desire inherent in the human brain to discover and understand "the Whole" must put an end to the incessant attempts to monopolize and divert the knowledge developed by the "Society of the Spectacle and Sustainable Development", with its devastating impulses.
Having probably reached a final stage of duplication of **a biospheric "counter-evolution" model**, **it is time to make known the escape routes already inaugurated and perfect them.**

III-2 CHANGEOVER

Obstacles and fragilities?

We can see that:
- An amplification of proselytism on racist ideologies, an ostracism towards the Genres and various social behaviors.
  (While **mixing-diversity** is the source of complexification, dynamization of The Mind and Transformation of Space, Over the Past Billions of Years)
- The development of religious fundamentalism and forms of **violence** Inter-community: Pogroms, genocides, wars...
- Massacres of civilians and punitive destruction of **cities over the past seven millennia**: Susa, Uruk, Assur, Babylon... Nanking (massacre), Stalingrad, Hiroshima, Nagasaki, Grosny, Aleppo, Mosul, Mariupol, Gaza (Palestine) ...
- The continuation of carbon emissions hindering the absorption of the Greenhouse Effect, protective of our fragile lives, in connection with the continued overexploitation of **resources fossils** to maintain the addition of populations to ultra-consumption.
- The Depletion of the **Biosphere,** by refusal to co-exist with the environments *(Lithosphere, Geosphere, Zoosphere, Aquasphere)* - 60% of ecosystem services are degraded - (UN Report).
- The proliferation of state despotism embellished with populist fevers to confuse the path of regaining awareness of objective realities and priorities.
- The development of an ideological "**Infosphere**" in line with the logic of

Control and Domination:
The theft of consciences, without the knowledge of Internet users in **cyberspace** (neo-mafia networks, "Data Brockers"), by hacking of digitized personal data circulating on "social networks", or the looting in broad daylight for private and commercial purposes as part of a "Big Data" collection of personal opinions (economic, social, political, cultural, etc.), or intrusion leading to the resale of data to economic operators.

- The increasing disappearance of **free-evolving soils** , leading to the extinction of the ambient biodiversity and pollution due to chemical and biological treatments of land and water resources, to develop the global agro-industrial market by pretending to be unaware that these domains of nature are not land reserves, but areas of carbon storage and oxygen production by **photo-synthesis.**
- Liberal nation-states committed to ensuring the conditions for **the free growth** of the Market Economy;
- "**Mega-Shelf Cities**" of 20, 30, 40, 50 million people, which agglomerate the populations within cellular spaces piled up to the clouds, to the point of erasing them to leave only spaces on the ground for compulsory circulation under video surveillance.
- Networks linked to predetermined functions, where spaces no longer appear public of expression, of meeting, of demonstration of the Collective, of expression of the crowds;
- Programmed social and physical containment poles, capable of generating a the inability of their occupants to exist outside of connected, technicalized spaces, and climatically artificialized.
- A break between **the individual and the** "**Common**", by the gradual introduction of the "**distance**" in e.domestic life, e.work activity, e.commerce, and e.food, e.conversation, e.reproduction...
- A **Metropolis** treated for drugs and alcohol. A fragile colossus on a drip because of his dependence on external resources (energy, food, water, materials, etc.) and on a fragility to climatic disorders, to social disorders.
  A phenomenon that generates the appearance of a new slave people (that of the delivery men **Self-employed people** paid by the race or the task, without any immediate commitment, without health insurance or pension, by bike or van, on watch day and night... ***).
  A macrocosm that is preparing to repel the assault of the "**Landless**" striking at the Gates, as a result of: the rise of the oceans, the conflagration of the forests, the droughts, floods, tornadoes and hurricanes.



Challenge

Currently, 80% of fossil fuels power technologies that are twenty-eight years before the **"Endgame"**. In order not to exceed **the average global climate temperature estimated in 1850 by 1°5 C in 2050, the additional carbon emissions emitted by humanity on the planet from 2021 onwards should not exceed** 325 gigatonnes by 2050. Let us remember that this is the only scenario proposed by the IPCC that allows a gradual return to pre-industrial climatic contexts over the next two centuries. At the current rate (2025) of growth of the carbon economy, this **stock will be exhausted in 2035,** and not in 2050
How can we imagine an economic system such as the one in place, based on the race for investments and capital movements, taking on the task of finding contributors-bettors who would agree to freely

invest (out of devotion?) in expensive and unmargined investments, and perhaps even at a loss, only to slow down the growth of their nest egg for a while?

While continuing their investments in coal, methane and oil energy, the banking powers are studying and assessing the level of risk generated by their carbon-based investments, during a possible but gradual transition to a fossil/renewable energy mix. They are not concerned about the human losses and risks incurred by the populations of the planet due to the induced climatic effects: devastation of inhabited areas, destruction of infrastructure and superstructures, inaccessibility to food resources, etc.
For their part, the political states that are supposed to manage contexts in the interest of their populations do not seem to be eager to upset their creditors either, while shareholders' profit margins continue to increase in the global speculative market.
In the post-Neolithic civilizational model adopted, the Economic Market has always shown itself to be the director of the organization of the Territory, with the latter being responsible for leading humans on the profitable course assigned.
Can it be otherwise?

Alternatives?

Today, Social and Solidarity citizen savings (Cooperative Banks, Mutual Societies, etc.) should be committed to a low-carbon investment policy, supporting citizen initiatives developed by activist associations: such as "Self-managed Group Housing", "Participatory Housing", etc. Or other cooperative formulas associating the actors with partial responsibility for construction work, such as the one carried out in France by the Association des "Castors" (an initiative launched in the post-war period intended to build pavilions and rental apartment buildings with the future inhabitants of the neighbourhoods). Actively and deliberately engage in the development of a **mixed, frugal, non-speculative economy model.**

In terms of Spatial Planning, the "**Ecocity**" movement (Germany) has relied on joint funding: citizens, local authorities, and local economic actors to build renewable energy production centers on the outskirts of medium-sized cities (geothermal energy, wind and solar farms, etc.). These wind and solar farms, supported by a collective initiative, mark the beginning of a search for autonomy linked to a learning of sobriety on the consumption side (passive, dual water network, public transport, etc.), and a gradual detachment from the centralized network model using fossil fuels of nuclear, gas, and coal origin.

"Consciousness is to be placed upstream of the act" *– S. Bohler –*

"Changing life, changing the city" asked some intellectuals in France in the 80s. It was a question, in vain at the time, of feeding the illusion of a relaxation of the rules of exploitation of Man in a world subjected to productivist, neo-liberal or neo-communist forms of economy.
The question posed has remained unanswered insofar as the **City** has never ceased to confine, control, segregate, sanitize and artificialize this form of concentration of human groups.
To put in place the means to break isolation, to lift territorial segregation, to live in the public space of relationship, to co-organize the space of daily life and proximity, to get rid of land rent and real estate as a maker of urbanism, to discover the soil to find the soil of the living, to master interrelations and communication, to erase borders, to make the places of the ban disappear?
Can we still stubbornly imagine experimenting, from the urban artifices deployed, the **seeding of an ecosystem Commons, evolving on a symbiotic basis with the various biological environments that rub shoulders with us and ensure our survival?**

"An Open Mass Hatches on an Ecosystem Line of Thinking" *- Elias Canetti*

The **"Open Mass"** is rebelling**,** distancing itself from the market of transactions and speculation: to **establish a mode of exchange with shared advantages**, replacing unequal exchange; **reembedding the social in the symbiotic**; **to develop** innovative collective relationships (ecological, neo-social, multicultural, etc.); **reduce its footprint and its hold** on biophysical environments, anthropologically called "Territories".
(*Etymical territory: Administered place)*.
"**Interconnectivity**" makes it possible in the moment to develop a wide field of **interrelations**, of **mutual aid**, which give everyone the means to act and to think about both globality and specificity, and to analyze situations from a vast field of data and knowledge, to put them into debate not between individuals but **between people of a revitalized Humanity**.

This "**Shift"** is not the "Transition" that a capitalism supposedly that has entered into resilience before a future "comeback" of business imagines to lead, nor is it a utopian approach.
It **is the effect of a dynamic of the "margins": which in a muted way instruct the modalities of a passage from the manifestly counter-evolutionary model to a collaborative and frugal stage, suitable for objectifying the place of the Species in Time and Space and the Operative Dynamics on the biospheric enclosure**. Those who develop creative initiative in order to concretize our forms of life in eco-compatibility and non-ownership with bio-diverse environments, our guarantors.
An **Alternative** of **"All Ones"**, conducted on the basis of a permanent analysis of ambient phenomena, the means available and their possible diversion, to sketch another human condition that leads to the development of the scientific and technical advances obtained, not to sail towards "black holes", but to understand the Biosphere, its springs and its limits.
A change that opens up the possibility for the social body to **undertake in Common and reason Together**.

Given the objective knowledge it has recently acquired on the mechanisms governing our living environment, **a fringe of Humanity is becoming aware, manifesting itself, inventing itself, setting directions, adopting other steering instruments in its progression towards non-domination and non-appropriation, experimenting with concrete alternatives in terms of installation, food, travel, decarbonization of the energies used...**
A conduct is developed, that of evolving side by side with the other: **the non-human** ... **To elaborate and shape the framework of an "other human condition", that of: conviviality, mutual aid, collaboration, autonomy in creation and action, humility that open the way to the biospheric eco-compatibility of the "truly wise Man".**





III-3 CHANGING COSMOLOGY

03-1 Process

The concept of the "Insurgent" political community put forward in recent years by Miguel Abensour takes note of the tendencies developed by the "demonstrating world" which undertakes to criticize and combat the conduct of the Anthropo-world led by productivist economic and state governance
His repeated initiatives set the **seeds** for another relationship between Man and the Biosphere, and announce the necessary passage to a transformation of the framework of functioning and objectives of Humanity, to base an existence of non-domination on living activity, **another human condition that is not desirable but essential to the pursuit of an adventure** "**With**".

The arrival of a **critical Humanity** opening up to freedoms of another nature, passes through a time of learning and exercising in the **non-domination of the political people,** a time that turns away from "Doing" for "Acting" and **debating in conscience the paths and horizons to be cleared.**
Among these horizons is that of our discourse: The **resection of the urban footprint on the planet**.
(Resection: Removal of a part of an organ or pathological tissue).

Changing cosmology**, planetary condition?**

For the first time since the appearance of life on Earth, a social being belonging to a species of life is endowed with knowledge that makes it capable of carrying itself at the same time:

- To know your **near future**. To discover the imminence of a threat to the duration of the existence of one's species, and to have the technical and financial means to prevent its disappearance, to decipher the human genome...
- To found a **cybernetic space** that places all earthly humans in instantaneous intercommunication, connects them to knowledge, and gives them: speech, the means to realize themselves and to invent, the power to assemble to act in a concerted way;
- To correct the causes of the degradation of the **Greenhouse Effect** and its recovery to previous regimes, by modifying the considerations on the immoderate use of energies and raw materials;
- To discover that the approach to problems through sobriety, moderation, frugality, does not lead to misery, sadness and constraint, but on the contrary participates in nourishing the pleasure of **seeking, understanding, elaborating and sharing**.

A **"reactive" process** is expressed and gives substance to a "**Planetary Condition of the Species**" revising the anthropological notion of "**Human Condition**".
This field of initiatives is autonomous from the currently dominant framework of thought by building a political thought that is committed to the resolution of the social and ecological question "World", outside the productivist mono-vision guaranteed by the Historical Political State.
Concrete are the **Alternatives developed at the global level** for several decades, in terms of food, reduction of the ecological footprint, reinvented social dynamics, direct exchange of user goods, or even cooperative self-production, etc.
Protester and denunciator is for the moment **the expression of the public** : Street demonstrations, reinformation and awareness campaigns, lawsuits before state courts for unfulfilled commitments on Climate, denunciation of the banking system financing the oil and gas industry, actions to hinder deforestation and the degradation of biodiversity, etc.
The expression of the public is **activist** in terms of the actions tirelessly carried out by the World Non-Governmental Organizations, committed to curbing epidemics, providing care to the excluded from growth and to displaced or bombed populations, fighting against famines, coming to the aid of "boat people" in search of an income to live on, - at the risk of getting lost at sea - providing temporary shelter, help rebuild homes following Earthquakes, Tsunamis, Hurricanes, Forest Fires, etc.

03-2 Changing Cosmology – Political State & Democracy

- *"The state is a political unit that doubles a people, and that can survive the comings and goings of governments and forms of government." - Macchiavelli*

- "*... Insurgent Democracy is born in the intuition that there is no true democracy, without reactivating the deep impulse of Democracy against any form of appearance of a command... It is a continuous struggle to act against doing, it significantly shifts the stakes by permanently bringing out a political community against the political state."*
  M. Abensour.

The concept of **Insurgent Democracy** aims to call for a re-examination of the concept of Democracy (a notion created by the Republic), abusively or perhaps voluntarily referred by Western ideologues to an Ancient Greece by omitting to mention the presence of the people of non-citizens (Women, Slaves, Metecs, Minors) alongside the master "Citizens" of the Ancient City. Such a misunderstanding of the social and political organization of the a-democratic Greek city is likely to make broad the meaning given to the label "Democracy" and the institutions that claim it.
From the 1980s onwards, the **State-Political** formula has led to a shift in governance towards a "Corporate" mode of management, following the neoliberal change introduced by global shareholders in a hurry to take over the general direction of the world's economic, social and political affairs and thus extinguish the previous Keynesian sequence in order to stimulate a new pace of production growth. consumption, domination.
The world's nation-states then adjusted to an economic system with **extraterritorial steering**, that of the rules of the world market, opening the way on the one hand to xenophobic and isolationist excesses, and on the other hand proceeding to the reduction of the citizen's rights of expression-demonstration.

In "Democracy against the State", Miguel Abensour, starting from the writings of Marx (1843) which deal with the **social consciousness determined by the relations of production** (relations that form the economic structure of societies and the different forms of alienation), glimpses at the level of framing and stabilizing tensions "that **the advent of Democracy goes hand in hand with the disappearance of the political state as a form of organization".**
Democracy being above all, **modality**:
political **action**,
self-determination,
of **non-domination in the City.**

This enlightenment, which places the **Demos as a political being**, calls for **the experience of the Community,** for **the unity of Man with Man, and of Man with the Living as a whole...**
Under the condition of a **symbiotic relationship to be defined,** which imposes a behavioral review, that of correcting the **human impact on the** bio-geophysical environment that is the foundation and organizer of the planetary living world, it should be remembered.
"Lifting the screws" were made in the past during the revolutions that punctuate history, with still hardly imaginable today: a passage in France in 1793 where the **political people** made the Convention ratify a **right of citizens to "insurrection**".
A right enshrined in the Constitution of the French Nation which authorized, in the event of an attack on the general interest, to suppress the laws promulgated.
It was a time when the "elected representatives of the People" were appointed to carry out distinct political programs, decided in assemblies raised within each territory, and when the elected representative of the People's Voice, in the event of non-compliance with the programmatic commitments made, could be dismissed at any time by the "Local Assembly of the Elected People".

Shouldn 't Democracy be a **political community**, which hatches and develops on a human bond through the movement of Humans in search of free expression in all circumstances and in all forms of manifestations, both individual and collective?

Shouldn't it be **the guarantor of the Unity of Humans in the dynamics generated by their differences, at all scales of life, territories of settlement, and cultures?**

*"Contrary to what the political classes say**, democracy must not be a political regime of "All One in the name of the One".***
*"It is a micro-macro Community with continuous variances: which seeks to institute the social under the sign of **non-domination**, which **thinks of the people as a unity that is constantly being made and unmade**, which ensures the cohesion of Men in their immeasurable differences.* - M. Abensour

Like a people-world that objectifies its Earth condition, places itself in a position to correct its civilizing thinking in order to invent an eco-systemic evolution compatible with its biotic neighbors, and a planetary shelter in demo-sharing.

03-3 Changing Cosmology - Political Community - Insurgency

- ***"To think of democracy under the sign of continued self-foundation implies thinking of the people as a definitive accomplishment, as a unity that is constantly being made and remade, between the always threatening outbursts of heteronomy carried away in the movement of the infinity of the will"***
  –Miguel. Abensour

- *"The Insurrection during the French Revolution had as its meaning: an active and vigilant presence of the people, **themselves the living institution of the democratic ideal**... »*
  - Pierre Rosanvallon

In recent decades, **the political communities** on all continents have expressed their need to change the political, financial and ideological motives that govern the conduct of humanity: by developing in a muted way multiple **initiatives in the field of an ecological-social and multicultural alternative at the local level** ; and by weaving in free inspiration forms of common life that take on self-management aspects, and even for some of the forms of constitution of a common citizen.

We can read in it a **micro-scale manifestation of the capacity of peoples to contradict and oppose the political state**, already analyzed and commented on by E. Kant, Spinoza, Machiavelli, Annah. Arendt...

More recently, Claude Lefort and Miguel Abensour have endeavoured to develop the notion of the state in order to conform it to the present time, where "the dynamic of questioning the state is accentuated to the point of appearing as an **opposition between the political Demos and the political state."**
The term **"Insurgent Democracy** " that they introduce is understood as a desire to follow up on the multiple approaches of protest-contestation developed in recent decades in the world against the form of state, this **destructive systemic form of "All Ones".**
"Insurgent Democracy" takes on the meaning of a political community of citizens against the political state, marking the resistance of the "All Ones" to want**:**
To constitute a Territory of time-sharing and social transparency at a distance from the Demos controlled by a separate power.

Political action in stages can be built on an idea of democracy, which takes the path of greater plasticity and openness to events, a stronger disposition to welcome the new of **the permanent inter-relation**, and **establishes a political-people aware** of the intangible balances that determine its existence.

Edward Godwin in his work - Enquiry concerning political justice 1793 - discerns the **irremediable conflict between government and the mobility of Humanity**:
"The government, from whatever point of view we examine this question, is unfortunately rich in regrettable intentions of which it is appropriate to complain. The true interests of humanity seem to prescribe incessant change, perpetual innovation. But the government is the eternal enemy of change... By its nature the institution of government tends to hinder the elasticity and progress of the human mind."

Should we understand the role of the **Nation-State** as that of a body for supervising populations assigned to territories in which they are called upon to produce and consume?
A body dependent on the competing financial markets.
A body intended to lead nationals towards militarized conflicts, when the so-called "strategic" resources risk being monopolized by a new predatory power, or simply by the plundered and starving indigenous peoples? As did... The Military Empires: Babylonian, Assyrian, Spanish, Chinese, English, French, Russian, Prussian, American, and many others, before arriving in the 21st century, the century of the control over the entire Species in all continents and oceans, by a single Hydra.

It should seem shocking... It is shocking to note that the gap between democratic regimes and democracies, illiberal democracies, dictatorships and para-democracies continues to shrink. Either the dictatorial fact is disguised behind a salvific anchor supposed to revise an unjust world, and where finally everything intertwines to mask "rump parliaments", constitutions that are not respected, elections that are manipulated, a law modelled on the preservation of the interests of the powerful, forces of repression (order and armed forces), mafias...

Must the paths of an **educated, reasoned and responsible Humanity, capable of consulting and interacting with nature**, pass through the **Political State of the Partial Demos**, when it perpetuates a regime of selection in social classes that is counter-evolutionary but profitable to a greedy minority? Gafas and Elon-Muskists, whose raison d'être is to obtain from the political spheres in place the lifting of the social obligations in force in the states, to extend their economic and ideological arbitrariness over an "avatarized" neo-humanity fed by Generative Artificial Intelligence.
The repeated demonstrations with a climato-social content, the Insoumise, the Insurgeance, the marginalities, testify to an opposition to this dead-end path of the **anthropo-civilizing model.**
Will the rupture depend on the ability of the world's people to impose the adherence, over a now limited time, to scenarios for the decrease of carbon emissions (2050 -1°5) and a "regenerative" sobriety of existence?

The "Off" of acting

From the end of the 60s, at the time of the rise of liberation movements, committed to interrupting the colonial phase of exploitation of peoples and resources on all continents, a general aspiration for change developed taking various cultural forms or attempting to bring **countercultures to life**.

Based on **analytical-critical approaches,** often created on the fringes of the Economic Market, because they are inspired by needs essentially related to the control of use, a field of alternatives has developed: on light construction techniques with components (wood, canvas, etc.), forms of **self-construction**, light tools, bio-sourced construction materials have been re-discovered...
On other registers, local currencies and forms of barter in exchange (informal economies) have developed... These are just some of the facts that testify to the continuous insurgency led by populations on all continents and regimes.

More recently, we can also mention:
- Insubordination in the **self-organization** of the inhabitants of Aleppo (the "White Helmets") and Mosul, against the exterminations and massive destruction perpetrated on their dictators and supporters;
- The legal action of States by citizens, for non-compliance with climate commitments;
- The **commitments of Amerindian communities** to oppose socially and militarily the projects of monopolization by global economic trusts, of mineral resources or biotic resources present on their soils (projects authorized by the States: Mexican, Chilean, Brazilian, etc.);
- The resistance of the Ukrainian people to the military annexation decreed by the Russian neighbor;
- Political opposition to religious dictates issued against women in Iran, Afghanistan;

The commitment in Europe of **civil disobedience movements,** against the apathy of political regimes to engage in the fight against forms of carbon emissions;
The contestation-denunciation of economic projects for the exploitation of fossil resources and the attack on biodiversity (Deep Green Resistance, Extinction-Rebellion, etc.);
Support for the development of "organic" agriculture and processes that protect biodiversity...
Etc.

Thus a human being, a social being, a political being, a bio-compatible being, **is sketched out on a broad register,** and the word is freed on the World-Space trying to practice Equality, Civic, Political, Gender...

03-4 Changing Cosmology - Extraction Autonomy - Mobility - Property

*"Deconstructing the state **means making room for intellectual collaboration, multicultural exchange, autonomy, self-management, critical analysis of situations, reasoned invention, curiosity about difference and the diversity of environments**." – Pierre Bourdieu –*

In the era of a possible interrelationship (which remains to be guaranteed) of the peoples of all continents and territories, via this web of digital interconnection that instantly allows everyone to have access to universal knowledge and deepening in exchange, E Goldwind's statement would seem to no longer make sense, yet this is still not the case.
Since the end of the 18th century, the frameworks of submission of Human Beings to governments have moved, taking other paths. **The Economy** has become a Philosophy-Politics, master of time and influencer, to undertake a **disempowerment of the Mass** that allows it to freely forge its society of Artifice on the human world.

Science fiction or unreason and drift?

- While the refusal of political and financial governance to substitute renewable and recycled resources for fossil and living resources that are disappearing is patent.
- While in the field of the ecological footprint, the refusal is recorded under the disguised term of "**Transition",** and the agro-industrial policies of sterilization of the soil and contamination of the foodstuffs produced are being pursued, and pig, cow and chicken farms, soon to be set up in the neighborhoods (UN estimates on the growth of the current world economy, on the horizon, place 70% of the 10 billion humans expected in 2050 within the Megacities).
- While to divert attention, the idea of **sprinkling** "green plantouille" on the asphalt pavements of the Avenues and on some experimentally cultivated roofs is developed... As in Paris itself, where people pride themselves on creating "**urban forests**" on a few crossroads squares dedicated to car traffic.
- While **the Post-City** presents itself, either as a **forest of towers** planted in the clouds as already on the megacities of the planet, or in compressions of blocks with tight vis-à-vis, without sun, with sealed floors, mono-oriented housing cells, behind street facades with "trompe-l'oeil" decorations: to make a Heritage City...

*In "The Invisible Cities" - Italo Calvino describes "the City of Penthesilea as **"a City without an outside, which is only the periphery of itself"***
"The people you meet if you ask them, 'Penthesilea?', they make a circular gesture that you don't know if it means here, or much further, or all around, or on the other side.
The city? you ask, insisting. "We come here every morning to work!" some answer. "We're coming back here to sleep!"
But the city where we live, you still ask? "It must be distilled there!" And they stretch out their arms to one side towards an opaque polyhedron concretion on the horizon, while the others point to ghostly arrows behind you.

Outside the Megacities, is there an outside?
Do we still perceive a "**philosophy of the living**" that would strive to reveal, contrary to the current model of the deterioration and collapse of space-time**,** an **alternative that would reside in the Man-Wise part of the being** and that would be able to amaze him, lead him to analyze, to resituate himself and exist in terms compatible with a planetary environment from which he is not separable?

Relaxing fabrics

The withdrawal or relaxation of developed territories can only be achieved through a policy of public buy-back of the land and the structures inserted, under the leadership of a social initiative that offers alternatives. An option taken by the indigenous peoples of Amazonia, once again!
The approach already reported in the experiences mentioned above (The paths and hearts of the blocks of Culemborg, the alleys to play, to converse, to lunch, to plant, from the Vauban district to

Freiburg), has indeed led a human-politician of various origins, instructed in the realities of the exchange of knowledge and practices: to define and create "open spaces" of common life, collaborative, introspective on the public domain, and to create interrelations that lead to concrete alternatives, within the framework of initiatives that bring together all age groups and social categories in various forms and manifestations and statuses of occupation.

Two worlds clash
That of convivial and creative frugality, **"short distances" and proximity**, self-financed and self-shared renewable energy, interconnected networks of medium and long-distance public transport...
And that of the quest for growth and power that plunders and exhausts the finite physical and living resources of the surrounding environment in order to play with the "Greenhouse Effect" after wood, coal, oil, nuclear power, before having understood the mechanisms too late.
We must now question **the correction** to be made to the anthropo-monopolization of the planet and explore the avenues discovered:

Adopt a sober behaviour and a reasoned use of available technologies;
Liberating thought to re-inscribe Humans in an eco-compatibility with the surviving biotopes;
To characterize and develop the part of our abilities to evolve in consciousness towards a **symbiotic approach to our existence.**

Isn't the time of instantaneous digital exchange, which no longer places a distance between Man-actors, in the process of changing the role of the human, not for an ultimate galactic conquest, but on the scale of the daily life of the Earth and the role to be played between the infinitely small and the cosmic universe, in its multi-compatibility with existing environments.

*"The delegation of productive functions to the machine, leaving man the task of realizing his post-historical and post-instrumental essence through playful and aesthetic activity, could be defined as the **critical updating of the paradigm of autonomy-extraction"***
-Marcuse-

In the era of climatic cataclysms and growing conflicts that strive to eliminate (civilian) men trapped in urban conglomerates, the human community must decondition **and reinvent itself in stages: in forms of sequential deposition or mobility, without metabolic imprints; redefine itself in the co-generation of temporarily lived biodiverse environments**, in **the co-evolution of the global Living Being**.
The approach could consist of initiating test programs :

- To found centres of activity adapted to the singularities shown by neighbouring ecosystem environments, in search of an **"almost zero" footprint on the installation-removal sites**;
- Configure the host environments built and developed according to **osmotic and bio-compatible architectural criteria and concepts, conjugable with the inviting ecosystem site** and the characteristics of the climate, the soil and the systemic, local life;
- Build **exchange networks** (sources and data), inter-poles at supra scales;
- **Conform the forms of stay** (sedentary, semi-sedentary and nomadic, etc.) and the functions assigned to the different living bases to the chosen sites;
- To have a biogeographical network made up of the interconnection, circulation and distribution of activity between **three types of resource poles**: "**Micro-poles" for** temporary, nomadic and imprintless explorations; "**Interlude Poles** " on "regenerative territories" hosting activities in a semi-sedentary framework; and "**Base Poles"** placed on former areas of occupation redefined to function in autonomy (energy, water, food resources, materials), and integrate civil, cultural, educational structures, etc. of the "**Essential Community**"...
- To create a low-energy **collective mobility** network (air-water-ground) over long distances, associated with the regional public transport networks responsible for ensuring the distribution of trade flows.

...

Roaming ?

The mobility practiced by semi-sedentary and nomadic populations for millennia must question us on the reasons for this choice of life, which in all territories strives to erase the footprint on the ground, and on the way to guide one's steps, by linking past and present without wanting to fix the future, to leave the rest free...
This proclaimed "civilized" Human (*Civilized: Made more civil, sociable - More in line with the life requirements of his society*) because he does not understand his societal journey in its historicity, propelled as he is by the grasp/domination he exercises over his life, continues his development in duplication of a permanent present without depth of field...
The fact of sitting in mobility, in convivial, interrelational and interactive societies, on various territorial scales, in non-domination of the Living and in biospheric eco-compatibility, puts humans back in a

position to rediscover the pleasure of discovery, investigation, learning, the desire for knowledge, the exchange of knowledge and questioning.

In order to better attempt a mutation in itinerancy on forms of erasable imprints and borrowings, closer to the eco-condition of the general Living, private property, an instituted form of permanence of an imprint-monopolization, remains an obstacle to be circumvented. The emphyteutic route is one of the keys to deviating from it, and then relinquishing it.



III- 4 BIO-GEOGRAPHICAL AREAS

THE INFRATERRITORY VERNACULAR PRAXIS OF INSTALLATION IN BIO-COMPATIBILITY AND TECHNICALITY EXAMPLES...

The bio-compatible infra-territory
Recovering the knowledge of Humanity in the frugal and inventive times of the long term
Lessons from "pre-growth"

Semi-sedentary life in Neolithic times led populations, even before permanent settlement in a site, to observe and analyze the territories travelled, and to characterize them in order to assess their compatibility as migrants to endure a sequentiated or temporary stay, before separating into sedentary for farmers and itinerant for herders.
By empiricism, they determined terms of eco-compatibility with the natural environment in order to establish, in **equity and respect,** a **coexistence** of lesser effect on the natural state recorded, due to the recognized fragility of their existence in the face of the plant and animal kingdoms, and the action of an Earth of mystery, with improbable actions.





Today, if we focus on revisiting the world that still lives and practices the impressive discoveries accumulated over the long term by human communities in terms of forms of settlement, frugality, and compatibility with the varied biomes present on the planet: We discover refined and complex techniques, but also a completely different form of mind, which aims to establish a **homeomorphic adjustment** ratio to the site, and develop life dynamics in non-depletion of biophysical resources, and in adequacy to the climatic conditions in place.
Depending on the base soils, the climate, the plants and minerals available, the amount of sunshine, the temperature and rainfall regimes, the botanical resource, the water potential (above, above and below ground), the winds, etc. The terms of an active life are determined: the size of the community, the form of stay (perennial, semi-sedentary, sequential nomad).

On all these parameters**, the share of ambient natural resources that can be extracted without harming indigenous ecosystems is first evaluated, and common life is organized, which**

requires mutual aid, consultation on common commitments, in order to summarize the relationship of compatibility of the human collective to a shared context.



Would it be so complicated to **revisit the experience acquired in frugal times** and deliberately discarded in the course of "civilizing" societal development?

Such as that which consists of:

To live in physical and biotic compatibility with the planet;
To establish themselves in "almost imprint-free" ways with hydrographic networks, without sealing the soil or contaminating or sterilizing it;
To maintain the soil's capacity to absorb carbon and inserted life;
To slip into the wind, to benefit from solar, geothermal, wind energy;
To taste the living water;
To curl up in the topography to find conciliatory microclimates,
Building evolving living spaces by laying, removing, resting;
To neighbor and explore territories and biodiversity with respect, almost without footprints;
Exchange knowledge and cultures at all times in all places and scales of the planetary space;
Carefully observe ecosystems;
To organize common life in "almost self-sufficiency;
…

The free spirit is not extinct, as the contemporary initiatives cited in terms of eco-development and eco-construction bear witness to this.
These approaches do not hide the fact that they take up the vernacular knowledge to find a formula for installation with less impact on physical and bioclimatic environments, and with frugality of use and proven consumption.

These ancient or contemporary approaches do not belong to the Capitalocene, because they are not part of a thought aimed at converting the need for use into exchange value, appropriable, profitable, monopolized... They belong to a techno-scientific approach resulting from a daily experimental practice that strives to identify the best use in sobriety, which leads to reasoning in geo-climato-compatible, biodegradable, and evolutionary modes, by the method of trial and error until the solution emerges.
In this approach, the observation-participation-collaboration of the collective plays a decisive role.

Sobriety and biocompatibility are mandatory.
In order to prolong our stay in the expansive Universe, we are no longer ignorant: the existence and the decisive role played by oxygenating photosynthesis; the extreme fragility of the few tens of kilometers that separate us from the hostile Universe; and at our feet, the molten nucleus at Approx-5,000°C, which chemically and tectonically elaborates the framework for an overall evolution of the Earth model.
What are we waiting for to conclude on the extreme fragility of our "Thinking Species", if not **access to consciousness** to draw the curtain on pretenses?

04-1 Bioclimatic approach
Vernacular land use planning

"The quality of a culture and a civilization depends on the dynamic balance they succeed in creating between the intuitive knowledge of the lived world and the development of knowledge. *- André Gorz -*

*"**Meso**" refers to the parts that are found in the middle of certain beings or objects. By extension, refers to what occurs on a medium scale of magnitude. From the Greek Meso+milieu: which is in the middle or which is adjoining –*
*"**Cosmos**", Greek etymology. Order, good order (universe, sky, star).*

*"**Mesocosm**" Medium-sized closed experimental set-up. A scale model of an ecosystem (e.g., an aquarium.)*
*The term **Mesocosm** refers to the home of men, a 4-dimensional space in which the natural conditions of life and species are reproduced, where all environmental parameters are controlled: temperature, pressure, salinity, acidity of the environment, CO2 content in the air, pollutants, etc.*
*The term **Macrocosm** designates nature: as the abode of the gods. A world as an organism analogous to man, a totality whose parts are in correspondence. Refers to a global view. - Excerpt from Futura-Sciences.*



Along the River at the Time of Qingming Festival, 1736, National Palace Museum, Taipei

China - Feng Shui

Ancient **Chinese thought** is based on the **correspondence between the macrocosm and the microcosm.**
The phenomena recorded in it actually belong to **one world**, which manifests itself differently on Earth and in Heaven. There are **mirrors between these two worlds, SQUARE and CIRCULAR.**
What happens in one area is only a reflection of what happens in another.

Born from the observation of nature and the philosophical principle of the interdependence of things, where everything would be connected initially, Feng Shui was originally "**the Art of observing the Earth**". This formula today is carried by two terms: **Feng "wind" and Shui "water",** which testifies over the centuries to the changes that have occurred in the approach to the way of thinking.

The classificatory approach of **Feng Shui** is not unrelated to the construction of Chinese ideographic writing based on correspondences. It is analogical in nature and makes it possible **to create links between existing categories in order to think about them together**; this is the case of **Space** and **Time**.
The example commonly used to illustrate **the thought process is that of the valley where Yin is assimilated to Uba and Yang to Adret, which, depending on the course of the sun, are examined from the angle of "complementary oppositions whose relationship creates tension.**

Applied to a hill, the Yin character is associated with the north of the hill cold and cloudy part and the Yang character is associated with the south of the hill warm and light.
- *"Yin and Yang, invest the field of cosmology as* powers of animation that preside over the dynamism of nature and the transformation of beings and things" - *(Kalinowski).* The sky is Yang, the earth Yin, spring is Yang, autumn Yin; summer is Yang, winter Yin; etc. - (Wikipedia)

Prior to the choice to found a fabric of life, the approach consists of collecting site data, analysing them, and then selecting them according to a grid of criteria: strengths-weaknesses and potentialities, to define the conditions of establishment and development favourable to a stay of the human community on the natural site. (a methodology that is reminiscent of recent tools for assessing the environmental impacts of our "innovative" projects).

The approach attempts to **evaluate the compatibilities and incompatibilities of the relationship between Man and Nature**: Yin and Yang in order to **determine beforehand the harmony, the environmental energy,** the **"qi" of a territory or a place.**
It is a process of preliminary questioning carried out in a philosophical framework that seized on a dual **organo-materialist and naturalistic inspiration** (Confucius and Lao-Tzu) to try with the available knowledge **to evaluate the natural context and simulate the possibilities, and the supposed compatibilities of humans to associate themselves with a given environment** (physical, climatic, eco-systemic constraints...

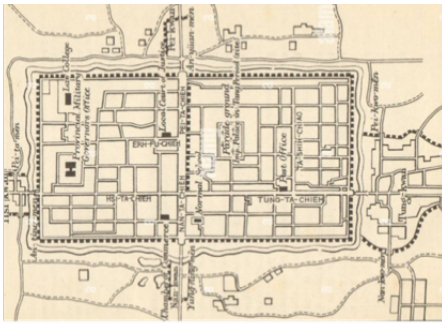
There is no trace in the West of a similar doctrine dating back to the period of the appearance of Feng Shui between 4500 and 4000 BC. A time when tribes migrated under the guidance of Shamanism in search of hospitable lands.

During its complexification at the beginning of the 2nd millennium (Zhou Yi), the Feng Shui approach followed an evolution that gradually distanced it from the initial intention: that of reconciling the stay of Humans with the maintenance of the ecosystem framework with a low ecological footprint, to turn towards an **anthropocenic thought seeking to reduce the risk capital of an establishment with the purpose of production**.

The "Yin Yang ping heng", on the other hand, sets out five steps in selecting a location: Search for the dragon; Examine the mountain; Observe the water; Decide on the right place to feed; Choose the right direction-liaison.

"Feng Shui San He" seeks more particularly the harmonious articulation between **Man-dwelling** and the **Gods-nature,** and thus marks a differentiation that breaks with most civilizing ideologies that have monopolized the nature "blessed by the Gods": that of the thing assigned by the Gods: the Consumable.

The geo-biological approach of ancient China to the structuring of agglomerations ignores the question of the center, of centrality.
The urban composition is located near a spring of living water, or permanent watercourse, and backs onto the south face by a natural embankment (hill) or an artificial straightening (the case of the Forbidden City).
It adopts an orthogonal layout oriented on the 4 cardinal points which constitutes the grid of the districts and interior networks.
A reservoir built upstream of the city is placed under the prevailing winds to air condition it, it also provides a reservoir function.
The administrations were inserted within the perimeter but the seat of the governor, Mandarin or Emperor, was far from the overall composition while being close to the hill and the lake.
This is the case of the "Forbidden City" in Beijing and other agglomerations of the imperial eras, including the city of Xi'an and Pingyao).



The buildings inserted are based on squares or rectangles to obtain a high density of occupancy within the district, the enclosed "Living Unit" is closed at night.

The **Master Plans** for the development of urban centres **respond to an analysis of the potential for use and exploitation of each unique site** : Availability of construction materials on site; intramural access to consumable water, Exposure to wind (health), Arable land nearby, Fluidity of mobility within the fabric to support the dynamics of life and activity operating between the inside and the outside.

Ancient Chinese thought is based on **"An Art of Observing the Earth" which takes into account the notions of macrocosm and microcosm from the angle of the dynamics that operate on Living and Matter... Taking into account the seasons, topographies, the nature of the soil, plant masses, animal species, hydrography, climatic effects, to judge the degree of compatibility and the natural sites to receive human activity and ensure self-sufficiency on the site.**

The evolution towards societies of surplus accumulation has led to the overexploitation and deterioration of sites and to an impoverishment of local resources, leading agglomerations towards an above-ground form placed under permanent dripping of incoming trade flows, a form calling for the accentuation of exchanges distant from import-export.
Should we forever consider that our installations and societal footprints must be "Sustainable" or even extensive, rather than temporary and even erasable?

04 - 2 Bioclimatic Approach: The Global Built Environment

Vernacular construction – Sedentary lifestyle and bioclimatism
Iran - Province de Yazd

The south-eastern desert area of Iran (dry subtropical climate) testifies to the way in which humans are able to invent with their fellow human beings the way to adjust over several millennia to the Earth, Water, Wind, Latitude... and to found some beliefs.
It is still an open book on a chain of discoveries and applications carried out to place humans in coexistence with a complex biophysical and climatic environment.




The **Biogeographic Province** with its arid soil is punctuated by villages linked in networks and oriented towards subsistence agriculture. They are populated mainly by Persians (60%, Azeris, and Kurds) scattered on a soil devoid of an apparent hydrographic network...
Some caravan cities located on the ancient "Silk Road" are today the economic and cultural centers of the terroirs (Shiraz, Isfahan, Yazd, etc.), sites for the exchange of goods, services and equipment. These peoples, following an unshakeable exploratory dynamic, outside the circuits of the commodification of techniques and knowledge, were led to design in the first centuries of our era books and technologies within the reach of those of today.

Before the Capitalocene, they invented : **Natural ventilation (thermal draught), natural air conditioning in summer (humidification of the air), thermal inertia of the walls (day/night), organic and geo-sourced building materials, the use of renewable energies, grain mills on vertical wind turbines, hydraulic management techniques, soil maintenance techniques and their regeneration, the underground housing and the underground public square for the scorching summers, also the coolers (at 50°C outside temperature), the preservation of meat by the smoking technique, etc.**
And worse still, on the side of the "cloud mountain" near Yazd, they have been able to link technical performance, aesthetic quality and erasable or movable imprint and sedentary mobility: As is still the case when it comes to moving the community village back in the direction of the slope in stages, because the Qanat has witnessed over the years a drop in flow linked to a drop in the level of the water table (evolution towards micro-climates with less rainfall).

The question of waste management does not arise insofar as the way of life, the making of tools, objects, buildings, pipes, food waste... Are part of a zero-sum metabolism approach... As can still be seen today in the Zoroastrian villages of the Yazd region (a philosophical current developed under the Persian Empire by Zarathustra).
These populations consider the Present as a moment in a stretched Time, and define their forms of settlement from the angle of a symbiosis with the adopted environment. This led them to design multifunctional works in application of the laws of Thermodynamics, not formulated at the time of their invention but felt and translated into elegant and sober means, without exhausting the biophysical environments in place.

Low-Tech, ancestral and renewable bioclimatic architectures and technologies

Sophisticated low-tech exists even when you don't have electricity, gas, coal, oil, computers, etc. It comes from a mode of maturation of the Spirit on the notions of time and place, which creates knowledge from a federative collective dynamic oriented towards the "Long Time".
In the desert areas of the Middle East, with adobe and brick and the "low tech" creations of ancient times:

- Ice houses, underground water reservoirs, **are dug and risen**, fed by settled, drained water, infiltrated into the mountain ranges during the rainy season;
- Stand on the houses of the **Wind Towers,** to naturally (without electricity) extract hot air from the living rooms and create a refreshing air movement,
- Are mounted with **sun protection walls**, protecting the gardened crops;

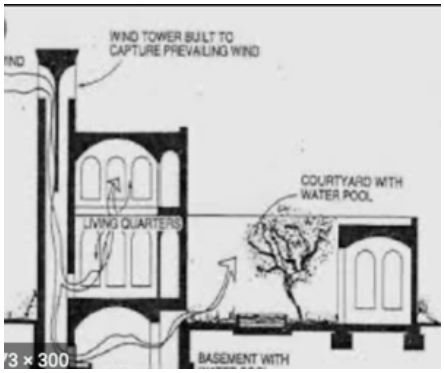
- Underground pipes linked to the surrounding water tables are shaped under modest-sized cities;
- Alleys are vaulted to shelter humans from sand winds and extreme heat; **the Cities are covered**, to live during the day at the temperature of the ground and the draughts carried in the gallery streets, until the night when the enclosed gardens evapo-transpire and freeze the sleeper under the starry sky.
Who would imagine using fossil fuels and fan coils when the proud solar chimney exists.
- Cereals are moulded using wind turbine devices combining the vertical axis wind turbine technique interspersed between rammed earth masonry walls and other construction variants to establish the concept of "Wind Walls".
...



Some of these technologies are several millennia old, for example: the groundwater settling structures discovered by archaeological missions on the site of the City of Susa date back to 1250 BC.
Most of them were developed before the eleventh century, in spaces that today seem lunar, where biophysical resources were then extracted in an adjusted human-nature balance.
This does not prevent the communities still in place today from supplementing the knowledge of yesteryear with the technologies of the moment: solar panels, digital telephony, etc. But with a sobriety of approach preserved.



The structures that produce the essential resources were and are still designed today and maintained by the village communities.
The most complex ones maintained in the cities of the Iranian plateau are the "Reservoirs".
15 to 20 m deep, under vaults equipped with high ventilation and skylights, equipped with access stairs, and supplied with running water by "Qanats": Underground galleries for capturing groundwater in the foothills of nearby hills or small mountain massifs, which by gravity lead the water on regulated flows towards the village or the city.
The interior staircases that lead to the deep water lead to low rooms where platforms are made to accommodate neighborhood conversations, transactions, water carriers, or the rest under the dim light and great coolness of the inhabitants.
In these desert sites, the Reservoir is a public air-conditioned square without machines or shared energy consumption for eternity, provided that a frugal approach is adopted.



Another low-tech feat with renewable energy: the centuries-old "Badguirs" or "wind sensors" adapt to the variable directions taken by the winds, or, in periods without wind, combine with a thermal draft simply created by the temperature difference between the inside of the built space and the outside (principle of natural vacuum ventilation).
The height of refinement is that the temperature of the rooms is further lowered by inserting a basin of water in their center, the evaporation of which is accentuated by the thermal draught, lowers the temperature even further, below 45 degrees outside.
An ideal device that dispenses with the use of a fan and other energy-consuming mechanical devices to accentuate the feeling of bodily comfort and bring the scent of the oriental garden (in the philosophy: Paradise).

Vernacular construction – Sedentary lifestyle and bioclimatism
Normandy-Somme / France – Tamil Nadu / India ...



In Indian or Atlantic oceanic climates, from the "Baie de Somme" to "Tamil Nadu", a rural sedentary lifestyle leads to the use of the Earth (clays) and plant fibres to form the envelope of a habitat.
The construction is a mountable and removable frame (as required). It uses all the resources offered, by recomposing plant fibres and trees into building materials: roofing elements (foliage), beams, slats, posts, and on limestone environments it benefits from the waterproofing and purifying properties of lime applied in external-internal plasters on the walls.

The principle has variations, such as that of the Somme and Normandy territory, which have resources in **flint pebbles** (a phenomenon that can be seen on the coastal cliffs composed of flint beds that alternate with chalk deposits, effects of successive marine transgressions that occurred in past geological times).
This flint resource was used to make arrows, harpoons, knife blades, then was used to provide a water-repellent and dry soil for the sedentary habitat of the Neolithic, and more recently to constitute the foundations (**capillary barrier)** and support bases for the vertical walls of wood-frame constructions, filled with clay and **straw**.

The **"Cob" wall,** made of clay, straw, plant fibres, and dandruff lime, is a sophisticated process that has been developed over the ages. A wall concept that meets the normative, technical and thermal requirements of the present.
In countries with a rainy climate, subject to the effects of the Gulf Stream, with forests (Crécy, Eu, etc.), **limestone** cliffs, **clay soils,** cultivated with **rye**, spelt and flax**, the indigenous populations** have sought to improve their habitat by using all available materials and materials:

Limestone (a product of previous geological times) makes it possible to obtain "quicklime" by calcination and then by immersion in water "aerial lime".

Aerial lime has many properties: it is an air purifier (Antibacterial), it is also a rainscreen in external whitewash by the solid film it forms during chemical exchanges with the ambient air. It is permeable to water vapour...

Clay is protected from water when combined with aerial lime**,** its cracking following shrinkage-expansion caused by seasonal variations is counteracted by introducing fibrous flake of flax (native plant). We now know that the most tensile natural fibre on the planet is linen, to the point that it is now being integrated into certain concretes to replace metal fibres.

The wall component , made of straw stabilised with clay in its non-load-bearing mass, receives on its external surface three layers of a **plaster** consisting of a mixture of clay - flax flakes - aerial lime, at the rate of lime (increasing outwards). A plaster finally coated with a whitewash of milk, maintained every year to form a rain-resistant film

It was not until the beginning of the 21st century that the construction sciences and techniques admitted, forced by a disastrous increase in carbon equivalent levels in the atmosphere, to recognize the performance offered by bio-sourced materials and the approach developed by "**Bioclimatic Architecture".**
This Techno-science, resulting from a practice experimented over the long term, has led to sober construction in biodegradable, or reusable, without an ecological footprint..

Vernacular construction – Sedentary lifestyle and bioclimatism *Chiapas (Yucatan)*



The traditional commons democratically managed in dispersed local rural communities are on all continents. The Communities are grouped together on shared resources (land, water, forest, fish, game, pastures).
Cultivation, education, and the management of natural resources are conducted in common. These are self-managed companies" operating on the short-circuit, short-distance model, etc.
They make it a rule to live in the 3 times: Past, Present, Future.

The indigenous Amerindian peoples of the Central American Cordilleras inhabit lands that they exploit on the move, or permanently in the case of Chiapas (grouped settlements).
They design their crops based on the observation of systemic environments where plants combine to ensure their life balance. Food crops near the habitat are mainly based on a symbiotic assembly of three plants: a stem maize that serves as a support for the red bean (climbing plant), and the squash that covers the ground with its large leaves to protect the soil from the sun's rays and from drying out always possible.
These three plants belong to ancient species adapted to a low rainfall regime and form a symbiosis. "Zappatiste" maize plants can withstand a drought regime for 6 to 7 months in a row. Isn't that strange... The fact that we do not see these maize on our farms that develop without quenching the water tables of the regions?
The Common is not synonymous with greed and ignorance!

The traditional abandoned dwellings are still largely in the villages. They are made of wood and earth frames (mulched cob or earth blocks), to take advantage of both the thermal inertia of their walls and the thermal regulation of the site operated by the nearby woodlands.
The inhabitants of Chiapas still use the traditional means of close contact, and contemporary modes of long-distance linkage to correspond.
Currently, these descendants of the Mayans are culturally and militarily opposed to the penetration of the model of exploitation-degradation of forest and mining resources, promoted by the Mexican Nation-State, on their lands.
The network of towns and villages is administered at different territorial levels by directly elected Indian civil councils, which jointly administer with the Mexican State the school facilities distributed throughout the territory without authorizing access to the land of the State administration and police

Their political project is to bring continuity and coherence to past, present and future times and to analyse the "progress" proposed by "business" in the light of their long-term experience...

They are trying to **build "an eco-compatible and biodiverse world",** breaking with the different registers of domination in the face of which, over the circumstances, an emancipatory project has gradually been developed.
They aspire to the redistribution of resources, to equality between men and women, to respect for life in all its forms, to integration without assimilation, to autonomy without separation, to citizenship, to liberation and dignity...
"Desire a world where there is room for many worlds"

Vernacular construction – Sedentary lifestyle and bioclimatism
Cambodia



The lake habitat has appeared since the Neolithic period. (Listed among other sites on the shores of the Alpine glacial lakes or the Jura - Lake Clairvaux). The surface of freshwater lakes represents 3.7% of the planet's surface, and that of the oceans and seas 71%.
A sedentary lifestyle can be floating when the resource is in the aquatic world of fresh water. This is the case on the Tonle Sap Lake located in central Cambodia, which is punctuated by floating villages inhabited in a discontinuous manner.

For centuries, the populations have designed two forms of habitable structures:
One, on stilts and a wooden frame placed on the banks that are not floodable during the monsoon season, to practice fish farming within plant enclosures.
The other, floating in the central position of the lake to maintain itself after the monsoon on this lake space, a tool for regulating the water of the surrounding territories. Both reservoir and spillway with an area varying from 2700 km² to 1600 km² (depending on the floods of the Mekong) and with a variable depth of 1m to 9 meters depending on the floods.

The two forms of settlement, on land and water, allow local populations to pool resources (fishing and small-scale agriculture) dependent on the climatic regime.

Vernacular construction – Sedentary lifestyle and bioclimatism
Burma



Lower Myanmar, a coastal sector in the monsoon climate zone, is a territory of rice and coconut fields, teaks and large deciduous trees, including the Sandoricum koetjapen, with its strong shade, which accompanies scattered dwellings in rice fields.
The habitat is designed to respond to the 2 hot seasons, one humid and the other dry, and to use only the plant resource in place.

The constructive solutions are found in the woods at the edge of the crops, which offer the resources in terms of trunks, branches and foliage.
The building is composed of a load-bearing wooden frame raising the inhabited floor from the natural ground. The walls are made of plant fibres woven into various patterns (braided link panels taken

from the coconut leaf - leaflets and petioles - and assembled roof panels made up of foliage in interlocking and crossed layers).
The slats of the openwork floor and the furniture are made of teak or more common species.

The construction concept applicable to all horizontal or vertical walls except the roof, is based on the search for the **greatest air permeability of the building**, to ensure a constant circulation of air in all directions in hot periods, without imported energy. The concept applies to the bedding by the choice of the Hammock.
The concept is accompanied by the need to periodically replace the skin with woven plant textures of varying densities, and it leads to the design of different kinds of components in assembled panels, prefabricated mainly during the rainy season.

The home is the combined seat of family and intimate activity and craft activities (tools, clothing-weaving, materials, food), or rice farming.
To this end, the house has a boat for trips in the rice fields during the monsoon period.
The construction on stilts imposed by the period of rising water levels leads to a differentiation between **use under the floor of the house** and use **on the floor during the dry period**.
During the hot period outside the "monsoon", on the natural ground, in the shade of the floor of the house, without blackout walls and brakes on air movement, the entire active life of the family nucleus is established, open to the overall activity of the village community.

04 - 3 Bioclimatic approach

Vernacular construction – Semi-sedentary lifestyle and bioclimatism
Chile - Chiloé Island

After a long migration from Asia to the last glaciation through the ice of the Bering Strait, the Inuit peoples saw fit, after crossing the Americas, to try to settle in Patagonia on the island of Chiloé (South Patagonia) which offered the possibility of feeding on fishing on an archipelago protected from the winds of the Pacific.



Over the millennia of occupation, their knowledge of the bio-diverse environment, its fragility and incompatibilities, led them to diversify their resources and establish themselves on a mixed form of activity combining fishing and agriculture on poor land.
It is the **empirical understanding (consciousness) of the environment** that has allowed them to stop over the long term on the formula of **temporary settlement** on the shores, **in the middle position of the available resources drawn from the land and the sea**.
The socio-cultural and climatic marginality of the Patagonian has certainly contributed to maintaining **symbiotic habits and customs** over the centuries, against all odds, on a site between the Pacific Ocean and the Andes Cordillera.

Two factors lend credence to the long-term conservation of the **settlement movement**:
The first is that of the permanent renewal over the centuries of the notion of **community ownership** of a territory placed under co-management, the second is related to the lakeside character of the domain and its fragmentation into islands and archipelagos offering for travel not roads but waterways, the third is to be found in the permanence of the food resource provided by the "inland sea" born of plate tectonics.

The combination of these constraints and potentialities has led to the passage of time on a **lightweight construction model, made of bio-based and geo-sourced frames and materials, which can be moved and transported throughout the territory of installation by water**.
Each operation calls for the **mobilization of the Agro-Fishing Community** to migrate to a new forest site by the sea, and is the subject of a Festival: "La **Minga**" (In recent years, mixed fishing/agriculture farms were still being moved).
The typical building of the "**Snail Farm**" is on one level. It is placed on wooden or stone pedestals to both: Isolate it from the ground (the region is very rainy); keep it elevated so that it can be moved (sliding) easily at a later date; and allow it to absorb without damage the seismic tremors frequent in these territories.

Initially the roof was made of thatch, then later of wooden tiles, and today of galvanized steel.
The **method of construction** is that used by the shipwrights of the region.
The floor is similar to a "raft" to facilitate movement on the ground and water when changing sites.
This raft placed on stones or squared tree trunks allows the one-piece frame to be slid onto the nearby shore at low tide. Animal draught power (oxen harnessing from the small itinerant farm) is then used for manoeuvring and floating immersion on inland waterways.

The change of site is established when the plot initially deforested for cultivation becomes impoverished. It allows the soil to regenerate and regain its ecosystem unity, and more generally for the island to maintain a balance between humans and other living beings over the past times.

Previously, the facades of the farm were covered with external wooden cladding and a veneer of joined planks on the inside, the climate being high humidity (South Pacific coast). The wall did not have a plant mattress to act as an insulator, but the backing of the afforestation provided a windbreak and protection from storms.

The twentieth century did not stop their ability to search for and find forms combining modern comfort and the preservation of natural environments: some remained farmers-breeders-fishermen in semi-nomadic mode and invented the "house-farm" that could be moved with a wooden frame and gable roof. But...
… The world economy of predation introduced industrial overfishing, which was responsible for destroying the maritime ecosystem formed between the island and the mainland, and the twenty-first century took it upon itself to pollute the environment "permanently" by massively setting up farms for salmon alvins, which accumulate excrement, antibiotic treatments, parasites, etc. consumed in other continents under reassuring "Norwegian" labels.

04 - 4 Bioclimatic approach

Vernacular construction – Semi-nomadism
Mongolia

Outside the winter period, the family nucleus rallies a steppe territory suitable for containing the herds, mainly composed of horses (the Mongolian pride) and Yaks, left to graze freely. The site is generally bordered by hills (refuge for wolves, eagles, etc.) and has an essential white water resource.





In these steppes, Mongolian herders have a corral and a **transportable habitat, foldable-unfoldable, without footprints**, covered with a cover that is both insulating and rainscreened, with natural ventilation on the principle of thermal draught between a skirt bottom and a removable headgear.

All the components are assembleable and dismountable components held by ties to a light framework made up of panels made of thin wooden rods cleverly articulated together: **zero waste.**

The circularity of the structural device provides stability to the structure and reduces its resistance to strong meadow winds. The Mongols didn't invent the right angle, but maybe better...
The cosmic circle expressed by the living space houses all the domestic activities and the manufacture of livestock products (mainly based on mare's and sheep's milk).
The animal vehicle is used when the family or the Community travels. The foldable pieces of wood forming the supporting structure of the yurt are then bundled.

The place is equipped with a wood stove in its center and has furniture, beds and chests around its perimeter. Opposite the entrance door is the "Hôtel des Anciens". The family sits during meetings on the right side of the Yurt and visitors on the left. Buddhist belief leads to moving from left to right
Modern life combines these multiple comforts with energy autonomy provided by solar panels, access to the world via the satellite Internet and smartphone, and the two-wheeled motorcycle vehicle that can be ridden like a horse.

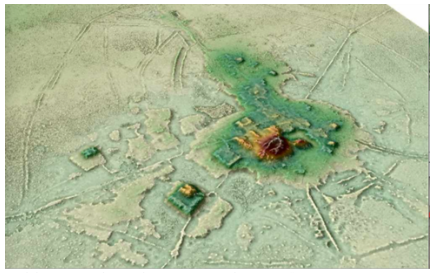
The open ground soils borrowed for a time are not sealed or cultivated and maintain their functioning as carbon sinks and roles within ecosystems.
Each stay of the human group leaves no imprint on the environment - Tradition forbids to prick the ground to **ensure the eternal life of the biotopes behind the footsteps of Mongolian society.**
The passage of time is done without borders, nor monopolizing private property.

Vernacular construction – Symbiotic semi-nomadism
Amerindians of the Amazon

- **Sources "The virgin forest of the Amazon does not exist" - Book by Stephen. Rostain** -

Studies carried out in recent decades by archaeo-ethno-anthropological research teams on the territory of the Amazon rainforest reveal the activity of human groups as early as the Palaeolithic period (10,600 BC), and the presence of forms of agricultural settlement from the sixth century AD.


Photo Coastal Guiana . Stephen Rostain


Capture d'écran d'une modélisation 3D du site de Cotoca, en Bolivie. H. PRÜMERS/DAI

Among the many observations and surveys made in recent years on the sites discovered, the studies conclude that the Amerindian peoples of the forest, who disappeared following the Spanish invasion of the 16th century, did not conceive of the living space with limits.
The Territory for them was Polymorphic and Metamorphic, as if **the notion of Frontier was comparable to the Void**. *(Shapeshifter: a complete change in the state, appearance, or shape of something).*

Space had a center that was the point of articulation of the paths irrigating a **continuum between humans and non-humans**.
Without a barrier between culture and nature, **civilization was not limited to the built environment.**
The coastal Amazon is made up of floodplains and marshes (the territory of French Guiana is one of them). It bears witness to ancient occupations, still visible today in the form of groups of small quadrangular mounds, and micro-terraces, linked by raised paths that establish the link between the cultivated areas and the places where the populations stayed. The surrounding cultivation areas are made up of multiple rows of circular micro-mounds, these mounds were originally intended to support at their tops the plants that could be eaten by the communities, according to the floods and recessions operating in the Amazon Basin.

The method of settlement adopted to allow a sedentarization in the **flood savannah** has found a new interpretation given by the people of the animal and plant species present in the environment during the long time of its abandonment.
In the thousands of mounds, native plants have settled: ants, termites, fungi, earthworms and various micro-organisms.
"The mounds built by humans gradually became after the extinction of the Communities "Babels" shaped, organized, multi-inhabited, at the convenience of "engineering organisms" which were gradually able to constitute a symbiotic whole, today still in free evolution. *- S Rostain*

Throughout their occupation, the first inhabitants of the Amazon also bequeathed "**dark lands**" **with very high fertilizing power: the "Terras pretas"**, land generated by the activity of life carried out on inhabited platforms (out of water), i.e. by the **production of waste from activity, self-regenerating waste**.

"The "Terra Preta" may be the first "compost" produced on Earth made up of debris from occupation: coal and ashes, ceramic shards, bone fragments, plants, excrement and other materials deposited on the peripheries of the living platforms. A spontaneous way of fertilizing the soil for the millennia to come, (Fertility 4 times higher than that of the surrounding natural soils). The oldest sites are almost 5000 years old. They appear especially from 500 BC. »

Upper Amazon and Agroforestry Crops
The modus operandi varies according to the pedological and botanical characteristics of the environments where the Amerindian peoples live. In the Upper Amazon, forest plots are not systematically burned, they can either be cleared and cultivated directly, or burned to amend the soil with charcoal and ash that will provide fertilizer to poor soils. The large trunks will be discarded or left as they are on the burned plots,
The **plots opened in the forest for cultivation, once the soil has been exhausted, are abandoned for a new virgin plot allowing the reconstruction of the territory left as a secondary forest.** These sites have not been abandoned, however, because the populations continue to maintain a distant presence that allows them to harvest the useful plant species that remain there with the wild plants in redeployment
"The mixed space is then transformed into a reserve for the communities, not necessarily of food plants but of vine wood or leaves for artisanal or pharmacopoeia uses" SR

"In building their cultural niche, Native Americans experienced a true interaction with nature, taking advantage of ecological processes to create a nature that was more favorable to them in a symbiosis that was mutually beneficial to all parties*... - S Rostain*

Northern **Burma**

In mountainous and forest areas, territories of ethnic minorities, some populations still practice scouring and burning to grow rice. These semi-nomadic groups move about every five years to allow the regeneration of the forest fabric after the exploitation of the nourishing soils. Before the rainy season, ploughing and sowing are done. The monsoon rains are then enough to grow this "rainfed rice". The beds of rivers rich in alluvium are also cultivated: when the waters rise, rice is planted, and at low rates it is harvested.

Today, on the basis of the data collected and analyzed, we can see that Humanity in the phase of discovery of the seas and continents was able to grasp for a time the terms of its adequacy to the conditions imposed by the earth's mechanics, thus proving its ability to integrate without halting the evolution of the existing components of life.
The different and varied climatic, geobiological and physical contexts did not prevent him from finding the various terms for an eco-compatible installation on the sites explored and stayed.
The traces still present in certain practices of semi-nomadism and semi-sedentarism assure us that **sedentarization/appropriation is not the sine qua non condition for a stay on Earth**, **but that, on the contrary, the de-conditioned human always remains capable with frugality, and on objective knowledge, of producing another narrative in connection with the Living.**

III- 5 THE EXISTENTIAL ALTERNATIVE - AGITATION

05-1 – Ecotopia - Movements and Resistance

"The quest for a possible elsewhere *must be in a constitutive relationship with the present worked on by the call to something else... - Miguel Abensour*

"***Inviting the unprecedented into a critical reappropriation of the legacy of past experiences and knowledge***" (Baptiste Morizot).

"The ***quality of a culture and a civilization*** *depends on the dynamic balance they succeed in creating between the intuitive knowledge of the lived world and the development of knowledge." - A. Gorz*

The character of the social animal inseparably linked to the system of the living planet has remained discarded, fought, and hijacked incessantly by the ideological currents that have dominated the last few millennia.
The 20th and 21st centuries ushered in another form of negation, in the face of the enunciation of a possible fatal outcome: that of the (bionic) superman preparing his escape from a planet sterilized by him, for a flight to the other world, after a time necessary for the domestication of brains and then the transposition of free knowledge into artificial knowledge.

Misery and decadence?

A void to be filled!
In France, the popular effervescence that preceded and followed the Revolution of 1789 is cited, a moment when it was imperative **to invent the next step in order to fill the void created**.
This period of the end of the 18th century, in all regions, cities and countryside, was fertile in the creation of **popular societies**, clubs where daily life was exchanged, and various associations. A vast movement then emerged **to debate and give one's feelings**: on the Common Good, political structures, the daily life of life, in a context of tension: the Scarcity and the corpses.
A threat to existence irremediably triggers a mass rupture, which in the first act of the rebellion pushes to open the prison, symbol of a restrictive and arbitrary regime. Then there is the impromptu discovery of the **unknown freedom of thought,** followed by debates and contributions to the construction of a new world designed to mobilize the greatest number.

1789 ? It was a brief moment when the foundations of a people were built: claiming to be secular; calling into question the inalienability of the right to property, and enacting new rules from the places where they live, carried to the Territorial and then National Assembly by mandated delegates, and at any time dismissable by the local base making the demands.
Today the equation to be solved is related but the will to apply it is still uncertain, although this time it concerns the existence not of a people but of the entire Species.

The demonstrations in correction of urban systems that have been developing over the last thirty years or so and are growing in the form of "**Neighbourhood Forums**" have given rise in Northern Europe to a demand for the organization of life in terms of "**Short Distances**", which can be translated today, in view of the facts, by modes of refounding a daily life on the roads: concerted initiative, co-management, collaboration, and the invention in stages of a correction in reducing the footprint on the Earth's environment.
The microcosms of co-habitation / co-evolution **are gradually emerging and being duplicated**, around the **concepts of Unité d'Habitation, the Neighbourhood Block, the Neighbourhood Assembly**, **and other territorial scales of the Commons, via the public digital network**,
and a micro-macro-systemic approach is fashioned capable of resituating the Species in the field of the general laws of evolution: Allowing the **planet to be inhabited not as an instrument of a mechanism but as an interpreter of a vast field of creativity.**

Societal protest – towards a redefinition of the relationship -

The 70s and 80s were nourished by a denunciation of the "machinery and automatism" in force in the industrial sphere, and by an anti-colonialism supporting the wars of emancipation of peoples (Fritz Lang, Chaplin, Frantz Fanon...). They see the emergence of a marginality in free expression "Spontex", committed to reinventing itself in a field of thought, socio-cultural, political, ecological, philosophical, other than that of invasive Keynesianism.
In France: Guattari, Sartre, Illich, Foucault, Gorz, Bourdieu, Dumont... They partly embody this current of the European Alternative Critique and open up a field of action-application that can be experienced in all the fabrics of Cities and Countryside, with the "68" youth of the post-war "baby boom" as diffusers and applicators...
For a time, the conditions of work, education and instruction, the conditioned form of life of the parental middle class, and the agreed happiness of the family in home ownership are called into question...
It was the time of contestations of all kinds in various forms: Conscientious objection; Hippie movement; students who protest against the forms and content of teaching and institutions; workers' movements (OS on automatic "chains"); creation of marginal living centres; freedom in the relationship with others; collective invention; multiculturalism; questioning of relations between the sexes.
A time of global and targeted criticism of society, the world of Profit and Exploitation.

In Roubaix - Alma-gare district -
Creation of a "Popular Development Workshop" bringing together the inhabitants of a working-class district built in the 19th century and slated for destruction by the State and the local authority.
The "Leftist" Schools of Architecture translate the demand of the inhabitants into a counter-project to maintain the living structure of the 19th century district and to evolve into self-rehabilitation by the existing neighborhoods, and self-definition of common spaces intended to be co-managed.
The response of the so-called "public authorities": Eviction and destruction of the District, accompanied by some rehousing.

In Paris – Workers, students
- Struggles with the "homeless" and actions of self-requisition of unoccupied buildings by the Defence Associations created for this purpose.

- Creation of "Health Advice Shops" and "Renovation Shops" in the nineteenth arrondissement of Paris by protesters of the economic and political system in force: Medical students and architecture students of the Architectural Pedagogical Unit n°6 (A self-proclaimed school, based on a contestation of the content of studies and forms of teaching of Architecture, in the spirit of the student-worker political demonstrations of the year 1968-69-70, on the site of the École Nationale Supérieure des Beaux-Arts de Paris).
The "Boutiques Aménagement" shops conduct neighbourhood surveys among low-income populations in unhealthy neighbourhoods, and provide legal aid in the neighbourhoods to the inhabitants of old buildings, which are still numerous: they do not comply with the minimum conditions of habitability required by law, and are subject to high rents charged by the owners who also do not comply with the so-called "48" law that is supposed to regulate them.

- In the centre of the Nanterre "slum" (lawless land) where the "homeless" immigrant populations, mainly of North African origin employed in the Paris region (without residence rights), gather:
Concerted intervention, between students and teachers of Architecture (UPA n°6) and the inhabitants to provide the slum in its center with a Common Room, by inventing a construction system based on the use of recycled materials easily transportable and assembled: To create and open the room to activities over a single weekend.
... The following week the hall was destroyed by the "forces of order" by violently using bulldozers, under the cover of a fallacious reason invoked by the Prefect of Police: Absence of Building Permit...

- Self-renovation, in collaboration with students and residents, (UPA n°6), of a building on Rue Laghouat in Paris, made uninhabitable after punitive destruction (roofs, water pipes, electricity supplies to the building, etc.) orchestrated by a group of thugs sponsored by the "sleep merchants" of the neighborhood, dissatisfied with the "badly housed" engaged in a refusal to pay "shameful rents"...
And many other actions in the 70s and 80s in Paris (requisitions of housing and empty buildings) carried out by Associations for the Defence of tenants and the homeless in the years that followed.



In Plogoff
– Repeated mass demonstrations mobilising indigenous and then Breton populations against the State's project to set up a nuclear power plant in the Region, until the project was cancelled by the "Électricité de France" group following the election of a new President of the Republic in 1978: François Mitterrand.

In Berlin
– "UFA" Occupation of the land and buildings of the former film studios of the "Reich" in Berlin and creation "For Life" of an eco-European platform (7 days a week) producing in "Open Source": Multi-theme impromptu exchange forums, Experimental ecological practice workshops, Concerts, Media-dissemination of alternatives, etc...

Over the past 50 years, experiences have endlessly lived, moved, renewed, and rebuilt.
An innovative field has been formed that testifies to the unexplored capacity, denied by the current societal model, to consider the Human being other than from the angle of a labor force to be contained, to be stabilized with the entrepreneur and the ruler.
This field of escape has founded a new notion of exchange, collaboration, artistic and cultural dynamics, social and ethnic mixing, and frugal life.
It is now eminently political, in the sense that it aims to initiate a commitment of the "greatest number" to shape an eco-compatible, multi-collaborative, transcultural living environment.

"The society of intelligence achieved by emancipation from capitalism is based on the practices of self-production, self-training, and collective reappropriation of network technologies."
- André Gorz -

The "Counterculture" Alternative -

The process began in the 60s and 70s to reach the dimension of a global movement, carried by the new generations who opposed racial segregation, the atomic age, the Vietnam War, "assembly line work"...
It will gradually give birth, due to the articulation of the denounced subjects, to a contestation of world society and the consequent emergence of an alternative: that of the "Counterculture".
Among other effects, it will provide the breeding ground for the information revolution and the Internet...
It is also the call for **direct "** Do it yourself" experimentation in the social, economic and cultural fields, to provide an alternative to the model centered on accumulation and submission, which strives to present itself as immutable...
This **awareness re-examines the issues** of: Do-ocracy (Direct Cooperation and Individual Autonomy), Urban Commons, Disappropriation, Autonomy of Work, Collective Intelligence, Individual Interconnection, Self-Management... And above all **, it is experimenting collectively with these ideas within the framework of cooperation networks for change**.

This Alternative to the Politico-Economic Philosophy aims to provide society with a set of values of utility and use with social and technological vocations to support a collective innovation in multitude.

Pioneering trials -

Between 1975 and 1990, there was a succession of initiatives undertaken by the "**Commons of Knowledge and the Immaterial"** :

- The "**Hacker**" movement was founded in 1975 on an ethic that is based: on **Knowledge: Non-transferable common property**; **the use of systematic doubt combined with organized skepticism; the power to act through individual autonomy where influence is measured on what is done; the implementation of a principle of self-managed horizontal cooperation;**
- The invention of a first 3D **printer** model - Japan 1980, which will then evolve to serve local needs;
- The creation of **Internet and Web standards** (Web Tim Berners-lee 1989) in open form and computer protocols in the public domain, to facilitate connectivity and continuous extension;

- The design, by Lee Felsenstein in the Hippie and Hacker movement, of the first **personal computer** – Osborne 1 – which he distributed en masse before the industrial versions of the market economy;
- The creation of the "**Free Software**" Movement (1985), which considers digital tools as a common good and gives itself the freedom to use software, to have it copied by other people, to improve it. In this framework of thought, works of the mind are accessible to allow everyone, everywhere, to add to them in a non-commercial context. A Common Good for everyone's use but without capture by anyone.
Thus will be created **under free licenses** in the spirit of a "Copyleft" **and "Creativ commons**"
- The "**Makers**" will be presented by André Gorz as: "*A **prototype of a new social mode of production and emancipation of work, which is organized on the basis of open local public workshops, interconnected to others throughout the planet***".
The Mackers movement entered the sphere of **free co-operation,** focused on **the production of the useful and the social necessary**: To make available projects ready to be printed, materialized, or modified to be perfected within the networks of the local and global Commons.
Etc.

The Contemporary Commons -

Oriented towards a redefinition of the social and ecological use value of goods, established on the basis of cooperation in proximity and daily citizen life, and distributed on the global scale of the people-world, the contemporary Commons are called upon to find new forms of development commensurate with the challenges posed, based on a logic of horizontal division of labor.
They manifest themselves in a number of "Initiatives", which attempt at micro-scales to correct a de-objectified and above-ground society (Don Quixotesque), by experimenting with forms of pooling of resources (material, intellectual and natural), which **revisit the notion of individual use within a Commons**, thus shaking up the notion and terms of collective exchange to reveal a monetary loss in the transaction and a redistributive empathetic, social and ecological added value.
The progressive development of **interconnected and federated local commons** is capable of amplifying the movement from "subordinate work" to **emancipation towards the consented form of an educated activity of social utility, apprehensible by the civil community.**

Movements related to the **Urban Commons** developed.

In **Naples**: the neo-municipalist movement has created spaces for self-managed creation and developed local services and material utilities adapted to the urban community. The City Council recognises the direct reappropriation for social or cultural use or refoundation of housing, abandoned or abandoned buildings. "**Commoning in Naples" is practiced at the level of the districts.**
In other cities in Italy, the expansion of the "Centri sociali" Inter-cités movement has led to an increase in the number of self-managed and occupied spaces, bearers of social, cultural projects and various forms of self-production. The first steps towards a power of self-determination of the living environment and of evolving forms of use over time.

Federalism has created a federation of the Digital Commons, the outcome of which will depend on the ability of the Commons movement to federate to give itself the synergies and sizes necessary to become the vector of a new social project. It is a question of acting on state governments by imposing **interoperability between platforms**, i.e. giving individual users and collective entities the power to **transfer their data to devices that are not proprietary** to politico-economic logics.
Platform Cooperativism aims to enable the development of socio-technical alternatives to Data Industries, on a path similar to the "free software" model.

Some States are becoming aware of the need to stop the movement of financial capitalism to capture human identity and its behaviour, and are carrying out constitutional reforms, such as the one under way in **Iceland** or **Ecuador,** carried out within the framework of a **process of participatory democracy.** which lead to making natural resources the perpetual property of the Nation (subsoil, living and dormant waters, areas of biodiversity in "free evolution, etc").

"It is necessary to interrupt the metabolic rupture of the link of interdependence between humans and the land that constitutes the irrational exploitation of land and nature by capital"
- Karl. Marx

On the need for the Commons to manifest itself in dynamic action
of the "All Ones"
"Other**" world is experimenting,** finding ways to deliberate on a global scale about access to in-depth knowledge, sharing data, speaking in all languages and thus strengthening intercultural ties.
This **post-sapiens human being** is working to learn the lesson of times of accumulation and prefers to escape urban confinement - today a condition for access to the job market for clients - to find a new breath, to grasp the infinite complexity of what he once believed to be his planet in " Peace and Love", to invent solidarity by co-producing the useful and the pleasant, by cohabiting, self-managing, sharing, interconnecting... Co-evolving
Is it not a specific characteristic of the human being to be carried by a renewed need to think and act for oneself, within a close or wider social whole?

05-2 – Ecotopia - Concretization

From obscurantism to civil disobedience Montfermeil Larzac, ND Landes, Bures

In the 1990s, the "Bosquets**" ghetto city** innovated (Commune of Montfermeil, Dept. Seine St Denis) and developed cooperation with African countries via family ties between people on French soil and those who remained in Africa.
An economy is developing that **combines local and global**, on tasks spread between the two continents, in the import-export of fabric fibers and the transformation into clothing and commercial objects, ethnic or not, on the basis of acquired knowledge and cultural sensitivities of origin...
At the end of the 20th century, at the end of the 20th century, the public social landlord thought it was a good idea to withdraw from its mission as manager of the "Low-Rent Housing" stock, after having asked for authorisation from its supervisory authority (State) to proceed with the demolition of the rental housing stock!
The building, which consists of several ten-storey buildings made of reinforced concrete, does not in itself pose a problem of dilapidation or deterioration of the structures.
On the contrary, buildings have a rare ability: that of offering without great expense a functional mutability, so appreciated today, allowing housing and activities to be mixed in the same body.
The structural and functional suitability of the built project escaped its designers and sponsors, but not that of the inhabitants-users who allowed themselves to free themselves from the established rules of the "bourgeois use of housing" in order to reconceptualize the rented space and adapt it to freer interpretations.

The root of the problem lies in the load-bearing structure of the building, which is intended to be thick, to be less expensive.

The (deliberately clever) concept places mono-oriented housing cells back to back, separated on the central axis of the building by a dotted line of concrete walls, the intervals allowed the bathroom blocks of two transversely opposed dwellings to be slid back to back.
This structural and spatial arrangement, which generates a complex interlacing of separating dwellings around the bathrooms in a middle position, certainly led the authors of the project to move away from an expensive option of reinforced concrete or heavy masonry to retain the light option of the plaster tile wall, especially more economical to block the central crenellation generated.
A choice that offers **a plus** in the sense of the evolution of the use of the structure towards a **contemporary "Babel", a** mythical place bringing together: housing, business, commerce, intense social issues; but **a minus** in terms of the statutory inability of the owner at the time, to accompany the transformation of the forms of life and activity of his tenants...

This **dynamic site, inventing international exchange on a multicultural basis,** could have been encouraged with certain adjustments between the "informal" and the "market". This was not the case and the authorities and well-meaning groups sought to hinder this dynamic to the point of obtaining the destruction of the rebel buildings, for the reconstruction of controllable rental housing... And after some time, discover the birth of a new activity at the foot of the "residences": the harmful "Deal".

On the other, civil disobedience and collective invention –
Larzac region

In the 1970s, 103 local peasants wanted to maintain their eco-compatible form of agriculture-livestock farming on the semi-desert plateau of Larzac, against the advice of the state government, which wanted to expropriate them, citing the need to extend the army's fields of manoeuvre.
Their opposition sparked a non-violent civil disobedience movement against the extension and ended after mass demonstrations with the abandonment of the project (1973 - between 60,000 and 100,000 participants). **A time of relationship and awareness** that led to the birth of a peasant assembly of self-management of the territory, to the creation of the national union "Confédération paysanne", and to the birth of other movements of protest against society, networked on this occasion.



Notre-Dame des Landes 2003 – 2022 ...

To move the Nantes **Airport**, which was supposed to be saturated in the future, and to create a new one to increase the international visibility of the agglomeration, it was created by the State, at the request of the City of Nantes in 1974: a Deferred Development Zone, on 1600 ha of cultivated land and woods. Despite the opinions expressed by a local collective of opposition to the project, made up of residents and farmers, the project was validated by the government in 2003.
This was followed in 2008 by the signing of a declaration of public utility authorising the start of the work.
The struggle undertaken in response goes beyond local issues and attracts other solidarity movements in opposition to the intensification of air traffic (noise pollution, soil sterilization, deforestation, gaseous pollution, etc.).
In 2009, hundreds of activists flocked to the site and occupied the pre-empted land, in tents, in shacks or houses left empty.
In the autumn of 2012, the police and gendarmerie tried to evacuate the "**zadists**" by force of arms.
The eviction operation continued for several weeks, giving rise to violent clashes between defenders of the Zad and the police. This is a turning point in the struggle against the airport project, which will mobilize an even greater number of demonstrators outside the Nantes territory, and lead to a demonstration of reoccupation (about 30,000 people) and self-reconstruction of larger and voluntarily non-temporary living spaces on the Zad site.
In addition to strengthening solidarity between farmers and occupiers, these successive clashes and reoccupations resulted in an influx of sympathizers from all over France, and even from Europe.
In 2014, two hundred people organized their living space on some sixty sites: old refurbished farms, squatted houses and cabins built of wood or cob in **self-construction**. Activities have been developed, including about twenty bio-agricultural projects: beekeeping, market gardening, cultivation of medicinal plants, orchards, etc. The zadists aim **for food self-sufficiency,** refuse the law of supply and demand in market relations, and sell **their production at a free price**.

Sociologist Geneviève Pruvost recounts these moments as follows:
"The zadists create farms in self-management on an alternative mode of agriculture, in forms of light housing that mark their form of opposition to "concreting". To do this, they use recycled or organic and geo-sourced materials (soil, wood, straw, etc.) in order to **reduce the human footprint."**
"... It is also a "libertarian" and anti-capitalist life experience that rejects the chieftaincy in favor of the **contradictory deliberation** of the actors, referring to a contestation of industrial progress and pyramidal societies as the neo-rurals of the communities of the 70s (Larzac) once were. There is the **political cohabitation** of groups of farmers and craftsmen working in interdependence. Among the "zadist" practices are: **self-production**, the limitation of expenses and the adoption of a **cooperative functioning**.
The fight against the airport was also an opportunity to launch a participatory census listing the fauna and flora present in the area and thus count 1500 living species. »

2020 ... At the Lorraine site in Bures, which is required by the State to bury radioactive waste from the 56 nuclear reactors in place on French soil, various forms of demonstrations in opposition to the project are also continuing.

Ecotopias - Concretization

Examples of Urban eco-design dynamics and participatory resource management -

Initiatives are taking turns to revise the notions of **Private Property and public or common land** in force.
These are initiatives such as those that consist of opening **squats** for reasons of social and artistic utility, as in the occupation of the former "Frigos" in the 13th arrondissement of **Paris**, or similar actions carried out by the associations of "Mal Logés" applying to empty buildings the "Right to Housing" For All, recognized by a law that has not been applied.

2005-2023 - Montreuil 9-3 "Peach Walls" - Wasteland in shared evolution -
In 2005, a few whistleblowers within a neighborhood rose up to hinder the desire of the local authority and the prefectural administration to open up to urbanization what remains (34 ha) of the areas cultivated in the Commune in arboriculture since the 17th century.
The labyrinthine site has been planted with trees and has been fallow for several decades.
It is crossed by a Ru and compartmentalized by the walls of limestone, lime and plaster from the quarries in place in the Commune and built by arboriculturists over the previous centuries.
Faced with the repeated but meaningful silence of the municipal officials, the occupation was carried out "without right" and at the end of the day, some enclosures were temporarily put under cultivation around a museum plot, restored within its walls, and replanted with peach trees in the traditional Montreuil method of laying in "espalier".
The local action relayed locally founds a "Popular Workshop of the Peach Walls" in charge of inventorying the resources and skills of the different sectors, for some of them to maintain themselves in a free evolution already underway, for others to accommodate vegetable crops without chemical inputs, or on the severely deteriorated sectors to support open-air cultural facilities and "why not" to create an Ecological Festival there every year.
The studio is linked to the Paris-Villette School of Architecture to illustrate the potential for reconciling nature and the insertion of forms of expression of a social and cultural ecology on the site. These approaches were then experimented with: theatre, shared gardens, guinguette, cooperative workshops, experimental gardens, etc.
Over the years, the audience has been strengthened, vigilance has focused on the evolution of urban planning documents, to gradually obtain a classification in protection of the territory and the grafting on its peripheries of cultural initiatives and ecological awareness.

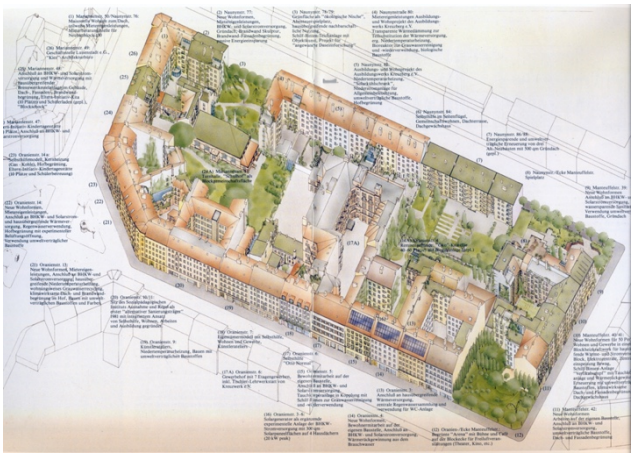
Today, life continues on renewed initiatives:
Plots reserved for the reception of the local Roma community - Associative gardens "Sens de l'Humus", "Jardin de la Lune" of medieval inspiration - Associative floral garden "Pouplier" - Mobile guinguettes - Cooperative workshops (production of beer, crafts, carpentry, artist's space, etc.), Open-air theatre and transhumance (La Girandole), Map Association in charge of the maintenance of a conservatory of "peach walls"; School of Urban Beekeeping ... And every year there is a Festival for the General Public of Bio-cultural exchanges.

Kreuzberg Generation -

It was in the years of the "Cold" War, when German anti-militarist youth were placed in residence in the old, undestroyed districts of Berlin, and then in the years after the fall of the Wall, in 1989... that the districts of Kreuzberg, then Prenzlauerberg, and others elsewhere, sometimes without property rights, were taken over to install the new world of **collective life in solidarity and shared uses.**

An abandoned land gives wings and ideas, and there were many. To name a few:

Transformation of buildings from the ground to the roof;
Installation of collective co-neighbourhood services - Schools and parental nurseries in the heart of the blocks;
Revitalization of crafts and local trade within the framework of residents' cooperatives;
In the heart of the blocks, creation of co-shared vegetable gardens;
Creation by the neighbourhood associations of Music Halls and Theatres within the blocks.
Experimentation on the construction of equipment with low energy and water consumption (recycling of rainwater, wastewater and black water), etc.







The inventive citizen dynamic

2002 - Berlin Operation IBA-Stern "**A roof for all...** »

Yes, public structures can be innovative and strive to get out of a managerial routine to deal with socio-economic-cultural issues at the root.
Such as the initiative led and financed by the "Stern Berlin" (Public Social Housing Organization), which in 1991 relayed a request for a neighborhood from a group of prostitutes waiting for housing, and committed itself to the purchase and development of a building in the neighborhood that was not occupied.
The Stern, unlike many other housing providers, does not look the other way, but on the contrary constitutes a support group bringing together: the applicants and other housing applicants in the neighbourhood, the sector social educators, the nearby Health Centre, a School of Architecture, and a construction cooperative in connection with the Regional Detention Centre (a centre specialising in the training of prisoners in the building trades in various trades).
On this basis, the building is appraised and acquired, then the project is carried out by the architectural firm in a **"participatory" mode.**
A process that calls on future tenants to define, on the one hand, their expectations in terms of living space (private spaces and shared spaces), and on the other hand, to be part of a training system allowing them to participate in certain phases of work on the building: the "ready to finish" of their homes, and the design and development of common areas (interior and exterior).
Apart from the work aimed at reinforcing the structures of the building, the equipment works bring together the workers of the companies holding the contracts, some future tenants, and the inmates in construction training, with their supervisors.

The housing will benefit from individual remote management computer equipment, allowing each tenant to manage online, in the greatest economy, all the household appliances installed (in the context of the energy source, during off-peak hours of Berlin demand.
For the well-being of the occupants, the plastering on the vertical walls inside the housing will be made with a mixture of three components: sandy clay, flax flakes and aerial lime. This coating, which

has been known for thousands of years, has the property of being a regulator of ambient humidity and an air purifier.

Tübingen - A Rental Community in Transmission of the Urban Resource

Schafbrühl district, Architect J. Eble
It is a district of rental housing built on bioclimatic principles, as part of a partnership established between a local insurance company and housing applicants in the area. From the outset, the experiment consisted of creating a living space that could be "passed on" to successive generations of tenants.
The approach based on a "shared management and co-maintenance by tenants" mode of common internal and external spaces, introduces a **median concept in terms of ownership**.
It allows the design of the property in relation to a request for use by non-owners, the latter being committed in return to ensure the regular and joint maintenance of the outdoor spaces for games, walks, allocated vegetable gardens, ponds and various other vegetated developments, in order to transmit their assets...
A commitment paid by a discount on the rent indexed to the average rent in the agglomeration.

The rental status is characterized by a fixed-term rental contract, over a maximum of twenty years, in order to keep the vocation of the operation, on the renewal of the rental offer in self-maintenance of the neighborhood and the soils planted and gardened by the tenant inhabitants.

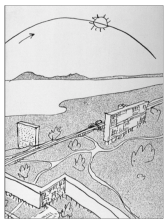
Usage Control - Co-designing, Co-living, Co-managing and Co-maintaining your HLM

In **Kassel**, a public housing building (rented from the 1960s) is being rehabilitated in a **participatory manner**, with the creation of a group bringing together the inhabitants of the district, the occupants of the building, the managers and the municipal group, who are responsible for establishing the new functionalities, performance and amenities and monitoring the execution phase of the works programme.
A process initiated with the prior agreement of the tenants concerned, and continued by a second commitment after reinstallation: that of ensuring the self-maintenance of the common areas and collective premises, and of co-managing the neighbourhood functions inserted in the building.
The redesigned building is multi-formulated, it is similar to the concepts initiated in the new construction processes of the 70s by the Self-Managed Grouped Housing Movement", but differs from it by the fact that it remains on **a public social housing status extended to citizen service functions.**
Functions integrated into the building are taken care of by volunteer tenants, paid in turn, who ensure the management of the workshop set up in the basement of the neighborhood DIY-repair; a kinder-garten on the ground floor; and a formula of accommodation on floors intended for friends and families visiting the inhabitants of the district for a short stay.
The innovation doesn't stop there. It concerns the training of the building's residents who are looking for work, who are directed towards trades related to the new functionalities of the building. Occupants initiated on site: in the management and maintenance of "guest studios" set up on the top floor of the building, in the running and animation of the equipment repair-recycling workshop, or trained as a maintenance agent for the neighborhood daycare center...
A Neighbourhood Housing Unit that offers training and jobs on site!
The limited-term contracts in practice allow job seekers in the district to access training courses, in situ.
The socio-active training part of the operation is financed by the Municipality and the regional Land.

05-3– Ecotopias: Eco-construction?

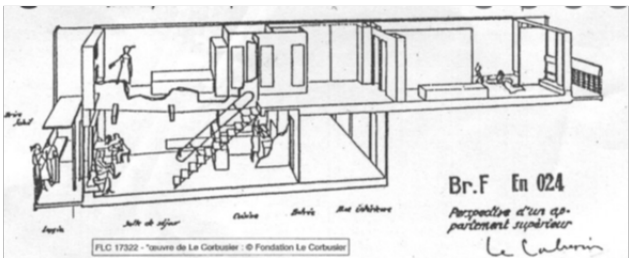
"The Radiant City" – Marseille, Firminy, Nantes Rezé, Berlin, Briey en Forêt

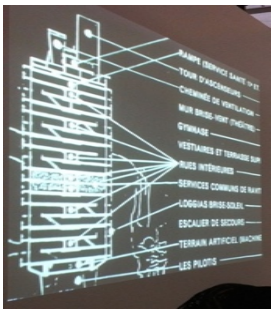




To make people want to leave the Anthropocene impasse, with concern for the User, the Human... To dare to take it in its great diversity, to offer it ways to perfect its respect for non-human life, to continue to lighten its ecological footprint, by integrating the framework of a biosphe-compatible evolution in consciousness and mastery.

As was the case for Jean Prouvé Architecte or for the Swiss architect Le Corbusier, when the latter designed the social housing project called "Cité Radieuse" at the end of the 40s, carried out in Nantes, Marseille, Firminy, Briey and Berlin.
The model was an alternative to the poor, storey social housing of the time, by offering each inhabitant, on a tiered space with sun, horizon view, quality ambient air, comfort of use provided by the equipment installed, modelability of the interior space, privacy... and **a neighbourhood life with its stepped blocks, crossed by a street and elevators.**
The keys to a varied social life, in reciprocity of exchange, served by local facilities and on-board commercial functions.





The structure has remained unique, the housing built has always been lived-in.
The "**Sky Face**" of the building houses the space for cultural expression and the acquisition of knowledge, reflections of the Community. It offers a horizon view and allows the contemplation of the Astral Universe.
The "**Face Terre**" offers shelter and retreat for outdoor activities, gives shade, shelters from the rain, hosts the market, neighborhood festivities...
The Neighbourhood Unit offers direct access to local services, meeting rooms, workspaces, a hotel, a gymnasium, etc. It is a tiered district, in the manner of Valparaiseau, but without a hill to support it.
This watchdog district houses the Schools, the Outdoor Centre, the nursery, the open-air swimming pool, the Greek Theatre with the horizon at the back of the stage.

The human ecosystem

The end of the 20th century, revealing the appearance of factors likely to interrupt the solitary race initiated by "the civilized", has allowed **some citizens and some attentive designers to understand that the Human is not an "Avatar", but only one Species among others of the Living on Earth**, and that it is necessary **to approach the Inter-Species space, as the one suitable for satisfying the laws of evolution presiding over an ecosystem conception of being.**

Two European Architects, along with others around the world, are part of this approach.
They are **Joachim Eble** and **Stefan Behnisch**.

S. Behnisch is guided in his projects by the desire to provide each user, within a materialized space, with a wide range of choices in terms of bodily and psychological comfort that makes it possible to determine the parameters of personal well-being, without it interfering with the other occupants.





Wageningen (Netherlands) - Forest and Nature Research Institute -

A workspace, better still, a continuum of life that beats to the rhythm of reintegrated biodiversity
In the Wageningen (Netherlands) project, Centre for the Study of Forests, **it is the whole of biodiversity that settles in the study site** to produce in a variable and adjustable way: air, temperature, humidity, sound, light, scents, in connection with the needs and rhythms of life, which creates **an ecosystem**.

The vegetation and the buildings combine to create a temperate thermal atmosphere, favourable to the energy balance of the whole and capable of generating optimal conditions of climatic comfort in the 4 seasons.
The glass roof with blackout curtains makes it possible to manage: lighting (direct sun and shadows); the air draft; temperature.
The vertical walls in the south tympanum are made up of glass facings, which, like gills, open, or close according to day or night rhythms and the seasons.

The whole described in this way may wrongly seem complex. The researchers, users of the place, are of the opposite opinion and admit to regretting not being able to live in the place.

05-4 – Ecotopias -
Bioclimatic regeneration -
Reactivation of the social dynamic



The evolution of new forms of interrelations and connections between humans at the different scales of a world space, and the transition to renewable energies (solar, wind, hydraulic, geothermal, hydrogen by electrolysis, etc.) transformed into electric mobility: Are able to develop active mobility, or "soft mobility", in a varied way and adapted to each scale of travel and each biogeographical area; and consequently free up artificialized land that supported the infrastructure.

This can be observed in the medium-sized town and neighbourhood programmes carried out within the **Northern European Eco-city framework:**

Mobility of proximity: 2 wheels and similar means
Medium-distance mobility: on-site public transport vehicles and rail...
Long distances above ground: hovercraft, heli-drones and copters...

A **mutation of the forms of relationship** has taken place at the **level of neighborhoods**.
Each newcomer discovers the attraction: of acting together; to exchange knowledge and services between social strata and age groups; to commit to supporting initiatives (shared gardens, collective lunches on the streets, development of outdoor spaces, creation of Associations, opening of collective restaurants, music groups, fab-labs, craftsmen's cooperatives and other services born of a local idea); and start testing another way of life.
It is here that the bicycle-stroller and cargo bike, carpooling, timeshare on the so-called "family" car, the street for children's games, and many forms of cooperative shops or DIY and repair workshops were invented...
These developments today contribute to halting the well-established process of fragmentation of social relations, they reactivate the creative and multi-entrepreneurial social dynamic within proximities, and gradually shift behaviors towards non-domination and the attraction of difference to open up to the diversity of worlds, that of the human community and beyond.

The convergence of soft-travel and digital inter-exchange technologies is also able to: facilitate the discovery by each human of the singularities around him, to develop his or her ability to co-manage many aspects of his or her existence: To reduce the time wasted on moving away from everyday life, to gradually lead him or her to push the door of discovery.

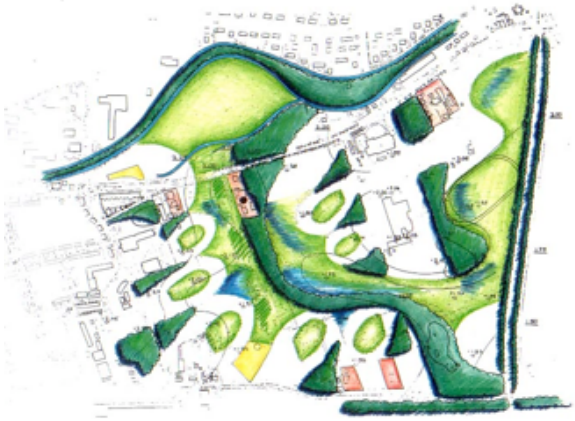
IBA Emscher - Changing life after the Anthropocene devastation of the 19th and 20th centuries

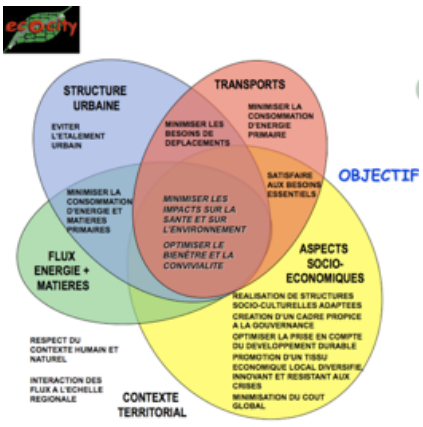


IBA Emscher It is the choice to redefine the Emscher Country (North Westphalia Region, the former Ruhr) through a public commitment to relocate there after decontamination of soil, water and buildings: Biodiversity, instead of coal and other chemical pollutants stored, and thus give life back to a distraught population, without job prospects.
As part of a mission entrusted to a public institution, **the IBA Emscher,** a ten-year consultation process is underway bringing together citizens, elected officials, economic actors concerned, public services, and representation of the territory's associations**.**
The choice is made to organise an active and continuous participation of the bodies made up of actors and resident populations, involving their inclusion in the decision-making process at all stages of development and implementation concerning: neighbourhood projects (collective facilities, networks and housing); projects on the specificities of terroirs, hydrographic networks, forest areas, subsoils in gallery subsidence; and their content (competition programmes, selection of successful tenderers, monitoring of achievements and commissioning).
A specific communication body has been set up for this purpose to inform all the public concerned, and to carry out travelling exhibitions over the duration of the projects undertaken, debates within the territories with the distribution of progress journals relating the content (works and overall developments on the part of the Ruhr concerned), and stage visits.

A large-scale operation dealing simultaneously in a user-friendly and coherent manner:
The renewal of social life and employment focused on new technologies and renewable energies; cultural and social development from an angle uniting past achievements and the emerging future; the strengthening of scientific and technical research centres; soil regeneration and the reintroduction of biodiversity and its development: the initiation of multiple and micro-surgical demolition or restoration programmes or the construction of eco-habitats in garden cities; the transformation of the "castles of industry, into swimming pools, museums, places of entertainment..." And the depollution of the Emsher River, a tributary of the Rhine, resulting from the harmful waste and discharges produced over two centuries by the industries in place, those of the "Ruhr", the flagship of German industry.
... To obtain after these cross-cutting and complementary initiatives a revival of economic, social and cultural life throughout the Region and to attract new Knowledge, Jobs and Dynamics.

Eva Lanxmeer J. EBLE Architect





Assembling the scales of life (block, neighbourhood, urban area)
En Commun, inventing and creating your ecological, cultural and social district

To live in **self-design, self-management, in energy and water resource autonomy**, in **"passive energy" housing**, with integration into the housing fabric of an organic market garden production estate linked to a cooperative farm committed to a mission to raise public awareness of nature.
A reality experienced by 800 people housed in 250 homes. The "**Eco-Unité de Vie**" was born out of a critique of contemporary living conditions, it is designed on a principle that assembles islands whose cores can be developed by the community of occupants (the neighbourhood).
The built environment, which varies within each of the blocks constituted, is required to comply with the same level of bioclimatic and ecological requirements and performance, in particular: that of not modifying the regime and nature of the Base Polder, which is subject to a permanent circulation of water within its soils; and that of not polluting its waters, because of the urba-activity reported on the surface.
This constraint is removed by the implementation of soft technologies for recycling, recovery and decontamination by biomass and phyto-purification processes.

The **water cycle, managed from upstream to downstream**, takes into account rainwater resources as well as freshwater resources drawn from deep aquifers (transformed into drinking water after filtration). After a first use, the water enters a new cycle and, depending on its nature, is subject to purifying treatments, with a second use in non-potability (washing, watering). For its part, the "black water" is subject to specific treatment by digester and provides biogas.
In terms of energy supplied and consumed, the buildings are "Passive" in performance, with a contribution of energy from renewable sources (solar thermal and photovoltaic).
The permaculture market gardening farm partly ensures household consumption of vegetables and fruit.

The project, led by a local group of inhabitants, concerned about ecology, and critical of the way of living proposed in the surrounding urban fabric, demonstrates that in the face of a complex biophysical context, a rebellious determination, which overcomes the declared impossibilities and mobilizes the knowledge acquired over the vast territory of Europe, can obtain the necessary "source data", and the "competent actors" capable of producing in sobriety a place to stay with symbiotic notes (... France prohibits construction on drinking water catchment areas).
The co-design process (Architect, Associations) here consisted simply of determining the conditions of admissibility by the occupants of a new way of sitting, to obtain an imprint without disturbing the existing environment.

This neighbourhood project, carried out in an awareness of the forms of use, without distorting the supporting Polder, informs us about the steps to be taken in terms of erasing ecological footprints in the case of future human settlements, with a fixed cycle of stay and duration.

Hufeisen Siedlung (Berlin 1930) - Architect B. Taut -
A friendly garden-building



An arch of housing opening onto a wooded park.
The design of this "horseshoe" shaped living unit may have been inspired, in the 19th century, by the Victorian model of the Royal Crescent made in Bath for the lesser nobility.
This is the only parallel that can be drawn with the work of Bruno Taut, produced during the Weimar Republic, and intended to promote the dynamic expression of the "people" in community.

The building is sober, it rises on three levels, the housing is double exposed (and manageable natural ventilation) and is equipped with comfort elements.

Sobriety and cheerfulness are reinforced by the delicate expression of the Architect's graphic and chromatic palette.
The quality of the operation lies as much in the intimate accommodation provided, as in the relationship maintained between it and the different scales and natures of the outdoor space.

Their combination and the composition of the overall space is based on:
- An overall concavity that drains rainwater onto a central pond, planted with trees around its edge;
- In the centre, a relaxation meadow, occasionally the site of festive events organised by the surrounding blocks or by the whole district;
- Near the houses, gardens cultivated by car-sharing between neighbors of each stairwell. Proof that humans can still design and co-invent uses without property.
- A perimeter road that redistributes to the wooded areas and other neighbourhood units and serves a neighbourhood theatre, staged in an axiality given by the building that responds to it as a Tribune.



The built, unenclosed arch places the neighbourhood's local facilities at its two ends, thus marking the importance given to the "green theatre" Centre, this public space designed in the sense of a shared commons. The neighbourhood facilities associated with the built arch are placed at the junction of the radial road that leads to the city centre. At the point where public transport stops, cycle paths and car-sharing vehicle parking.

The semi-elliptical built complex, contrary to the trends developed today, is not a space of closure and rejection of the peripheries, but the opposite. It is the focal point of the composition of the district, which organizes all the peripheral buildings and associated gardens, the preserved woodlands and the slow circulation of the fabric.

Kronsberg (Hanover) Refounding the notions of periphery and urban center



This is a step towards a reversal of the urban-rural relationship, intended to halt the simultaneous deterioration of urban-urban areas in order to sow the seeds of an approach that introduces a third environment, over the long term forgotten: that of biodiversity, this forgotten condition for the continuation of an evolution.
This is a fundamental first step, because rather than responding by strengthening the technical means and investments proposed by complex and temporarily effective land use plans; the elected representatives of the agglomeration questioned the possibilities of living differently by first examining the expectations expressed by the two trends of the population - the "stayers" and the "parties" - in order to arrive at a synthesis that fits into the one degree five scenario by 2050 (IPCC).

After the urban peripheries were monopolized by urban sprawl, in the mode of dispersion (a North American urban-economic model of welcoming the middle classes), the **"Hannores" concept of shrinkage** marks the first step in correcting the dominant trend.
It can be understood as one of the first manifestations of the desire to find **a mode of urban shrinkage**: **a phase of withdrawal, of retraction, a process of disengagement, of the deoccupation of non-urban annexed areas, of increasing denaturation of biodiverse environments**, if not as a correction of the expansive model of economic activity.

The recomposition of the urban fabric is carried out by reseeding and complementing the neglected fabric of life in the old pole.
In Hanover, it was a question of grafting onto the neighbourhoods on the edge of the city, which were partly deserted, the components of an ecological and social alternative, declined in the form of service facilities (transport, economic activities, multiple forms of travel, transitional natural spaces, etc.), in order to create a reversal of the peri-urban flow: the return of "expats" to stays to discover an expressive world of the Commons, collaborative and relaxing, conducive to self-reinvention.

At the same time, the old, uncomfortable and dilapidated fabrics are dismantled, then recomposed by associating activities and habitats, resunny, greened, restored, on a concept of neighbourhood clusters, and returned to the previous occupants and newcomers.

The **Eco-City concept** is also expressed through plant continuities that are born on the terraces attached to the housing, slide at the foot of the buildings to metamorphose into shared public spaces and get lost in meadows and peripheral woodlands formed to accommodate outdoor sports, leisure activities, and festive events.
The **biodiversity corridors** introduced into the fabrics establish a link with the fauna and flora occupying the periphery of the agglomeration, to reintroduce plant and animal species over time in conciliation with the daily life of urban populations.

The **concept of circularity** , called here, gives rise to **travel networks that free themselves from the centrality-authority of previous centuries** (Western model) to give centrifuged territories a uniformly distributed identity and autonomy. In this approach, equal importance is given to bus and tram traffic lanes, cycle lanes, soft pedestrian traffic and slow road lanes.
The simultaneous enhancement of old neighbourhoods and those in their roots attempts to revise the current relationship between Humans and Biodiversity, by varying it according to the specificity of the topographies addressed, the nature of the soils, the exposures, the native vegetation, etc.
It thus introduces **varied but borderless variations available to all social categories gathered and served.**

A non-dispersive initiative carried out on a still unusual territorial scale that takes the opposite view of the Rennes "Ville Archipel" approach, which pursues a distinct development between the City Centre and its suburbs, dispersed within the rural territory...

°°°°°°°

Could we not move without delay to **the stage of this biotopic and carbon-free adolescence of the territory?**
To adopt on a meso-pole a process of repatriation of the unfortunate dispersions concocted during the Keynesian era, not to return to previous times, but to invent a territory offering everywhere to the whole of its assembled population: a quality of services and use of public space; without spatial segregation; with consideration of the surrounding biodiversity; And a massive use of renewable energies to decarbonize and sustainably tranquilize daily life?
A framework for speculative land rent should probably be introduced, insofar as these redefinitions of occupied territories must essentially be conceived, managed, and partly carried out by the public authorities...



III. 6 ANTHROPO-TERRITORIALITY ?

Territory *- The Territory is a suitable portion of space. An area of domination marked by limits. Considered as a place of resource with regard to a weaving between natural factors, human factors given a social, institutional, political and cultural or even ethnic context" (J. Rancière)*
Resectio *(Latin) Etymology: To cut, to remove - In surgery, the removal of all or part of a diseased organ or tissue while preserving or restoring the function of the apparatus of which it is a part. Also joint resection.*
Ecology *- "Olkos = house, Oikonomia = economy: the administration of a house, hence the science that studies the interactions between a living organism and its natural environment*
Ecocide- *. The neologism is constructed from the words "ecosystem" and "genocide".*
"Eco" from the Greek oïkos, the house, and from the Latin "cide" caedere, to kill. To be guilty of ecocide is to burn the hearth, the Terere
(The concept of Ecocide is a key weapon that people are gradually seizing to bring before national and international justice bodies the irreversible damage done to the environment and the entire planet.)
Terricide, *same meaning as "Ecocide" (biocide+humanicide+cultiricide+Genocide...)*
Trophic relationships*: networks of food relationships between organisms*
Disruptive*: It is to find new ideas and new levers of communication (is said of the electric discharge that bursts with a spark).*
Dystopia*: wrong place, wrong place.-* ***Dystopia****: imaginary society governed by a totalitarian power or a harmful ideology*

A Fable of the Anthropocene: "The Ogre, the Hen and the Bacteria"



Somewhere in the universe of the interstellar void, on a small blissful planet, there are 3 living species that are called "Gallinaceous", "Ogre" and "Bacteria".
The Ogre species is referred to by some as "Man"???

During their development in the oxygen tent that still allows them to survive and develop, the Ogre species has split into two categories: the "Ogre Served" and the "Ogre Servant".
The first category is more greedy, more devouring, more flesh-swallowing than the second.
It should also be noted that in the very distant past, in the time of the Stone, it hunted better and feasted much more often than the other... A question of genes or enlarged Striatums can play a role.
Fortunately, the species has transcended itself and the "desire-pleasure" impulse has shifted from the fresh bloody flesh of wild times to the cooked flesh, that of the "meat chicken".
Their King Henri IV campaigned a lot for this. It's written!
So much for the great History.
Now, having reached the supreme stage of Civilization, this "Sup Category" has created a vast apparatus for the production of animal proteins on a concept of fattening-dismembering of the neighboring species:
the "domesticated galinaceous".
In this way, the "Hens", they can also be called that, and their by-products cover "cheaply", in "white goods", at prices accessible to the greatest number, the household demand of the Ogre-humanity.
So the system of course is constantly evolving...
In recent decades (they call it the 21st century), the technical-financial-scientific teams of the species have perfected the production model in the following way:
- The males of the species called "roosters" are mostly eliminated. Only a few specimens of powerful progenitors are kept... To maintain it, it would only be a not very tasty and hard meat with no real financial interest.
- Aside from disruptive males, the process consists of multiplying the "broiler", but in a hybrid variety designed to give only boneless fillet to the consumer, The category of "Ogres served", we are told, is losing its chewing vigour.

I must tell you that during its life, which lasts only one month, the chicken, which has just come out of its "chick" phase, it seems, is inhabited (formatted) by a single obsession: that of eating soy 24 hours a day.
At the end of this cycle, to protect him from future suffering, his life is taken away as well as his chest equipped with two magnificent and tender boneless meat fillets.
Yes, indeed as tender meat is strongly desired by Ogres of all categories, to provide increasing quantities of food it is necessary to deforest the planet more and more? It does not seem to have attempted to solve the problem in any other way.
But the process as a whole is very remunerative, we are told.
- The story doesn't end there.
Well-fed Ogres are also fond of eggs... So a second female hybrid variety was formatted to lay one egg a day like a machine for six years.
And here again there is great sophistication of the production line: the laying hen at the end of the program is killed (God rest his soul!), is dismembered in an automatic line, then frozen and shipped to the territories where the "Ogre servants" are confined.
You quickly understand that the commodity, quickly perishable, sold at bargain prices on the markets in the middle of the African heat, to populations in need, ruins a little more every day the self-production efforts they develop to overcome a limit state of subsistence and dependence on "nourished goods".
The eco-friendly financiers questioned on this subject, on hidden camera, argue that you can't be perfect, but that this is a good way to achieve "almost zero waste" and thus contribute effectively to the global policy of ecological transition.
Ah, I forgot!
The habitat of the Gallinaceae?
There are four types, which are very efficient:
- The "Chicken Silo" also called "**Chicken Tower**"
On several floors kept in the dark so that the occupants live between dream and reality, without too much stress to guarantee the daily production of an egg... For 6 years;
In secret words: "We might as well not arouse the desire for revolution".
- The "**Cage-à-poules**",
In subdivision mode where each individual is close to the other, with a central artery of circulation between cages arranged to recover the production mechanically and market the egg as soon as possible...
"Small neighbourhood conflicts exist but cannot find an echo outside the microcosm!" reports the service employee.
- The "**Chicken Parking**"
Under artificial lighting (to spot disruptors) consists of a limited parking period of 30 days to force-feed teenage chickens out of simple addiction who will each wear the beautiful "white chicken fillets", as they are called there...
"On this side there is no risk of conflict, very quickly they can no longer move!"
- Finally, the "**Thatched cottage"**
The fourth type of habitat is open-air, and is used for the hen, nicknamed the "two-purpose hen ".
There it is to remember these animals that enchanted the children of yesterday "... A hen on a wall pecking hard bread... To see them still running, fluttering around, tasting earthworms, and laying with desire a magnificent uncalibrated egg to end their ideal life as a "chicken in the pot" on the tables of the elites of the class: "Ogre served".
Is it "Green", sometimes afterwards there is a Hell?
All this worked "with God's thunder!", with antibiotics, because the Ogres and Hens species are fragile... Until the day when the third community of the "Living" on the planet: the Bacteria, of an insignificant size, against all odds, managed to thwart the protective arsenal of this Low World to cause the collapse and disappearance body and soul of the so sophisticated civilization of the MPOP (Ogro-Pouletoid Mode of Production).

- *. Chb. About "Poor Chickens, a Geopolitics of the Egg"*
  ARTE 2019 report –

06-1 - Dystopia and Capitalocene ...




Dystopia *Etymogy: (Greek Dys: Bad state) - A fictional story depicting an imaginary society, organized in such a way that it is impossible to escape and whose leaders can exercise total authority and without the constraints of separation of powers, over citizens who can no longer exercise their free will – Wikipedia -*

Comparative analysis of the periods of development of human societies concludes, regardless of the continent and the era, that **inequalities appear approximately in the 3000 years following the domestication of plants and animals by farming communities.**
This stage is reached when the production of food resources generates a stock greater than the annual coverage needs and guarantees food security in the face of climatic hazards that weigh on the territory of life.

To reflect the dispersion of wealth within communities of life, on different time scales and at different times, Anthropology has equipped itself with a comparative measurement tool: the "**Gini coefficient**".
The tool consists of evaluating the characteristics of a habitat (nomadic and sedentary forms) and the time elapsed since the domestication of plants in the region on several criteria, and then converting them into a percentage varying from Zero to One.
The coefficient Zero marks the state where all the members of the community have the same income and assets, and the "coefficient 1" the situation where a single member of the community owns all the income and assets.

Concerning the ancient "Fertile Crescent", sedentarization appeared around 15,000 BC and manifested itself in the form of round houses with stone mortars.
It was around 12,000 BC that villages appeared, with the first domestication, that of the dog, and a marked interest in the consumption of wild cereals (a technique of gathering plants during harvests carried out with sickles).
Morphologically domesticated plant species are attested around 8,200 BC.
If we refer to the data presented for Mesopotamia, the society of the "Hunter-Gatherers" (period from 15,000 to 8,000 BC) is assigned an inequality coefficient of 0.17 and the first horticulturists in the 8,000 to 7,000 years ago, a coefficient of 0. 25.
From 7,000 BC to 6,000 BC, there followed an agricultural civilization made up of cereal-growing villages with an average surface area of one hectare, adjoining cultivated land with the beginning of irrigation, with three-room rectangular dwellings and larger buildings associated with squares. At the end of this period, the coefficient of social inequality used is 0.35.

The measurement of inequalities and distribution of wealth five thousand years after the domestication of plants in the cities of the Mesopotamian area, at the time of the city-states, gives a Gini coefficient of 0.40, close to that currently established for the USA.
We can conclude that the period on which the transition from the era of the "Commons" to the era of "Directed Management" instituting the Division of Labor must be observed is the period between 8,000 and 6,000 BC.
That of settling in the city.

To continue the comparisons: The City of Teotihuakan in the geographical area of present-day Mexico has a Gini coefficient of 0.12, five thousand years after the beginnings of plant domestication, while the Maya city of Tikal has a coefficient of 0.62.

In Italy the city of Herculaneum in 79 AD has a Gini coeff of 0.57. The capital city of the pharaoh Sesostris III in the Fayoun 0.68, very close to the coefficient calculated for present-day South Africa which is 0.67.
France today has an inequality coefficient in the redistribution of wealth of 0. 30, higher than that of Scandinavia 0.25. The USA is at 0.38 (OECD sources).

Capitalocene & Dystopia...

A few more reminders.
City Systems, emit 60 to 80% of greenhouse gas emissions, **consume 75% of natural resources**, and the economic-political powers call for population growth to overpopulate them. There are therefore **89 million additional human beings to feed each year**.
Every year, the surface area of cities in the world increases by about 400,000,000 square meters.

Why does this liberticidal societal model seek to bring the world population to 10 billion people and more by 2050, and to support a "mega" concentration of populations within these megalopolises, the new Bastilles?

- Because of a fear: that of having to face during the century the massive migrations of desperate populations fleeing their living environments (due to exterminating climatic disorders and associated famines); after having ruled out the IPCC scenario for reasons of financial losses which made it possible to re-establish the Greenhouse Effect that had been damaged, and possibly reconstruct previous achievements**?**
- Perhaps because of an uncertainty: that of losing the reins of power during the period of climate "transition" in the face of the rise of the interconnected global collective consciousness, self-organizing on the paths of **sobriety, renewability and eco-compatibility in autonomy?**

Unless the concentration camp desires on the urban of Capitalocracy are based on the certainty of henceforth holding the tools capable of monopolizing the freedom of thought and action of the human, to lead him to serve a new exterminating cosmology... An intergalactic alienation?
The entry of "Cognitive Capitalism" marked by tools: Data-center, stratospheric constellations, Artificial Intelligence Systems, etc... Which multiply the modes of surveillance-capture, selection, targeted eliminations... Wouldn't they be proof of this?

"*Cognitive **capitalism is the mode in which capitalism perpetuates itself when its categories have lost their relevance, it is the crisis of capitalism that shakes society to its depths. Virtually outdated, capitalism perpetuates itself by employing an abundant resource - human intelligence - to produce scarcity** ."*
- André Gorz 2003 -

This model is in place and is progressing.

The **"Platforms"** collect the "identity traces" left by users entering their sites, sell them on the market to manufacturers and services, and store them to follow other processing within the Data Centers, on a property regime that ignores the prior agreement of the users of the networks.

"Cloud computing" - Private owners: Amazon 40%, Microsoft, Google, Alphabet ... With undivided control over most of the digital data produced on all continents, they envisage the beginning of **another stage of growth-accumulation**: that of the disappearance of self-produced computing, of the personal computer and of servers installed in situ; by means of calculation, planning and design services, connected to their own databases by cables and satellite links.

The era of "**cognitive capitalism"** brings new blood to the classic forms of domination by gradually taking power over the global computer network World Wide Web by the upstream capture of knowledge exchanges and social speech stored digitally in private funds; in this case those of the GAFA, operators of a non-violent conditioning.
The materials unduly appropriated are, among others: intellectual knowledge in circulation, technical and scientific research and development projects, individual profiling through access to correspondence, and conversations, documents circulating on the Net.
A system of suction of the human brain, authorized by phagocytosed nation-states, supposed to allow a few private spheres to monopolize, dominate, all the knowledge exchanged to replace the **Freedom of Thought** of the Human Mind with the **Condition of Thinking**.
A mercantile political philosophy, still attached to the Power-Collapse syndrome, this time with a recycling of the human at the end of the chain?

Recently, the phenomenon of distance from city centres has been revived. It is not of the same nature as that of the middle classes who, in the 60s and 80s, moved to the peri-urban areas for a suburban dream subdivided into the "American" style and for a few others to a residence called "secondary".
Does the general interconnection of territories via digital networks (fibers and satellites) mark the beginnings of a multi-site "Being there", close and distant physically or mentally, in mobility between: rurality, micro-urbanity, or inter-continental nomadism?
A Being there, not subject to a physical presence on the site of the person giving orders and data, but simply "remotely" in a situation that is supposed to be able to authorize him or her to produce

commissioned work without escaping from a chosen environment: social, cultural, sentimental, natural.

In this universe presented and consumed as a playground, freedom is conditional, because the governance in place of the world market in order to survive must proceed to the diversion and reinterpretation of the incessant inventions of Man, towards applications that mislead him.
"Distance learning" is not only... the possibility offered to the elites to work in their second homes. Unlike the most humble, it allows the disappearance of the salaried worker and its replacement by a "self-entrepreneurship" paid by the task on a pre-counted time.
For example, at Amazon-Trust, the champion of the "lawless" free enterprise, we obtain the delivery of parcels to consumers in record time by putting the poor in competition on a mode of offers, punctual paid by the task, broadcast day and night on the online site, to call on the unemployed owners of a van to go to the drop-off site and then make the delivery in one time set and evaluated **...** Why should we rest here below? Let's not forget also the staff who prepare the packages in hangars and who are subject to the same regime of time for the execution of tasks and to the uncertainty about the next day.
An "all-in-one" with a tracking of the "individual" and storage of his personal and behavioral data in the client's Data-center.
A Slave Democracy, this new "libertarian" world?

For those who still doubt it, any proof?

Elon Musk, boss of the "Tesla" firm, bought the social network "Twitter" in 2022 for $43 billion and simultaneously ordered the launch of a fleet of satellites to create an Internet connection network free from the cable networks set up by the public nation-states.

"**Amazon Care**" is the mutual health insurance company that states its intention to improve the behavioral and physical health of each individual by offering preventive or curative care programs, adapted to each "patient-consumer", and traced from the database accumulated on its global "Health Cloud". ». It is nothing more and nothing less than "managing social well-being through the algorithmic management of interpreted health, subject to the rules of market profit, after having circumvented the trust of users with the help of indices that sublimate and connected objects.

"**Google Health**", in the name of the need to protect the human race and to provide access to health monitoring for the poor and the disadvantaged, has embarked on the creation of: a Medical Encyclopedia 2.0, a global registry on the health data of sick populations, and associated digital objects, for the health monitoring of everyone.
The "**Google-Alphabet**" unit has acquired the start-up "Alter" for the development of alter ego characters of users of the virtual world: "Avatar" assisted by artificial intelligence.

In the field of clothing trade, a new firm is destroying the notion of the store and the lifespan of the goods traded. It is the ready-to-wear firm "**Shein**" that is developing a concept that focuses on producing a new range of women's clothing every day, and distributes its products at low cost in "e. commerce".
Since its launch, it has collapsed the clothing business sold in branch stores located in the city. The craze of shopper-influencers that is displayed on mobile applications (

Twiter, Tik Tok...) is sufficient for the dissemination of the brand. The approach is part of a mode of overproduction of non-reusable consumables and consumables that can be consumed by the day... a model of social brutalization and self-perpetuating addiction giving consumers the illusion that they are endlessly reinventing themselves in a zero-sum game.

Urban dystopia –
The City as a consumer, segregant, video-drono-monitored. Annexation territory

*"Super **megacities** are cutting us off from nature, psychic damage is at the root of our diversion towards other artificial pleasures" - NH*

Why the "City of Artifice" monopolizing, consuming, segregating, violent, illusioning, alienating, inhuman... barely destroyed, is rebuilt each time with alacrity, whether the cause is an exterminating war, an earthquake, a tsunami...?

Would the desire to increase the world population over time and to dream of it bordering on asymptote in order to achieve an endless growth in invested capital, pass today, with the complicity of enslaved rulers and technocracies, engaging in a neo-urban policy of isolation and cramming of consumers

within "Bubble Cities" or "Mega-Gigapoles" of several tens of millions of "wise individuals"? as world bodies report.

"**Densifying urban centres?** ". Critical minds will not fail to mention that in armed conflicts, bombings in these circumstances should decimate more widely the civilian populations working or housed in the air... New York Twin Towers?
What has happened in recent times 2011-2018 in Syria and Iraq, in Mosul, in Aleppo... And then in the Donbass, then in Gaza, and tomorrow elsewhere? The carpeting of the built environment (habitats and places of activity), but also and above all the death and burial of their civilian occupants under aerial bombardment.
Have the concentration and confinement of large numbers of populations on the same site not become, with the new tactical aerial weapons and the climatic demonstrations of repeated violence (over a minimum of the next two centuries - IPCC +1°5 scenario), factors likely to weaken the lives of future generations even more severely?
Man testifies to an inextinguishable ability to create one world within another and yet another until he reaches the collapse of his assemblages...

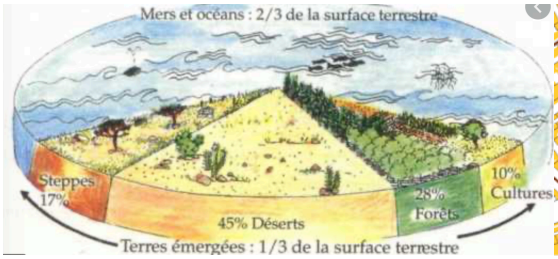

Des maisons détruites par les frappes israéliennes à Rafah, le 22 mai 2024. (Eyad Al Baba/AFP)

The long reign of dependent societies until capitalism in its phase of mass consumerism and the capture of Knowledge, is based on a dystopian ideal built on the myth of exponentially growing prosperity, while everyone notes that the living resources of the planet are already partly no longer able to be regenerated, when they are not already exhausted.
"Globally, 1/4 of the land has escaped the substantial effects of human activities. Only 10% will remain in 30 years, largely in deserts, mountains and polar regions." (Quoted by A. Barrau)

The dystopian field is responsible for reducing time to the instant, and to do so, customizes the present so that it appears "Sustainable", thus continuously erasing a future likely to re-consciousness of the existential impasse.

The urban no longer functions as a major site of protest and political revolt, as in the 19th century when the power to be overthrown was intramuros. **The demand is transformed into a consumerist impulse by the information-disinformation organs owned by private shareholders.**
Wasn't the social unease expressed by the Yellow Vests hijacked by the media in protest movement over the high price of car fuel, by omitting to explain that these increases reflected a speculative game engaged by global finance on fossil fuels... With a lamentable conclusion: that of a weekly meeting on the Champs-Elysées, perhaps intended to train the police forces in vivo in street fighting: a "ping-pong" method?

Should we conclude that in the present context the breeding ground for protest has shifted from **the suburbs** to a "**peri-land"**? A second periphery where we are beginning to understand that we have to pay the bill for the past Keynesian phase, which consisted momentarily of redistributing a share of the profits to create a well-off and indebted middle class as a bulwark against the permanent upheavals of the workers' movements.
Nothing yet reveals a sufficient capacity among the "out-of-the-box" to question the addiction to the market economy, nor the commitment to actively participate in the decarbonization of the productive system, or to bring a constitutional revision to the Republican Democracy...





06-2 Territorial development models under debate

Etymology – Definitions

Territory *: The extent of a country forming a political district – The extent of a jurisdiction.*
Region *: Latin Regio, derived from rex, regis, king – Refers to a geographical area located around of a city. A region is a territory or geographic extent of the Earth with identical characteristics in terms of climatic, geographical, economic and linguistic characteristics.*
A set of territories that have certain common characteristics and where authority is exercised. –
Territorial subdivision *: Corresponds to a level of administrative division without necessarily consistency from one country to another*

"Urban planning is a geotechnics intended to make the earth more habitable, more consumable and malleable" - K Sale

*"The **city** is a phenomenon of relocation of the living earth where food is a commodity above ground, exchanged in dematerialized currency by an individual whose behavior is recorded interpreted in his actions and the meanings given" - B. Morizot*

Eco-Regionalism?
The concept resonates with that of Ecosystem Global.
Eco-regions require an objective holistic anthropo-understanding of phenomena on the part of peoples, stimulated by the grasp of the issues weighing on their existence, and a general effort to create a harmonious and sustainable system of self-sufficiency.
The size of the Eco-regions is considered to be proportionate to the number of inhabitants and their territories correspond to the ecosystem biophysical characteristics in place and the nature of the climatic zone concerned to allow a life in harmony with nature.
Future **cities and mega-cities**, according to the authors, are supposed to offer habitable conditions to 20 billion humans by the end of the century, provided that they are eco-systemically integrated into a territory in joint development and have a new system of sustainable self-sufficiency.

This "conception" has a reason: The repeated calls for the "climate transition" or "ecological transition" are not intended to testify to a radical revision of the anthropo-evolutionary conception in force.
On the contrary, the scenarios of **"Growth" and "Sustainable Development"** concern: a continuation of the sterilization of the earth's territory; The transition of cities into megalopolis-type concentrations with a façade varnish: "Eco"; and a permanent increase in energy consumption to ensure the progression of dehumanization by self-ignition of the "production/consumption" couple.

Today, 736 million people are below the poverty line (an average income of 1.90 Dollars per day). Urban concentrations in 2020 bring together 55% of the world's population, or nearly 4 billion people. If the same current "Sustainable" economic development regime is maintained in 2050, the rate should be 70% – (UN Sces 2021)

The Bio-Regionalism Movement

In 1973, P. Berg (accused of Anarchism) enunciated the concept of Bio-regionalism in a book entitled – The Biosphere and Bio-region –
The Bio-Region is "...***A territory determined by its own natural characteristics and inhabited in a respect of ecological balances by human and non-human communities, not dictated in its anthropo-installation by the economic-ideological sphere... The approach requires defining lifestyles and modes of settlement adapted to each ecosystem context encountered***."

This concept emphasizes lifestyles that are adapted and attentive to the natural resources of the places invested and considers that **micro-poles could be an alternative to the metropolis dependent on its subsistence territory**: The city of waste and waste grabbing

The statement was forgotten by the promoters of the "Ecological Transition", who were not inclined to radicalism, and only the notion of a Region associated with organic farming was retained. (Benchmark), replacing Biosphere. It is easy to understand why this substitution takes place, since it is now only a question of dealing with the regional question in the Latin sense *of "Regere"*
- Derived from Rex, Regis, king: to rule – A set of territories that have certain common characteristics and where authority is exercised.

More recently, some development actors have modified the content of the discourse by providing an interpretation that serves as a stepping-stone for the proponents of the Transition-Global Warming, who are both skeptical about the ongoing commitment to a process of finitude affecting the Species, and above all may be inclined to support the implementation of the Climate-Biosphere emergency which would involve a certain loss on the profits made and a shaking of the established statutory edifice.
This trend, which brings together the technical and political spheres, supports an approach where the Region is the reference scale: "guarantor of positive and dynamic interactions between the urban and rural components of the lived space".

Eco-Regionalism
The concept resonates with that of Ecosystem Global.
Eco-regions require on the part of peoples "an objective holistic anthropo-understanding of phenomena", stimulated by the grasp of the stakes weighing on their existence, and a general effort to create a harmonious and sustainable system of self-sufficiency.
The size of the Eco-regions is considered to be proportionate to the number of inhabitants and their territories correspond to the ecosystem biophysical characteristics in place and the exploitable resources of nature in the climatic zone concerned to allow a promised life. This conception does not abandon the way of considering the harmonious **human species necessarily served by the environments that surround it.** A softer capitalism!
Future **cities and mega-cities**, according to their authors, will be supposed to offer habitable conditions to 20 billion humans by the end of the century, provided that they are eco-systemically integrated into a territory in joint development and have a new "sustainable self-sufficiency system".

Bio-urban-region
The concept of the Bio-urban-region put forward by the urban planner A. Magnaghi is supposed to make it possible to constitute "a non-hierarchical constellation of cities and villages in networks, united by spatial and multiscalar relations and self-governed by a participatory federalism".
The Bio-Urban-Region is committed to "**finding a balance between ecology, modes of production, and social dynamics, within the framework of a telematic hyperspace**".
Presented as an "**agro-tertiary society**", it would aim to initiate a **process of degrowth** in order to **conserve a "Biodiversity Reserve" necessary for the pursuit of research on living organisms, which are so complex, but whose resources can be exploited and profitable.**

This approach seems to relieve the human being of his primary responsibility, which is to contribute to the perpetuation of the global living world and its enclosure, by conceding as a remedy a lightening of his imprint, without however undermining its material and ideological expression: the Territory renewed.
The question of the non-domination of the Species over the Terrestrial Ecosystem is evaded, the City remains in place, it is imagined to regenerate it by "a synergy with the material and immaterial networks of the territory... and recompose it in "polycentric and reticular modes".
The result is neo-typo-morphological declarations, intended to mask the role played at all times by an urban dweller in charge of selectively controlling and confining residents in search of employment, and continuing its expansion-annexation-artificialization of extra-human habitats.

Frugality and Territory
Another line of thought combines **Frugality and Territory** to engage in an equitable division within territories between the activity of human societies (still conflictual) and nature that has long been subject to domestication and reduction (a phenomenon that is still ongoing).
The approach takes into account many objectives: Decrease in the extraction of natural resources, consumer sobriety, conviviality, multiculturalism, etc.
It advocates the questioning within the current socio-economic model of the place taken on life by paid work, and aims at a redistribution of resources diverted by the private spheres to the detriment of investments in the shared Commons.

Frugality. "Sober and Happy" is supposed to meet the expectations of the populations and encourage them to undertake a life of peaceful exchange and discovery leading to re-establish an evolution in Harmony with nature.

A shadow remains among the bearers of the message. Do we suppose that the capitalist model is capable of signing its surrender to the "Power Flower" of sobriety?
Are we expecting the imminent occurrence of a traumatic shock that would lead the Eight Billion Humans to peacefully leave the forms of conditioning that oblige them?
Is it a model of "Transition" whose implementation would be entrusted to "enlightened elites" determined to survive?

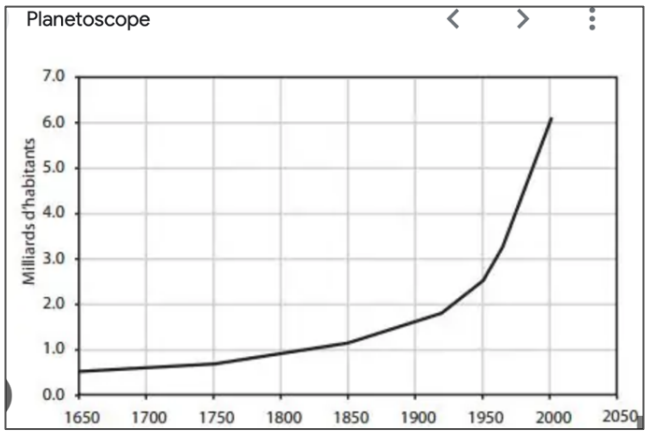
How can we achieve Harmony without deciding to question the disinformation-propaganda that ensures in a loop that our planet is a source and resource at the service of the development of a Species potentially destined to migrate into the expansive Universe by freeing itself from its companion on the road: "Photosynthesis".

06 - 3 Freeing oneself from the monopolizing and reductive City, The first steps...

"Man's forgetting of the functioning of nature occurs in the transition from a being in nature to a being in confrontation with nature, a process of externalization and loss of knowledge (or perhaps forgetting) of the human component in its confrontation with the relationship of coevolution" *- Claude Lévi-Strauss*

Masked Diversity makes the world we live in in which we live: that of plants, phytoplankton, bacteria, viruses, pollinators, earthworms... That of living communities and ecosystems. That of our extreme fragility which does not allow us to live in the absence of oxygen (O2) for more than 90 seconds, or in the absence of drinking water (H2O) for more than seven days without complications, or food for more than three weeks.
The degree of hypertrophy reached by Humanity on Earth, in a little more than ten millennia, and the climatic and biophysical dysfunctions caused by it, require a new approach to the **relationship between Diversity and Inter-compatibility with the other Living**, to open up to forms **of adjustment of exchange** and consequently **to restore complexity in living spaces**.

Change of language and identity...
We rediscover that what haunted Prehistory: the **World of interdependencies** between Species, both beneficial and harmful, is a perpetual regime of interactions complex enough to hinder the supremacist tendencies that may appear in any of the biospheric Species.
In the present context, the revision is heartbreaking. It requires a change in this preconceived identity within the Living and it **induces the restoration of autonomy** to **a world that belongs to none.**



Stabilization of the Greenhouse Effect.

In the process of deterioration, it requires a coherent and non-destructive model of the worldview to be obtained in a limited time:
- Which makes the species compatible with a free evolution of the ambient biodiversity and other phenomena guaranteeing the global planetary balance;

- Deactivates ecocidal geopolitics to give birth to a biotic and peaceful geopolitics, nourished by a scientific investigation committed to deciphering the processes of functioning and interaction between environments: Lithosphere, Hydrosphere, Atmosphere, Biosphere; and to deepen the whole;
- Which leads to unaccustoming the reflection of the "Everyone" inclined to immediacy, to the short time conducive to confrontation in order to access the long term, which is essentially ecosystemic,
- Leads to the discovery of the terms of the processes of co-neighborhood renewed between actors on the terrestrial substrate without borders, to understand that our Habitat is in theirs, and cannot be considered otherwise than within a reconcilable diffuse.

Shouldn't projects for the installation of human activity be established or reconditioned by creating domains related to the surrounding ecosystem environments, to allow each component of life to develop its native power without enclosure or territorial fragmentation?
From these multiple reweaving and rewritings already in modeling, **a new language is taking place, based on the terms:**
Diversity, self-sufficiency, interrelation, self-regulation, eco-compatibility, commons, exploration, conviviality, collaboration-sharing, co-evolution ...

Paris in 1870 was home to 3 million inhabitants and its suburbs to 2.5 million
(World population in 1800: 1 Billion)
In 2020. Paris was home to 2 million inhabitants and its suburbs, 12 million
A few reminders about the state of affairs and the context of life in the 21st century, it is so quickly forgotten!
The **city** is the domain of a **trophic relationship** (tissue nutrition), a place that links the predator to the prey, a place where the manager keeps the human being uncertain about his tomorrow: the worry of finding a permanent sale of his labor power to survive, the difficulty of finding a place in the social ladder to exist without even a guarantee of being able to remain on one of his rungs, a place that maintains the discomfort of being and looking at oneself.

These **metropolises, megalopolises**, which allow **vertical concentration and social selection,** no longer mask the accelerated commitment to a process of barracking by stacking, which is supposed to be able to increase the degree of manipulation and remodeling of the city-dwelled Human Mass.
If we look at everything, the vertical agglomeration model is already being tested in these so-called growth poles, bringing together from 10 to 25 million confined people, where the majority of the population does not allow itself more than a few days to return every three years (on the occasion of a National Day), to the family nucleus composed of the elderly and children far inland.

The city-selection, conceived as a pole of administration and management of people, selects its occupants, arranges them between the centre and the periphery, places them in variable densities, exposes them differently to air pollutants and wind effects, models human concentrations as it wishes, often on the principle of centrifugation-selection by social status...

Do the Rules enacted and the Urban Plans concocted, even "Eco", correct the social-spatial imbalances observed?
Urban planning is the **object of a speculative and segregative game** (on the peripheral strata) left in the hands of the land and real estate markets, generally embellished in a central position by a decorum that focuses on the highlights of the history of the dominant classes with: an Eiffel Tower, a Clock Tower, a small Pyramid or more "cheap" an obelisk... Finally an elevation to embody the spirit of Domination that animates the powerful.
The **territories in the "Ban"** where the various low-income social categories are most often classified are land reserves, waiting to be offered to private real estate operators: to allow the cohort of demolition-investors to benefit when the time comes, to be able to proceed with the densification of the soil and the sterilization of living environments...
And to repel the indigenous **neighbourhood groups** to other, more distant peripheries.

The fragile and transvestite city...
The city's modes of cross-dressing vary. The greening of some roofs can impress or amuse, and the planting of trees on the avenues can improve the décor of the most expensive apartments.
Sometimes the cultural basins bring a curious aspect to the verticality of the "Districts of Tours". In some Chinese cities, the residential towers that house the middle classes are topped with decorum constructions reminiscent of the Mandarins' palaces of yesteryear. These decors, which are very popular with buyers, are supposed to increase the value of the investment. This phenomenon can be read as that of a rewriting of the Memorial City, that of imperial times.

In Europe, it is also possible for a time (that of the sale on illustrated plaques) to hang **greenery on the facades** of towers, to dress up the exciting and desperate vertical city in an ephemeral way, without questioning the ability of the chosen plant to withstand variable microclimatic conditions according to: the altitude of the levels, the exposure to the winds on the 4 facades, sun exposure or not, seasonal variations, etc.
But it doesn't matter, it's not about revitalizing, it's only about one day providing **a colorful image for a faded life**.
It is true that the humans assigned to the towers will not be asked to reflect on their expectations in terms of Nature, nor will we discuss with them the many handicaps of the model of vertical housing with a confined atmosphere, nor the accidents resulting from increasing technical or climatic disorders that generate power supply disruptions on the energy supply networks, hinder indoor mobility and access to the ground (lifts), etc.
The city is the target of armed conflicts, it has always been a means for man to satisfy not his curiosity but his violence and in particular to systematically make a clean sweep of the built environment in order to redistribute land and its forms of occupation between two wars (see chapters devoted to historicity). Verticality is then the object of a heavy sacrifice.

Should these tirelessly dismantled urban conglomerates be maintained and consolidated in order to find an expression of the plural life generating the Commons and forms of association, with regard to the dynamics and constraints of biotic environments?
While the immutable civilization is at the point of merging to evolve into digital fictions and artificialization of its environment and necrosis, resistance is also growing in the cracks, like the "weed", that could create the Alternative and lead to "the paths of freedom in eco-compatibility".
The Fissures in the urban model are these places of exchanged speech, these places of the "counter-culture", of the "Do it": The microcosms of impatient proximities.

06- 4 Of the Resection of Anthropo-Territories?

***Emphyteusis**: Allows the person who benefits from it, called Emphyteote, to have full use of a property belonging to another person. - Cntrl.fr*
***Resectio** (Latin) Etymology: To cut, to remove - In surgery, the removal of all or part of a diseased organ or tissue while preserving or restoring the function of the apparatus of which it is a part. Also joint resection.*

The project, which consisted of retracing a journey from the Neolithic period, aimed to grasp the path of civilizations from "one step back, two steps forward" or the other way around, in an attempt to clarify Futures in biospheric compatibility, rather than those of a Cosmo-system built on the intention of artificializing human matter: The Impasse!

In the course of history, it has happened that a focus of critical resistance has developed to the point of creating an **inventive and infusive counterculture** leading peoples to get out of these existential impasses maintained by destructive economic-political models...

At the present time , what is at stake is different, that of an **almost absolute emergency situation set by the planet** for the delinquent species, which disguises the state of affairs as "transitory warming" of the Earth's climate.
In this context, the measures to correct the trajectory to be taken seem to be the responsibility of the world's population, who are responsible and aware that the process under way is leading to a "No Future". This is expected, to clarify the climate issues and effects on the 8 billion humans, and to demonstrate, prove, implement, the concrete forms of rapid escape from the model of creation of illusory profits, and to disseminate them via public digital networks, without borders.

The first ages, which marked the "**unequal exchange**" and the distribution of surplus value between self-proclaimed elites who were interpreters of the gods, invented community cantonment, then in stages the concept of agglomeration, and finally a city, made up of walls, gates, and internal grids for subjugated populations.
A housing estate? a city? Above all, it is a space for the concentration of the functions of direction and control of the division of labor, a place for the sectorization of occupants, for the storage of value, for the manifestation of belief-illusion, for the glorification of power...
A space marked by architectural works and artistic codes to specify to the populations their belonging to an economic, social and ideological model.

The object, according to the historical and technical contexts and the evolution of cultures, has undergone changes while remaining the platform on which the structure of organization and

supervision of human life is built, hence the punitive and destructive wars most often followed by memory reconstructions.
The successive societies in this "Trip" have always striven to leave the traces of victories and not defeats, to better tell their story and to persuade themselves of the continuity and immutability of their model in rejection of earthly laws.

Contemporary urban equipment
Enables all at once: The production of goods and their supply-storage-distribution-consumption until their disposal; the breeding of chickens and cattle in multi-storey buildings inserted into the fabric of urban districts; soilless vegetable cultivation (hydroponics on a neutral and inert substrate) and other modes under artificial light (by drawing water resources from groundwater); remote monitoring of common areas left to the public, with facial recognition system, etc.
Only in the early days was the production apparatus placed on the outskirts of cities. More recently, it has been deconcentrated by the so-called "liberal" economy towards low-income territories on the planet and with a high return on investment (Profits).
Today, the apparatus for the production of market goods seems to have to be reintegrated into the nations of the dominant economic pole for strategic reasons (exacerbated competition between imperialist poles and climate insecurity threatening supplies...).

The **global and agglomerated city,** with too much desire for attributions, accumulates handicaps
- It must **import the resources essential** to its maintenance: energy, water, food, construction materials in built structures and networks, as well as all the objects manufactured (tools, machinery, objects, clothing, etc.). A Hydra!
- To manage the entire cantonment system, it had to call on a large population arranged within distinct zones, spatially segregated by income levels or ethnic origins, in order to avoid sudden storming of the "Bastille", or worse, to allow a desire to live differently to simmer among the downtrodden (the "Paris Commune");
- It is deadly in times of armed conflict and prisons in times of peace
- It is unsuitable for extreme climates and stresses such as flooding, tsunamis, tornadoes, heat waves, extreme cold, melting permafrost and ozone release in the atmosphere, etc.
- The intensity of the economic exchanges carried out under its influence has an attraction on the share of poor populations in search of income and employment, and generates fabrics with uncertain futures on its periphery kept under tranquilizers;
- The endless growth of its metabolism results in: a loss of biodiversity; the accelerated disappearance of living species from the planet's terrestrial and aquatic ensembles; an exponential growth in carbon emissions and multiple pollutants;

...

The socio-economic and financial model, which has varied over time, is directing humanity towards increasing confinement over time, as the prehistorian JP observes. Demolded.
"Every year cities grow by 400 million square meters for agricultural purposes and even more worrying on a global scale 3/4 of the land is allocated to human activities, the rest being largely made up of arid lands (Deserts, Poles, etc.)"

Cities have average **ecological footprints** of about 5 hag/inhabitant for bio-capacities varying from 0.2 to 0.5 hag/inhabitant. **They consume 10 to 25 times their bio-capacity.)**
In 2014, the Ile de France Region had a ratio of 8.9 for an ecological footprint of 4.8 hag/inhabitant and a bio-capacity of 0.54 hag/inhabitant.

Bio-capacity - A quantified indicator (calculated in hectares) that assesses the capacity of an ecosystem to replenish its reserves and absorb the waste from their consumption. The global hectare (hag) - conventional area used for ecological footprint or bio-capacity calculations.

The City is a repeated travesty of history, a glittering illusion for the docile elites who are inserted into it, and ignorance for the "ban" of the reserve placed on the peripheries.

The societal issues of the moment
- Demographic projections made on the current trend estimate the world population placed on the margins of Nature at **70%,** part of which in a report that is essentially virtualized;
- The Facebook firm is currently creating several thousand jobs intended to create a **program for the virtualization of the "Metaverse" world**, i.e. supposed to be able to provide each individual confined to his megalopolis with an **avatar,** to navigate within an illusory world, and mentally directed, of course!
- On another aspect , the growing relentlessness of the GAFAS to store and hold for proprietary uses the knowledge exchanged on the "Web", and thus fracture the initial public system (inter-state) where the data exchanged were open access resources offered to all.

The private collation of all the data exchanged on free digital networks aims to obtain complete control of the "**Knowledge Resource**" of the human to make it a recycled commodity entering the speculative market of raw materials.
In the development phase that is supposed to follow, storage in **Data-Centers**: The reproduction-dissemination of looted data, could undergo a selection-reconstruction oriented towards the financial and strategic interests of operators, and better correspond to their economic-political ideologies: **The Holy Grail of authoritarian regimes**.

In these times, the Mega-Metropolises of the World are redressing themselves to get through a period disguised as a "**transition"**... Although their feeding and storage models are not compatible with the sustained degradation of an accentuating climate model.

A new language... Speaking up

However, in this context, another part of the Human being is expressed, on all continents, on another partition: Start-ups, Teams, Teams, Minga, Neighborhood or neighborhood associations, Mutuals, Cooperatives...
These structures of voluntary grouping on affinities and assembly of knowledge, which in all fields of activity and places question and state the alternative by placing themselves on the margins of a predatory society, have over millennia been able to find in their work force (analysis and creativity), material to progress in "open source"...
The alternatives left in history, sometimes still maintained or created in the present time, have a common characteristic: They **are based on a group dynamic at scales that allow the proposing word to spread and obtain an echo**.

Humans belong to the family of ecosystems, and yet their development has manifested itself over time in the form of a **systemic parenthesis**.
The question he should answer is no longer that of being or not being, but that of **being differently**, in order to be able to **reinsert himself into the biosphere reality in eco-compatible and diversified behavioral and mental formulas**.

It is clear that vigilance and critical thinking, which overthrow dictatorships and arbitrariness, emanate mainly from the proliferation of inter-communities rooted at the local levels.
Isn't it obvious that the closeness of the other, of others, the collaborative cross-exchange, the pleasure in discovery and sharing, generate a dynamic in each human?
From now on, the Era of the Web-Web, connects computers, it makes it possible to organize localized human micro-ecosystems into a network (browsing the Internet) and to engage in a liberation from the frameworks of management, production, exchange, education: in property.

The maelstrom is active, formed by entities that proceed with **open, dynamic approaches** : living culture groups; neighborhood neighborhoods that voluntarily develop a sharing of uses in a daily and convivial way and animate festive events; an associative world that supports specific requests for expression and exchange of knowledge (literacy clubs, drawing clubs, singing, sports, gardening, model aeronautics, 3D printing, etc.) ; co-working hubs; public nursery and elementary schools inserted into the fabric of the neighborhood...

A microphone that responds to an individual need to reintegrate into a collective that questions, recharges its batteries and experiences the exchange as it progresses.
The movement on the "scale of the Commons" without ownership, nor attachment to accumulation and domination, operates on the scale of **proximity** without the externality relationship (Internet) seeming to hinder the pursuit of the notion of exchange in reciprocal benefits of knowledge or friendship-conviviality.
This is the long-standing approach followed by the scientific community of researchers and experimentalists, both dispersed in groups of initiatives, but interrelated in the exchange of data and reflections.

In 1835, the English botanist Arthur Georges Tansley defined an "**ecosystem"** as "a **complex of organisms and physical factors ... The systems they form are the basic units of nature**."
One may wonder about the fact that the **intensity of the dynamics within the living world, linked to the small scale at which their systems of relationship and data exchange operate**... Or again contradicted by the model of human society in action, committed to the formation of a macro-system detached from the planetary Living Model.

IV. EXPLORATIONS…

Towards another narrative of the Living Human





Civilization: All the features that characterize the state of a given society, from the technical, intellectual, moral, and political point of view. (Latin "Civis" - Citizen compatriot, action of civilizing)
Merizo : to share (Ancient Greek)
Economy: Oikonomia: House Management
Logos: speeches
Topos: place
***Biotope*:** a place of life defined by relatively uniform physical and chemical characteristics. It is home to a range of life forms: flora, fauna, fungi and populations of microorganisms that make up the biocenosis
An environment that hosts a set of life forms that make up the biocenosis. Flora, fauna, fungi and organisms - wikipedia
Ecotope: The smallest element of an ecosystem
A form of settlement of the Species that takes into account both an adaptation to external factors (the "Niche" host biological community) and the response to community environment factors in terms of "Habitat", the spatial distribution of the Species
Ecotopia: The place of the house
"A concrete reality, targeting the achievement of the best possible state in a conduct of humans and living beings that is constantly compatible with the laws of evolution on Earth"
Geotope: Portions of the geosphere delimited in space and of particular geological, geomorphological and geo-technical importance - Unit or smallest part of a geo-system.
The term indicates the smallest geographically homogeneous spatial units (a part of the landscape with relatively uniform characters and structure.
Geo-Biotopes: a geographical area offering constant or cyclical conditions for the species constituting biocenoses, where all the physical and chemical factors of the environment remain more or less constant.
Country: The extent of countries with a real geographical, economic, human or political unity
Circular metabolism: Circulation of incoming and outgoing flows within the same territorial system
"**Ecological corridor** - A place where ecological habitats function in a network, supporting ecosystems, they take into account the mobility of animal and plant species in their life cycle, they are settlement areas.
Anthropo-Ecotopic Poles (micro and macro): alternative forms of insertion of the Species in eco-compatibility with the multi-components of the biospheric space.
Geosystem – def. Aquaportail - : The Geosystem is a geographically localized ecosystem characterized by its geomorphological and bioclimatic homogeneity and by its natural and anthropogenic dynamics.
The analysis of the 4 main components of a geo-system. : aeromass. Hydromass. Lithomasse. Biomass makes it possible to define characteristic states whose duration, rules of change, and modes of binding over time, define the behavior of geographic systems.
In a given territory, all the interactions between nature and society and their evolution is a geo-system. The concept of geosystem includes the ecosystem by taking into account not only the interactions between living systems and their environment, but more broadly the interrelations between the biophysical environment and the activities of human societies.
As a unifying concept, its objective is also to approach in a global way. The relationship between nature and society based on a systemic approach.
Cosmology *– Cosmology is that science that is primarily concerned with the sequencing or harmony of all parts of the universe. If there is a principle in cosmology as fruitful as some, it is that of that universal connection which binds together all the parts of nature. -Cap*
Cosmology is a science whose name is derived from the Greek word cosmos. ***A philosophical concept that designates the ordered world in a position of chaos.*** *The term cosmology refers to all scientific research relating to the universe. Immanuel Kant calls rational cosmology the set of problems concerning the origin and nature of the world. Science and religion therefore have the same object of study, because it is a question of studying our relationship to the world through mental representations at the interface between the divine and the human. –Wikipedia–*
Metabolism: *It measures the compatibility of the necessary flows of energy and matter in and out.*
Territorial metabolism is based on an organicist metaphor that compares territories to bodies to ensure the vital functions of a territory.
Territories need to draw materials and energy that they consume, transform and then excrete. This concept thus provides a materialist reading grid of the functioning of territories, reminding us that societies are not above ground.
Territories and societies are part of their environments at several scales from which they extract resources and into which they release various things, such as pollutants in the air, manufactured goods or associated waste.
Cities are privileged spatial entrances, no doubt because they concentrate many flows at the same time as they are easily delimited. This is called urban metabolism. (Geoconfluences quote)
Anabolism*: From the ancient Greek "Anabole" i.e. launching from bottom to top with the suffix Isme. All biosynthetic pathways of cellular and/or other constituents*

In biochemistry and medicine. It is the set of chemical reactions of living organisms allowing the synthesis of essential metabolites from the basic elements provided by food and leading to the construction or renewal of tissues.
Anabolic: which facilitates anabolism – A substance that facilitates or increases the phenomena of ANABOLISM, i.e. tissue production, especially muscle mass.
*" **Abiotic factors**. – All the physico-chemical factors of an ecosystem that have an influence on a given biocenosis. It is the action of the non-living on the living that can be opposed to biotic factors, which constitute part of the ecological factors of this ecosystem.*
***Ecotone** – An area of ecological transition between two ecosystems, for example, the transition from savannah to forest or the transition from a river plain to a non-flood zone. In landscape ecology, it corresponds to an edge.*

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This chapter attempts, on the current "intermediate" times, to explore follow-up paths built around a concept of geo-biotopic and geo-systemic reinsertion of humans, provided that the biological, botanical, climatic, and abiotic states of the landing sites are preserved.
That is to say, to sit in "almost" symbiotic modes, to after de-installation on the borrowed sites lead to a self-regeneration of systemic biodiversity.

Open Experimentation

The "**intermediate times**" are supposed to develop at the intra-community and multi-territorial scales a field of social, ecological and inter-exchange experimentation intended to **direct human activity towards non-domination, non-predation, non-exploitation of the living on the entire biospheric territory.**
The **intermediate times** are also those of the fight against the ongoing privatization of the planet's spatial surroundings, the new suburbs... By a voracious "libertarian" global Finance, which is beginning to establish a Neo-Empire over the peoples through satellite constellations called upon to control the daily life on the ground of human-earthlings and manage their knowledge and behavior (Starlink-Musk, Microsoft, Amazon...).
The **intermediate times** are over the next 10 years, those where Humans must enter into a process of revolt that imposes on the dominant illiberal political states, a low-carbon strategy and a global sobriety, compatible with the halting of the degradation caused by the Greenhouse Effect.
A lifting of the screw to find a biospheric horizon.

***"... Awakening** is the event that will suddenly make possible the manifestation of **contradictions** as such, will make them **freely play in history**, and will open them up to their revolutionary effects. (or evolutionaries for P. Picq)* - Miguel Abensour -

"** ... It would be as if the change of thought were to succeed in unlearning the attachment to an established order, to a given establishment, to the point of detaching oneself from it in order to invest, not in a new order, but thanks to the suspense of time and space – a resting place, the holidays of Humanity. To **attempt the open experimentation of a new being-in-the-world and a new being-together-in-the-world, which,** far from fearing gaps, passages or leaps beyond, inaugurates a new disorder, **a fraternal disorder** to use the beautiful expression of the Insurgents of the Year III, **of such a nature as to "let inventions, dreams and fantasies flourish, until the heroic blossoming of a vita nuova"
- Interviews between Morris and Abensour -

*"...To call on the dialecticians who watch for dreams to become technicians of awakening, to **take note of the dreams of the collective, and to grant them a degree of reality so that, under certain conditions, they open a path to historical awakening**... The rude awakening that tears the collective from the hypnotic sleep that kept it in the vicinity of death so that it could seize things, the fragile chances of freedom, and escape the repeated catastrophe"* - "Paris Capitale 19th century" - Walter Benjamin -

*" ... An endogenous transformation requires time, too much time, unless the **intervention of an** exogenous factor" such as the viral type or the climate mutation type. **Have we not reached this stage of the short term** (10 to 20 years) where we must stop exploiting our fellow man, and immediately stabilize the Greenhouse Effect by **hindering the production and consumption of so-called carbon emissions by the consumer and criminal spheres?***
*"...**The success of a civilization turns against itself, making it incapable of reforming... Every civilization dies from the inability to rethink the support of its previous success and from the inability to understand that the destruction of environments heralds its own**: **The** logic of ecosystems... Their **evolution towards extinction is not attributable to the vagaries of exogenous factors**, contrary to what is generally taught, but is attributable to the endogenous factors causing the degradation of besieged and denatured environments.*

We are the only Species that exploits its neighbor. *»*
- Interviews – Pascal Picq –

*"...**Today we are dealing with living things and no longer with humans and nature**.*
To be interdependent is to be autonomous** in the sense of being well connected to multiple elements of the **biotic community**, i.e **. viable in such a way as not to be totally dependent on the instability of the environment.
*Ecological limits are not external or political constraints (in the sense of civility or politikos, relating to the organization-management of a human society exercising power over the territory), but they are **inner lifelines that draw our human condition from woven to the other forms of life that make up the environment**.*

*"... A new world on the right of every man **to have the right to have rights while guaranteeing the ecosystem and physical balances of the planet**. This will have the effect of abolishing private property, the Nation-State, the capitalist market; and to replace them with **a single people organized around relationship, through the exchange of cultures,***
***knowledge, the pleasures of living, in the complex world of the living,** reassured by cosmic rhythms and the holding of physical and ecological planetary boundaries" -- Hannah Arendt –*

Starting from the fact that we are discarding for the bright tomorrow, the nascent path of a "Cognitive Capitalism", the ultimate form of dictatorship over the Human Species, it was first necessary to relate the long time of the human saga, the past-present time of misguidance or wise evolution, in order to try to better grasp the nature of the contradictions maintained for a long time with the Ecospheric environment.
These contradictions are partly the result of the adoption by the species of a system of exchange centred on predation and appropriation of the "Surroundings" bio-physico-chemical environments.
(*Cf. Earlier Chaps*.)

The emerging co-evolutionist perspectives, in order to be apprehended, must be freed from the reading of "progress" (domination-growth and profits) imposed by the civilizing logic of the Capitalocene, and focus on the potential of resources in terms of knowledge and means acquired to date by Humans, through a prism: that of the " **Biospheric Commons** " urgently implemented.

IV-1 Ecological immediacy?

Observations, quotes & about: To be or not to be biospheric



City of **Aleppo** (Syria) 2012-2016 War-eradication - Islamic State

01-1 Emancipation or ruin?

(The aim of this Paragraph is to deal with both the Capitalocene impasse and the conditions of exit by stating the alternative in progress, and its nature)

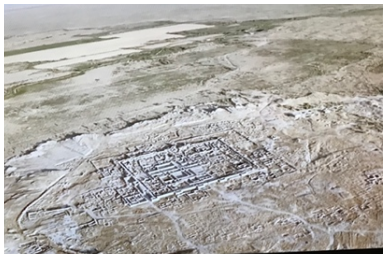
> *"A delivery man, he shares a room with 3 of his friends and pedals all day to pay for cigarettes, bowls and send a ticket to the country at the end of the month. The majority of Deliveroo riders are in an irregular situation, they work by borrowing or renting the identity of a relative who has valid papers. Everyone knows it, but everyone closes their eyes."*
> *Excerpt from sidewalk interview -Journal » Libération» 6 March 2023*

Post-neoliberal society declares itself surprised to see the contingents of the unemployed and populations old enough to integrate the sphere of work of ordered work, turning away in increasing numbers from work for life and retirement at the end of it, which is no longer even a hope when the

offer to the greatest number is oriented towards entrepreneurship such as disposable automatons, within economic structures intended to remunerate private shareholders from the other world.
Outside, what is the weather like?
Wars of religion maintained on any continent, and when this is not the case, wars where economic powers confront each other when the competitive mode of exchange seems unbearable to them.
Inter-ethnic conflicts, famines, epidemics, climatic conditions, increasingly generating disorder, population displacements, loss of life...

How, in such a context, can we imagine a "car, work, sleep" life?
Resistance to the context and the desire to escape collapse could be able to activate in the Neo-Sapiens a progressive Awareness leading them to leave the scene to engage in the exploration of a relationship of ecological compatibility with the other populations of the "Matrix", and to **reinvent themselves on a Common, collaborative, creative, sober, diverse, in non-domination of the Earthly Life... Aware of the complexity of the host biospheric ecosystem and the fragility of an existence that depends on it, because it comes from it.**

" To found a new humanity... It is when the false collapses that the authentic can live" *- E. Bloch -*



…

Rewriting sequels differently...
It is to open the way to **a society freed from the dictatorship of value and enslavement to "inessential" production,** to a society of generalized despecialization where spheres of activity open to all multiply, conversing without restriction or retention of data and lines of thought.
It means **adjusting the different scales of belonging to the local and to that of the planetary community**, by intensifying and reconsidering the transversal connections "web web", this vehicle for social and empathetic speech, and for the exchange of knowledge.
It is to promote the emergence of **a people who are otherwise political**, endowed with a capacity for **collective analysis and self-criticism, leading them** to the non-domination of the living and non-intervention in the processes governing life on Earth and biospheric balances.

01-2 The City on the City: Palliative Care



Today, their operation is based on a triptych: produce, consume, throw away.
Of the 100 billion tonnes of minerals, fossil fuels, metals and biomass used each year, it is estimated that only 8 to 9% are currently reused. (Leonardo)

In 40 years, 60 **to 70 percent of the wildlife** on Earth has disappeared, even as the effects of global warming have barely begun to be felt.
Today, 17 countries are in a situation of **extreme water stress**, while 27 others, including some in Europe, are in a situation of high water stress.
As much as 25% of the world's population could soon run out of water.
Plants are disappearing 350 times faster than the historical norm. More than 15 billion trees are eradicated every year. And only 46% of those left on Earth before the beginning of agriculture" *(quote A. Barrau)*

The Giga-Mega Cities are already there: Hong Kong, Delhi, Jakarta, Sao Paulo, Chongqing, Shanghai, Singapore... There are currently eighteen **gigapoles** on Earth that exceed twenty million inhabitants and one conurbation already has sixty-four million inhabitants. Inhuman?

In the nineteenth century, the "lumpen-proletariat", a class dangerous to capital, was stored in slums or in the basements of destitute buildings in European cities. Today, it is far from the middle classes who are wisely attached to the consumption of "sam'suffice".
It is found under the name "Migrant", "Undocumented", "Homeless"... Taking refuge in the interstices of the urban infrastructure, or with his family in the unsanitary buildings in the heart of blocks and looted by the merchants of sleep. They come from distant countries where the only way for the populations to survive is to move to the Gigapoles, in the hope of offering their children a better future... but within the world production-exploitation apparatus.

Lives today can be piled up on 200 floors and be erased by clouds. The housing cells then have no horizon other than the other towers, and it does not matter where the sun is. It is also to the point where in these universes the inhabitants hide the pale external light that presents itself in the windows of their cells... You have to see it to believe it.
For them there is nothing more to see!
The ground plan of the "Mega-Barracks City" is simple, it looks like a computer keyboard. Twenty million people arranged in this way cannot take up much space and it is so many areas left to agro-chemicals cultivating sterilized soils from the rest of the planet!
As for the life that can be led there, it resembles that of battery farming, which is now done in buildings (cited in the second chapter) ... Performance? Hidden inhumanity?
Now, we are told, the model being perfected, it would be a question of giving height to the territories of the "**middle-class cities**", of fighting a political laxity that has allowed in the past their "sprawl", and the indebtedness of the working masses...

To "grow" the city in a "warmed" climate, what a strange idea!
So, since the economy of accumulation-extortion, in order to continue its course on the same regime, expects 10 to 11 billion people by 2050, it is necessary, they warn: "grow the city"; Not on the historic center memory of the powerful, but on the land reserve that constitutes the buffer suburbs, where it seems the middle classes garden too much, in defiance of global warming, while at the same time agribusiness allows itself to dry up the water tables as a "common good".

Develop Mega-cities on the third dimension to house a growing number of populations, while it is imperative to engage in a demographic decrease to reduce the Species' hold on the planet:
It means increasing the food dependence of the population; it is to weaken them at a time when we are entering a cataclysmic and destructive climatic regime of centralized networks (which keep the sedentary alive); it is to increase pollution; it is to accentuate the mass destruction of lives during armed (or even nuclear) conflicts... These extermination games that love to attack civilians so much...
So, to create a diversion, there will be talk in Europe of dressing the sad real estate heritage in green. But only on the Avenues, as was done in Berlin in the time of Sir Erich Honecker (President of the Communist GDR), where only the facades of the buildings on the way from his residence to his offices were repainted. In these contexts, we must speak of "**Frugality** " (in the sense of wisdom, moderation, sobriety).

The "Bio-Territory" is a "green" chatter. It testifies to an anthropo-certainty about **the notion of nature: an environment "made available" to human nature** so that it can develop its real estate operations, clear the soil to practice monoculture, or exploit the subsoil (shale gas, rare earths, cobalt, nickel, lithium, etc.)

Proof of this is the approach taken by our public or private developers when they intend to include a **"green washing" project in a "Territory"** that has yet to be sterilized. In the best of cases, an ecological concern is invoked and an environmental identity is established (the label that excuses), while the development of the project was done without the slightest concern for preserving climate, biodiversity, frugality: "It's to sell better!"
The multi-criteria assessment of the impacts of the operation on the environment is carried out by using the most simplified Life Cycle Assessment models (fed with data that the manufacturers will have previously been willing to communicate), to extract from the "multi-criteria evaluation" the most favourable to the marketing of the "Environmental" product displayed on incomplete advertising brochures.

What does it matter to the market economy?
Second-class inhabitants are evicted via the Local Urban Plans concocted in public pharmacies, to allow themselves to arbitrarily make a "clean slate" of living sites, then the profits made by private real estate are masked with a few "stickiness" on advertising brochures, and for the neo-modern touch they announce the "all-electric on the floors" (78% of nuclear origin in France).
How dare we maintain that **the future is all-electric and without sobriety**, when studies, certainly carried out by sorrowful minds, conclude in the event of various and probable disasters (Wars, Dismantled Climates, Submersions, etc.) that the supply networks or production poles will be

destroyed (Examples of the ongoing Ukraine-Russia war and daily climatic disasters) placing the life of the "all-electric" in total stop.
On the public domain: Squares, Avenues and Streets, initially designed to meet, express oneself collectively, trade, walk, gradually become territories of identification or repression of users, now scrutinized, identified and recorded in the databases of dictatorships, but also in those of democracies with illiberal developments.
It's already happening in Singapore thanks to Dassault-Systèmes, or elsewhere in Vancouver with the Google group... In order to, it seems, "better manage the flow systems between individuals".

01-3 Contexts - Making the Real Coincide with the Ideal

While he possesses all the technologies of communication and interrelationship between likes, as well as a vast understanding of the forms of cohabitation in adequacy of plant-anima life, why should humans refrain from correcting the disruption they have caused to the Greenhouse Effect and biodiversity, when they have the means to control and reorient their model of life on a horizon of non-exploitation and discovery, in co-evolution and proximity with its fellow living beings?



Humanity's commitment to a development mechanism freeing it from the framework of ecosystem evolution appeared, as we have seen, when hunter-gatherer peoples, who became farmers in nourishing biophysical environments, reached a stage of mastery of their environment nearly 11 millennia ago (in the Mesopotamian Basin) that made it possible to have an exchangeable food surplus
From the exchangeable stage, they have moved on to negotiable between close and distant communities, and gradually to a civilizing posture that organizes the biodiversity environments encountered for its own benefit, and modifies the substrates to its liking.
... Today, having reached the limit stage of experimentation of this neo-Mesopotamian civilization, eternally unevaluated on its counter-evolutionary biophysical footprint, do human societies still have the capacity to move towards a path other than "monopolizing", under the guise of civilizing the planet?



Photo Libération(Gaza-Genocide 7 May 2024

The last 60 years have been rich: in reflections and evaluations of societal impacts on biophysical environments; in the implementation of solutions on alternative living; in systemic footprint reduction; in statements and the creation of new bases of exchange and consumption and other equally fundamental themes...
These contributions have been deliberately ignored by the economic-political systems that are committed to constantly developing an eco-climato-genocidal activity, then in flagrant opposition to the laws of constitution and functioning of our space of "cosmic exception", where air comes from

water, or rock comes from air (limestone sedimentary rocks and carbonaceous rocks), where information is carried by photosynthesis and where the Earth-planet is able to control the intense energy received by its sun-light...

"To be realistic to the point of **asking for the impossible**"?

In the present context **, the human species and its demonstrating political bodies must** impose that the laws of international trade be subject to the decisions taken by the states "in assembly". States responsible for ensuring a climate-wise and socially peaceful and sustainable future for human groups, to curb the Greenhouse Effect in the "Present", and to be able to engage in **forms of co-evolution compatible with the biospheric world.**



Une manifestation à Marseille samedi 6 juin. Daniel Cole / AP







*"If the new spirit looks to **the future** in the renewed quest for a possible elsewhere, it is **in a constitutive relationship with the present worked by the call to something else**.*
*Utopia must be able to provide the means likely to **make the ideal and the real coincide**"* - M. Abensour

Insurgences and civil disobedience are expressions of the shock created by the entry into the fray of **political ecology as a tool for the analysis of a civilization** that is committed to a hard-line enterprise of eradicating the so-called "wild" living, and which persists and still signs today under the mask of **greened energies**.

The Capitalocene today sees in the "Electric Green" the means to accelerate its unfulfilled need to lead the productive system drunkenly towards **asymptotic growth**. The climate degradation caused by two centuries spent developing the use of carbon-based energies seems to serve the proponents of the carbon-based economy, by the interpretation given to the energy "Transition" mixing renewable energies and the maintenance of carbon-based energy consumption, which is supposed to decline...

To rebel, in the face of this new senseless and macabre "human comedy" where we talk about the merits of the cocktail "sustainable growth + artificialization of the planet + eradication of alter-human life + discrimination + demographic growth + staggered concentration of populations scratching the Universe + business-profit"?
What are we waiting for to **escape conditioning,** formatting, tattooing, cloning, avatars, and finally consider that **ecosystem interrelation is the only way in the restricted Universe of the planet** that is supposed to be able to offer a life of creation and discovery, provided that we establish a fair and continuous exchange with the speechless of the non-human domains, the basis of our existence and survival.

"He saw nothing during his journey, for he had lost his temper with him." - Montaigne -

It is time: to proceed with a **change in Cosmology,** which will make it possible to: detach ourselves from practices that aim to civilize space **from the surrounding to the beyond**; to abandon this stubbornness that consists in redoing in the style of hybridized nature; or to select our animal and plant cohabitants to keep only the share of "profitable" resources, supposed to be able to help us prolong our predatory existences.

It is a question of freeing the shackles that weigh on extra-human living things by shaking up our formatted education-habits, in order to be able to access **a mass awareness of the objective state of the Earth-System,** and consequently to be able **to shape our lives on the basis of an eco-reconcilability to foreign environments: Changing cosmology.**

We have a perfected brain with resources that are dammed or diverted but can be released;
We know how to manage ourselves, find alternatives to the problems encountered, and create;
We know how to memorize our knowledge and carry out the analysis of the objective phenomena that surround us;
We know how to correspond, to exchange with foreigners in our own language in simultaneous translation;
We know that we can control our impulses of domination and destruction.

01- 4 "A simple first step", as an interlude towards a second

For Emmanuel Terray, philosopher, "A simple first step" is still to be taken, but strangely so, while the solution is in place, when we know the modalities of change and the challenge of the collapse of the Species in the event of immobility: there remains a reluctance to take the initiative, and to take action.
At the advanced stage of degradation of our host environment, the regeneration of planetary balances requires an **accelerated awareness** of the urgency of embarking on the path of implementing a **symbiotic model with a replenishable footprint, without reaching the global Living Being: the "Planetary Condition".**

The progression of our knowledge has allowed us to understand that humans are not designed to be a species, contained, agglomerated, and necessarily predatory of bio-diverse living environments, because they are placed in a complete dependence on them.
Work in **Anthropo-Archaeology** informs us about disappeared societies, with traces that tell us **about the times of eco-compatible and mimetic societies.**
Similarly, the very wide variety of climate-biosourced and culturally marked constructions informs us about the knowledge acquired by the different human communities to resemble the chosen fields of travel and the universe of installation. These approaches are still practiced to this day on all continents by certain peoples who are also working to ensure the regeneration of native soils and ecosystems after a period of passage and use.

Today, in **the interlude** of the **carbon-intensive society to be rejected**, some, without gods or masters, are discovering that the digital world, after a simple tap on a smartphone or tablet, allows us to free ourselves from robots, clones and avatars, to enter through another door into the world of multiple horizons, of the collective alternative, of innumerable accumulated knowledge and partly diverted for ideological purposes.
The ecological-political movements of "**Open Exchange**" and "**Sobriety**" are developing thanks to this global platform within which a growing number of actors have been contributing for several decades to designing and creating the elements likely **to provide material for the development of another evolving Cosmology compatible with the eco-sphere**.

... A simple second step has already occurred at the level of neighbourhoods, that of the block or the neighbourhood, when it was a question of redefining oneself as a user-designer, materially and spatially.

01- 5 Changing the Diet



Source wikipedia**Homelessness**

The facts unearthed following the research carried out by the Communities of Historians and Archaeologists, Anthropologists... reveal: that between the middle of the **12th century and until the beginning of the 16th century**, another model of settlement of human groups of the sedentary,

itinerant collaborative type **developed over a continuous area of biomes (forest, grassland), extending between the Pacific Ocean and the Black and Baltic Seas (Mongolia). Russia. China. North India. Uzbekistan. Kazakhstan. Iran. Turkey. Ukraine).**

The Mongol Empire was still presented a few decades ago as the "Savage Horde", almost destroying the Euro-Asian continent.
Yet it was a **nomadic society** whose **organized mobility** ensured over 36 million square kilometers, a **conduct of inter-people trade** by simply subjecting the local oligarchies crossed on their way to produce goods entering into an **organization of distant exchanges, managed and transported by the different hordes on the "great territory"** ; with the use of force in case of necessity, with an innumerable, light, self-fed cavalry, displacing a people of seasoned horsemen who were at the same time breeders, travellers and communicators.

The sudden expansion of this Empire and its stability was due to its very essence.
An Empire carried by a people on a mode of existence that induces: constant **mobility on the territory of residence** (arid steppe crossed by hills and rivers, bordered in its northern limit by the Siberian Taiga), a way of **life in frugal condition**, and the need for a **close association with the horse animal** , providing both: a fast mode of travel (horse); permanent **food** (exclusively horse milk and meat); and a precise knowledge of the ecosystems of the large territory (grassland and water resources);

The nomadic conception of the principles of life eliminated the idea of inventing "His City", (Already cited: the example of the Amerindians of Patagonia, who knew how to oppose for several centuries the installation of the Spanish conquerors (a sedentary people), not finding a way to control a fluid people, without cities or villages.
The concept of roaming does not prevent living in community and in symbiosis with the natural environment, it even offers the possibility of founding a commercial empire.

In the twelfth century and afterwards they organized at a distance the exchange between the **poles mentioned** in place, founded by sedentary peoples with fixed productive activities (crafts, sites, raw materials, food culture, water consumable in situ...).
They set up their (movable) camps on the borders of foreign cities under control, maintained the local oligarchies and the specificities of the economic models in place, producers of tradable goods, on the condition that they ensured by themselves the distant exchange and inter-territorial trade, and the profits derived on the scale of the Euro-Asian world.
... This is reminiscent of the role that global capitalist finance plays today. A speculative and accumulative entity, imperceptible to the human producer, who reads from the system only the territorial political regime.

The overall economic management is based on the organized and controlled exchange of resources and manufactured goods produced by the different peoples on which the Empire applies royalties, and a purchase value of exported goods varying according to the prices of the market it manages between: the Pacific Ocean, the Indian Ocean, the Black Sea and the Baltic Sea.
Taxation applies to goods in circulation and not to goods used in the various territories.
The beliefs and cultures of the managed peoples are maintained.
Exchanges are carried out in the languages specific to each administered territory (multilingual dictionaries, etc.)
Intense diplomacy was maintained with neighboring or distant states by the Nomadic-Commercial Empire.

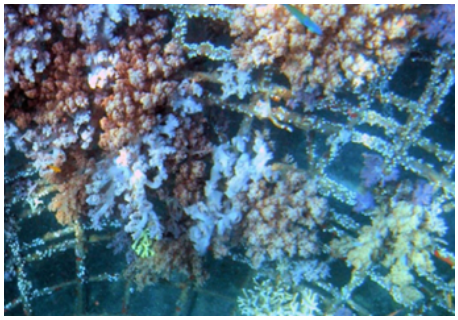
Frugality
One step among others in terms of proto-symbiosis of human settlements

In Siberia, we can see that the pretty villages are populated by Isbas of about twenty square meters on the ground (to limit losses and the compensatory energy used in winter), and that these small family living units each have a large vegetable garden (approx. 100m2) to produce the necessary food resource (canned goods, hunted smoked meats, etc.) and to spend the winter in retreat. These "frugal" Isbas, buried in winter under a blanket of snow, continue to converse with the whole Earth, thanks to photovoltaics and a local "Fab-lab", and have links by Drones and other air or ground means, to "connect" with the complementary and public equipment and services of the coordinating meso-pole.
The example corrects a maintained lie that consists in justifying humanity's access to "progress" by the "single way" of the regroupment-concentration of forces: relations of production and exchanges**,** within the same pot.

A **regime of sobriety in decline on the useless and the inessential requires the commitment of a global demographic decrease accompanied by an equitable redistribution of resources among the new shoots of the human biotope.**

"Recycling"

Why not leave in place these "mega-urban" poles that have agglutinated up to 60,000,000 humans; these witnesses of the "**Productocene**" times of the concentration camps?
Some of the frameworks could be given up as "**reefs",** very quickly be taken over and reinterpreted by nature in nurseries, spawning grounds, beehives, aviaries, mushroom farms, etc.
They could even eventually pave the way for a new generation of biotopes capable of hosting the first "Inter Vivant" conversations: As in the Amazon, the Buttes?
The office towers at 20, 30... 100 floors could also be reinvested in "resource shelves" by a cross-ecological engineering: human
(endives, mushrooms, etc.) and other species.







At this moment, ruin is no longer a delirium of the mind, a joke.
Neo-capitalism has already thought about it, but in the opposite direction to demystify the danger it generates. Under the Anglo-American name "Urbex", it gives an additional opportunity to small profiteers to express their greed.
Today, jackal-visitors are made to pay for a free exploration of the moribund neighborhoods of the defunct city of "Detroit" (Michigan), the corpses of the powerful American automobile industry of the twentieth century and the last traces of a working-class misery that can be visited.
There, the "Urbexer" goes wild, comes to crawl in ignorance of the past to be without bearings, only surprised. Racism, the brutal exploitation of "Chained Proletarians": No! But we can take away some "Trash" memories...

Urbex was also exported to the former USSR: to Chernobyl. Not to note the past mistakes and the weakness of men in trying to cohabit with nuclear energy?
But to "Urbexer" crawl around the radioactive sarcophagus, (which only partially protects from radiation around the edge). To play in abandoned squares, and to self-isolate to excess... Some will say that ants, these small inferior beings, still live there as well as part of the plant: The mental deficit is still cultivated there!

To get rid of capitalist entropy?

Data **digitization and cybernetics**
"The science of communication and control in animals and machines" (Norbert Wiener) still timidly mark **a second revolution-escape of the human mind,** if we consider that its first revolution-mutation was that of the written and exchangeable thing in the distant times of the Mesopotamian plain?
But here again, the era opened up on two paths:
That of the times of "Assembly Line" of the mechanized human, of the "Fake-news" **cacophony** both uncultured and let off steam, combined with the Android "AI" (Artificial Intelligence) falsification;

and that which **leads to the autonomy of analysis and criticism in order to get rid of capitalist entropy,** which gives free rein to **a non-proprietary evolution of intellectual and manual exchange,** dismantles the corset of patents, private contracts, and supposedly "inalienable" rights granted to private property, carried today by generations of anti-globalization and ecologists.

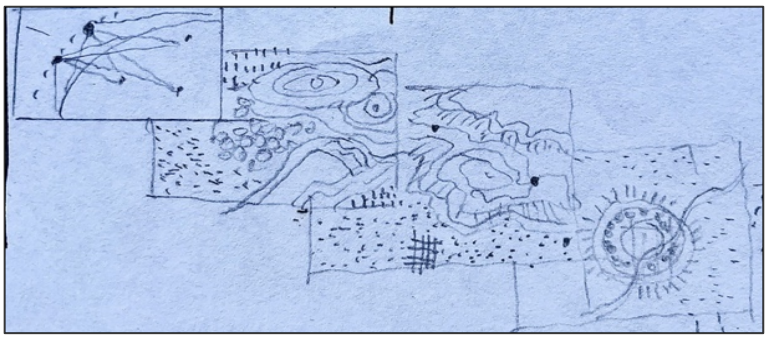
It is that of **a sober, peaceful society format**, **in discovery,** to dismantle the alienating Anthropocene format.
It is that of a society in decline in consumption and in the de-monopolization of planetary space: By a shift from exchange-value to **exchange-use;** by the adaptation of human demand to the capacities provided by the biological and abiotic resources in place; by the restoration of native ecosystems that contribute to the general balance of life systems; by the erasure of the notion of Assigned Work.

"To think of a non-state political form based on despecialization and the collective reappropriation of the ability to participate in decision-making. Human activity must be freed from the demands of work for an evolution towards cognitive work. Building autonomy. – *J. Baschet*

IV – 2 BIO-GEOTOPIC INTEGRATION - APPROACHES

Without domination... Reformulating the forms of the stay of human communities within the diversified geo-biotopic spaces of the planet...

Biogeography*: A branch at the crossroads of natural sciences, geography, pedology, ecology, bioclimatology and evolutionary biology, which study life on the surface of the globe through descriptive and explanatory analyses of the distribution of living beings and more particularly of communities of living beings*
Abiotic *– Abios Greek etymology: lifeless, environment unfit for life*
Biogeographical area*: A biogeographical area that is climatically and ecologically relatively homogeneous in terms of plant formations and temperatures. It is an ecological unit of ecological land classification systems.*
Economy = Oikos*: House Management*
Biota *: Biota is all living organisms, flora, fauna, fungi, microorganisms present in a natural or semi-natural habitat.*
Merizo : *to share (Ancient Greek)*
Topos: *place*



"The fragmentation of science by the fragmentation of specializations leads to ***the reduction of life to what*** *is known or* ***must be known****. – Mr. Fukuoka*

"The majority of environmental problems can only be solved by ***transforming relationships*** *- F Madoff -*

The ***blocking of the state presumption****, an instance of domination, determination and totalizing force, allows a diffusion of the democratic institution of the social under the sign of action by irrigating the non-domination and self-determination of the Demos. - A. Arendt -*

Breaking the necessarily abiotic productivist dead-end

In sub-Saharan Africa, megacities, often capital cities, concentrate on average 60% of the country's population.
This is the consequence of an uninterrupted scenario implemented by the countries of the northern hemisphere, which generates massive deforestation driven by agribusiness, which continuously plunders mineral resources, depletes and pollutes the living and dormant water resources of inhabited territories, and leads to a growing exodus of populations expelled from their lands.
This state of dysfunction, continued in the climate context, does not seem to concern the predatory finance system in any way.
However, **the consequences are already being written**: mass flight of the disinherited and survivors, in search of a future, to their already submerged urban centers, then a massive extraterritorial exodus to the resource countries that are already trying to push them back (refugee camps, racist ideologies, wars against a religious background...).

About fabrics at the "Ban"
Relegation, Marginality, Misery and Alternative Dynamics –

The Parisian metropolis of 12 million inhabitants places 10 million of its inhabitants on concentric peripheries. **The part of rejuvenating and plural life is now in the suburban and multicultural peripheries.**
The "historic" districts, of the City-Centre with its ancient built heritage, are divided between: **empty shells resulting from investments made by the international financial market, housing fabrics, most of which are uncomfortable due to the play of land speculation**; places of attraction; company headquarters; hotels, shops, museums...

The fabric of human resources, which is constantly being deformed and reformed, is that of the **suburbs in the "Crown"**, between the city centre with its disguised history and the suburban "rur-bain" of housing estates huddled on walled gardens.
It is that of fragmented, embellished places, with uncertain durations, multi-community, in informal exchanges. An urban fabric of "news items", sometimes on the borders of law, where a plural expression is woven with its codes, its "margins", a specificity that rightly worries the regimes that make these "Dormitory Cities".



In the inventory of existing fabrics, let us not forget those of non-ownership occupation. Perhaps the most inventive part of the Cité, which is reinventing itself, based on the recycling of "waste".
Their authors: the relegated populations who express themselves on all continents, who manifest themselves in the register of **the ephemeral-renewed** to live differently, or to survive, and retain a marginality and inventiveness to insert themselves "without rights" on the "abandoned" land of the "peripheries" of Paris, Cape Town, Philadelphia, Berlin, Mexico City, Santiago...
This people of the "homeless", settled on the land reserves of the future Mega-giga poles, neighbors along a passage that they invent for themselves on "wasteland", or within a "hollow tooth", on the edge of a railway line, or in Townships, Favellas, Slums... It has its own mode of exchange on a circuit called the "informal" economy.
In the world, 1.4 billion displaced people live in this way.

"The vernacular is a field independent of the industrial and commercial economy. This is the domain where Homo Habilis ensures his subsistence by mobilizing his generalist skills and by carrying out a plurality of daily activities, unplanned, non-hierarchical and not controlled by an institutional body. *» - Illich 1983 –*

The "Vernacular".

Is it also a link with the past, or the mark of an attempted symbiosis between the human of the societies of the Commons-conscious and creative, and the bio-geophysical states traveled or sojourned?

The Vernacular reappears, when Homo-Industrialis stumbles...
The knowledge acquired and experienced by past human communities has for the most part been downplayed, forgotten, or knowingly prevented by the fact of belonging to the Common Heritage of Humanity, **outside the field of trade**.
These were, for example: These wind turbines (mentioned in the previous chapters) invented and created in large numbers in the 19th century that were used to irrigate some of the North American Great Plains, then dismantled while providing renewable, non-polluting energy. An invention forgotten for a century before returning under Patents and Profits.
There were also the hundreds of thousands of mounds of earth built several millennia ago in the forest by the companies of the Amazon basin, to allow cassava and maize to be planted overhanging marshy land, in symbiosis with the ecosystem environments in place.
A fantastic library of knowledge that we rediscover, emanating from the human collective... And a lesson in humility for the 21st century?

The Vernacular is a knowledge coupled with the mastery of use that draws its life lessons from an analysis of the renewability of the resources and constraints of the environments encountered, and is invented in multi-compatibility... Propertyless
To do this, it is a question of designing a form, a technique, tools, without the intention of transforming the fundamental components of an environment, and thinking collectively.

In terms of construction, this science of living in sobriety, quality and comfort, moreover adapted to uses, microclimatic varieties, natural resources... It continues to be practiced in all continents and specific sites: such as in southern Burmese or maritime Patagonia, or in Zoroaster country (semi-desert plateau of Iran).

The sedentary Burmese South



The boat for the monsoon season is stowed to the house on stilts, and the level of the living floor is raised to the level of the high waters of the monsoon.
The constructions assemble the wood and (woven) plant fibers of the region, to better manage the internal/external climates according to varied and sometimes contrary seasonal manifestations.

The shades, waterproofing and permeabilities differentiated according to orientations, accentuate or slow down air circulation ("Human Intelligence" thermal draught), shelter from the rain, protect daily life in summer from the sun, and naturally ventilate the four facades and floors of the house.
In summer, the weaving workshop goes down to the garden level under the floor of the house to put itself in direct contact with the busy street of the village and the Community.

Maritime Patagonia, semi-nomadic



The "Mapuche" Community has the specificity of living in broken families in order to maintain a para-symbiosis of the natural environment (regeneration of ecosystems shared for a time), while maintaining a permanent link and support from the community between its members.

Even at the end of the twentieth century, the family boat or fishing boat could be found on the beach. The farmhouse with a central hearth made of local wood used for the frame, the scaled roof, the walls of planks grouted with braided vegetable fibre beads and the wood scale cladding.
The materials came from the wood cuts made to create the crop plot adjacent to the facility. The construction was placed on the edge of the land reached by the highest tides, it rested and still rests on squared tree trunks that allow it to be cleared from the ground (area of high rainfall and humid soils) to slide it easily on the shore when navigating to another cultivation site (Mixed Fishing-Agroforestry practice sequenced on the protected shores of the South Pacific).

The crossing of millennia has enabled these groups **to empirically grasp that the flows and stocks of materials and energies linked to their activities correspond to what the biosphere is able to provide them without disturbing the biodiversity in place.**

Eastern Iran,



The transition to an eco-compatible lifestyle with a low footprint on native biotopes leads to the search for a micro-climatic, spatially evolving built environment, built of local and geo-degradable materials.
It sounds very complex and yet the wise and collaborative human knows how to do even better.
Between the Zagros and Taurus Mountains was the improbable but immutable city, under a bell, rather under vaults... Yazd.
This is the "almost zero" ecological footprint. There is the following conditions: natural ventilation; cooling by cooler; water supply in sobriety, and adaptability to the nature of the resource (in a dual network); solar protection; climate regulation without the introduction of fossil fuels from outside the site of installation...
It is **the adequacy of people and environments that encourages us to reconsider the concepts of integration without artificialization, in order to live together in all climates.**

The "Sobriety" City
The City is a vast **sunshade,** which covers a checkerboard fabric: structured by the "Allées-Rues", under Vaults-Tunnels, under illuminating and breathing domes, which allows climatically through its architecture and its organization of flows to found in past times an immutable caravan city, although it has lost this long-term vocation.
A city, with its shops, its common services, its craftsmen and shopkeepers, its meeting and exchange venues, hotels (formerly Caravanserai), schools... Punctuated in the center of each of the squares created, by a space of open ground and open sky left in touch with external climatic variations.
A city that seems to be waiting for its energy autonomy in photovoltaics through the vast plan of terraces offered by the sprawling "Bazar".

The heart of life is associated with the organs that are the "residential quarters" by arteries and by veins (covered galleries) that run through the checkerboard islands that form the Ruche under galleries.
The habitats continue the climatic refinement undertaken on a large scale on the Bazaar by inserting themselves into an orthogonal plot grid that gives rise to courtyards and on the periphery to living quarters (blind to the adjoining ones).
A device conceived 5000 years ago – Cf. Arad,
In the richest houses of the fabric, the built space has a basement and two levels of elevation + terraces.

It is up to the occupant to select the appropriate climate characteristics during day and night and in all seasons, between: the underground living room to spend the day during the hottest periods; the terrace to sleep in the cool of the night; the ground floor on an open-air "Atrium"

to approach the garden, the water, the shade and the light, the scents and sounds of the city or the countryside.

IV-3 MERIZOTOPIA

SPACE - A PROCESS OF DIMINISHING MUTATION





1920 The Garden **City** of the Butte-Rouge (France)

03-1 Transforming the living environment and unleashing dynamics

For a time (late 19th and early 20th centuries), it was thought that the urban dweller of the poor classes was a problem to be solved in order to secure the framework for the development of a bouncing industrial society (multiple revolts and proletarian revolutions), but some socialist regimes and social utopians sensitive to nature tried the experiment in Europe of a "Garden City" showcase (Garden District of social housing). to live on the outskirts of cities. An experiment that quickly went unheeded.
Other more convincing experiments were carried out on a large scale, among others in Berlin (Opérations de l'Architecte Bruno Taut) under the Socialist Republic of Weimar which openly aimed at social well-being for "the greatest number", in a city operating on public services and networks of energy, transport, property management and culture...

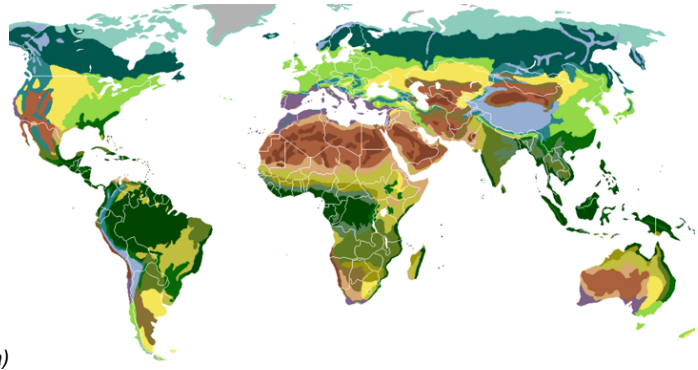
The essayist intermediate times of the "almost that!"
Some "medium-sized" cities and municipalities, located in Europe, are beginning to pursue a **social and ecological transformation, one that is invented on a daily basis in the proximity of multiculturalism and social plurality, and shapes at the scale of blocks or neighborhoods, living environments conducive to the formation of neighborly relations: to make a daily life that moves away from consumerist formatting evolve in cooperation and experimentation;** to give free rein to social and intellectual initiative, coupled with a discovery of other worlds, known as "wild".
A **breeding ground** already set up in West Berlin (70s...) by a youth who developed the Counter-Culture, the Collaborative Economy, the Pooling of Neighborhood Services, the non-governmental, the refusal of weapons, etc.

Today, technical and scientific advances allow **the creation of Neighbourhood Units or Collaborative Eco-poles in autonomy and "almost without footprint".** They make it possible to obtain Renewable base energy on car-sharing modes, in almost all sites, to have repurposing, recycling or restoring the resources consumed (effluents, food waste, materials, technologies, etc.);
To the point of questioning whether or not it is necessary to renew the linked notions of sedentary lifestyle and private property... A scandal?
Not really at a time when the world's financial power, with its production-consumption apparatus and "Intelligence Artifice" no longer hesitates to free itself from the proprietary interests of the Nation-States, to arbitrarily attribute itself without property rights or prior agreement: The Human, the Earth, the Planetary Suburbs, perhaps even the Solar System, as their thurifers try to make us believe.

However, we can still allow ourselves to conceive of an alternation that commits to giving an answer to a question, which has been dismissed for millennia: that of **defining the way to place the Human in a Common Living World, undirected, in peaceful co-evolution.**

03-2 Taking the Step to Other Species of Space

In this 21st century, the marginalized peoples of the world (indigenous), borrowed from a **philosophy of symbio-adaptive life**, still retain the pioneering spirit of living in partial eco-compatibility with the Mother Sphere and in links of exchange and collaboration, without resorting to aggregations.



Map of "Biomes" (Wikipedia)

Exemple de cartographie de la végétation terrestre. Inlandsis et déserts polaires Toundra Taïga
Forêts feuillues caducifoliées tempérées Prairies Forêts sempervirentes subtropicales Forêts

As long as the water source is drinkable, the local energy is renewable, the public satellite remote link is available, the fauna and flora remain, the waste from activities is biodegradable, and mobility is ensured by collective means with a low ecological footprint:

a possible way of improving the **ecological integration of human collectives is opening up, in sobriety and planetary densito-compatibility**;

It is allowed to access **an "almost impactless" stay within the ecosystem areas**, with regeneration of the laying environments, after migration of human settlements (meso and micro-poles, and exploration-research bases).

The fabulous thing about humans lies, among other things, in their ability to shape themselves without always discarding what they cannot explain in the moment. The worst perhaps happens when he thinks he has understood.
This is a step that Darwin took during his voyage of exploration in "Tierra del Fuego" in 1836; during which, in a few months, his "educated" way of thinking made him first appear the first Amerindians of Tierra del Fuego as a "Primate" animal species, hairless, greasy, shrill and violent... To understand that after immersion, due to repeated stopovers in this extra-terrestrial world, these were Humans who had been able to grasp that the conditions of their maintenance within a hostile environment at multiple points (climate, food resources, topography, dangerousness of plant and animal species) required to invent a form of adequacy between their pleasure of living and reproduction and extreme bioclimatic parameters, in place.
A striking discovery in 1836 that remained in Darwin's notes stored in libraries, so as not to instruct the Common. The century captured them en masse to make them slaves.

03-3 Dare to " weed"

Daring, from the space of the neighbourhood, to free oneself from the asphalt in the manner of a blade of "weed", to insolently embark on the path of eco-diversity and sobriety in well-being and discovery, and **to lead a recomposition of the space of use in direct connection with the dynamics of the land?**

We can already **dare to take a look** at the transformation of forms of life and settlement. Several phenomena come together and develop over a short period of time, which have appeared over the last 40 years within eco-territories, which are the result **of local initiatives carried out by active political ecology** , and which lead to **a reconsideration of the narrow and erroneous relationship between man and nature that can be read in the organization of present urban life.**

- The first phenomenon is that of a rapidly growing appearance of an awareness and a taking of responsibility by the "**Human-Commons**" **on daily life and proximity, which pushes to "do it by oneself" with others, and which gradually broadens its fields of reflection and action** from the doorstep, to the street, to the neighborhood... Going so far as to gradually turn her interest to issues affecting other territorial scales.
- The second phenomenon is the multiplication of initiatives aimed at bringing everyday life into line **with the forms of evolution of non-human living things** in order to achieve, now over a limited period of time, an **unavoidable ecological compatibility of our species with the biospheric environment,** in understanding the "long term".

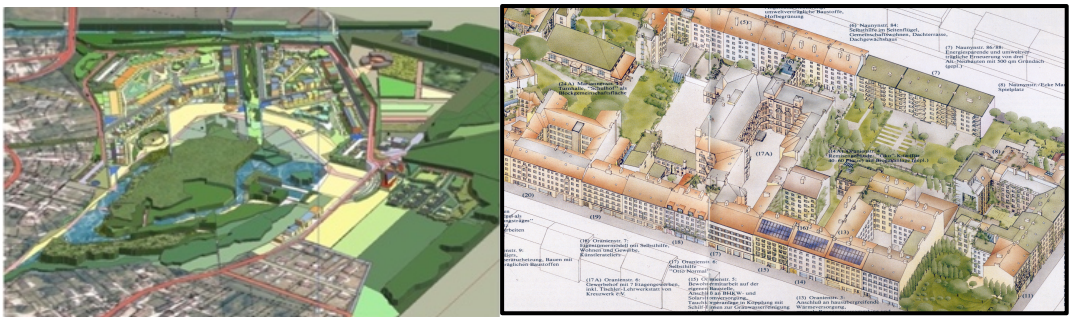
- The third is the evolution of thinking on the **revision of the notions of private property** and **public domain,** by introducing variants on the forms and conditions of use, on the **design of construction-deconstruction structures with reuse** of components, on the condition in terms of temporary occupation of land and its restitution in the open ground.

- The fourth phenomenon is to have proven operationally that it was possible to pursue a **scientific and technical evolution on the margins of the growth imperatives** set by the Private Construction Market, by setting up public databases (academics, etc.) and by supporting independent warning and expert groups (for example for France: Le CLER, NÉGAWATT, CRIIRAD, MSF, MDM, Architects and Engineers without Borders... and many other actors).

For example, in recent years, Public University Research has made it possible to provide the design-build sphere of European buildings with an evaluation tool that now makes it possible to assess both the impacts generated by projects on ambient biodiversity and to determine the targeted impacts on human health and the planetary resources consumed. An approach that makes it possible to analyse the life cycle of structures of their ability or inability to be compatible with the desired biophysical evolution of human sites and footprints - "Biodiv" / Agro Paris-Tech , "Life Cycle Analysis" - Equer - Mines Paris-Tech / Bruno Peuportier -

Daring to weed in the City, for a life in Common, means:
- To achieve an **increasing reduction in territorial metabolism** over the coming decades, and consequently a decrease in the ecological and demographic footprint.
- To give birth to a biotopic model, midwife of consumerist counterculture, and multi-social and multicultural initiatives, which commits to deconstructing and depolluting the traces of the inhuman and ecocidal urban, in order to gradually regenerate the multi-species Living and invent a dynamic Commons in diversity;
- Specify the means, forms and stages of a disentanglement of the neighbourhood grids and then the mutation of the current human-urban installations, to **initiate a phase of destructuring-breathing and neo-regeneration in order to carry the evolution of the neighbourhood-systems towards the formation of a living domain shaped on multiple neighbouring ecosystem identities**.
- To dare to adopt an **extra-urban model of life,** which pursues the exploration undertaken on the forms of installation of the Human in non-ownership, non-hybridization of the "diverse Living", and which evolves symbiotically within systemic living environments in different modes of roaming.

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The island space
is this place of **conscious common act,** from which must be developed: the alternatives in inventiveness, sobriety, efficiency, solidarity and equity, necessary today for humans; and the policies of autonomy in terms of renewable energies, in situ reduction of discharges and recycled waste, implementation of triple water networks in the home, bioclimatic comfort, etc.

If we rely on the eco-initiatives developed and partly cited, the **island of everyday life** is the easiest scale to encourage population groups to outline, within the framework of an exchange of knowledge and daily experimentation, in trial and error, an evolutionary practice compatible with the ecosystem worlds, and to find the gateways out of the "urban concentrate".

In the framework of the Northern European Ecological and Citizen Movement "**Eco-city**", or in certain French programmes (Habitat et Vie Sociale, PAN, etc.) and some other government

initiatives (Beauvais-Quartier de la Méchelle, etc.), reference has been made previously to initiatives carried out jointly by groups of actors bringing together the
public sphere of local authorities, citizen groups, building professionals and architects, operating as pioneers on the fabric of the neighbourhood,
Experiments on urban sites have continued mainly in Northern Europe and Switzerland, at urban scales including conurbations, and on various themes involving city dwellers in various capacities (Leicester, Hanover, Ponte Verda, Brussels, Breda, etc.).

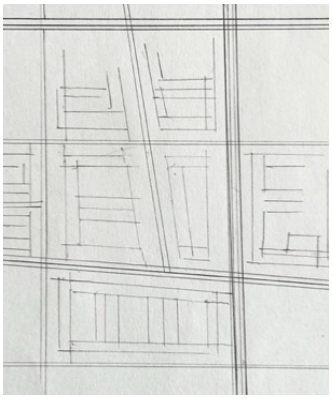
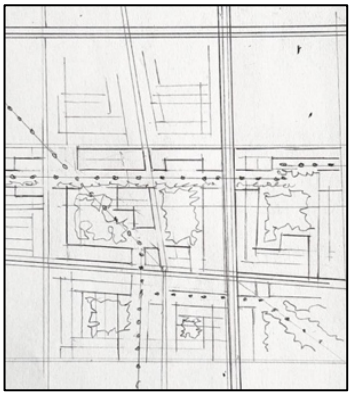
On the basis of these experiences, it can be considered that a process of **reappropriation into self-management of the neighbourhood from the existing body-block** is capable of being carried out jointly: by the occupants-users of the site, gathered in co-design assemblies; the public authorities (Municipality-Region-of-State); and public and private financial operators...
As has already been the case in development-construction programs calling for reformulations of the "Neighborhood Unit" on the basis of a public idea competition (Architecture-Urbanism-Ecology-Sociology), on concepts allowing the inhabitants to be actors in a short-circuit, open-source economy.
The experiences of **Kassel, Emsher-Park, Tübingen, Culemborg, Kreuzberg**, cited above, and many others, prove that in most cases social and environmental dynamics manifest themselves among urban barracks.

Self-management
The territory of Quebec, for example, concedes the constructability or revitalization of heritage to residents' cooperatives practicing self-rental management of heritage with conditional public aid.
Emphyteutic stay - In a context of eco-reformalization of city fabrics, the public purchasing of private property leads to interventions in the reconditioning of blocks (redesign of the soil, rehabilitation, reconstruction, demolitions, etc.). It is carried out by using forms of land transactions carried out on the basis of long-term lease models.
Leases that transform the purchase price into a commitment to maintain the "occupant" owner of a property that has been destroyed throughout its life in a new apartment (real and joint lease in France and many other formulas in other countries).
An occupation without rights to the walls and land, with the sole responsibility of the inhabitant to ensure both the upkeep and maintenance costs of the building and his personal consumption (Energy, Water).

The Scale of Life

The scale of **the "Medium-Sized City"** (European, etc.) seems to be able to redefine itself on an objective linking **a reduction in footprint, autonomy and creativity** (social, scientific, technical, economic), by redefining at the same time: its temporalities, its kinship with other entities in the biogeographical area, its flows of activity and infrastructures, its links and dependencies in the middle of the site, etc. And by **positioning itself in ecosystem compatibility**: ambient air quality, renewable energies, biological soil regeneration, water quality of subsoils and surface whitewater and recharge capacities, prevention of climatic disorders, use of bio-geo-sourced materials, local bio-food production, etc.

This "City of Yesterday" must be able to be approached in the manner of Hanover or Rennes: to revise an organization based on the decohesion of a Center with its peripheries, to redefine itself as a homogeneous host entity without breaking with its geo-biotopic area of installation, and to be within this area **able to ensure a unifying and generalist role with the new constellations of micro and meso-poles in bio-operativity on the ecosystem world**.
This path involves the resection of central urban fabrics affected by discomfort or over-densification (such as Paris intramuros and many other cities), and the "growth" on the extrados of neo-districts designed in partial autonomy of resources and "soft" links associated with Public Transport, with the other bodies and functions of the Mother Ecotope.

The alternatives initiated in Europe from the 1990s onwards, in terms of reshaping lifestyles and forms of staying, were developed on **the initiative of resident populations** who carried an early critical analysis of the major societal drifts taken by the society of immediacy.
Given the small number of "reactive-creative" actors, ecology applied to the urban environment has manifested itself on a reduced scale, initially through the transformation of blocks into city centres, or through the creation of **co-managed neighbourhoods**. These demonstrative scales are supposed to convince a wide audience of the merits of a better everyday life **,** when this daily life wisely anticipates a desirable future.

The first corrections focused on **reducing consumption** of: renewable energies as an alternative to nuclear, oil, gas, methane; urban waste (sorting-reuse, composting, recycling, etc.); drinking water resources; soil depermeabilisation and regeneration; sustainable greening of inhabited fabrics, etc. All themes affecting the daily life of the citizen, and whose resolution requires a rediscovery of common action, in self-management, instructed among "Equals" -




The reduction of the **ecological footprint of urban fabrics is addressed under different themes and according to the nature and forms of occupation of the sites**
(*Freiburg , Vauban , Berlin centre and suburbs*

- Co-neighbourhood blocks have been set up within their core areas: playgrounds, ponds, sports-leisure fields, open-air theatres, lake trails, shared gardens, community workshops, nurseries, etc. hotel for visiting friends (... to be shared, as in the case cited in *Kassel)*
- The existing R+4 building has been equipped with outdoor wooden structures supporting gardened terraces (*Tübingen*);
- **Bio-climatic architecture concepts: have joined forces with those of "passive" construction within vegetated islands, which themselves have developed landscaped areas** for relaxation, ponds for the collection and infiltration of rainwater, basins treated with reed beds to phytopurify some of the effluents from neighbouring homes, effluents redistributed on a double network for certain uses (*Berlin*);
- "Ecological corridors" have been inserted into the fabric of the neighbourhoods, from wooded areas, and other areas of biodiversity, to introduce a different relationship with the "living other" within everyday life;
- **Co-shared neighbourhoods** have combined distinct forms of residential sociability (sedentary and nomadic), have created plots dedicated to the development and concerted maintenance of the inhabitants of the blocks (festive spaces, kinder-garten, music space, temporary self-constructions *(Berlin Prenslauerberg, Freiburg, Montreuil 93, etc.);*
- Alleys **that are permeable** to play, talk, garden or sit down have been created and invested *in (Freiburg)*




The driving poles of the urban model of the second half of the 20th century are those Medium-sized Cities that have long been anchored in a geo-original cosmos, these Cities that have an intellectual and material base in continuous connection with the long term, and which have remained attentive to **situating themselves collectively and originally, on the future,** but with an approach that refuses to separate the human from the place, the contemporary from the ancestral.

It is the taking of initiatives in terms of ecological and social requalification that has enabled these poles of life and activities to link the reformulation of their base to the deployment of innovative fields (sun, water, wind, reduction of consumption and waste, etc.), gradually taken over by the entire interconnected community.
It is here: a City in Eco-redefinition of its living environment, built on former marshes, that the population supports the university structures (scientific and technical in place), which will experiment with multiple processes and technologies on the theme of depollution and reuse of urban wastewater... (Berlin)
Elsewhere, it was the decision to program and build self-managed districts, which led to the mobilization of public research centers and local engineering to found one of the first photovoltaic solar development centers in Europe and to visit the in vivo achievements of the old city readapted to "renewable"... (Freiburg)

For these Cities and others, a mobilization is being triggered on **Reliving and Participating, to shape another Future.**
In Germany, the financing of energy policies from renewable sources is carried out on a mixed economy approach involving the Local Authority, the Citizen Savings, and the financial participation of industrial and commercial activities of local establishment. Proof that we can do without hedge funds to evolve by changing horizons.

These concepts, although still timid, are all focused on **escape, self-organization and anticipation**. They develop encounters, the discovery of the unknown, the need to generate mutual aid at the different scales of space, to open up to exchange and discover the infinite diversity of the living world. These concepts are timid because they have to deal with profit, but acknowledging that the destruction of biological and abiotic resources attached to productivist cosmology is likely to lead to the accentuated extinction of the Species, in Insubordination they open the door to neo-vernacular innovation.

The "**shift"** introduces the fact that inhuman confinements must be dismantled or abandoned to lead to the creation of eco-systemic living spaces introducing a living world in co-evolution.
Survival requires the de-artificialization of human existence and the transition to sobriety and respect for the rules of maintaining the living in mutual evolution.
Make way for Poppies in the wheat fields, Earthworms and Bacteria in the open ground.





The process of mutation is inseparable from a dynamic of Assembly, Cooperation, non-hierarchization, non-domestication.
In the 1930s, the Spartacist movement, under the Weimar Socialist Republic, launched the construction of workers' housing.
For the Berlin elected officials of the time, it was a question of creating social housing districts with: ponds, woodlands, strip houses, R+4 buildings with relaxation areas and shared gardens, integrated facilities: health, schools, cultural centers... Irrigated by a vast network of public transport associating the districts.

Architectures to be lived, demonstrating, placed in networks of life.
"Hufeisen" is one of these projects, assigned to a wooded and marshy territory, entrusted to Bruno Taut, Architect and Urban Planner.
The designer has made a point of preserving for the most part the tree cover in place and the forest paths and ponds, to establish a constant and dynamic link between nature and humans.
Today, these spaces for the expression of the Commons and inter-exchange within the proximities still function. The ponds collect rainwater, the plant cover regulates seasonal micro-climates, and the Cycles and Tramways networks in place for almost a century, ensure the link with distant territories.



Berlin - Bruno Taut, Architect



Hunderwasser, Architect

03-4 What to do with the cities of the past

To operate as a palimpsest, or to free oneself from an urban fixing system, which reveals itself over time adapted to the growth of the product-consumerist model

"By 2024: 80% of the world's wealth is produced in cities."
Do humans need wealth to live...

City: Decrease in footprints

In any ecosystem, the structure of the networks strongly influences the quantity, diversity, stability, and quality of biomass and residual organic matter
The urban of the networks of the consumable and the consumed: fossilizes the city; preconditions uses; agglomerates the human on an artificial building.

The Infrastructural Anthropo-System

Most of the technologies and engineering structures built to supply the city with fresh and drinking water in a gravity system were designed in Roman times. For the record: the potability of the water at the time was only obtained after noting the possible harmful effects on the health of the first consumers.

The system today is broken down: In capture of the resource (white water, standing water, rain); then in retention on dam lakes, ponds, artificial lakes, connected to a gravity-fed water supply network (Latin: lead to), then in distribution by canals, pipes, aqueducts, qanats, to the consumption areas where treatment plants (purification, drinkability) and storage (reservoir, water tower) are located.
The final distribution is made by a network of pressurized pipes that develop along the street grid within the agglomerations.
The system then continues on the urban grid by recovering effluents, wastewater and rainfall, then collecting the volumes of contaminated water from stations located on the outskirts of cities, which are responsible for decanting, purifying and decontaminating before discharging this water into the hydrographic network, which is likely to be able to continue the decontamination of the discharged water through oxygenation and phyto-purification.

This underground network requires maintenance that does not prevent a loss of the general volume of drinking water transported of around 20% (leaks) and needs to be replaced in sequences of 60 years.
Drinking water consumption is estimated on average for households at 140 liters/day/person (France), while with sobriety and a dual network (rain or recycled water) the consumption of drinking water could be only 40 liters (10 liters/day/person are needed for food) - *These data only apply to the dominant economies of the planet!* -

Apart from the recently created cities, most cities are still in a combined network combining rainwater and domestic water consumed. During intense storms, the final decontamination basins are opened and all the effluent is returned directly to the general hydrographic network to pollute the downstream of the agglomeration.

In 2021, 92% of the French territory was estimated to be anthropo-consumed
The Capitalocene Progression has brought us to the point today where the degradation of the climate is creating a phenomenon that is causing droughts, fires, soil sterilization, storms to alternate in an increasing way... And it no longer makes it possible to replenish the reserves necessary to continue the consumption model of water resources on the basis of current withdrawals from industry, intensive agriculture and households.

Let us remember that the massive deforestation of the soil practiced by the Babylonian, Mayan, Kmer Empires... to increase the yields of mono-crops on deforested soils, led through over-irrigation and the loss of native biodiversity to their artificialization, then to the modification of the initial climatic conditions unmanageable by the civilizations in place.
This time it is on the scale of the Planet that the Suite or perhaps the End is being played out.
At the same time, some populations in desert regions never stopped developing forms of **sobriety extraction**: condensates, rainfall, or frugal management of groundwater in the foothills of mountain ranges. Always taking into account the maintenance of the balance between the needs of productive activity and consumption, and the variability of the supply of the water table depending on microclimatic changes.

The "Hanover" process

The transformation of the relationship between town and country has created what everyone thought impossible: that of an **inverted Exodus, 3rd generation",** after the one that made people abandon the urban for the rurban. Reverse exodus consisting of **leaving the subdivided fabric of the interior-urban and outside-peri-urban to move towards a place to be created, in invention of relationships to the bio-world and reactivation of socio-cultural dynamics.**



Urban shrinkage and disalienation

Can cities: circular, centered, gridded, orthogonal, horizontal, historized but discriminated against, recharge their batteries to live in blocks and neighborhoods, and better still: reinvent themselves in their functions and uses; detach themselves from the criteria that determined their existence and structures of embedded thought (Family-Fatherland, Gods and Idols, Kings and Emperors...). Cements that bind?
These long-term metropolises, rewritten in Palimpsest mode, have to link up with the bio-regenerating areas of their Terroir, while maintaining: their scientific and technical specificities, their forms of knowledge transmission, their cultural and artistic specificities... But by desegregating, dedensifying, reinserting itself into a context of uninterrupted exchange with the large-scale Micro and Mézo community centres located within the Geotope concerned.

Inter-dependent and open-connected exchange hubs, on specific vocations in connection with the laying sites.
Places **that create proximities that are conducive to cooperative exchanges and self-invention of uses and functionalities,** at all scales and situations of the reformed agglomeration.
Neighbourhoods and blocks, designed in an eco-dialectical mode developed in stages, similar to that experimented in Hanover (see P 182 description), which leads to the **resection of** entire blocks to make way for areas of biodiversity and to the commitment to a co-evolutionary design of environments (plant, animal, human).

Writing in Palimpsest mode

The first act is that of **an urba-resection of the fabrics,** conducted to inscribe in stages the wefts and textures, full and empty, of **the neighborhoods and blocks in an eco-dialectic.**
It is a question of making room for an "Other Domain" introducing human activity towards a progressive eco-compatibility, through a sensitive and active insertion into a medium of positing the human-common that reveals the bio-diverse domain in order to discover its specificities and capacities for co-evolution... And on this basis, we must engage in the design of living sites by correcting the Anthropo-Error of the sterile and eradicating City of the past-present.

On the central urban fabric - The combination of resource spaces can accommodate neighbourhood communities at the scale of the neighbourhood-blocks, in a diversity of spaces inter-related and multi-activities (public facilities, and fields of activity).

The Neighbourhood Units then come together on a larger scale around areas, relaxation, sport-leisure, land set up for bioculture, equipment to raise awareness of Earth sciences, etc.
The various sites are innervated by networks of calmed circulation (walking, cycling, jogging, etc.)





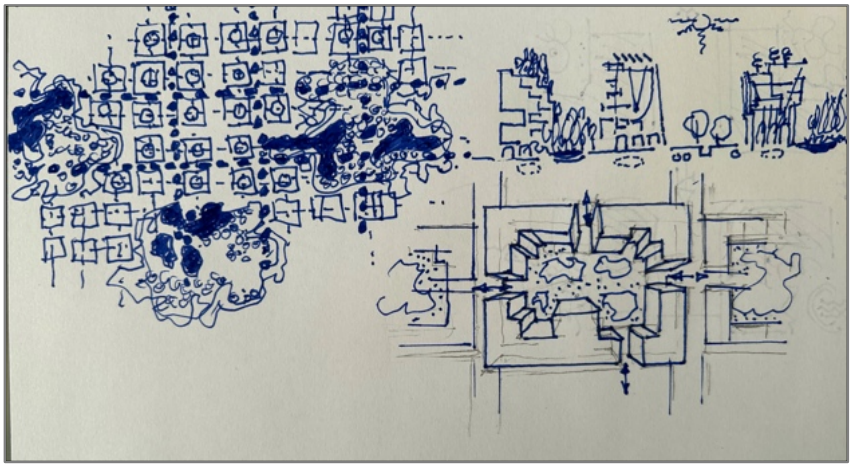
A pre-writing

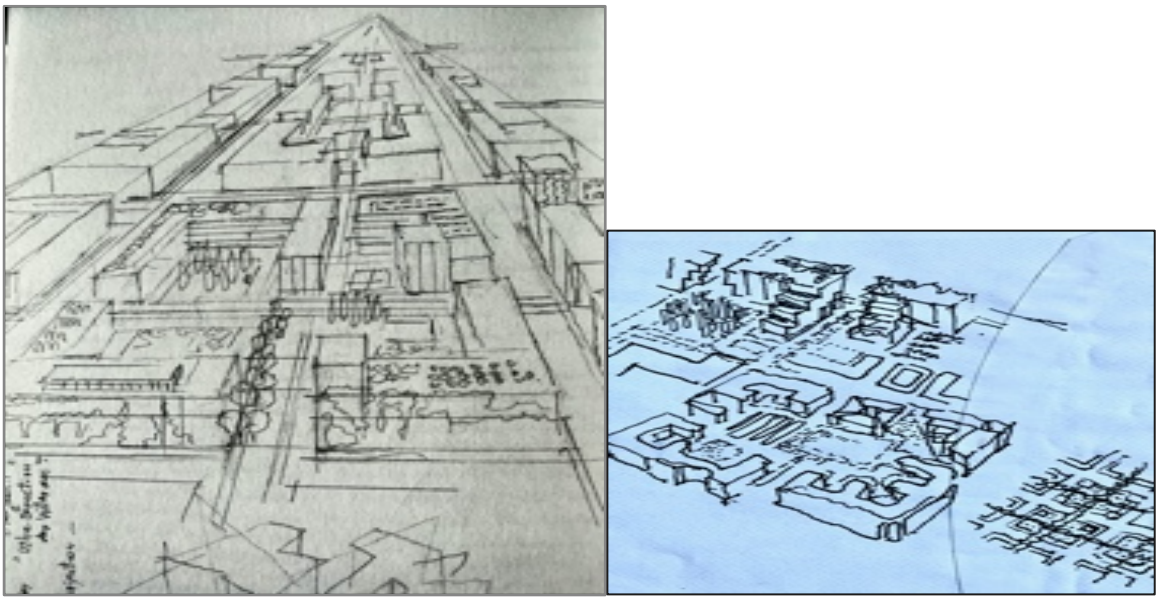
After an evaluation of the site and the factors at work (hydrography, geology, climate, etc.), the pre-writing consists of evaluating the potential for Anthropocene deterioration by clinical examination of the patient.

Namely
On the one hand: those of rainwater resources, the potential for drinking water, recyclable water and rainwater (future dual network); Those of the open ground soils to be restored or in place; the nature and volumes of the materials to be destroyed, transformed, or rehabilitated on all the structures built in the past into infrastructures and superstructures, etc.
And on the other hand: The expectations of the populations called upon to lead in Participatory Neighborhood Assemblies to redefine their living environment, and the associated dynamics in terms of: housing, activity, relaxation, transport, culture, and associated common services, inserted within the blocks and neighborhoods...

Pre-writing also consists of determining the forms of deconstruction of fabric parts (proliferating, invasive, uncomfortable built environment; Dilapidated, unhealthy or degraded structures; Non-solarized, mono-oriented, non-thermally and soundproofly insulated habitats, etc.), to make way for a process of co-evolution of the general living world on the **biosphere**.
A process

Which responds to compatible modes of residence, between human groups and physical and biological environments, based on certain knowledge, means and practices acquired;
This opens up to forms of stay consisting of settling or moving in sobriety, almost without imprint within bio-geotopic areas and in para-symbiotic modes of approaches and exchanges with indigenous ecosystems.





An Open City and Mutuality Writing

In public management of development, construction and maintenance.
In stages, in a participatory and contributory framework, the users and inhabitants associated with the elected representatives establish the content of the **programme and the methods of implementation** on themes such as:

- The hybridization of existing buildings in bioclimatic sobriety mode;
- The use of on-site renewable energy supply.
- In situ resourcing (islands) by double cycle of use of biodegradable plant and organic effluents and waste (see Photo Berlin heart of the block, E. Hahn Arch);
- The constitution of microclimates generated by taking into account the specificities: of the existing tissues of soils and subsoils, of the climatic effects of the operation, of the needs or contributions of the nearby built environment (Prisma J.Eble Arch);
- The articulation of the heart of the blocks with each other by the creation of bi-axial crossings to introduce links between neighbourhoods off the circulating road, at several scales of life, economic activities and services;
- The creation on the fabric at the scale of the districts, of vegetated areas (after deconstruction of islands) and regenerated into wetlands, lake trails (see Photo Freiburg Centre-ville), wooded areas: scattered over the district and united by biodiversity "corridors" in connection with the sectors close to free evolution.

The successive stages of modelling are **a source of teaching, instruction and citizen mobilization** to progress towards human settlements with a very small footprint, in partial autonomy of resources. In the medium term, they make it possible to find specific forms of co-evolution without depredations or rejections.

The biospheroi-compatible recomposition opens up the creation of varied domains of life because they are unique.
It is available in:

- Energy-self-sufficient and low-consumption buildings;
- Housing on a "free plan" allowing to invent oneself in the space of intimacy and everyday life and to have a double orientation capable of operating in natural ventilation and natural lighting adaptable to comforts adjustable by the occupant;
- Habitats supplied by a double water network allowing the consumption of 25 liters of drinking water per day/person instead of the current average 140 liters in France;
- Buildings with a collective laundry, common areas to accommodate passing friends or organize activities aimed at children, collaborative spaces ("Makers");
- Greenhouse balconies;
- Trans-generational housing with mini-services for all age groups
-etc.

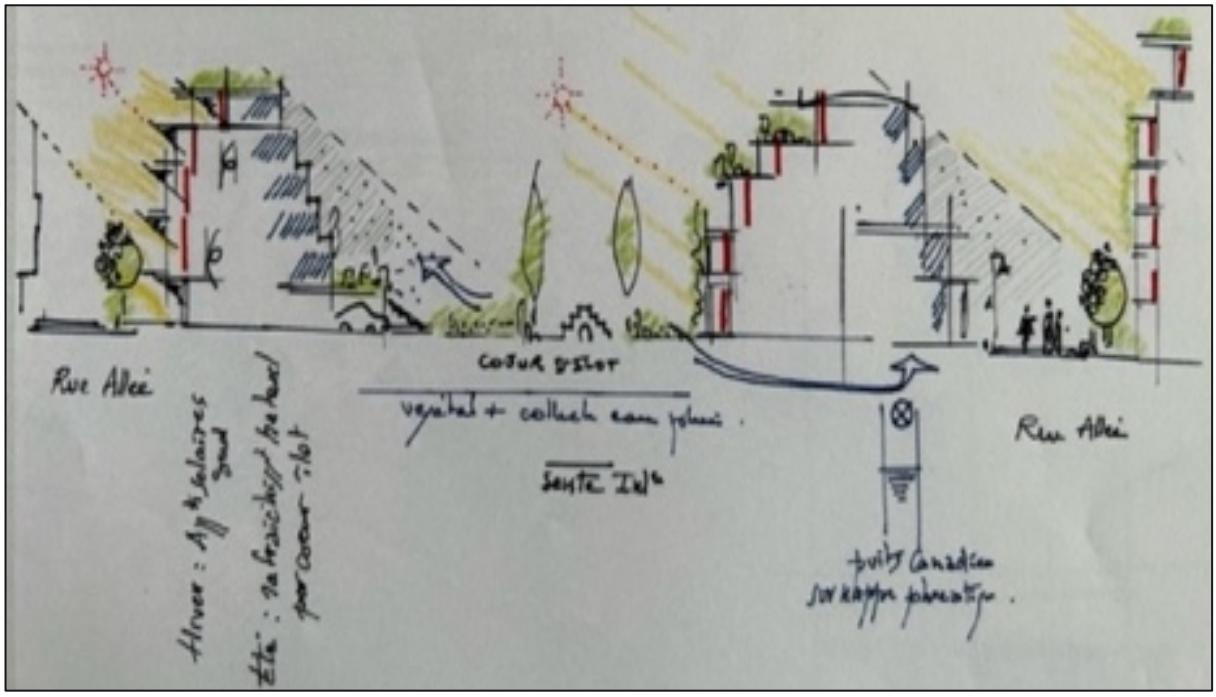
*"A period is underway to reverse the flows towards **zero carbon impact** , 0 net loss of biodiversity, 0 plastic, 0 waste, to face reality and repair the damage of the past" - E. Delannoy*

"A period that requires ***the development of protocols for a "co-evolution of living to living"*** *- B. Morizot*

"A phase where we must ***redefine the "art of inhabiting the earth" in stages*** *- Sale*

"Engage in a ***period of Rewilding Habitat, from frozen man to Man exploring-discovering diversity without permanent imprint, in symbiosis with his earthly environment and as a precaution on the cosmic infinity"*** *- M. Abensour.*

The following acts: *Extinction-Rebellion, Friends of the Earth, Greenpeace, Scientists in Rebellion, Attac, Fridays for Future, Youth for Climate...*

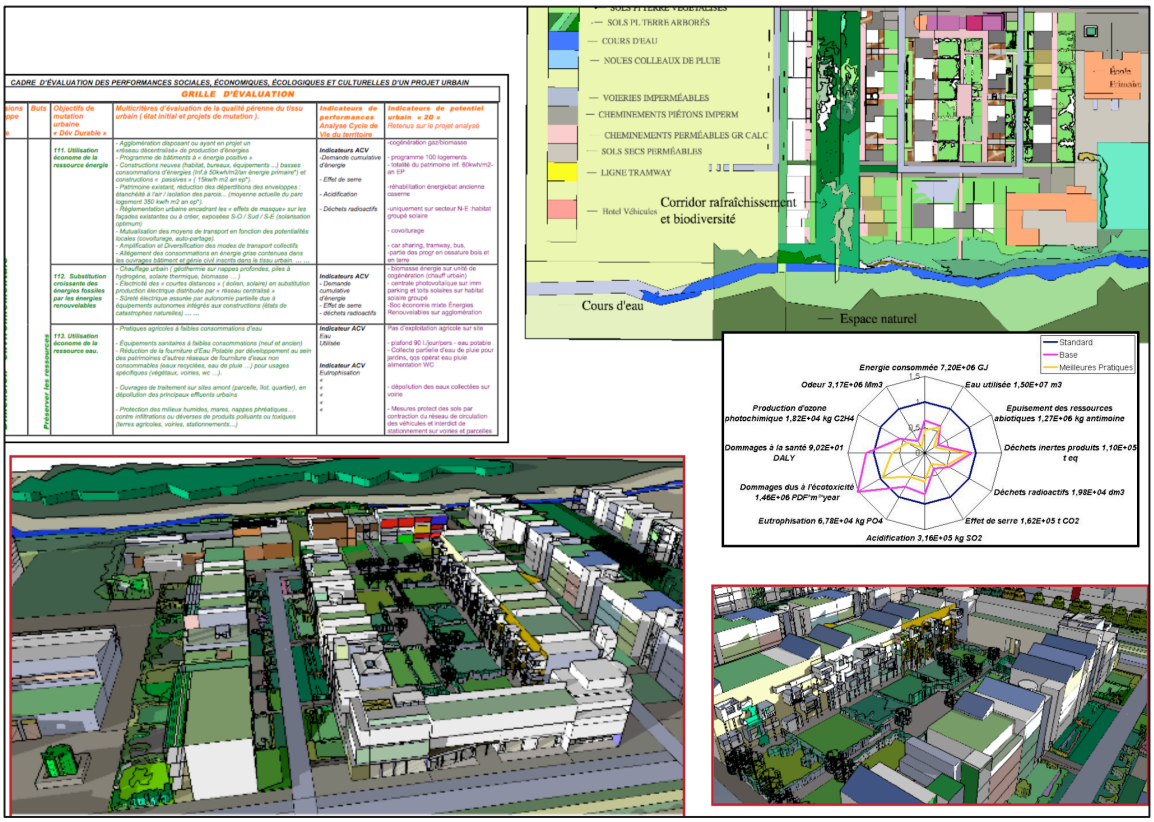






It is the **citizen "movement" at the local level: which has allowed itself to Eco and Climato-rectify the fabric of life in its neighbourhoods, and which has contributed to radically correcting the gargantuan urban machine**; which is committed to de-waterproofing the soil, to reintroducing non-motorised paths and cycle paths, to giving priority to passive and renewable energy constructions, with low consumption of water resources and fossil materials, to create and run Bio-farms, to create "biodiversity corridors" within the islands, etc.

It is **this people in conscience who "neighbour" and educate themselves**, who are able to lead to a rewriting of the agglomerated fabrics, to the point of undertaking a resection of the urban fabrics with gangrenous islands at their hearts, saturated by a renewed process of agglutinative and segregative land speculation.



Define a new mode of conversation and cohesion without domination in the exchange...
Can be translated into other concepts of life organization and "light installations": Such as these cores of vegetated islands collecting rainfall, micro-correcting the climate, to offer the reconstituted neighborhood units the domains of a peaceful and collaborative exchange and give free rein to the creation of a fabric of life in intelligence of the human with the ecosphere, and with himself.

At the current stage where the soils of Metropolis Cities, Megacities and their smaller sisters are entirely subject to the asocial initiatives of private real estate and public authorities, citizen structures at the level of neighborhoods such as Atelier Populaire Èco-Urbain (Alma-Gare-Roubaix Experiences, Murs à pêches Montreuil, and others), seem to be able to proceed with the formulation of construction and development programs on popular consultation. and to support and impose the commitment of municipal public policies on multi-year contracts for the mutation and refoundation of the Living Units (blocks and neighbourhoods), in concert with the resident communities concerned (Related approaches: IBA Emsher / Berlin-Stern / Breda / Leicester ...).

The City can de-densify, decompress, then shrink, until **it disappears in favor of living platforms: with various sails, semi-temporary installations or zero-footprint mobile bases, adapted to the bio-geophysical and systemic contexts chosen**, and give rise to forms of "Other" installations:

Offering free access to the fields of Knowledge and Design, which are not patentable
Directing food resources to local bio-potentialities;
Matching consumption with resources available in situ: energy, water and raw materials (*the concept of the village community*);
Redefining the status and forms of use of connecting roads and spaces of conviviality, discovery, and meeting of the other (*Freiburg*);
Bringing together within neighbourhood groups: housing with local services, self-managed ephemeral facilities (*Kassel*, etc.);
Creating participatory municipal budgets to develop outdoor developments according to the uses with the active participation of the neighborhood in the implementation and management *(St Brice Courcelles* – 51)
…

03-5 A biotic political economy ...

*"**Interacting with nature** is another way of being human.* – F. Madoff –

*"To feed humans to protect an environment**, we must start from a trust in the dynamics of the living, restore the autonomy of the environment rather than developing it and subject it to entropy** (permanent disorganization) which will require it to be constantly updated by human interventions*." –Fukuoka-

"Property is one of the causes of the ecological crisis, a right to exclude the names of owners from the use of the property" - B Morizot -

"Private ownership of land is a founding function of market societies."
- Karoly Polanyi -

Non-ownership

In France in 2024, 50% of inhabitants rent out their place of residence -
The **free privatization-grabbing and destruction of land** (sprawling housing estates, territorial expansion of agro-industrial business, private satellite occupation of the atmosphere) **by private financial powers** since the creation of the first regulated domain: the City (Report page 31 period of the "Obeid")
This state, which imprints human behavior, is a sophisticated pillar, refined during the last eight millennia of the "civilizing system".
It has been enunciated and partly denounced, since the development of forms of critical thought emanating from the philosophical, scientific, economic, etc. (mainly since the 18th, 19th, 20th centuries), as a contributing factor, with the limitless increase in demography over the last two centuries, to the progressive destruction of biodiversity and ecosystems expressed by the planet; and consequently to a worsening of the living conditions of humans, to the point of exceeding certain parameters that until then guaranteed the maintenance of life of the Species...

The mental conditioning associated with it is such that one could be led to forget that other forms of pose of the human almost without imprint are conceivable.
In his research work D. Liberski-Bagnoud, (***The sovereignty of the land**. An African Lesson on Inhabiting*, Paris, Seuil) echoes another reality in the Volta Basin (Burkina Faso, Ghana, Mali. Benin, Togo, Côte d'Ivoire.)
The societies of the Voltaic era have a relationship with the Earth that is entrusted and organized by "guardians of the Earth"; guarantors of its inappropriability in the service of its full sovereignty and conservation...

*"In Voltaic societies, men do not exercise any sovereignty over the Earth, but they are the subjects of the sovereignty that the Earth exercises over them - The Earth belongs to no one but itself - No higher organ commands it, it is not delegated or shared. This fiction, constructed by rites and myths, is the basis of the regime of division of the Earth**.***
A non-ephemeral sharing that is not part of the duration of a balance of power, which lasts for the duration of a human lifetime, and thus responds to a principle of equity, because it prevents any undertaking that would aim at the accumulation of portions of land, to the detriment of the rest of the community...
***"The Earth is neither a person nor a good; the Earth is the inexhaustible source of life in which all life must find its place**. And it is in this sense that it exercises its power over men...*
***"The earth appears as the instance that animates the relationship to the spaces it contains**.*

The role of the guardians of the Earth is to ensure harmony between the order of the Earth (biosphere order) and those who want to find a place in it, not only the human species.
Transposed in terms of Ecology, it is a question of Humans inserting themselves into Eco-compatibility within environments with varied dynamics and without appropriating them, for a fair exchange and learning of mutuality.

Living, an inalienable right?

Why not state that the **right to housing** is conceded to all, not in private property, but **in public ownership of the land?**
That it is accompanied by a commitment by the occupant to ensure the control of use and co-upkeep-maintenance, within the framework of this general control of the land provided by the "public" Commons on all geographical scales.

A citizen-administrator commitment that guarantees the maintenance of "neighbouring", biotic and abiotic environments, by implementing a housing offer that ensures housing for all in a framework of well-being ranging from the intimate to the common.
The concept of rental management established in the Tübingen Eco-district (cited on page 184) is one of the expressions of this, since it provides a rental housing in the co-neighbourhood, in temporality of the stays, and self-maintenance by the occupants of the adjoining spaces. It asserts itself as non-segregative, and in return testifies to a local craze.

«

A right to build under a long-term lease signed with the public authorities, the sole owner of the land, can also be a form **of gradual erasure of proprietary urban planning,** which gives way over time to new forms of spatial and material organization, evolving in biodynamics and inter-cooperation, and returning part of the formerly urbanized land to peripheral ecosystem domains, without "Banlieux".
A framework of intervention negotiated over time that allows both to reinterpret the transmutation of the Eco-Cities (Eco-Polis) in view of the general interest expressed, and consequently to intervene on the erasure of the networks: removal of imprints on the Geotope concerned.

Note: Le Foncier-Commun *– Cf. page 227 - Theme addressed on experiments in construction under emphyteutic leases. A concerted programme for self-promotion of users/mixed economy operators with a guarantee of occupancy over the life period and repayment of the investment shares of the programme's users on reduced rents (similar to a construction loan taken by the occupant and repaid during the period of occupation by the managing public operator (the latter close to the French Sa.Hlm model or public cooperative)-An operating method also implemented in Chine_*

Spaces and exchanges - The Measure of a Man

We know that during a part of human history, during the Mesopotamian Tributary Mode of Production, two compartmentalized forms of use of resources and goods were superimposed within the communities: that of cultivated foodstuffs produced by the rural community, and intended in part to maintain its labor power (the ration of life); and that of creating a long-distance trade, commodifying the surplus cereal production, and the characteristic natural resources present on the biomes of the "Territory of the Five Seas" (reeds, wood, minerals, precious materials), which are diverted by the ruling organizing elites (the unredistributed surplus value).
The external "market" negotiated between the ruling classes of the states allowed the dominant groups to adorn themselves, to distinguish themselves, with the profits derived from the labor of the community of craftsmen, farmers and various servants... And attach himself to the gods by translating it.
The eighteenth century in Europe saw the beginnings of a market of land (the subsistence base of the populations) and of the entire labour force; then the birth of Capitalism to **extend monetised exchange to all the goods, services and jobs of the world social body.**
The Anthropocene conceives of economics as an applied science that studies the means of directing and increasing human consumption of superfluous needs, by masking the irreversible degradation of the host environment.
The economy could be restorative, regenerative, circular, CO2 neutral, be compatible with the admissibility of the biosphere, generate an entropy that does not exceed the absorption capacity of the global system...

> Can we regain control of technical means as suggested by Isabelle Delannoy (Symbiotic Economy)?

Invention over the past decades is sufficiently varied, and the resulting tools can be reinterpreted for other uses, to allow oneself a pose devoted to reconsidering them on other operabilities.
For example: the 3D printing of objects, the mechanisms and shaping of built envelopes, or those in terms of design-build in the bioclimatic construction industry, which would make it possible to obtain biocompatibility with the ecosystems approached and the varied physical and climatic conditions of the sites chosen for the refoundation of the Species' living spaces.

> *Can we regain control of the forms of production and consumption "Feeding the world by repairing the earth", as* B. Vallorgue writes?
>
> *"The greatest mistake in the history of the human species is agriculture.*
> ***By reducing dietary diversity through the selection of a few species, agriculture maintains the illusory possibility of an unlimited increase in the human population that must be fed by a productivist agriculture****, by Agri-technology" - Jared Diamond -*

To date, 60% of the services provided by ecosystems are degraded – 4 vegetable calories to produce one animal calorie of chicken and 12 vegetable calories to produce one calorie of beef – 1 kg of beef consumes 15,000 liters of water and emits 20 kg of CO2 eq.
75% of the world's food production is now generated from 12 plant species. and 5 animal species.

Research carried out in botany has led to the establishment of the existence of 300,000 to 500,000 **plant species** , of which about **30,000 are edible**... This means that **the ambient biodiversity is able to provide the nutrients necessary for the multi-pole stay of human activities established in para-symbiosis on the sites and zero sustainable footprint.**

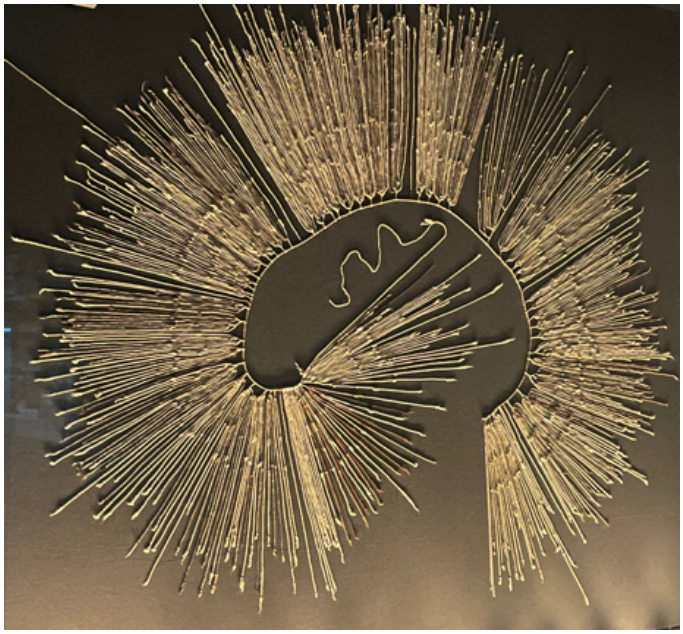
To find diversity.

In Agrobiology , forms of regenerative agriculture are already being implemented, which restore the soil (earthworms, insects, bacteria and their bacteriophages), drain them, thus replenish the water tables while maintaining the life of the soil and the humidity necessary for the plant... Diversification and rotation of cultivated plant species and an organization of alternating species in strips is practiced to curb infestation by insects and other predators.

Deep ploughing to turn the soil is ruled out. According to Bill Mollison, it is a question of diversifying species to **create autonomous agricultural ecosystems.** (Cf Permaculture)

> *"In agricultural systems that respond to symbiotic principles, it is a question of* ***developing the territory according to a design that maximizes the flows of information, energy and matter between ecosystems to make them enter into synergy.*** - ls*. Delannoy - The Symbiotic Economy*

V. HOW TO INHABIT THE EARTH... A SHARED RELATIONSHIP



"It is not the conscience of men that determines their existence,
on the contrary, it is their social existence that determines their consciousness"
- Contribution to the Critique of Political Economy - Karl Marx

About the forms and modes of human residence:
In sobriety, degrowth, biophysical co-evolution, "almost" imprintless migratio, in maintaining resource potentials and ecosystem dynamics in place, and in revising the notions of Space, Time, and Living, watered down.

Migratio**:** *Latin etymo: Passage from one place to another*
Merizo : **to share (Ancient Greek)**
Topos**: place**
Spatialization*: Refers to the process by which individuals or societies constitute a space.*
In a constructivist approach, the term implies that space is not a given, but a social construction. Spatialization presupposes an organization and qualification of the earth's space according to the perception and use that individuals have of it. - (ENS Lyon geoconfluences)
Country: The extent of countries with a real geographical, economic, human or political unity
Mesoclimate*: the climate of a specific area that is different from the normal climate of the region due to geographical specificities. Example: Leaning against the limestone buttresses, a village benefits from a mild climate network.*
- The CNRS Iconos situate the current state and make it possible to indicate the gains to be expected from a new design of the installation with almost zero footprint
In particular, the reduction of input-output flows by the establishment of Eco-poles on the basis of a prior multi-field assessment of human/natural site compatibility, by combining environmental, social and economic LCA tools on both aspects: that of the territorial eco-system in place and that of the anthropo-system envisaged.
Symbiosis - *or "living together" describes the close and lasting association of different organisms where the growth of one allows the growth of the other and vice versa. The formation of coral reefs is one of the most spectacular cases of this – Coral is made up of an Instructor-Polyp and an Algae-Feeder; an algae that knows how to capture light energy through photosynthesis and nourishes the Polyp that houses it" - Wikipedia-*
Synergy*: from the Greek synergos: To collaborate. The pooling of several actions contributing to a single effect.*
Polis *- from ancient Greek: City. Community of free and autonomous citizens, expression of a collective conscience*
Sobriety***:*** *Starting from the notion of threshold, it reveals the illusions of innovation and efficiency, lists all the renunciations to which individuals and society will have to submit, reconsiders inequality and poverty in the light of planetary boundaries, and calls for the construction of a self-liberating sobriety.*
- Bruno Villalba- Sobriety Policy
Biocenosis *: All the living beings of a biotope, of a given environment – Ecological concept linked to the notion of ecosystem, community of living beings of various origins and compositions: animal species, flora, bacteria, fungi to form a biocenosis. These organisms must share the same environment (biotope).*
Biotope: *geographically delimited living environment in which the ecological conditions (temperature, humidity, etc.) are homogeneous, well defined, and sufficient for the development of the living beings that reside there (called biocenosis, with which they form an ecosystem (Futur-sciences)*
Biome*: An extensive and homogeneous ecological environment on the surface of the globe (tropical forest, desert, etc.) essentially characterized by its climate.*
Biotic area*: All the ecosystems characteristic of a biogeographical area defined on the basis of the vegetation and animal species that predominate and are adapted to it.*
Biogeographical zone: *An area geographically delimited on the basis of its floristic and/or faunal composition, its biocenosis, the biotope, and the ecology of a habitat.*
Geo-Biotopes: a geographical area offering constant or cyclical conditions for the species constituting biocenoses, where all the physical and chemical factors of the environment remain more or less constant.
Ecotone: *A transition zone between two ecosystems, where the environmental conditions are intermediate. The concept applies to the fluctuating boundaries in space and time of many areas, often artificialized due to human activities. In landscape ecology, it corresponds to an edge*
Ecotope: A form of settlement of the Species that takes into account both an adaptation to external factors (the host biological community "Niche") and the response to community environment factors in terms of "Habitat", the spatial distribution of the Species
Civilizing*: making it more conformable to the demands of life in society – Littré –*

01 – Autonomy

About and Excerpts - **Autonomy, the society of good living and the multiplicity of worlds** - *J. Bashet*

"It is inscribed in the foundation of capitalism that **labor power is a commodity**
...**Defined as a human resource or as human capital, the person is now invited to conceive of himself as a small company, dedicated throughout his life to improving and growing his "employability**", i.e. his ability to correspond to the criteria required by the labour market, which include psychological, emotional and relational qualities.
Subjected to this regime, the whole of life appears as a patient work of production of oneself as a company, of constitution of a mode of being entirely adapted to the norms of the market. Such a

representation is a tour de force of social illusionism, it qualifies in the register of the company and capital what is nothing other than the production/reproduction of the capacity for work on which companies (the real ones) feed. At the same time, it is the expression of the commodification of people, that is to say, of their **constitution as a commodity-capacity for work**. It also testifies to the fact that work and its demands spill over into the realm of private life, so that self-awareness is increasingly shaped by logics of professional self-presentation.
From now on, it is life as **life-for-work** that **becomes a commodity**.
A kind of ***market democracy*** is taking hold: **a democracy reduced to its formal appearances by the combined pre-eminence of economic logic, the omnipotence of experts and the obsession with security.**
Imagining a post-capitalist world consists in grasping, in all its dimensions, what a society freed from the logic of value, *production-for-profit* and *work-for-survival can be. »*

"This presupposes considering **another social logic based on a principle of generalized de-specialization of tasks**, and this is the opposite of the tendency towards the division of labor that capitalism has pushed to a degree never reached before.

"Opening the way to a society of **generalized de-specialization**, **in which the spheres of activity explored by each person multiply** instead of being restricted in the name of the supposed efficiency of "specialists", implies first of all *a* ***revolution of time***, which associates transformations of practices and uses of time with subjective mutations.
Considerable parts of the industrial apparatus (weapons and military equipment) would be abandoned: **peasant agriculture would render a large part of the chemical industry obsolete; the agri-food sector (an example of perverse commodification) would disappear in favor of a valorization of self-production and local production/consumption circuits; the construction and development sector would develop on technologies freed from the overconsumption of reinforced concrete and metals to enhance the resource offered by bio-sourced materials and the reuse of deconstruction materials, etc. »**

"... The post-capitalist society is above all a society of available time.
In the capitalist world**, "free time" is only the reverse of work**, **its indispensable complement dedicated to consumption, when it is not vampirized by the production of self-employability** or given over to the desperate emptiness to which unemployment condemns... **In capitalist society, the available time is not a leftover: it is the essential**.

"The abolition of wage labour restores the unity of human doing.
It cancels the dissociation between doing and making decisions related to it, and gives back to those who control their activity.
The age of doing and of the time available allows for a generalized de-specialization, which opens up to everyone the possibility of experimenting with multiple fields of activity and faculties (which, moreover, makes it possible to carry out many tasks oneself that would previously require recourse to the work of others and to market consumption.
"Quantified time, dominated by the obsession with efficiency, is opposed to a time of availability, open to all the ramifications of exchange, to all the branches of possible becomings.
If we admit that a human being is constituted by interpersonal ties that gradually weave his existence and make it possible, it is not forbidden to think that a society based on cooperation between equals and on self-government makes it possible to **sweep away the illusion of a selfish and anti-social human nature**, and to **renounce the place of man apart from nature**. overlooking it. »

"The break between nature and culture, between the animal part and the rational part, is not universal, it is a question of **modifying our conception of the relationship between the human and the non-human**.
It is the responsibility of the human species to avoid this devastation and to recreate the conditions for the preservation of the biosphere, but this implies getting rid of the separation between nature and culture and discarding the human/animal duality, in order to **conceive of the human species as an integral part of a network of complementarities and interactions that goes beyond it. »**

"Man cannot control the ecological conditions of his own life.
The commodified production of nature plays on the fantasy in this regard to give credence to the work of the planetary devastation that this induces. Humans are therefore called to an **awareness of proportionality**: "*their own place depends on the place they give to others".*

« … It is necessary to undo the hold of the idol of work in us, by becoming aware of the heteronomous nature of work and its constraints, by minimizing the benefits of the recognition it is supposed to bring, by breaking at least partially the trap that pushes consumption in order to better subject to the obligation to work. Breaking out of this circle

suggests consuming less in order to work less, and this in order to live better, in greater temporal relaxation.
Recreating spaces for cooperation at the level of the neighbourhood, the village or the neighbourhood is a way of amplifying the power of Doing, outside the circuits of the economy, and of **developing forms of experience based on mutual knowledge, gratuitousness, trust, solidarity, and the ability to solve problems collectively. A recovery of the collective meaning. »**
"We must implement a greater capacity for collective action, without this implying going through centrality, in order to **privilege the networking - in resonance - of collectives as well as the detailed convergence of groups and individuals** with a view to specific struggles**.**
In all imaginable forms, work to encourage the "autonomous irruption of those from below", so that a rapid process of self-consciousness and intensification of cooperative capacities can be initiated that opens up possibilities. »

02 - Substances - Devices - Subjects - Escape

*"It is **the Oikonomia of devices**, **which tries to govern man and guide him towards well-being.***
*"I call a '**device**' anything that has in one way or another the capacity to capture, orient, determine, intercept, model, control and ensure the gestures, conducts, opinions, and discourses of living beings.*
Not only prisons, schools, confessions, factories, asylums, disciples; but also style, writing, literature, philosophy, agriculture, cigarettes, navigation, computers, mobile phones, and why not language?
*There are therefore two classes: living beings "**Substances**", and living beings "**Devices**". Between the two, as a third, the "**Subjects**".*
*I call the **subject** that which results from the relation, and so to speak, the object of the hand-to-hand combat **between the** living and the devices. Those that cause **schizophrenia**.*
*The apparatus is above all a machine that produces subjectivations and that is why **it is** also **a machine of government.***
***"The devices must produce the subject**.", without this shadow theatre the insane would throw off his chains. -*
- Giorgio Agamben -

It is the Economic-Financial system, through the devices it installs, that tends to overwhelm the Human Species to obtain a bionic material of dis-intelligence (a theme addressed and in the process of being concretized in the AI (Artificial Intelligence) commodity).
Obviously, our argument is based on a contrary field by considering that the necessary break with Oikonomia, the product-consumer system, involves the initiation of a process of fracturing the homogenizing and petrifying model of the Society-World by exercice.et the disengagement from the **imposed subject** that restricts, that drives the mind

For Giorgio Agamben , reconstruction, in biospheric evolution-compatibility on other forms of human arrangement, is capable of generating forms of extraction of **"devices" (** *Oikonomia*), through the development of self-directed, collaborative, interconnected groups of solidary life, capable of multiplying initiatives to get out of the schizophrenic model.

03 - He knows how to be, and how to do

Today, humans have the means and knowledge that allow them to express themselves, to communicate individually and collectively, and to reinvent themselves.
It is able, through direct investigation and analysis of operative phenomena, to move away from the terrain of disinformation, from the fear of the other, to put into perspective this long reign of possession, power, predation, exploitation and to assess the stakes for the future.
At the same time, he discovered that the "Civilizations of Certainty" are at an impasse that pushes us to urgently outline ways of life in interrelations and autonomy, on non-predatory and non-destructive forms of organization and installation of the planet's biogeographical areas.
This is what we have tried to testify to earlier.

This Human today still knows how **to be itinerant, sedentary, explorer...**

He knows how to unite with his fellow human beings and share his knowledge and his pleasures.
It knows how to adapt to diverse organic environments without decimating them.
He knows how to live in a sober and peaceful way in bio-geo-sourced constructions that he shapes.
He knows how to live without depleting resources (water, energy, soil, etc.), to feed himself.
He knows how to explore planetary and sidereal space, in part.

He knows how to speak in simultaneous translation in all languages, between all places on the planet.
It knows how to move on the ground, on the water, in the water, in the air and beyond.
It knows how to treat itself and even extend its lifespan.
He knows how to analyze, synthesize, philosophize.
He knows how to analyze and invent
…

The commitment to the gradual decrease of the ecological footprint, the demographic footprint and the production-consumption potential in action leads de facto to a revolution in the forms of exchange and control over the entire planetary soil, it opens up to the progressive regeneration of the biodiverse and ecosystem worlds, through a reformalization of the mode of settlement of the human community to achieve an ecological footprint of "1".
To date, cases of spatial, ecological and social formalization, inspired by the alternative field opened over the last 40 years (*Example of Culemborg cited ...*), testify to a feasibility that is able to evolve in the long term towards the creation of Bio-Clusters in compatibility with native ecosystems.

We know, apart from accumulative and destructive economic dynamics, how to **develop** projects aimed at the union of States, of Peoples, in world bodies, even if the first attempts were only imperfectly successful (Creation of the United Nations, following the Second World War).
In other fields of action, we know how to found and develop inter-acting scientific communities, or expert groups on the climate mobilizing global interdisciplinary knowledge. In the same way, we know how to develop and multiply Non-Governmental Organizations and Wikis, through support in solidarity citizen funding, etc.

In summary, we can also:
"Becoming aware of our capacity to act" (L. Bantigny)
To detach ourselves from the lucrative commercial planetary circuits to develop local circuits that create autonomy and collaboration and forge the useful and necessary;
Consume less to work less;
To get rid of the grip of work in order to exist;
Exchange services at different territorial levels;
Participate in tasks of collective interest that break with the value of money and increasing work;
Undertake collegially, collaborate and create;
Design spaces for cooperation at the neighbourhood level;
To speak to us in every way about the spherical planet;
The intermediate times, thanks to the fabulous resource provided by the Internet network for the digital transmission of knowledge and words, beyond the messages carried by protests, demonstrations and struggles on the ground, make it possible to carry out an accentuated evolution of morals and thought through direct exchange.

This tool (Internet) has the capacity to be *"the **cornerstone of a new model of exchange system within the Earthly Life, offering the possibility of establishing itself in compatibility with the fundamental interactions of the universe**"* - PB Préciado -

But the current rush of the world's financial power to equip itself with several swarms of private satellite families (satellites in geo-stationary orbit), placing the "Gafas" in constellations on the atmospheric layer, consists without hiding it in burying the inter-state public network under the guise of a self-proclaimed "neo-freedom of enterprise".
The challenge undertaken by private trusts consists, in view of the declarations of its leaders, in continuing the phase of cognitive invasion until the complete capture of the freedom of thought for the Human Whole. The supreme Libertarian suicide?
Can we destroy this ultimate enterprise of predation of the human brain, which would lead, according to these instigators, to obtaining an artificial super-intelligence that can be exported to the interstellar world, is this not the Bastille of the twenty-first century to be destroyed as a priority?

04 - How to Inhabit the Earth? It's always a question...

A look back at the historical long term, and ancient China:
Lao-Tzu (571 BC) may have been the first to leave us a lesson on how to inhabit the Earth, without breaking with non-human environments.
As for the doctrine of Confucius, the second pillar of Far Eastern philosophy, it is of a different order, since it is centered on the organization and management of a society established on a Modes of Production and Exchange of goods.

The contradiction between the two approaches did not prevent Chinese thought from forcing synthesis by establishing precepts on the foundation of the city and its surroundings
In fact, the approach that we call bioclimatic, **inspired by Lao-Tzu**, **presides over the foundation of the "City" body by analyzing the site of pose** in its phenomenology, its resources, the ecosystems in place, from the angle of time, to learn from it on the balance to be found between the presence of humans in activity and the preservation of the Geosystem at a distance to situate its position.
The oldest versions of **Feng Shui** in terms of the establishment of living spaces, transcribe the teachings of Lao Tzu on the physical, climatic, hydrological balances to be analyzed to determine the location of a City and allow it to endure.

Confucian inspiration, on the other hand**, is only exercised within the built space and institutes urban rules**: Regrouping and organization of the labor force and production tools, protection of goods produced and exchanged, spatialization of roles between actors...





The Chinese powers that founded the City brought together the two contradictory approaches by placing that of the first philosopher as a manual of territorial integration, and that of the second in the intramural organization of the City.

For Lao Tzu, the conditionality in terms of the establishment of a living site: that of the City, is based on:

The proximity of a drinking water resource and permanent supply. (surface or underground)
Exposure to prevailing winds to fight epidemics.
The solarization of the installation area in all four seasons contributes to the sanitation of the City
The Cité leans against an earthen embankment on the southern front: hill, emerging mound, natural reliefs to protect against the cold winds of the North. In Beijing, the "Forbidden City", the residence of the Emperors, is backed by an artificial hill).
The northern facies of the support, hills and other reliefs, placed in free evolution (woods, forests, etc.), which suggests that the preserved biotic area was perceived as a guarantee of the stability of the microclimate;
The creation of a reservoir fed by the nearby white water source and seasonal rainfall. The water reservoir is sometimes built upstream of the city and positioned under the prevailing winds
The peripheries of the City: assigned to food crops, on a specific right-of-way, by cultivating in strips and differentiated plants to hinder insect attacks. (A technique still visible in some campaigns).

The Confucian intramural part **is rigorous** : the built territory is enclosed by a defensive wall. It is gridded into closed quarters at night and distributed by two central axes north-south and east-west, sometimes equipped in their centre with channels fed by the waters of the nearby river (identical to the centre of Freiburg). Access is through four gates North, South, East and West.
In the central part is placed the "Clock Tower" which marks the temporality of existences.

The density of the fabric on the orthogonal plan led to the adoption of an alignment with an alley and a housing plan centred on a courtyard collecting rainwater and light. The rooms around the garden courtyard are in mono-orientation.
A striking difference with the plan of the Mesopotamian City, and later of the Western City, is that of the position of the pole of governance (Mandarinate) located at the eccentricity of the City.

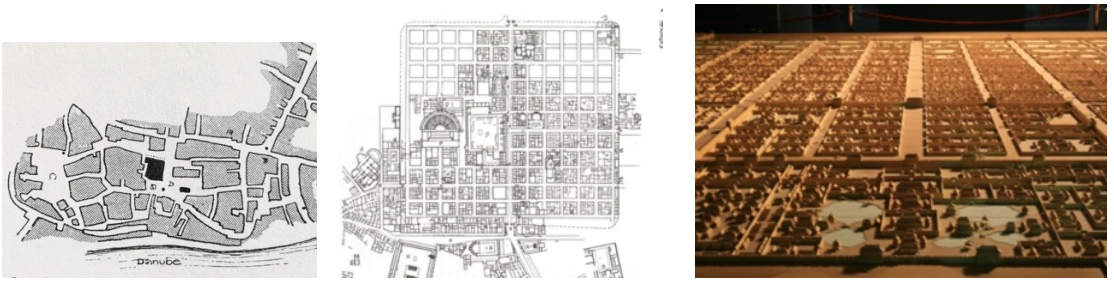
Chinese thought teaches that human existence manifests itself only through activity; The city was therefore a place of expression for the labour force, it evolved in its form of reception of the ruling elites.

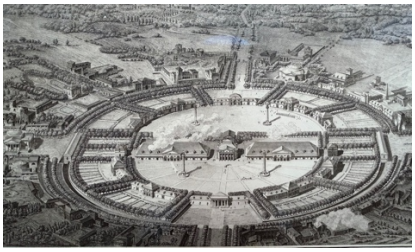


The iconography above reflects an application of **Feng Shui** to the evolution of the City.
In this line of thought, we can grasp the stages of transformation of the site, from its foundation at the time of the "Han" dynasty to a contemporary period, represented here in the center of the sketch.
The Taoist city according to the precepts is buttressed on the hill placed to the north, it is fed by a river on its west face, under the prevailing winds, and solarized at all hours of the day and seasons.
The Confucian marking criss-crosses the fortified city set by its nourishing agricultural estate.

The third illustration bears a second stage of evolution, which is supposed to be contemporary, it marks the evolution of the social relations of production and the appearance of the middle class placed in intercommunication on an infrastructured peripheral stratum, with access to other scales and territorial functions.

The domination thus exercised over humans and other forms of life will not cease to grow over time on all continents, and will be expressed by the expansion of land artificialization and densification on an orthogonal, three-dimensional grid of the city, all conceivable registers of enslavement of the "mass" human into enslaved human.






The current Eco-Alternative approach differs from the above approach. It requires strata with increasing degrees of ecosystem compatibility between the natural biogeophysical domain and the area of activity (constraints and resources).
In this respect, it took several millennia of productive madness to realize that human influence is not designed to be sustainable.

05 – Heterotopic spaces, for educated and inventive sharing

About ... source & Excerpts - Henri. Lefebvre "The Right to the City"

"... From the beginning, **cities were born from the geographical and social concentration of a surplus product**. **The city is the main site for the production of surplus value**.
… The effectiveness of political protests is often measured by their ability to disrupt the urban economy.
We can consider that the Paris Commune was both an urban social movement determined to reconquer citizenship rights, and also a class struggle over a concentrated space... The Commune can be considered as a moment of struggle of the city's actors, that of a population in the process of **regaining the right to own and control the fruit and the form of its precarious production.**
"... The politics of capitalism are affected by the constant need to find suitable grounds for the development of production and the **absorption of a surplus of capital**.
Any alternative to the economic-political model of capital accumulation must **abolish the power that the law of value exercises over the regulation of the market.** This requires the abolition of the process of domination of man by man introduced by the principle of perpetual expansion of production linked to the realization of surplus value.
Unequal exchange exerts destructive pressure on social and cultural relations and consequently on global ecosystems. »

The task is to try to create an educated and inventive space for living and sharing, which requires the creation of **a solid citizen movement committed to transforming daily urban life before moving towards emancipated modes of stay, in osmosis with natural balances.**
Reinventing our installation cannot be done without the exercise of collective power over the processes of deurbanization and deconfinement.

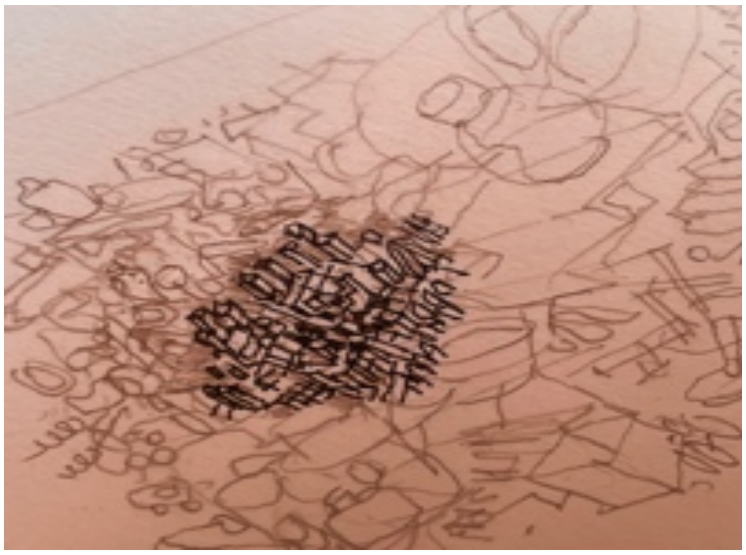
There are many practices in urban areas that offer alternatives. When people feel, perceive, express and seek to give meaning to their lives, they create heterotopic spaces**.**

06 - The Urban: a product of productivist societies intended for to civilize the living "around"

- Civilize: To make it more conformable to the demands of life in society. – Cf. Littré –

*"The city of **Léonie** remakes itself every day.*
Every morning, the population wakes up in fresh sheets, they wash themselves with brand new soaps, just out of their envelopes. She puts on brand new bathrobes, she takes from the most advanced refrigerator jars of unopened milk listening to the latest tunes with a latest model radio.
On the sidewalks, enclosed in clean plastic bags, the remains of the Léonie of the day before are waiting for the cleaning car. Not only flattened toothpaste tubes, dead light bulbs, newspapers, packaging, packaging materials, but also folders, encyclopedias, pianos, porcelain sets.

Rather than the things that are made, put up for sale and bought every day; Léonie's opulence is measured by those which, every day, are discarded to make way for new ones. To the point that one wonders if Léonie's true passion is really as they say, the pleasure of new and different things, or if it is not rather expulsion, estrangement, separation from a recurring impurity.



.... The higher the altitude, the greater the danger of landslides. All it takes is for a jug of milk, an old tire, a flask to roll on Léonie's side.... And an avalanche of mismatched shoes, calendars from years gone by, dried flowers will submerge the city, under its own past that it tried in vain to push back, mixed with that of the neighboring cities finally cleansed.
A cataclysm will level the sordid mountain range, erase all traces of the metropolis constantly dressed in new clothes.
Already, cities are ready in the neighborhood with their steamrollers, to level the ground, to extend over the new territory, to enlarge on themselves, to throw new garbage farther away. »
- Italo Calvino. p 141 "The Invisible Cities" -

Cities currently occupy 2% of the planet's surface, accounting for 50% of the population and 70% of global greenhouse gas emissions.

The expansive urban, from the first Village, then the Town, and the Platform City, is transformed according to the nature and forms given to the social relations of production instituted as rules of life by successive financial societies.
The evolution over time of the mechanisms is accompanied by the reorganization of the fabrics and forms of segregation, classification and control of individuals and groups, to the point of penetrating the intimacy of the masses to perfect their subordination to elusive financial interests.

The urban of the productivist world is not regenerable as it is

The experiences of Hanover, Berlin, Leicester, Tübingen-schafbruhl, Emsher-Ruhr (already presented), teach us that urban **subtraction operations, carried out by the public sphere** on agglutinated built bodies and overloaded, sterile, impermeable, polluted soils, in the city center or on the outskirts: require the close and active participation of local actors, of all incomes and occupation statuses.
These experiments teach us that in these participatory (non-fantasized) modes of operation, which aim not at a renovation but at a resection of the tissues, to lighten the footprint of cities on the bio-territory, the Human being is at the center of the initiative - As a direct actor and maker of a future in the recomposition of martyred biospheric relationships - and that these initiatives at the neighborhood level have an impact on **the greatest number of people** and participate in the expansion of the social and ecological alternative.

We know that in the context of similar operations, populations adhere to change, when public action is responsible for maintaining an inter-partnership, supporting the exchange of knowledge between users and operators (administrators, designers, then housing providers).
In the resettlement phases (rehabilitation or novation of social housing operations), which may include "ready-to-finish" at the expense of the recipient or be designed as a "free plan", it can be seen that associative bodies are created to accompany the operations, participating in the co-management of outdoor spaces, or in the development of local services within blocks and neighbourhoods, and gradually re-establish links between housing organizations, residents and municipalities.

07 - Young ecosystems are being developed.

"Young ecosystems produce few services; Busy building their structures, they create a lot of biomass and weave few networks. As their structures become more mature ***, the networks become more complex, their roots connect via a huge and dense network of micellar information that makes the soil a form of gigantic invisible tissue.*** *Information, nutrients, chemical and even nervous signals circulate there. In the air, chemical signals are also exchanged: leaves, fruits, flowers, everything participates.*
"In these more mature structures, wildlife comes to settle. It provides locomotion that plants do not have and contributes to the enrichment of the network. Pollens, seeds, nutrients travel through them and ***connect ecosystems to the planetary level. Information circulates extremely abundantly, and ecosystems then find their best capacity to adapt to change****,* ***to solve their problems by increasing the exchange of information.*** *It is at this 3rd stage that their level of service is the highest. »*
*If there is evidence in humans of a phenomenon akin to this third stage of ecosystem growth****; it is not to be found in the infrastructures, elevations, excavations*** *that its installation generates, accompanying an independent expansion.*
"This tool of dissemination and interrelation is provided by all "Scales": "the public Internet" *combined with digital technology****. A tool that makes it possible to address, with the entire species at a scale of data that has been discarded until now, the terms of its compatibility to maintain exchanges, to pool reciprocal achievements with the ecosystem world.*** - Isabelle*. Davis–*



The global computer network "Internet" and its spider's web "Web ", **in its current state, ensure the permanence of a mass exchange in spontaneous expression, in intimacy or in distant assemblies; in exchange of past and current data; on all fields of human knowledge.**
The network is accessible by mobile and portable reception and transmission devices, the size of a clothing pocket.
On the condition that a global computer network with guaranteed, public, free and protected use is maintained on a global scale: It is then possible to **conceive of a mass escape** from **urban concentrations** and **a recomposition of human groups on itinerant forms of mobility between biosystemic poles of various sizes, installed and designed to lighten the ecological footprint of selected biophysical environments.**

Is it not already the seeding of this approach that is expressed in the Northern European experiences cited, at the scales of the refounded or created neighbourhoods - although within the imposed framework of private ownership of land - but perceptible more clearly in the initiatives developed by the public sphere, in terms of the development of neighbourhoods and blocks and collective rental constructions?
The excerpt quoted from Isabelle Delannoy highlights **the stages of eco-systemic evolution, to highlight the missing step in the process of human evolution, and to attribute it to the brake on the exchange of information, which prevents obtaining the highest level of service to clarify the path to be taken in co-evolution, without losing its specific dynamics.**

The new form of interrelation in the moment on the whole Earth brings together the means of learning, of debating, of collaborating, of peddling, of shaping, of disseminating, by taking the path of diminishing sobriety, to abandon the holding of miserable roles on the Net, for lack of being understood.
It is thus able to support the use of emancipation, escape, autonomy as a baggage, and to bring out societal alternatives in human-biodiverse forms that lead to the use of the "Commons in open-source, interrelated", to make our biospheric compatibility.
A hypothetical path of course, but allowed by the approach not of a phase of resilience of the model but of a phase that imposes its abandonment for the resumption of the misappropriated human achievements, patented for the purpose of constraining him, while the evasive versions are available.

In terms of **alternative human activities**, there are "incubators", "incubators", "hacker houses" and many others, up to the "start-ups" of the digital economy, neither commercial nor state, although under the partial constraints of a business society.
All these marginal initiatives testify to a **renewed desire to express human need, to choose oneself, to join forces to act in correction of phenomena, in the critique of systems, in the mobility of thought and in action to create new synergies with the ecosystem field autonomously**.
Autonomy **opens up to the meeting of the collegial human** in search of equitable forms of inter-exchange, collaborating at all cultural and spatial scales, and
plunging into the endless discovery of a Living in transformation.

This **process is related** to the one described in Isabelle Delannoy's quote about the evolution of the ecosystems of the Earth model:
"In these more mature structures, wildlife comes to settle. It provides locomotion that plants do not have and contributes to the enrichment of the network. Pollens, seeds, nutrients travel through it and ***connect ecosystems to the planetary level.*** *Information circulates extremely abundantly,* ***ecosystems f***

then their better ability to adapt to change, to solve their problems by increasing the exchange of information*. It is at this stage that their level of service is the highest* ***."***
Are we not looking for the path of ecosystem synergy to reintegrate biospheric dynamics?



Opening the doors, leaving the city, abandoning a sedentary lifestyle, increasing exchanges, changing scale, changing history...
Breaking up a space of confinement that is constantly tending towards battery farming to curb citizens' aspirations to escape or revolt is to "**make neighbours**" with this desire to learn, to analyse, to experiment, to exchange on a daily basis: within a system managed in common, co-developed on planetary circuits.
On a small scale, allotments and shared gardens are spaces of this kind where the applied knowledge of each person mutated into All-Ones is exchanged in situ with pleasure.

The metabolism of proximity, which aims to reduce the flows exchanged in terms of services, the economy, agricultural production, etc., proceeds from the **same** impulse, that of bringing together the conditions of manufacture, cultivation, breeding, manufacturing-repair, and a desired and chosen relational sphere.
The centres of life to be created must be inspired by this desire to "make neighbours"

- Metabolism is said to be ***circular*** *when incoming and outgoing flows manage to circulate essentially within the same territorial system - "Confluences" sources -*

Is the option of a human residence compatible with ecosystem environments, while guaranteeing the maintenance of biodiversity, impossible ?
Our "toolboxes" are full of solutions, forms of applications for:
- Stay in **"almost footprint-free" co-evolution** mode;
- **Suppress ecocidal processes** developed under the guise of civilizing action;
- To practice **non-segregation and non-domination over the human and extra-human living beings.**
  human;
- **Readjust to the objective conditions of biodiversity evolution** , through the strict respect for the physico-chemical dynamics in force "Urbi et Orbi";
- To develop an **interrelationship and intelligence with the worlds of the global Living World;**
- Couple **human activities with the various dynamics of evolution** developed by ecosystems within biogeographic entities;
- Have local renewable energies in **autonomy** of use (decentralised network);

- To create direct links and cooperation between the actors within the multi-scalar network of information networks and non-proprietary knowledge. From geospheric space to micro-local;
- **Integrate collaborative production-consumption** within the established living centres where **everyone is supplier, buyer and user**;
- To create unrestricted access for all humans to the knowledge and means acquired by their allowing them to live in **physical, intellectual and material well-being;**

…

! ! ! Surprisingly, these routes have all already been tested or experimented with

08 - Times of Metamorphosis – Initiatives and Ethopolitics

"Ethopolitics": "*Space of possible relations between humans and other living beings, which are neither the politics of the moderns, nor natural relations. A space of relationships to be explored, imagined, rediscovered, invented to make the world liveable" - B. Morizot – "the unexplored"*
Ethos*: from the ancient Greek ethos: manners*
Ecotone. *Transition zone between 2 ecosystems where the environmental conditions are intermediate. The passage from the savannah to the forest or the passage from a plain to...*
Ecotope*: The term refers to the full range of adaptations of the species to external factors belonging to the niche and habitat.*
The ecotope is the integration of the ecological niche into the habitat since it represents a positive response. Characterizing the vitality of the population to the abiotic and biotic variables of a population's environment.
The term niche applies to the role of the species in a biological community.
The term habitat refers to the species' response to community environment factors. This is reflected in its spatial distribution. (Wikipedia)
Bio-terroir *– Country, Country – A place defined by its forms of life, its topographies, its Biota, rather than by its human imprint, a human conquest. A place governed by nature, the cooperation of living humans and non-humans*
Territory*: A territory is a body of land occupied by a human group, which depends on an authority, such as a state, province, city, jurisdiction, local authorities, etc.*
Mutual: *From the Latin mutus: reciprocal, exchanged.....*

°°°°°°°°°°°

"What sets us apart from other species is the collective use we make of our Cortex. The cortex takes its orders from the striatum, ***it is a question of bringing our striatum*** *to* ***see things from a new angle, creating a new contagious social norm leading to sobriety and respecting the global challenges of the planet.... By*** *appealing to the unique capacity of the human being:* ***Consciousness.***
"A major challenge for the future of our species is to ***bring our level of consciousness to a level comparable to our level of intelligence****.*
Intelligence develops solutions, generates calculations, implements objectives and programs; ***But*** *it can do so very well without consciousness intervening at any stage of the process.* - Sébastien Bohler *– the human bug –*

"Who produces the habitability of the world?
Plants, phytoplankton, bacteria, earthworms and soil fauna, pollinators, communities of living beings, healthy ecosystems, extremophile bacteria to ensure the water cycle. - B. Morizot -

" Nature is not just a stock of resources
Neither techniques nor men can replace photosynthesis. – D. Bourg

The city - "Where the soil has become ugly and where all poetry has disappeared from language, generations are extinguished, minds are impoverished, the road, routine and servility take hold of souls and dispose them to torpor and death." - É. Reclus.

The current attempt to capture the human cognitive initiated by the world's financial power under the guise of the future conquest of interstellar space, concomitantly with the sustained disruption of the Greenhouse Effect, is a passage to the Inhuman.
Shouldn't it convince us of the urgency of freeing ourselves from the societal rules of supervision, surveillance, tranquillization, soon to be summarized in "Intelligence Artifice".
It is a dream of the fascist regimes to obtain the unconsciousness of the masses.

Humans do not have a Territory.

The notion of property transgresses the fundamental rules of operation of biospheric and celestial mechanics. From this mode of appropriation-production-exploitation, chosen and reproduced for millennia, the human must get rid of and replace it: **Sobriety, Degrowth and a collaborative Common...**
As we know how to do, the indigenous peoples remind us, it is a question of halting the demographic explosion and other consequences of the infernal game maintained by a world-finance playing Dante's "Inferno", and simultaneously of initiating the abandonment of the devastated lands and the Cities of barracking and storage of the inhuman, to reintegrate the framework of a biospheric evolution, after having left the "Unequal Exchange", and restored the innumerable forms of ecosystem integration that are suitable for a reasoned evolution with infinite resources.
... There would then no longer be **"Territories",** in the etymological sense of the term**, nor "urbanization"** but a reasoned evolution: in consciousness, sobriety, diversity, biospheric compatibility, in imprint compatible with the free evolution of all environments (Bios and abiotic), in stays or itineraries with erasable imprint and restitution in free-evolution of environments (Bios and abiotic), in foundation and organization of collaborative commons, in fair exchanges without predation, in interrelation at all scales of public networks of connection.

Decivilize, deprivatize, disoccupy, definancialize exchanges.

Times of metamorphosis would strive to free the Human from his infirmities: villages that have become subdivided reserves, cities of accumulation-annexation-degradation-disconnection, artificialized land and harmful crops, etc.; to allow him to acquire an autonomy of thought leading to the **establishment of equitable modes of inter-exchange with the actors-authors of biosphere life**.

After the Age of Enlightenment, and the disappointed times of hope, a post-Darwinian revolution seems to be taking shape. A part of the human consciousness, driven by a sudden doubt about the potential for survival of the Species in the biosphere, and about the acquired certainty of its inability to colonize the hyper-universe (a departure from the road), must convince itself to find a follow-up in the Holocene on the aspect of an Earth eco-compatibility. :
To develop an **Etho-politics of the Living,** as Baptiste Morizot raises in the book "Unexplored"?

09 - After the multi-millennial Sapiens... The passage of artifice, of the sterile, of the segregative, to a biodiverse human settlement, in co-evolution

The following evocation relates Northern European experiments carried out on the fabric of blocks and neighbourhoods over the last 30 years, but hindered, in their attempts to extend them to the overall urban system, by the fact of going against the tide of the economic and ideological logics of accumulation, supported by the state powers.
There are no utopias or mirages, this description is found in the previous pages which deal with the real changes that have taken place since the 1980s-1990s and the following years. They did it!
(See Chapter: III.5 / 05.3)

The Eco-pole

Supported by a citizens' assembly, co-manager of the neighbourhoods, it adopts passive and bioclimatic concepts and develops a frugal conception of its forms of installation and consumption patterns, to gradually achieve eco-compatibility with its installation area.

It operates in three domains of space and relationships articulated between them:

That of the "Ecopoles **- Districts**", co-managed, which develop the forms and natures of built structures and outdoor spaces under various eco-concepts: shared leisure spaces; peaceful travel routes (pedestrians, public transport, cycles); permaculture areas in initiation and food bio-production; biodiversity corridors linked to surrounding areas of accentuated biodiversity...

That of the "Écopôles **- Îlot**", self-managed by Neighbourhood collectives, in charge of:
To define the needs expressed over time by the resident population in terms of shared spaces, to lead the operators in partnership, to participate in the maintenance on the daily spaces,
To develop in situ economic activities in the form of Cooperatives or Multi-Service Associations - bicycle repair, coworking hubs, carpooling, sites for the exchange of tools or vehicle loans between neighbours, creation of convivial spaces, street animation, etc. (approaches cited, in Hanover-Kronsberg, Freiburg, Tübingen... Cf. page 175).

That of the space of exchange between the neighbouring native ecosystems and the places where the populations settle: made up of various forms of human-fauna-flora intermediation placed in the vicinity of the islands of life (the heart of vegetated blocks), such as "biodiversity corridors" or peaceful spaces for walking and observation.

It is **a Fabric** where infrastructures are developed for awareness, public initiation to the environment and associated technologies, and food bio-production:

- Educational Bio-Farms, in a Permaculture mode, combining market gardening and arboriculture;
- Solar farms combined with suitable crops on the ground, as well as wind farms operating in a grid on a model combining the capture of renewable energies and their conversion-storage-redistribution;
- Rainwater collection ponds, collected on the floors and roofs of the living centres and maintained in phyto-purification (watering, swimming, etc.) ;
- Wastewater and black water processing units based on the model of green technologies, without nuisances, using reaction-fermentation and phyto-purification greenhouse treatment processes, such as "Terra Prêta Technologie", "Living-Machine" and similar.

The Ecopole is a stage in the transformation of the City towards a **human biotope** made up of buffer spaces "forest chambers", forming the limiting domain of the human ecological footprint, before approaching over time the search for forms of interdependence with the surrounding biodiverse environment, inventing an inter-species relationship without domination.

A reformulation of modes of residence in ecotopic dissemination

*"It is the '**Commons' that allow us to unite as a cultural entity.***
*It is the rise of social commons motivated by collaborative interests and the desire for sharing and relationship, that is giving rise **to open-source innovation**, pushing for transparency and the search for **synergies**: an ideal technological framework to promote the social economy, universal access, values to maintain and create the social capital of **civil** society… If the current system favors autonomous self-interest in the capitalist market, the new kid on the block would favor the **in-depth collaboration of the networked "commons" within an open public domain**.*
Culture could be recreated by everyone in this new public domain
- "The New Zero Marginal Cost Society" (2018) J. Rifkin

Because of their small population size and densities, the "Medium-sized Cities of the Country" seem more likely to be able to undergo a change in the resection of their soils, because of their scale (about 100,000 inhabitants) and the colonizing peripheral fabrics that they seem to be able to absorb. Some regional sites are signalled by a commitment to a more global Eco-mutation of the relationship between the City and the natural spaces of the biogeographical area to which it belongs, and could eventually show an ability to develop a "constellation" network of Micro and Meso-Ecopoles with a low environmental footprint or even sequenced mobility.
Like the step taken in the city and territory of Hanover, consisting of rethinking an ecological, social and frugal installation of the human, both in the city and on its margins of village-suburbs, in a rewoven whole.

The "ancient city" entity thus evolves on a new weaving, in various forms of mediation and multi-community interrelation, within networks of various scales (from micro-local to planetary).
It then reasons in the Assembly system, on the path that associates: "fair exchange"; ecosystem weaving; the resourcing of multi-culturality at the multi-scales of the Living Planet; and geotopic immersion.
The process involves the disappropriation of parts of the land covered by urban and peri-urban areas, and the abandonment of the sterile land produced by the agro-industrial model, to let the natural regenerate them with patience.

10 - Evo-compatibility and Installation

***"Seeking to detect the principles of living organisms that can help us chart the path to the future means questioning our choices in order to assess their biocompatibility, i.e. learning to evaluate their compatibility with the processes of evolution and adaptation within living organisms; which amounts to adding to the criteria that are supposed to guide us: evo-compatibility**. Politics can then only be the collective construction of responses.*
E. Delannoy -
*"**Symbiosis exists only in a pure relationship of reciprocal efficiency**." Davis*

Shouldn't Metamorphosis be born from a cocktail combining: itinerancy, discovery, interrelation, symbio-insertion, ecosystem diversity, an ecological footprint coefficient tending towards unity...?

The implementation of a phase of **metamorphosis of the human footprint** involves the **revision of the modes of exchange towards a mutualist economy, a peer-to-peer collaborative consumption where the participants share part of their own resources to provide the service and content provided by the federated network.**
It is accompanied by **an eco-formulation of human settlements** ("medium-sized" towns, towns, villages, hamlets), **combined with the redefinition of the terms of exchange with the reborn ambient environments... Without domination!**

In these contexts of elaboration by applied trials, **the repositioning of human communities can also evolve towards a mode that leads to their departure from past sites, to escape towards forms of spatial organization and frameworks of action that are supposed to place them in conciliatory proximity to communities of Ecosystem Life and in grasping their specific biophysical contributions.**
(The term Living *is taken in the sense of the biotic forces that have made us and that make the earth habitable*.)

Future Times, self-management, co-management, interrelation between scales of life; mobility-transportability and renewability of energy and water sources; semi-sedentary lifestyle, itinerancy; permanent interconnectivity of humans; biodiversity rubbed shoulders... Let us repeat, **are already there**, already tested by the pioneers of critical thinking and neighborhoods.
The knowledge acquired, the practical reason, the collaboration, the peer-to-peer exchange, where each person is a supplier, buyer and user of the good leads to:

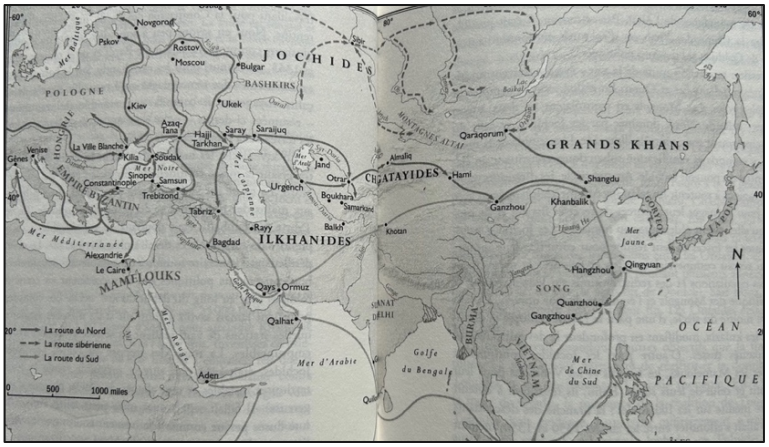
- **Develop a movement** of the Human, **in "pose, deposit, rest", "almost" without imprint**: visiting, investigating, questioning, testing, cross-checking, simulating, shaping a system of life with micro and mesolocal implantations, interconnected with the scales of planetary space-time;
- To bring together the flows produced by humans with those emanating from the living ecosystem, in order to **develop "reliances".** Sharing footprints, by maintaining symbiotic relationships with species that can lead to certain forms of mutualization, by adopting sizes and living environments adapted to the biophysical and microclimatic contexts on the sites visited or selected for the stays;
- **Engage in a material economy,** by experimenting with the field of the "para-symbiotic" economic alternative, likely to regenerate more resources than are consumed, **by taking into account the services provided by existing ecosystems.**
  In this line of thought, the associated indoor/outdoor architectures and infrastructures, implemented on the sites, are designed to combine or (and) adapt to contextual variables: ecosystemic, climatic, physical, biotic and multicultural human;
- **Develop interoperability** (*ability of an element or system with known interfaces to work with other existing or future elements or systems*), without any other implementation restrictions (bio-geo-sourced materials) than those that may contribute to the reduction of overall costs, or those introducing multi-climatic responses in the design of structures with a long life cycle (assembly/use/dismantling /reuse-rehabilitation,)...
  A mode that calls on everyday actors to participate in general innovation and in the resolution of questions of use and specific comforts.

The evolution of the forms of settlement of humans in bio-geographical areas, taking into account our acquired knowledge and means, present and past, can be conceivable:
In plural forms, organized in constellations, made up of **Micro-Ecotopes, Mezo-Ecotopes in mobility or semi-sedentary and "almost autonomous", associated with a fixed Inter-Ecobase (Geotope Referent Eco-City).**
Interconnected and connected sets on a global scale, to form a permanent open-source inter-community connection.
(Recent archaeological discoveries (Israel), concerning different caves serving as burials for the Homo-sapiens, Homo-Neanderthals, from Asia, Africa, living 130,000 years ago on the same territory, reveal in each group the use of certain tools and certain identical life practices, thus attesting for a long time that differentiated humans practiced during their movements (migrations), a common exchange.)

About the Societal Movement – The Internet in the Thirteenth Century

Since time or part, migrant groups have chosen to set up a station to hybridize the plant. L'histoire compte has dispensed with shedding light on the evolution of nomadic groups on the move. Quickly arranged in savage hordes.

However, this was not the case, since as we have seen, nomadic groups participated from the Neolithic period onwards in distant caravan exchange (handicap of the sedentary), and in animal domestication (rapid mode of travel).
Recently, contemporary historical science has endeavoured to exhume the scattered data relating to the functioning of the Mongol Empire - 13th to 15th century - a form of inter-society exercise that could be described as an "**internet society**", by its originality in providing sedentary populations with the "distant exchange" that at that time they struggled to operate. (Mongol Empire City page 206)



The Mongol Empire possessed, like our contemporary means of exchange, the necessary transport vehicles and the animal traction of the time (horse or camel) and roads. (Silk Road ...). **The operator also ensured the safety of the goods transported, the settlement of disputes between cities, and the general tranquillity of sedentary spheres of life if necessary by moving its itinerant military aircraft. The language used in the exchange was not a substitute for the Eurasian national languages.**
In the same vein, the mobility attached to their concept of existence led them not to found cities or occupy existing ones, if necessary to camp at the gates, but to meet periodically on the steppe to sit on the general affairs, without detaching themselves from their ecosystem roots...

Today, provided that we have a public network of open source and Creative Commons people's internet, Humans, regardless of their geographical position and form of life and culture, are able to produce ideas and thoughts, to collaborate remotely, to explore the unknown, and to find distant vehicles of exchange: without the trap models of the City-State of "Growth-Destructive", "Cloning", "Artificial Intelligence" without authors.-etc.
In **a single digitized language resulting from the simultaneous translation of many human languages.**

11 - Achievements and Action

The Plot, a dictate
The framework applied to the places of human sojourn generates isolation, the artificialization of space, densification, indocility, indocility, segregation, and feeds despair, violence, docility. It norms living environments and lives themselves.
The plot symbolizes the fear of humans in trying to understand the universe that carries them, and that they take either for a hell or a paradise.

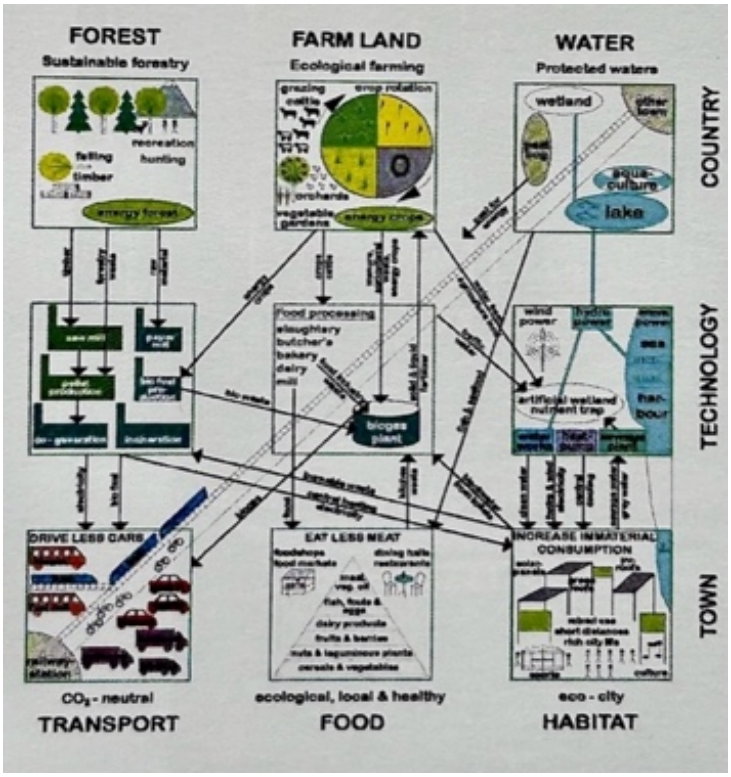




The form of organization of the human being in a knowing community (Commons) must be conceived outside the "occulting, segregating..." ", and be carried out with regard to a prior assessment of the dynamic characteristics and resources of the site (soil and subsoil, biodiversity, topography, water network, and external acting factors: climatic, action of living organisms, etc.).

Ecological "tranquilization"

The Ecological Alternative has focused on building places of conversation between individual and collegial humans and nature at the local scales, without really excluding the role played by the Growth City (20 Million, 30 Million and + Humans...) in the ecocodary and genocidal process still at work, which continues its work of erasing a world to be felt and shared to the rhythms of plants, tectonics, night/day cycles, seasons, water-air-light-energy resources...



The diagram above shows the current stage of circuit operation between:

- A production apparatus driven by a financial power, concealed);
- Resurrected bio-resources, presented in the field of construction as of substitute materials for the energy-intensive and carbonaceous materials used in the production of construction, but exploited to the point of destroying the soil and the forests-lungs;
- An exponential population growth programmed by civilization, in its the enterprise of grabbing the planet's land and oceans;
- A conglomerate of mega and giga cities segregating socially and culturally, and in duplication on all continents;
- Expansive mechanical mobility controlling space at all micro-mega scales;
- Water resources (streams, rivers, groundwater, etc.)

privatized by private agro-industrial powers;
- ...

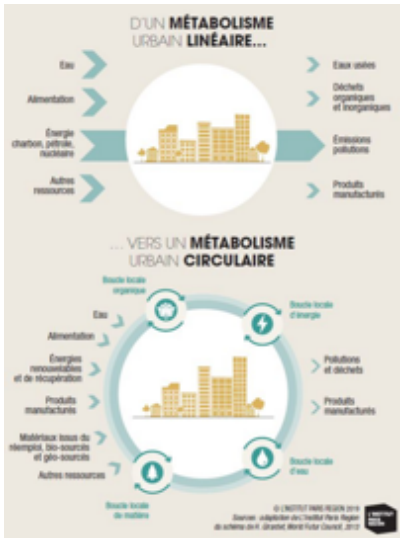
This stage of "greenwashing" ecology does not reveal the ability to evolve towards a reduced ecological footprint, it enters the realm of deceptive appearances.
It does not mention the exhaustibility of natural resources or the redeployment of biodiversity on biogeographical areas to be restored, nor does it mention the necessary rapprochement of humans towards a living ecosystem world.

Spacing and plurality

Roaming? Mobility? Migration? Exploration? Transhumance...
A sedentary lifestyle is not a posture, it has been learned and imposed for ages when our animal species has been able to benefit from an edible plant and animal world, and discover that by collecting seeds, their replanting made a renewable food resource available to wandering peoples.
The mastery of food resources (new social relations of production) combined with the ability to reproduce and grow the food plant, has gradually led to the stabilization-sedentarization of most human communities.

Given the knowledge available, the technologies invented, the mobilities and means of exchange acquired to date, the progression towards an eco-systemic connection could lead to the development of stays in various forms of mobility-itinerancy, almost without an ecological footprint, or even **in search of a co-evolutionist footprint**.
Within sequenced or temporary stays in multiple sites, the occupants would then set themselves the task of focusing most of the food resource on crops that are acceptable to the soils in place, and that can be combined with the microclimatic regime and the ambient ecosystem dynamics...

Today, the metabolic relationship, maintained by the present and past with biodiverse environments, can be abandoned insofar as the temporary symbio-installation of human groups, guaranteed by an alternation of siege in removal-resting, is now feasible by the technological means in place, while allowing a biodiverse regeneration of soils borrowed for a time -
(Chiloé Island - Chile - similarity of approach - page 212).



The examples reported in these pages express, at the level of proximity, the need to create **forms of disengagement or exit from the "behavioral straitjacket" of civilization**. The ways in which this "tranquilizing" process is avoided is the prerogative of alternative eco-social dynamics led by neighborhood communities, exchanging in "open source".

1788… 1793.
Let us not forget that the French Revolution was launched and directed in 1788 by the "Districts" (the neighborhoods of the time), places where the dynamics within the micro-neighborhoods had been created from debates raised around the "Cahiers de doléances" (opened by the Estates General).
Contemporary sources recount this phenomenon extensively, where **the dynamic was built at the level of neighbourhoods, which organised themselves and met in deliberative assemblies that were in control of their own decisions**, and which in the following years set up mini-parliaments, with offices (commissioners and rapporteurs), elected by direct suffrage, and self-administered in the places where they lived.

It was these **districts** that decided to take the Bastille prison on their own, and then later headed for Versailles to ask the king to sign directly (without going through the Third Estate), the first Constitution drafted by the Parisian population, abolishing privileges and initiating the **transition to a non-state Community regime**.
A document that was then preceded by the first "Declaration of the Rights of Man and of the Citizen".

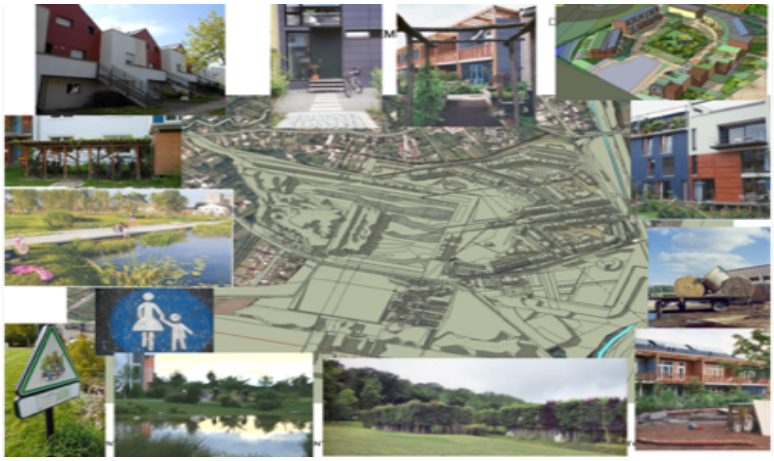
The issue raised has been the subject of positions for several decades. Among others the cross-cutting approaches brought by Anna Arendt, Elias Canetti, and Miguel Abensour (*quoted by M. Abensour: "H. Arendt against political philosophy", and "In Compactness").*
The theme was first addressed by Hannah Arendt in the context of an analysis of dictatorial regimes that are adept at the controlled **concentration** of individuals. It is examined from the angle of the political existence of the Human Confronted with the position of the relationship between **two notions: that of Plurality and Spacing**.

Continuing this approach, Miguel Abensour introduced the notion of "**binding separation** " as:
"social innovation based on collaboration within poles in singular exchanges, spatially differentiated from each other, but interrelated".
He argues that **singularity is the bearer of innovation**, and that this is expressed all the more **when men distance themselves in space, thus acquiring a multiplicity of knowledge and awareness of the environments approached.**
"Plurality forms human habitation, within which a world is built in memory of the innovative faculties of each singular being." - Desire for utopia – N. Pear tree-

Élias Canetti (1965) also extends the reflection on the same path, and considers that the multiplicity of the world must be understood in the sense of a "**multiplicity of breathing spaces**", of human beings (we can now broaden the field to all Living Beings).
He suggests that "**each being the centre of the world**, **the world can be defined as the articulation of a multiplicity of centres and that no centre is to be privileged over others".**
Their relationship makes up "a multiple world of non-massification".

Whatever the quibbles developed, **the evolution of regimes of domination leads to the massification of space**, by various means. Isn't one of the last to associate individuality with consumerist addiction within territories of massification...
To be convinced of this, it is enough to look for free spaces of political and cultural expression, non-commercial, in metropolises, to see that most of them, which claim to be such, are only places of consumption.
Today, the politico-economic powers of all persuasions declare that the city must concentrate, build on itself, grow in population, of course... Except for the so-called historic centres, responsible for sacralising the ruling classes for eternity, in an architectural writing that falsifies the past.

On the transformation of the city's fabrics



On the scale of everyday life, the transformation of the social and ecological space must be the work of assemblies of users.
It is at the scale of the block that knowledge and expectations trigger an active participation in "correction" (Berlin example of Kreuzberg).

The **participatory process** leads to the rehabilitation and transformation of buildings, housing, or blocks and neighbourhoods: through the creation of user collectives associated with the co-redesign of the building, and through the participation of the site's users in the renewed development of the

neighbourhoods: common neighbourhood services, shared gardens, relaxation and play areas, etc. (Example cited from: Kassel, and Beauvais "la Méchelle")
The participatory process allows the emergence of a Commons deliberating on the transformations to be made to the block, to the district, to get out of the closed universe of "barracks-buildings", asphalted streets and avenues, and the countless nuisances borne on a daily basis...
It generates an awareness coupled with insurrection, which pushes in stages to want to change the scale of place and life to find sobriety, to rub shoulders with the resources of nature, in a friendly setting that reinvents itself every day, or almost... (experiment "Murs à Pêches de Montreuil -93).
It participates in the development of ecological, social and public housing, in the spirit of movements such as "Co-designed, co-managed and self-maintained grouped housing" (cf. Berlin requisitioned and co-rehabilitated building), etc.

The process can more easily **manifest itself in medium-sized agglomerations**, where the inhabitants carry out part of their activities in connection with the surrounding areas.
These entities (in France "**Medium-sized Cities**") for the most part did not appear at the time of mechanization and fossil fuels, but were founded at a time when humans in large numbers sought to settle in environments that seemed to them to be able to ensure a safeguard over the long term.

These inhabited sites, nodes of networks, past poles of gathering and exchange of the populations of yesteryear, seem to be able to reform in their living areas (Culemborg Experience, etc.) the contemporary modes of relegation (vertical or horizontal housing estates), to gradually find a shareable territory, of conversation and concerted conception of the present-future, bio-diverse, decarbonized, peaceful, etc. (Vauban eco-district ... Freiburg, quoted on pages 170 ...), provided that these approaches are combined with that of dismantling the political-financial, neo-dictatorial, geno-ecocidal system.

Obviously, inserting oneself into the footprint (soils, biodiversity, emissions) in a country, with a view to establishing a balance between biodiverse and geophysical resources and human borrowings, requires **postulating the erasure of the Anthropocene,** otherwise it will not be possible to open up co-evolutionary paths compatible with all living things.

12 - Biospheric Compatibility and Ecosystem - Micro and Meso-Ecotopes

"We have to ask ourselves: ***What is needed for them and for us? We must adjust the "regards" to their own interests, to their forms of life, to their relationship to the biospheric commons and to its maintenance****"* - B. Morizot

"Communities of importance" *describe the fragile connection between interdependent collectives of human and non-human living beings who have in common for what matters to them only the habitability of their shared environment (the Shepherd, the sheep, the wolf, the meadow and the forest).*
"They ***imply a creative transformation of the identity of the humans present, and the passage from exclusive interests to mutually agreed interests in the "Community of Importance" installed in the field of relationship****, to propel collectives into a weaving where they become other****.***
"For the group, another will is invented, which is no longer a weaving of the self*."*
- B. Morizot



On the basis of an examination of the human resources and deviances cited over the Long Time, can we understand that the current stage is for the Species (oriented to distract itself in wars and enter into confrontation with the planet), that of an existential impasse...
But, likely to give rise through these cracks, then increasing fracturing, to the emergence of alternatives bringing a visibility that the Species has not been able to obtain since its appearance?
Let us pause on these fissures through which grow: the Common in the face of individualism; division in the face of property; sobriety in the face of addiction-submission; ecosystem compatibility with the eradication of non-human life; diversity in the face of cloning...

Let us dare to put forward the hypothesis of a mode of collaborative installation, made up of Ecotopes, from Micro to Mézo, associated with a node of the "Geo-bio-biotopic Eco-base" network, practicing: association, roaming, exploration and stay, in various forms of **permanent or temporary** sedentary life, interrelated and erasable environmental footprint: which would aim to design and create forms of equitable exchanges between the existing ecosystem living organism and the new ecosystem in formation of its human part.

In this context... For humans: It would be a question of **restoring** the regions of life that they have monopolized, and of placing themselves in line with the flows of the living, to **give rise to synergies in terms of rapprochement, exchanges, and even mutuality in action**.
But it would also be a question of abandoning in rapid stages the model of monopolization and politico-economic enslavement of peoples, sophisticated over the millennia in its forms of exchange-growth and production-consumption to the point of making people believe that the Species is capable of escaping contexts via a migration-exploitation of the Universe...

Let us observe, however, that the **awareness of the Human is** concretized in terms of societal alternatives on the grounds of **proximity and identity**, and that on the other hand **diversity** is the key to the evolutionivity of Species on Earth... A counterculture that remains to be instilled.

13 - Biospheric Communal Residence - Ecotopic Sites

In the **phase of development of** the **socio-climatic and bio-diverse political alternative** of the Human, the stay in the Biospheric Commons leads to the determination of concepts of life, organization and activity, which take into account the geo-morphic, biotic, microclimatic, hydraulic, tectonic complexities and singularities... From each Pose-Drop site used.
After six millennia of existence, having reached the stage of development of **eco-compatible Geo-biotopic generations, the City disappears.**
The eco-life poles are immersed, discovered, responsible for grasping the nature of the flows of exchange characterizing ecosystems, and for evaluating and experimenting with the conditions of an approach in compatibility of the commons-humans, in wisdom.

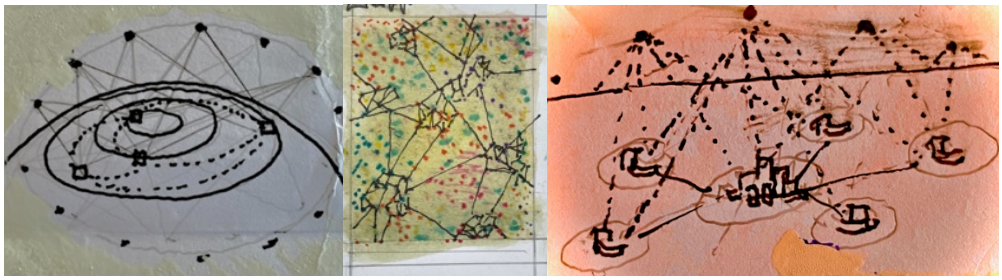
The **stay centres are made up of micro and Mézo ecotopes,** with various vocations linked to the eco-systemic singularities of each site, and have the means and resources to
facilities allowing the headquarters communities to carry out the tasks assigned to them within the selected perimeter.
They are **permanent or temporary**, designed in the spirit of promoting creative cooperation between the populations called upon to stay there (joint associative collaborative modes, Open Source and Common Creativity).

Each of the **Ecotopes** is supported by an "**Inessential Community**" (Giorgio Agamben), **whose composition does not imply any condition of ethnic, religious or other belonging, and which has its capacity to evolve on the basis of its multi-singularity, in order to "make the Common".**
Eco-topes are **designed to adjust bio-compatibility to ecosystem domains.**
They present themselves in forms dictated by the nature of their stay in co-proximity with the living and the climate.
They can be **deposited and replaced at other sites of semi-sedentary activity and over time sequences with finite durations.** Dismantled by their constitution (built environment and decomposable infrastructures), they have an **erasable systemic footprint and allow bio-regeneration by neighbouring living systems after their displacement**.
The operator, in this socio-economic environment, is public, he is responsible for carrying out the missions assigned to him by the Assembly of the populations in place, and those carrying out other missions in the geotopic area.
The establishment of the Ecotopes is done under the "biospheric condition" of using only renewable resources, and of (returning) reintroducing into the natural environment only those elements capable of being reassimilated, without generating degradation.
An optimum is sought in the relationship between the specific biophysical and climatic state of each laying site, and the forms and nature of the inputs introduced for the purpose of activity of the operating human group.

Food resources must result mainly from local activity carried out in forms of circular economy (partly financed by investment programmes in a mixed public-citizen-private economy with a low payback period), and based on eco-technologies.
The energy production facilities are integrated into the installation site, which is itself chosen to ensure the community's water resource in a frugal way, without disturbing the natural environments in place.

The interconnected poles, with combined and complementary activities, form a framework in which motivated civil society pursues in its singularity (in sobriety, non-domination and ecological compatibility with the environments of base) an existence that is ecologically compatible with the Living environments within which it is intercalated.
The poles define an action and vocations in accordance with the fundamental laws that govern the framework of an Earthly existence and its original mechanisms...



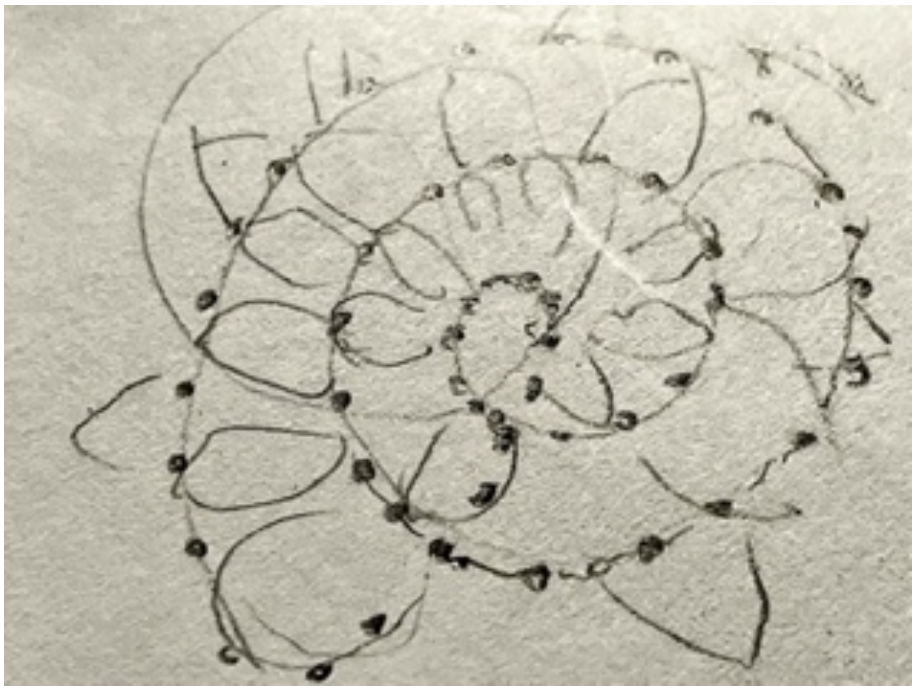


The Micro-Ecotope is nomadic, it pursues research missions within each geo-biotopic entity, it is interlinked to a **"**home port", the Inter-Ecobase, in place on the redefined base of yesterday's "Medium-Sized Cities".
The Meso-Ecotope is a semi-sedentary pole of the constellation, its essential functions are production and exchange. It is self-managed and led by the assembly of the populations present in the settlement area.

The Ecobase, a crossroads site, a community attachment space and a place of assembly.
It ensures the functions of inter-distribution and interconnection within the network network made up of the Micro and Mezo-ecotopes operating in the ecosystem domains of the region; as well as an operability for the share of products and materials not available on the sites deployed**.** The Ecopole-Base also takes care of the construction, Infrastructure and elevation sectors necessary for the creation of the Ecotopes in laying-removal-reinstallation and maintenance.

VI. MERIZOTOPIAS

OF INSERTION IN ECOSYSTEM COMPATIBILITY – DRAFT -



« … It does not have the inclination of past cities to impose
what is right through what is unjust" - Italo Calvino

*" **Ethopolitical relations** are relations between living beings at the scale of individuals, populations, multi-specific collectives, interspecific alliances whose clearest nature is **trans-action**. The plural negotiation continues between forms of life that are not atomistic individuals for whom it would be possible to quantify and compare costs and benefits according to a single metric. They are weaving co-individuation.*

"... Weaving that opens up to cohabitation, co-adaptations as multiple forms of life induced by the interdependence and mutual definitory vulnerability of an ecosystem - as a form consequently, the most conducive to life, for these beings made of their intertwining with the otherness that are living beings". - Baptiste Morizot -

°°°°°°°°°°°°°°°°°°°°°°°°°°°°

***Ethnography of the Worlds to Come** -*

*"In each territory, political decisions would no longer be subject to the laws of economics or to the will to control of a distant centralized structure, but to collective deliberation with decision-making processes that would integrate in different ways, the multiple points of view of non-human cohabitants... A **hybrid perspective** in which ecology would first take shape in more and more numerous territories federated **in networks, which would explore different forms of autonomy and different modes of relations** with the state structures still in place.*
***The existence of communalist lands** would not leave the states with which they cohabit unchanged, far from it. They could, for example, contribute to **the recognition of a legal personality in the living environment**, thus reversing the perception we have of relations between humans and non-humans in a global way.*
***The former would now be hosted by the latter, within the shifting and complex fabric of relationships that make up each living environment.** More generally, the multiplication of self-governing territories would make it possible to launch offensive actions of all kinds against the structures of capitalism, would offer the possibility of fleeing if necessary and, above all, of experimenting with other forms of social organization. »*
- 2021 interview - Philppe Descola and A. Pignocchi

*"Young ecosystems produce few services, busy building their structures? They then create a lot of biomass and weave few networks. **As their structures become more mature, the networks become more complex, their roots connect via a huge and dense network of micellar information that makes the soil a form of gigantic invisible tissue.***
Information, nutrients, chemical and even nervous signals circulate there. In the air, chemical signals are also exchanged: leaves, fruits, flowers, everything participates.
*In these more mature structures, wildlife comes to settle. It provides locomotion that plants do not have and contributes to the enrichment of the network. Pollens, seeds, nutrients travel through them and **connect ecosystems to the planetary level**. Information circulates extremely abundantly, and ecosystems then find their best capacity to adapt to change, to **solve their problems by increasing the exchange of information**. It is at this 3rd stage that their level of service is the highest. - Isabelle Delannoy -*

This text by Isabelle Delannoy (already cited on page 39), can inspire a reading on the evolution of ecosystems in the living world, and lead us to consider that humans, after having occupied themselves with building their structures with a lot (too much) biomass and reaching the stage of weaving their networks, **as a mobile species, have reached a stage that requires them to contribute to enriching the planet's ecosystems,** and no longer to subjugate or destroy them by activating one's own peril; as Antonio Gutteres, Secretary-General of a so-called United Nations Organization, said in 2023: "*Cooperate or perish towards climate hell*".

In this new phase of understanding the Living and its planetary limits, the evocation of "Parsimony" is placed, the materiality of a concept of sojourn "almost without footprint".
A way of reading an after-present of the human, resituating him on a path of biospheric evolution which consists in elaborating the terms of his eco-compatibility with all the authors, actors, directors, of the Living World.



Sparingly

There are no Triumphal Arches, no Obelisks, no equestrian statues, no busts serving as a perch for pigeons, no pretentious Pyramids, no phallic towers... This place of life does not falsify the past.
It is a site of Pose-en-Voisinages, where the human being has the vocation to develop, in a framework of compatible evolution between living entities, the forms of a stay in equity, or even association, without exhaustion or degradation of the biophysical and climatic conditions in place.

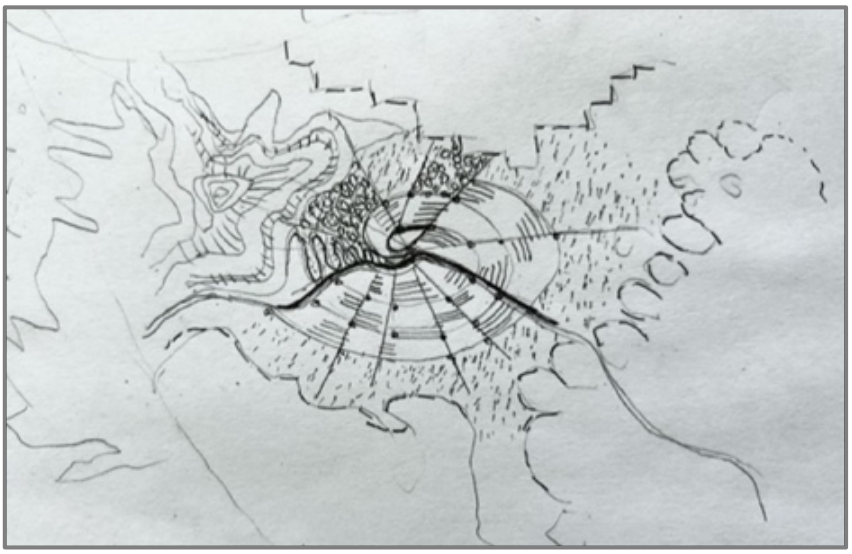
"Parsimony" can be achieved in various ways: by air, by rail, by water, by camel, by horse, by walking...
By walking, we will better understand its reason for being, as for the end of the journey the place will appear nestled against a hill taking the morning sun, cottoned on the ground by a mist emanating from a combination of lake and river.

When we discover Parsimony evolves, our relationship with the planet

Coming from the domains of free evolution, previously called "wild", the path leads us through a moor, rugged in the crossing of a wooded country, straightens in the ecotone, then emerges into a fabric of food crops arranged in strips!
This is the area of transition where the footprint of the inhabitants is negotiated with that of a "sharing" fauna and flora. The sound atmosphere changes, the scents too, the breath of the wind is felt, the land is discovered, and the landscape is structured in strata revealing the thought and action of a kind of passage that has come to understand.

… Continuing the approach to the North with the hillside that blocks the horizon as a focal point, we enter without crossing a border into a straightened landscape that seems to want to tell its story, to converse with the traveller, and to underline behind this complex texture the ambient diversity that humans cultivate in this place.

… The paths further on give way to alleys that cross spaces (heart of blocks) of convivial construction, or disappear as you approach what the natives call "biodiversity corridors", free paths within which the biospheric living (to which humans always belong) tries to weave or exchange glances, cries, sounds, movements.
A relearning after so many thousands of years of anthropo-certainties!

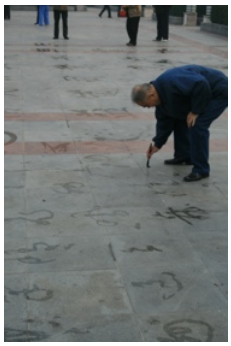


… And then, connected to the neighbourhoods by branches (the "Boulingrin" concept), "La Ramblas" developed, traced along a spiral that originated on the river.

Here is the space of convergence and encounter: a place in an open assembly of the microcosm; public services (health, education, training, scientific and technical centres, etc.), general shops; space irrigated by surface public transport that links the neighbourhoods; access to the station, a gateway to the other Eco-poles of the geophysical network and to the Intercontinental scales
There are no private motor vehicles in circulation, the only ones in operation are those assigned to public services, and to the rental of equipment for the transport of SMEs in the pole.

On the Ramblas one likes to join the umbilical cord of the system, which does not lead to the governor's palace, or to the Ministry of the Repression of Ideas; but to a spiral cord that unites while embracing a lake domain in free evolution for a shared contemplation of the diversity of worlds, a meditation on the pursuit of the long term...
Here, the pleasure is to observe the diversity of faces, it is to discreetly listen to the palaver and to scrutinize the site on 360 degrees between hill and plain, under infinite qualities of light.

It is the obvious place for human exchange, debate, and meetings. It is also the open-air theater, where early in the morning we meet to practice body exercises in groups, practice choral singing, and other disciplines, and where some come back in the early evening to dance to music among enthusiasts.
If you have the soul of a poet or philosopher, you can come on the weekend afternoon to join the debates held on the slab. Then follow those who are holding a small box filled with water in one hand and a large brush attached to the end of a long handle in the other.
It is the language carriers who trace texts on the ground to discuss them with their partners: the meaning, the ulterior meaning and the written form that is supposed to correspond to it, while at the other end the text evaporates.





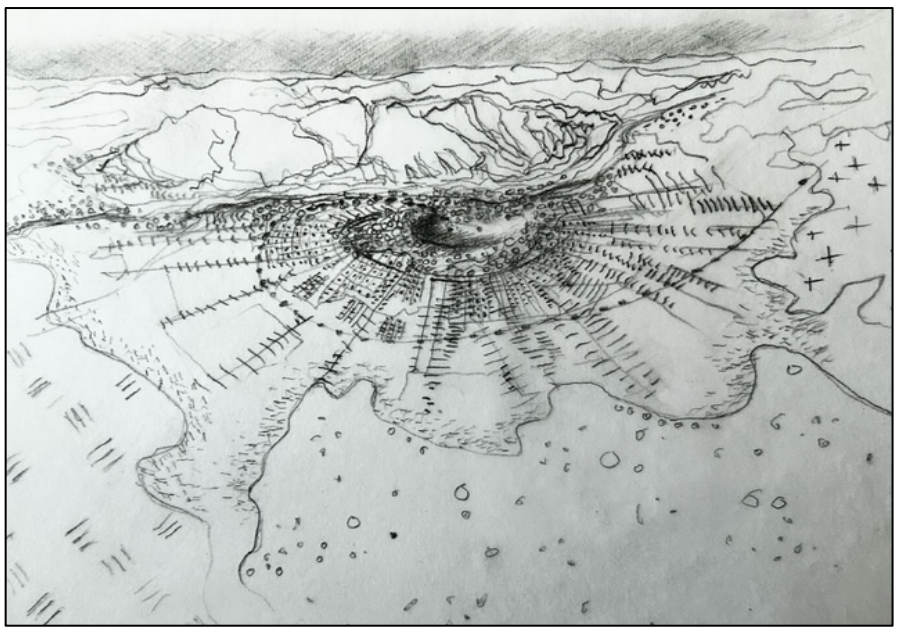
You will understand that in this microcosm, there is no need for **a Centre**, only adapted and co-managed general services and self-managed neighbourhood facilities.

The workload of the assignment work only covers 3 or 4 days. The rest is allocated to the renewed acquisition of knowledge, to inter-collaboration and free exchange of knowledge and ideas, to family and friendship life, to festivities. All this within a varied scale of places between the intimate, the neighborhood and the general commons.





Within the **heart of the blocks** , the collective work is constantly readapted and redesigned, for all ages, with a built front often hidden behind greenhouses, terrace gardens, graphic trompe-l'oeil. All kinds of gestures that reveal the human being as a social animal, author, artist, politician, philosopher in a daily game...
An Arcimboldian or Valparaisian game where everyone can express their ideas, their art, their culture, society... Even on the risers of the stairs or the doors and conciliatory facades.
A human in "Open Mass" shaping its biospheric eco-compatibility.



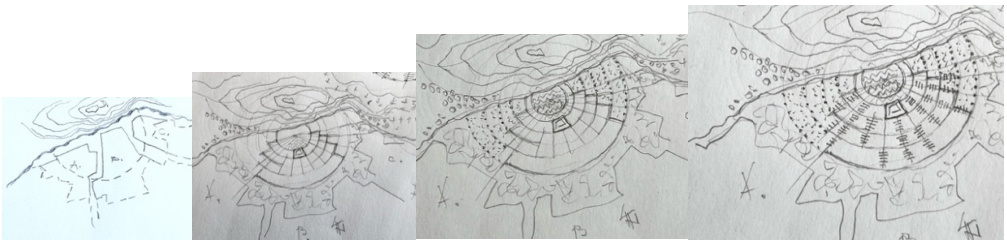
"Parsimony"

… Is a Meso-Ecotope, a place of life, arranged for a determined sequence of time, placed in immersion, whose vocation is to explore, study, determine the margins of an approach in biophysical compatibility between humans and located ecosystems.

The site is chosen after an examination of its in vivo and climato-physical characteristics, and an evaluation of its ability to maintain its dynamics during a stay on its margins of a human group, responsible for probing the forms of eco-compatibility and fair trade to be maintained or developed.

The pre-assessment of the admissibility of the site is necessary to determine:
The renewability of its resources in the occupation phase with regard to the optimal population gauge;
The conditions for non-disturbance of existing ecosystems;
The non-contamination of plant and animal species, surface soils and subsoils;
And to conclude on the form of response to be given, on the concept of life of the Micro-Base, Micro-ecopole, Meso-ecopole, and the facilities that should ensure the necessary autonomy, partial or total, from the probationary stage to the stages of approach to a biospheric conciliation.

An installation that must be concluded without affecting the "free evolution" of species and the regeneration of the environment that has been occupied for a while.
A stay of the human community that inaugurates: forms of exploration of sobriety (energy, water, soil, etc.); adaptation to local food resources; a reconcilicability to the micro-climate, (all things that native populations experience); and a path of approach towards what is useful and necessary in times of deterioration of the contexts of existence of a species made fragile.
Circumstances require that the limits imposed on the human footprint be established so as not to deteriorate the installation environment (Zero: toxic emissions-pollution-waste... various nuisances).



Master Plan and Synergies

The plan is the result of taking into account the topographies and reliefs, the operating microclimates, the hydrographic and podialogical characteristics of the site, its solarization, the wind regime, etc. This is something that we were not unaware of just a few millennia ago.
... Seen from a bird's eye view, the **Meso-Ecopole**, which neighbours the native worlds, is expressed by its flowing watercourse which generates a spiral relaxation that carries the living areas **(A),** and in its Pytagoric centre a lake reserve.

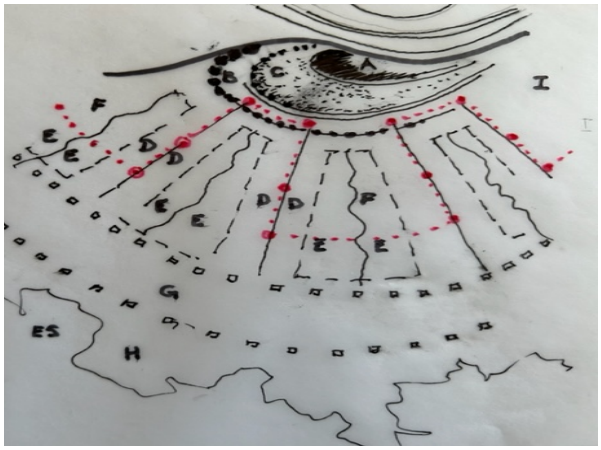
Symbolically, the **Via Major** spiral created (Forum), aims to bring together the whole Community, on all the elements of its expression: Relaxation, Shows, Festivals, Political and Sports Gatherings... and to give life on a daily basis to the expression of citizens, convened at the end of the day in the Assembly (represented in each building, block and district) to orient and self-administer the common enterprise. **(B)**

The major axis: **Forum** of composition, is the space of convergence, movement, mixing and relaxation. It encloses the botanical park and its multi-component woods, lakes and lakes on a slight stepped embankment. At its end is a green theatre, which uses the Roman technique of transferring the central spoil around the edge, to form the tiers. In the background, the river runs along the mounds and mounds, which protect the northern flank from the cold winter winds.

The spiral of support distributes in its development the "**Branches** " carrying the districts. It generates on its intrados an area that combines a lake world and a botanical area, as a reminder of the surrounding biotopes **(C),** and flares out to create a variation in the exposure to climatic parameters and in the visions of the landscape offered to the neighbourhoods and blocks.

The chosen mode of expansion of the weft makes it possible to alternate between the branches that carry the neighbourhood islands **(D), cultivated estates** with various forms of cultivation, dedicated

to the populations, and adapted to the nature of the soils and ambient climatic regimes: Permaculture, Agroforestry... **(E).**

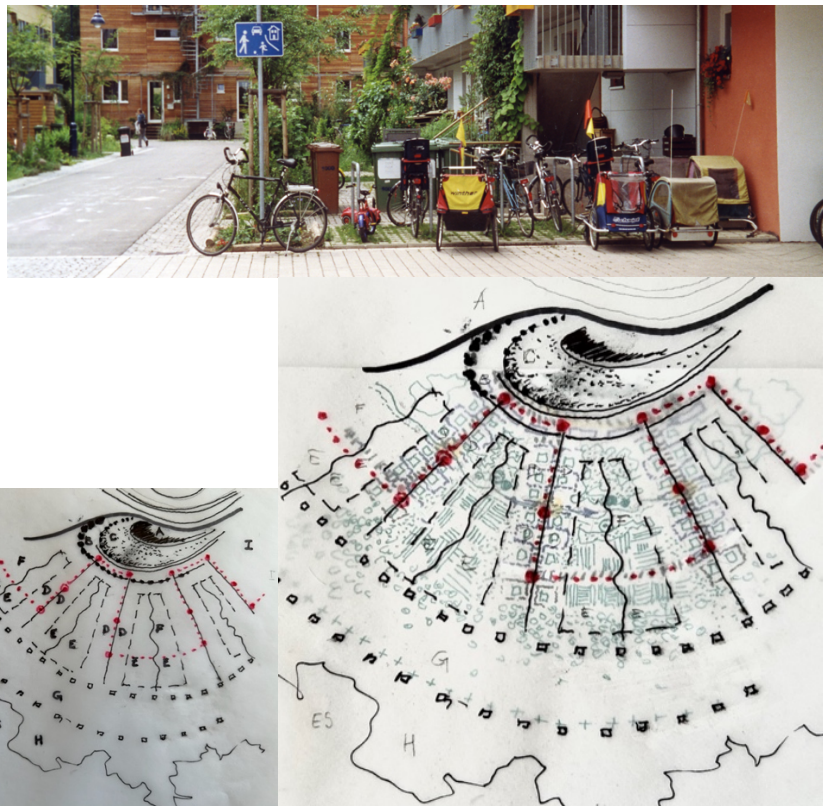


The plant sequences characterized by their strip system, alternate cultivated species (a form of hindrance to the development of contamination and infestations), they are crossed by different forms of non-motorized travel routes. **(F)**

The Meso-pole at the end of the spiral composition **(I),** generates a Space allocated to general equipment (Health, Research, Data Center,...), and to the Primary and Secondary sectors of activity related to the vocation of the Eco-pole **(I)**

On the peripheries, there is a perimeter area **(G)** on which bio-agricultural farms, solar and wind farms, ponds and aquatic infrastructures linked to the double network of recycled grey water (phytopurification process), supplying the neighbourhoods, and meadows and orchards crossed by walks, trail trails, etc.

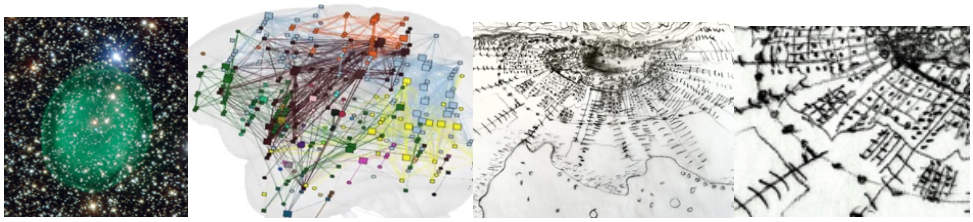
The last device is that of **the interlude (H), a** buffer space for the weakening of flows, which marks the Ecotone, the limit of the footprint of the human biotope in relation to the native ecosystems **(ES).**



Mobility – Travel – Interrelationship

The framework of the movements is bidirectional. It is deduced from the outline given by the **generating axis**, and by the perpendicular branches, which lead to the extrados of the composition, where the quarters are placed.
The **"branches" of the Avenues that carry the neighbourhoods,** spaces of convergence of flows**,** are punctuated by Squares with a vocation as "Third Place" developed to promote social interaction and cooperation, within proximity, daily life, social and cultural mixes. They offer an intermediary domain between the intimate and the public where they are located: Ressourcerie, Coworking space, Fablab, Creative workshops, training place, fitness spaces, etc.
In addition to these squares, places of synthesis of the districts, there are tertiary activities, shops, and local public services (schools, early childhood centres, health centres, etc.).

The Public Transport that runs through them has stops 500m apart to limit the journey between the furthest entrance gates of the block and the TC stop to 300m (Cf . Eco-conditionality Germany...)
Only buses and service vehicles circulate on the inhabited part of the Mézo-pole, deliveries are made outside of working hours.
The "short distances that separate the neighbourhoods, encourage pedestrian or two-wheeled travel, and similar modes.



Links – interconnections

The era of interrelation in digital connection has refocused daily activity on proximity, due to instantaneous remote exchanges carried out on the Internet (data and interpersonal links), and consequently modified mobility systems on all scales of travel.
The human time thus dilated, increases the time of the relationship within the area of stay on a daily basis, to open up to participation in initiatives and activities carried out at the different levels of the Municipal Commons.
The alternative and sober system of travel erases part of the road network generated in the era of auto-mobile proprietary travel, and combines interchangeable forms of mobility on the routes.
A viable system inaugurated at the end of the twentieth century in Freiburg and other European Eco-cities, which combines pedestrian routes (500m), and multiple uses of means: cycles, public transport, car-sharing and for inter-city connections: railways.
Most long-distance travel is provided by high-speed train and aircraft combinations.

Neighbourhood-blocks

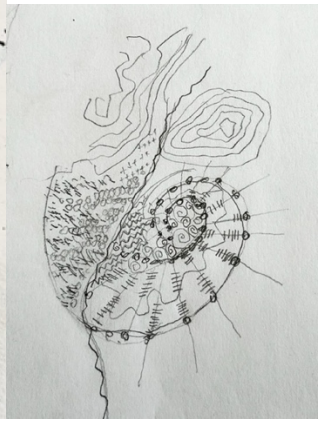
In the "fan" composition, the **interludes, cultivated and embellished,** are crossed by walking circuits and inter-district cycle paths; they form "dry micro-valleys" which collect rainwater in their central axis to infiltrate it, or conduct excess precipitation towards the sloping lake (Hanover-Kronsberg System).

The blocks are made up of neighbourhood units of about sixty dwellings and form neighbourhoods where nearly 1500 people live. The districts overlap the Avenues (a concept of the Vauban district in Freiburg) which lead to the terrace-embankment, which generates the spiral composition.
The blocks that lean against the avenues that attract activity, find at their backs the **interludes, cultivated and embellished,** bearers of a gardened nature: AMAP, shared gardens, school gardens, greenhouses, crossed by circuits and stops for walkers, green theatres and side cycle paths linking the neighbourhoods placed in a spiral (Cf. Hanover-Kronsberg).
These interludes collect rainwater in their central axis to infiltrate it, and conduct the excess precipitation towards the lake on a slope
In the range constituted, these domains alternate with those of the neighborhoods to form a continuum, on a formal and vegetal variation.

To limit the footprint of agricultural activity, soil conservation crops are practiced (reducing ploughing and turning over the land so as not to release the carbon contained in the soil into the atmosphere),

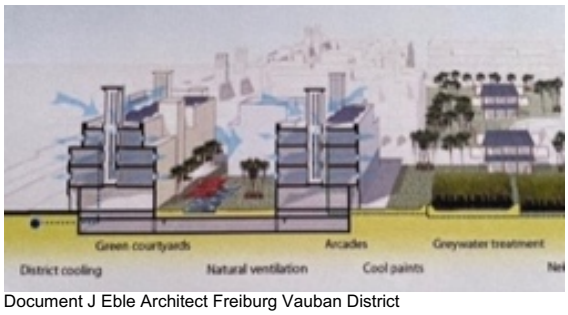
diversifying plant species and developing protein-rich legumes. A regenerative agriculture that invents new agronomic practices to regain biodiversity. *"Feeding the world by repairing the planet" B. Valorgue*





The distribution of the blocks is ensured by slow alleys, known as "children's streets", which have a central asphalted conveyor belt (access for firefighters, ambulances, etc.) and two side strips with infiltrating surfaces. The verges are backed by a strip planted at the choice of the residents and co-maintained with the general services of the cluster (see Freiburg Quartier Vauban).
These uncirculated alleys are the subject of various interpretations on their use: children's play area, festive spaces in the neighbourhood, a place to stroll and meet, etc.

The **Cœur d'îlots,** which combine various architectural concepts with bio-climatic comfort, open onto orchards and market gardening areas. These semi-open blocks, on one side, are aligned with the Avenue "trait d'Union" carrying the activities and services of the district.
The inhabitants are partially responsible for the development of spaces as an extension of their homes (balcony-terrace, vegetable crops on terraces and in the heart of the block) and for certain multifunctional buildings the animation of neighbourhood workshops in multi-activities... (Cf. Kassel operation).





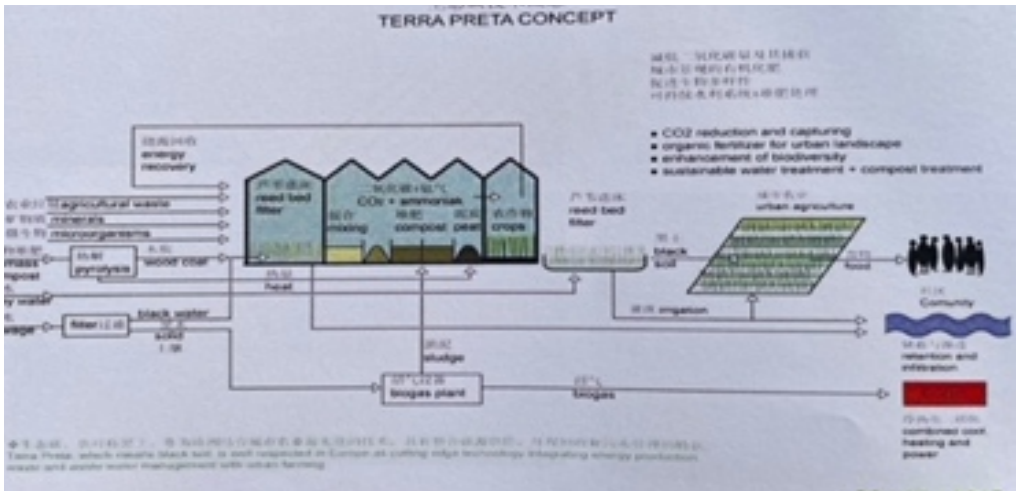
Document J Eble Architect Freiburg Vauban District

Area of activity (I)

The Meso-pole at the end of the spiral composition **(I),** generates a space allocated to general equipment (Health, Research, Data Center,...), parking of service vehicles in the area and vehicles for off-site travel and workshops; energy conversion and storage equipment, (wind and solar) and drinking water production, and second network; Primary and Secondary sectors of activity related to the vocation of the Eco-pole.
On site, there is agricultural land cultivated in bio-agriculture, which complements the market gardening and vegetable and fruit production sectors arranged alternately between the districts; Similarly, a fish farming site has been set up: "freshwater farm" on ponds, for fish farming.

The energy source supplied comes from the wind and solar installations stored on site.
At the level of the Eco-pole, waste is re-assimilated into recycling or the reallocation of materials, equipment and products. This zero-waste metabolism applies to buildings and infrastructures that

can be decomposed and exported to other sites, with the share of the bio-sourced materials used remaining in regeneration on site.



Perimeter Area (G)

Between the site of active life, and the domain where the ecosystems are located, there is a mixed area where the utilities are inserted:

- Organic and ecological infrastructures (Educational Farms), taking charge of the development of food production produced in the Permaculture mode - market gardening and arboriculture; Schools and Colleges and their bodies of water supplied by roofs
- Solar farms combined with suitable soil-based crops, as well as wind farms and their transformer-storage-redistribution stations;
- Micro-wastewater and black water processing units based on the model of green technologies, without nuisance, using greenhouse treatment processes in reaction-fermentation and phytopurification, such as "Terra Prêta Technologie" and similar.



Interlude between biotopes (H)

On the periphery of the site is an **Interlude, a** buffer domain between biotopes, whose role consists both in attenuating the forms of manifestation of human activity in the surrounding environments, and in developing, in this median space which rubs shoulders with local ecosystems, the terms of a cohabitation between Living Beings, without attempting to correct the parameters of evolution of the biochemical and physical environments in place.

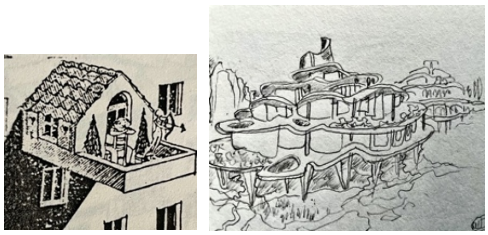


Temporality and impacts

Each on-site installation is linked to the missions assigned to the community
Regardless of the duration of the stay on the ecosystem site, the whole made up of the built environment, the infrastructures and the developed or cultivated land, is dismantled, deposited and transferred to the storage and reconditioning centre located on the "Ecopolis" Eco-pole, which organises the bio-geographical era.
An Interpretation and Interrelationship Pole, whose mission is to federate the networks formed by the nomadic or semi-sedentary constellations of Research-Experimentation, and to refine, on the basis of the results obtained by these poles, the forms and modes of systemic co-evolution of human settlements with a small footprint, those adapted to the bio-geotopic area where human communities stay.

This patient elaboration undertaken by each population leads to the enunciation of the terms of an Ethopolitics at the level of the Biomes: "A new space of relations declined in situations".
The modus operandi in fact rejects the notion of private appropriation dear to the capitalist mode; it is financially supported by consortia bringing together: the public sphere (non-governmental funds), the social and solidarity economy, public interest associations and non-governmental organizations, non-profit foundations, etc.

Built environment and environment concepts
The housing is rented, guaranteed to all residents of the eco-pole, and occasional passengers.
Housing concepts are essentially of the **generative, bioclimatic and passive "plan-libre"** type.
The interior fittings in redistribution and decoration are necessarily made of geo-bio-sourced materials of local manufacture and depending on the site based on clay, lime, hemp, straw, wood, woven materials, etc. (inspired by vernacular science and technology).
The "**ready-to-finish**" part of certain operations relates to forms of extension: greenhouse, trellis, terrace-garden; based on a project agreed between neighbours.
In other operations, the public housing body may be called upon by self-managing groups to deliver only the load-bearing infrastructure and superstructures with the necessary services. The occupants then pay for the construction of the envelope walls and the development of the living space in organic and geo-sourced materials
(Cf. Frei Otto - Berlin).



Throughout the built area, the elements used, in order to be easily assembled, dismantled and transportable, are designed with a low weight (tubular-type structures), guyed or triangulated. They use modular floors that combine with the structures and integrate the pipes and supply ducts, wiring.
The entire built environment rests on screw-pile type foundations, to restore all the soil to natural regeneration processes when the Ecopole is removed.
The templates of the prefabricated set are compatible with rail transport standards.
Depending **on the site, the construction concepts** must be able to approach the smallest ecological footprint in terms of implementation and materials, and be adapted to the climatic regimes for which they are intended: monsoon, desert, mountains, shorelines, etc.
The concepts of indoor-outdoor space development on three dimensions, vary according to the blocks to **distinguish the groups**, identity and biodiversity oblige!
The self-managed heart of blocks develop various themes that evolve over time, according to the desires or needs expressed by the group of inhabitants.

The choice of the site, the built environment inserted, and the developments associated with the ground, are designed to avoid extreme climatic stresses (hurricane, flood, heat wave, extreme temperatures, earthquakes, etc.). The characteristics vary according to the domains chosen to set up the Eco-poles (Biomes, Latitudes-Longitudes, Topographies, etc.) and the degree of degradation of the planetary climate.
The built environment is built on stilts, which leads to the allocation of the ground level to temporary uses and retractable facilities: sports hall, market, entertainment and games area, festivals, etc.

The structures on the elevation are shaped according to their exposure to the sun, their grip on the prevailing winds, the micro-climates and natural lighting to be conducted in the heart and the comfort in sobriety of the living spaces.
The buildings are built around common patios to ensure a temporary retreat during extreme weather effects and have temporary autonomy in energy, water, heat or coolness (kronsberg Building. "microclimate")

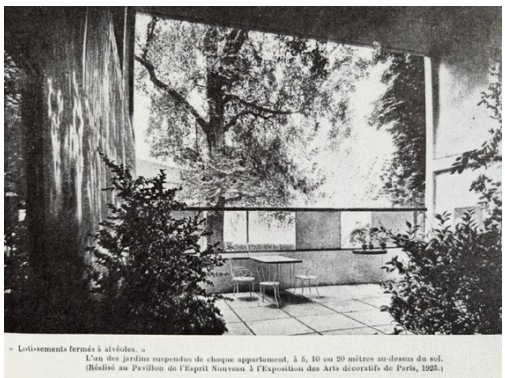
Habitat

The habitat is designed to, beyond the intimate space, promote social expression in concerted forms, starting with that of the block: a space for meeting, exchanging experience, mutual aid, a field for initiation to the project, and invention; this part of the history of humanity reserved for the elites.

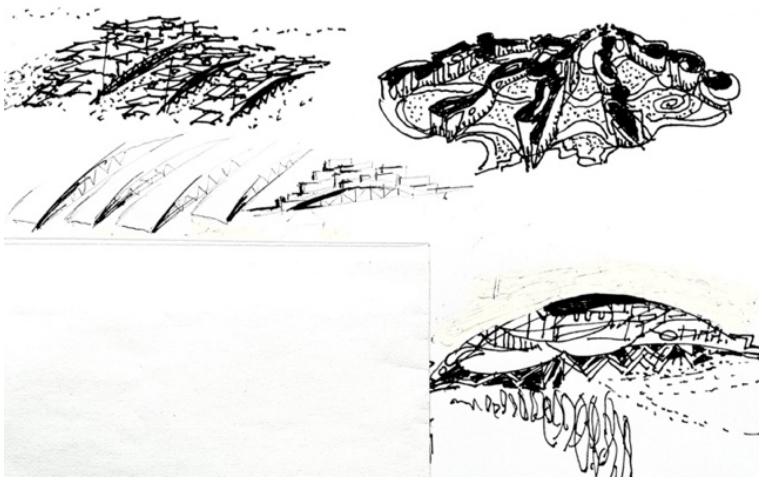


The block is Parsimony's identity.
This place: where we inquire about saving rainwater, groundwater, drinking water, depolluted and recycled water; where we know where the North is; where you know the Compass Rose in all four seasons, where you can regulate the indoor climate of your "Home" day and night with thermal insulation on the outside of the envelope walls, and materials with thermal inertia inside; where we also know, how to protect a view to the south in summer, with a simple visor fixed outside on the lintel of the bay to be protected;, where to position a garden to be able to cool the home at night in summer and keep the cool the next day, without air conditioning and electricity consumption... Finally, to know how to "almost", without energy and without the impression of sobriety, to live collectively in collaborative autonomy.





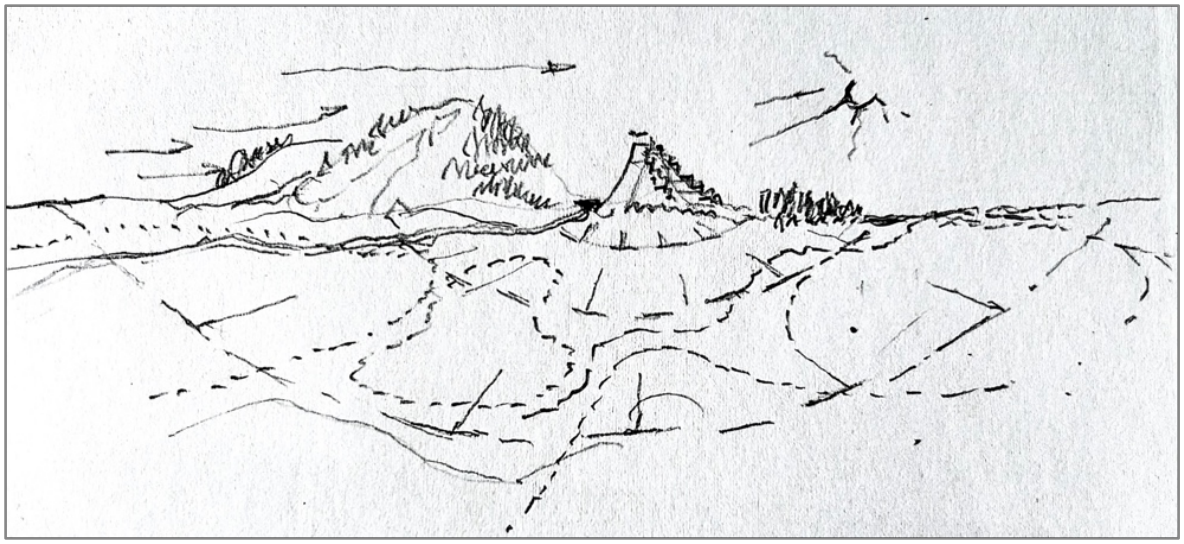
« Lotissements fermés à alvéoles. »
L'un des jardins suspendus de chaque appartement, à 5, 10 ou 20 mètres au-dessus du sol.
(Réalisé au Pavillon de l'Esprit Nouveau à l'Exposition des Arts décoratifs de Paris, 1925.)



VII. MERIZOTOPOS

LEARNING AN ETHOPOLITICS OF SHARED SPACE AND EXPLORING THE CONDITIONS AND FORMS OF INTRA-LANGUAGE ELABORATION WITHIN THE LIVING IN CO-EVOLUTION

OBSTACLES AND ACHIEVEMENTS



Biocenotics: *aims to study the living beings of a biotope, of a given environment.*

Biotic*: Describes an environment in which life can develop. Biotic factors are determined by the presence of organisms of the same or different species alongside an organism that exert competition or competition, predation, parasitism on it. And then they are influenced by it. (Sce: Actu-environnement)*

Biotic interactions: *Major factors in the relationships between organisms, climate, soils and human activities, they are also a driving force behind the evolution of ecosystems.*

Biotic interactions can be beneficial: 2 species will benefit from their association, but they will still be able to survive without each other. (Example: Mutualism between ants and mealybugs. The mealybugs will feed by planting a kind of straw inside the trunk of the trees. To deplete the sap directly.)

Biotic: Relative to the living world. Biotic factors are linked to living things. Term opposite to Abiotic.

Etho*: Prefix forming words related to the mores and behaviour of animals, including humans.*

Mutualistic relationship*: Mutualism is an interaction between several living Species, all of which derive an evolutionary advantage from it. This translates into benefits in terms of protection, dispersal, nutrient draping, or pollination. Mutualism corresponds to an interaction with mutual benefit. In a mutualistic interaction, the association between the 2 individuals is established without the relationship being mandatory, which means that the survival of the individuals does not depend on this interaction.*

Metabolism

"A key tool for diagnosing the territorial circular economy. Urban metabolism corresponds to all the flows of materials and energy involved in the functioning of a territory and its actors. It considers the incoming flows (Import). Local extraction, (local production of resources). local recycling, (local resource loop). Pollution generated by activities (emissions into the air on the ground, waste production). And outflows (exports). It thus makes it possible to qualify a territory in relation to a circular economy. (AREC, regional energy-climate agency, Paris region.)

Symbiosis *(mutualization)*

A few reminders

In **Europe**, 50% of natural resources are used for construction and produce about 30% of overall waste.

The building and construction sectors account for more than **35% of the world's final energy consumption and nearly 40% of energy-related CO2 emissions.**

In France, the average mass of a common construction is between **1200 and 1500 kilos per square meter.**

The average surface mass in collective housing (5 levels) is 420 kilos per square metre. The construction standards **in 2020 of 1500 kilos per square meter** for a building with a concrete structure and about 900 kilos per square meter for a mixed wood/concrete frame building that meets the standards in force.

Light **processes remain 2 to 3 times less cumbersome than the standards** of the real estate market.

The average carbon footprint of the projects is estimated at 317 kilos of CO2/square metre for collective housing (R+4) structures, and 282 kilos of CO2/square metre for individual housing.

Optimization of construction systems: The average efficiency of lightweight structures, prefabricated or dismountable, is 6 **components per square meter for the collective**

Complexity is inversely proportional to the size of the building. It averages 18 types of components for collective housing, i.e. 0.7 m² (Individual: 29 types of components for a ratio of 1.5/m2).

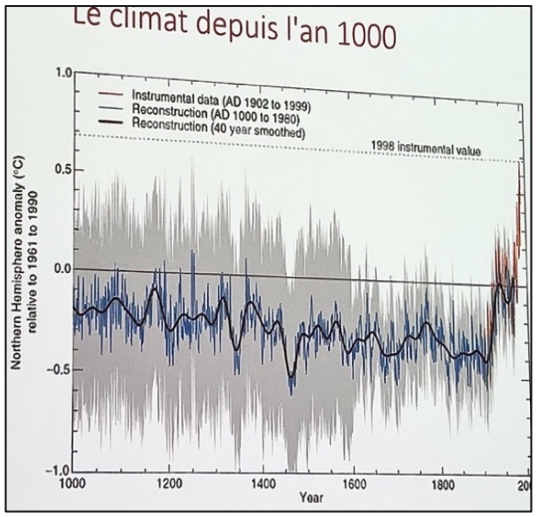
Every year, between 150,000 and 200,000 single-family houses are built in France with an average surface area of 120 m², for a weight of 1200 kg/m2, which represents about 30 million tonnes of materials, not counting construction waste**.**

In terms of weight and carbon dioxide emissions, the most convincing construction system seems to be the **hybrid wood-steel construction,** which effectively combines the lightness and low carbon footprint of the materials.

The hybrid *grid-panel systems* studied, which use an average of 25 types of components with a ratio of 1.5 components per square meter, have a **better potential for transformation since the envelopes and structures can be modified and transformed independently of each other.**

(Data from the construction sector - France)

01 – Global change - The obstacles -





Starry Night after V. Van Gogh

The climatic context and other planetary changes initiated by the current global societal system could, by worsening, could: lead to the triggering of large-scale migratory movements on all continents, movements of the "desperate", the "landless", in search of "refuge" territories that are still preserved, to be converted into exterminating wars... A return to barbarism, before extinction? ("Socialism or Barbarism Rosa Luxemburg, Castoriadis, Lefort, etc.)

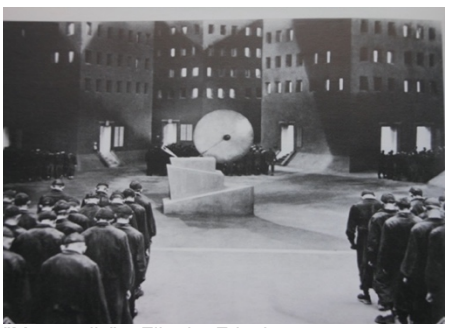
Two courses of action in the face of the "Increased" aggravation of climatic phenomena that destroy lives and facilities?

- That of a human collective committed to the implementation of forms, means, and tools to curb the phenomena in progress, to then design and engage forms of existence compatible with the conditions posed by the host ecosphere.
- The one where the decision is left to the world's political and financial bodies, adept at speculative games and reluctant to act as a correction of an anthropo-model engaged in the implementation of an "Augmented" cognitive enslavement of the Species...

And in 2024, governments in Europe are already strengthening their borders by increasing police resources and building impassable walls and fences. Great Britain, within the framework of a financial and inhumane agreement with an African country, imagines for a time deporting its undocumented migrants there, The USA continues the development of the wall separating it from the Latin American space and declares to seize Greenland and annex Canada while leaving Free Trade Agreements by imposing arbitrary customs taxes on the world, the State of Israel and the Russian State are monopolizing peoples and territories, through all registers of violence and hatred, to the point of exterminating the indigenous populations, etc.

This devastating global context calls for the acceleration of the development of another approach **to open space at the local scales**, through a peaceful, convivial, non-segregative, non-imperialist, non-interpretive approach to life of supposed deities and gods, and which is active in building forms of welcome-installation: non-segregative, collaborative, non-deprivative... In protection of the organic and abiotic resources in place, on a consumption mode compatible with the in-situ resource...

.





"Metropolis" – Film by Fritz Lang

The Anthropocene, endgame?

"Man's greed leads to an inequitable mastery of nature; Instead of imbuing nature with an ability to take care of itself in return, it makes it an object of consumption.
The self-alienation of Humanity has reached such a degree that it can experience its own destruction as an aesthetic pleasure of the first order. - Walter Benjamin ***-***

Aristotle in his time denounced the accumulation of "wealth for wealth's sake" which he considered unnatural and dehumanizing. Capitalism has seized on this deviance to place it at the rank of a financial-social dynamic and a movement of thought capable of establishing a market with exponential growth, today labelled as "**Sustainable Development**" or "**green growth**".

Today: A citizen of an industrialized country uses: 3 times more fresh water, 10 times more energy and 19 times more aluminum than that of a so-called "developing" country, and 20% of the world's population consumes 80% of the resources produced.
The inhabitants of the USA (5% of the world's population) consume 30% of the world's resources.
The 500 million richest people in the world (about 8% of humanity) currently emit half of the "Greenhouse Gases". - Source Worldwatch Institute -

Back to basics... Domination-Ownership

Reading notes by Nicolas Delalande - Excerpt (Diff. Books & Ideas)
About Wolfgang Streeck,- " Bought Time. The Constantly Postponed Crisis of Democratic Capitalism"

« … The supposedly unbreakable alliance between, on the one hand, a political regime of democratic essence based on both the rule of law and individual freedoms, but also on the sovereignty of the collective will, and on the other hand an ***economic regime based on private property and free contractuality****, seems to have come to an end. "*

"While each of these two regimes was supposed to strengthen the other and give it a more stable basis, today we realize that this was an illusion and that this mutual reinforcement only existed in a very particular historical moment during which the former showed its ability to domesticate the latter and to control its excesses.
In the long run, ***the market*** *generates such* ***inequalities*** *that it undermines the very foundations of* ***democracy, that is, the egalitarian principle*** *that forms its core.*
" ***Deregulatory globalization****", which is the result of deliberate and carefully considered political decisions, deprives* ***national states of the possibility of effectively controlling the market while at the same time deploying itself in such a way as to prevent the emergence of a supranational political body that could effectively take over.***
This mechanism is designed to allow inequality to resume its march forward and the richest sectors to monopolize the fruits of growth.
The retraction or disappearance of material benefits for the majority - or even for entire sections of society the deterioration of their situation - then provokes the ***democratic disaffection*** *that we see today.*
At the same time, this deregulatory globalization shifts the center of gravity of power along with that of wealth distribution, and increases the influence of elites, who are increasingly difficult to control due to the absence of global political institutions. These elites, on the other hand, promote ***deregulation*** *that serves their interests and produces a concentration of income at the top end of the scale. "*

"It was the capitalists themselves who seceded in the late 1970s, rejecting the tax rates that had been applied to them since World War II.
This is the source of the crisis of the contemporary fiscal state: in the face of spending (especially social spending) that has continued to increase, revenues have not kept up, either because the richest obtain tax breaks, or because they shirk their duty by placing their money in tax havens.
According to Streeck, the need for states to turn, from the 1980s onwards, to the financial markets to find money, was the starting point for a ***conversion of the "fiscal state" into a "debtor state" and an unprecedented increase in public debts in peacetime. »***

"The inflation of the 1970s, the public debt in the 1980s and 1990s, the private debt in the 2000s, would be the three ***financial illusions*** *used in turn to change the situation and make the masses believe that democratic capitalism could endure, despite unemployment and economic languor. 2008 marks the end of loopholes: inflation is no longer judged, rightly or wrongly, to be desirable, private debt has ruined millions of consumers, and states are paralyzed by public debt... »*

*"One of the aims of Streeck's book is to expose the **inadequacy of theories of democracy with the actual functioning of contemporary political systems**.*
*Democracy, according to him, unfolds on two very distinct stages: on the one hand, elections, opinion polls and confrontations between political parties, which compete for the votes of the "people-citizen" (Staatsvolk); on the other, the auctioning of government bonds, the daily observation of interest rates and the concern to give pledges to the **"people-market"** (Marktvolk) to maintain his trust. These are the two groups of actors ("Constituencies", in English), one organised on a national basis and the other on a transnational scale, to whom political leaders are accountable....*

"Since 2008, the balance has tipped sharply in favour of the second group, which is just as adept, if not more so, than the voters in asserting its interests. The institutional developments of recent years would thus all go in the direction of strengthening the guarantees granted to creditors to protect them from the vagaries of universal suffrage: the rise of independent and unelected institutions (such as the European Central Bank), the enshrinement in law of intangible rules to prevent deficits (golden rules), the imposition of austerity plans by international experts and civil servants (like the troika in 1993). Greece). The return of rentiers, beyond its effects in terms of economic and social inequalities, would lead to a profound and lasting transformation of the rules of the political game.
Streeck explains the self-reinforcing dynamics of this neoliberal policy as follows: Faced with deteriorating public services, citizens turn away from the state and are increasingly reluctant to pay their taxes, which in turn calls for further spending cuts to contain deficits.
*The characteristic of the "state of consolidation" (which follows on from the "debtor state" in his theory) is that it sweeps away everything in its path, both the institutions and public policies and the feeling of support of the citizens which was the primary justification. The less effective the state is, nor the less able it is to promote social justice, the less obvious the reasons for contributing to it seem obvious. This explains, more fundamentally, the **dynamics of flight and privatization that can be identified here and there, in the educational, health or social fields**... »*

"For a generation, this balance has been upset by two new elements. On the one hand, the interpretation of individual rights and freedoms has undergone what can be called a "rigidification" that has transformed them into absolutes, while, conversely, the principle of the sovereignty of the collective will has undergone a continuous erosion, leading to the idea that it is not up to the collective of citizens to will, but only to choose, under the guise of universal suffrage, those who will want the place.
*The first of these developments raises **"free"** competition to the rank of a constitutive principle of civilization, **frees the right to property from all limitations**, elevates **"contractuality"***
***Voluntary" to the rank of a paradigm of individual freedom**, and introduces into the idea of the supremacy of law substantial considerations that make it possible to grant constitutional status to this absolutized acceptance of the right to property. Even more seriously, the very mechanisms of this absolutization, in particular globalization and the fiscal and social competition between states, seem to deliberately put this absolutized meaning of **the concept of property beyond the reach of any democratic control**. The European Union, in particular, was designed to entrust the protection of this conception of freedom and property to institutions largely isolated from collective control, as if their normative validity could not even be questioned or discussed.*
*No one seems to be able to dispute today that, in a world of freedom, an entrepreneur has the right to move his activities wherever he sees fit and that, while the exercise of this freedom undoubtedly has unpleasant consequences for some, this cannot justify calling it into question. This same freedom is supposed to give the entrepreneur the right not to sell the company to a buyer who offers to keep the jobs; It is possible that he is motivated by the desire not to have a competitor in his market, but, here again, the dogma is that the exercise of the right of property includes the right to sell or not to sell, and that any obstacle to the exercise of this right would lead to the reconstitution of the society of the privileges where the right, instead of being an impartial rule of interaction between equal partners, it would become a **means of power** by which some would protect their interests through artificial barriers. »*

Ownership

*"The founders of **the liberal idea** had neither absolutized the right of property, nor claimed that the faculty of unlimited use of it was sufficient to define freedom. On the contrary, they constructed the concept of a right of property freed from the legal obligations and restrictions that characterized the society of the orders as an instrument of de-feudalization of society, that is, as a tool adapted to the destruction of specific forms of personal dependence that take the form of legal obstacles. However, the forms of personal dependence and non-freedom that are encountered in the world of developed capitalism are no longer legal privileges, but **asymmetries of material power** and **unequal capacities to take advantage of** formally identical rules, even if these asymmetries have a very strong tendency to crystallize again into privileges thanks to the legal provisions that allow their reproduction. Consequently, if the **liberation of property** from its legal fetters has indeed been the relevant means of destroying hierarchies based on law and the difference of statuses, it is no longer*

*so in order to contain the asymmetries of material power that are today at the **foundation of contemporary forms of dependence.***
*On the contrary, it is this liberation itself that now leads to the **Re-feudalization of the economy and society**, while only the limitation of the right to property in order to make room for freedom can today be the relevant tool of individual freedom... »*

*"Far from preserving the freedom of all, **the deontological rigidification of property and contract** consequently reintroduces a regime of domination in the entirely transformed context of contemporary capitalism. In turn, this **new regime of domination** — which is profoundly undemocratic at the same time as it is illiberal — sets in motion a movement of rejection of all individual rights, which can lead to the emergence of authoritarian regimes and the **extinction of the form of political regulation** that we call **Democracy, that is to say, regulation based on the idea that each individual possesses both the same value and the same right to independence**... »*

- *Nicolas Delalande -*

From public/private land to common land: generated dynamics.

*" **Property** is one of the causes of the ecological crisis, a right to exclude the names of owners from the use of the property"* - Baptiste Morizot

Property is one of the fortifications of the nobiliary societal model rehabilitated by the republican bourgeoisie of the 19th century, already instituted in the Babylonian times of Hammurabi. (Code of Hammurabi).
Keynesian and then neo-liberal forms of capitalism have set up various variants of "loaned" property in wealthy countries, known as "sub-primes" and other authorized variants of usury.
In the European Nations, a range of public rental housing at moderate rents, not indexed to the speculative market, remains due to the resistance exerted on the public-political authorities by the low-income categories who benefit from them.

On another field, the following are spreading: the Squatt; the Nomadisme roulotte, a movable private house formula and its US variants "Tiny-houses" that can be moved; the Camping-car (500,000 in France); the co-living / co-working rental; the Amsterdam boat-living also practiced for a long time on all continents, and many other formulas adapted to temporary stays, without any commitment of ownership on the land of installation.

Different forms of housing do not require the acquisition of land, but only the payment of a **right of use** and temporary residence in return for remuneration paid to the private landlord or to the Public Social Housing Bodies, in the form of a rent regulated by the public authorities, or under other forms of conditionality, in terms of uses, durations, and forms of financial contributions, such as that of **long-term leases** and related provisions.

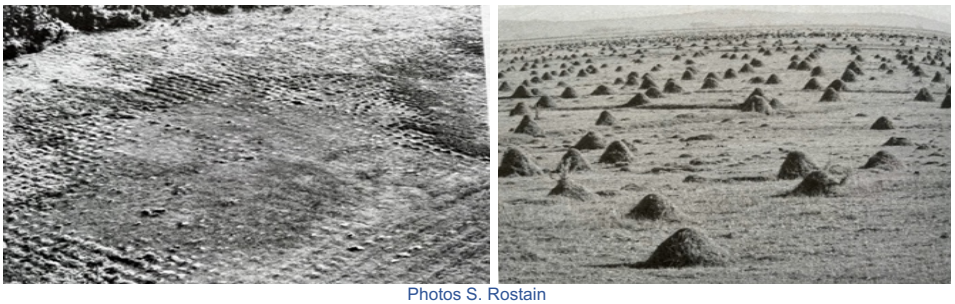
In this case, it is a **concession for the use of public land**, granted on a pre-established lease to private law service providers, to allow the construction and operation of works financed with own funds.
This formula created by the Chinese state (variated in the West under the term "occupation concessions") since the end of the 1980s accompanies the measures to support the creation of a middle class in China by departing from the Soviet solution, which has proven to lead to the general degradation of the public housing stock, which is not maintained and renovated by the structures of the state.
The objective in China has been to maintain the State's total ownership of land and to retain the ability to modify its uses in order to be able to build at any time and in any place the infrastructure necessary for the development of the nation's planning and construction policies.
On this basis, a long-term lease suspensive formula for 80 years has been created, authorising private actors of dwelling(s) and activity(ies) to build on the public land of the Nation: subject to the user and leaseholder to carry out its upkeep and continuous maintenance of the structure listed in the Local Urban Plan.
At the end of the 80-year lease, the occupier of the walls, or his beneficiaries, is offered the possibility of obtaining the renewal of the occupancy and upkeep-maintenance contract if the State does not wish to integrate it into public management or proceed with its destruction.
The initiative was successful and remains in force today.

It is the only system in the world to date, which authorises the liberation of built land in order to reallocate and renature it over time in the general interest, and which, as part of a path evolving towards the redefinition of the human societal base, may lead to the consideration that the support surface formed by the planet is not subject to appropriation-exclusion, but is conducive to opening

up to **hybrid forms of use with fixed temporalities, welcoming sets of life, sharing, and weaving with the environments of pose** .

02 – From Suitability to Ecosystem Life - Nature Engineering

Nothing new in this area, humans during their first developments had understood that they were part of a mysterious, complex, random planetary ecosystem, subject to dynamics and transformations, and that in order to survive they were required to cooperate with the climate and with the animal and plant species in place.

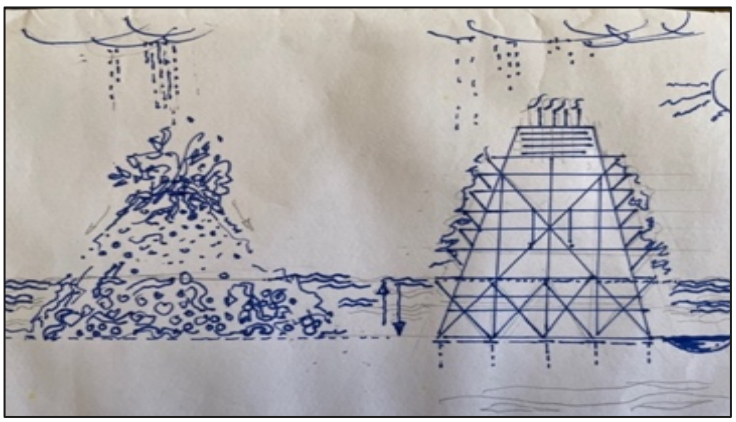


Photos S. Rostain

The traces of these ancient periods still remain , combining human knowledge and the achievements brought by the native ecosystems in place. Archaeology tells us about these times by exhuming these long mysterious fields made of mounds of earth.
Simple small mounds of earth, arranged in the flood savannahs of **the coastal Amazon (**French Guiana), revealed jointly by aerial "Lidar" auscultation and in situ study by archaeologists, and very recently understood as the work of extinct pre-Columbian Amerindian communities.
Tribes of cultivators-gatherers were required to place their living platforms above the level of high water (flooding of the Amazon River), and to create fields of micro-mounds of the same elevation in the immediate vicinity to place edible food plants at the top.

Stephen Rostain, Archaeo-anthropologist, reports: "*During their exploitation and after the extinction of these civilizations, organism-engineer tenants settled in a coordinated way (termites, earthworms, fungi, insects, microorganisms, plants, etc.), until they formed* ***a vertically self-organized ecosystem between populations****."*
(S. Rostain - "The virgin forest of the Amazon does not exist")

These human-created earthen embankments have evolved into biotopes**.**
The structures in place are in autonomous life. They offer resistance to rain erosion thanks to the cover produced by the foliage of the plants that have settled at the top of each mound. Their base, which can be submerged due to the flooding of the Amazon, is made up of galleries that partly belong to termites, which migrate to the upper levels during high water.
The mound in its elevation is home to a variety of micro-fauna: earthworms, in permanent ploughing (with a high contribution of mineral and organic matter) and in breathable ventilation; Cultivating ants, who after cutting foliage (trees and plants) and bringing them to the rooms of the building, transform them into fertilizer to cultivate mushrooms that they will consume.
This **multi-species architecture** uses an indoor "natural ventilation" device, with a controlled humidity level created by the network of galleries, and ensures a climate conducive to each cohabitant.



Within these mounds, the engineers-architects belonging to animal and plant species, have created the conditions for their meeting (Self-managed Group Housing) within the same building: **A place where foreign communities gather, which combines their skills to manage the solicitations of the external environment, and to pursue their own activities in specific habitats, articulated internally.**

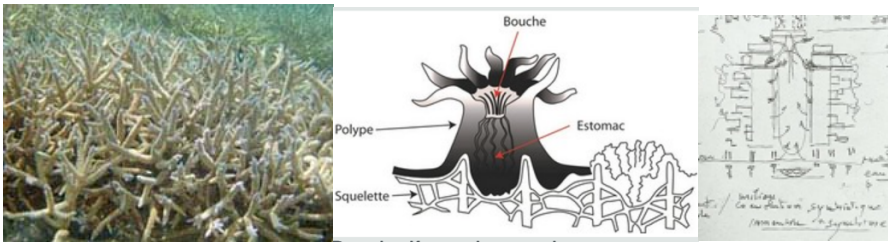
The unthinkable creation of a climatic state that has lasted for several millennia.

A concrete "Merizotia" that could encourage us to make reality coincide with the ambient necessity.
A model that expresses the creative power of natural engineering in its ability to seize structures abandoned by the extinct Human... But also an example of the establishment of concordances between human groups and the ecosystem dynamics emerging from the territories of settlement.

A testimony to the symbiosis that can operate in various forms with the living other, in adjustment to pedological, hydrographic, climatic constraints... To the point today of transmitting this approach to "modern" humans, who are still uncertain about the follow-up to their existence.

Nature engineering, sequels.

The examples developed by ingenious living organisms in terms of symbiotic architectures are very numerous.
For example, since time immemorial **, corals** have built and arranged reception areas for the purpose of leading a common life with the living-stranger. They create architectures that generate symbiotic spaces.
The coral system demonstrates through its multi-millennial existence that certain species of non-human life, placing themselves in co-evolution, are capable of allowing the emergence of **societies of "living together"**: around certain rules of exchange; at various scales of mobility; in bodies with a vocation of refuge to give shape to inter-species domains of life.



*Known since the Primary (**600 million years ago),** these animals, solitary or colonial, maintain close relationships with the mineral and plant worlds. The cells are organized into two sheets or tissues. Corals with calcareous skeletons build, together with calcareous algae, coral reefs.*
- Sce Wikipedia -

The **coral reef**, or barrier reef, is a natural bio-built structure. It results from the construction of a **durable mineral substrate** (formed by calcium carbonate) secreted by living beings, mainly corals.
As long as the corals are alive, the reef continues to grow, counterbalancing the effects of erosion.
There are several thousand species of corals that form complex marine ecosystems among the richest in biodiversity, generally at shallow depths.
Coral reefs, especially in tropical regions, provide **ecological niches** for many animals that find food, shelter, protection and shelter there. Many species of fish are dependent on it.

These ecosystems are home to more than a quarter of the world's marine biodiversity on just one thousandth of the ocean's surface.
Their **massive biological structures** are the result of complex interactions: between the tiny polyps of the coral animal (secreting the mineral skeleton), its unicellular symbiotic algae, and a **wide variety of** closely associated microorganisms (bacteria, archaea, fungi and viruses).
Reef-building corals form the basis for the structural and biological diversity of reef ecosystems.

When a coral dies, its structure serves as a support for other organisms that will attach themselves and grow on it (sponges, new corals) and participate in the enlargement of the structure.

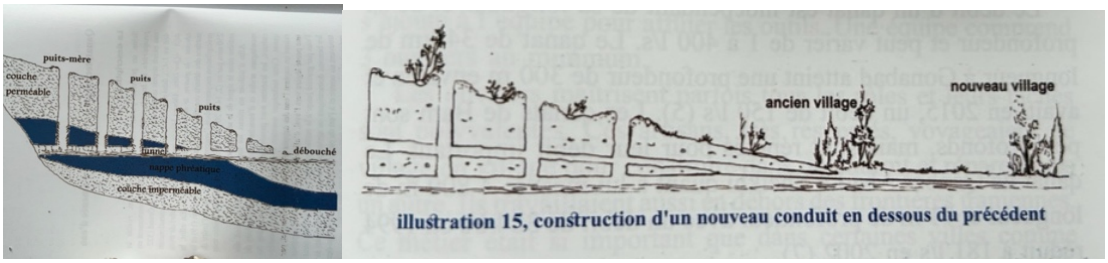
03 - Symbiotic Approaches

Anonymous, inspiring constructive knowledge, in compatibility with the micro-climates and preservation of biophysical resources in place

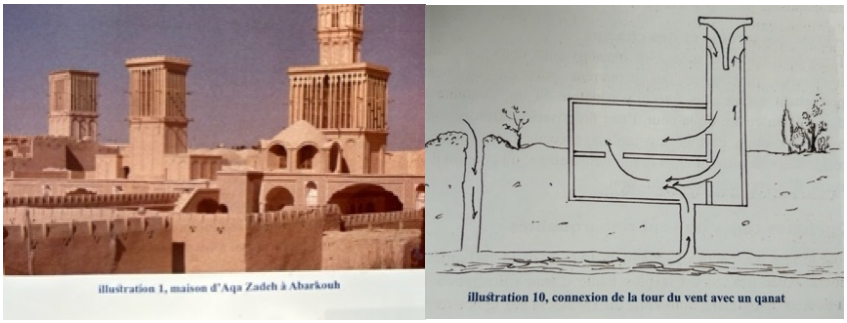
When the current techno-economic model discovers that flax fiber has the highest tensile strength in the plant world and de facto integrates it into the manufacture of certain building materials: this is a non-discovery.
For several millennia, people on all continents who live on clay soils and cultivate flax have integrated this fibre into the clays they use in construction, to avoid cracks resulting from shrinkage and expansion of the component under the effect of variations in heat and humidity.

When the process of integrating bio-geo-sourced materials into construction appears to be a peak of modernity for the wealthy "elites", it is "fake news".
These ways of building are several millennia old and are still implemented by the poorest people on the planet. Their merits do not stop at the fact of using materials in situ. In each geo-territory, these structures adapt to the specific climatic effects, to draw all the resources from them.

In Iran, the region of Shiraz - Abarkou - Yazd - Meyode - Isfahan**, has a range of works calling for sophisticated sciences and techniques, which are expressed in** the achievements created and managed with frugality in the past and maintained in use by a stubborn present, where the human remains impregnated with the need to evolve without destroying, and where the shared ownership of knowledge retains its meaning.



Qanat-Water Resources



Home ventilation and natural air conditioning

In homes, ventilation chimneys emerge from the roofs that operate in natural draft, blowing and sucking according to the variation of climatic parameters and regulating devices in place (interior and exterior).


Windmills



Coolers

In adobe, mud bricks or terracotta, the deep "Glaciaria" are built, the floors of which are placed in the shade of high sun-shading walls, to shelter the floors exposed to the sun's rays...
Within every biome encountered on the planet, the Human of the past has proceeded in the same way. He has designed his laying space in such a way as to take advantage of the characteristics of the local climate, or to protect himself from them, and he has built his shell from the reasoned borrowing of the material resources in place.
The silty earth here, there the species of wood (Chilean Patagonia), or there in Asia-Pacific wood and bamboo...



This human knowledge, abandoned by productivist societies looking with disdain at the "archaic of the subcontinents", fortunately, has not disappeared, and on the contrary, over the last 50 years, has created an interest among some engineers and architects from the margins.
These peoples have settled here and there, near the renewable resources necessary for their lives, on the well-understood condition that they have to **develop means of subsistence that can be reconciled with the constraints of the site and the maintenance of its resources over time**...
And not the other way around.

The whole interest now lies in the ability, or not, of our societies to learn from it, with much more elaborate means and knowledge... Provided that they are used for non-harmful and non-destructive purposes on the inviting planet.
This transition towards the revision of our analyses is underway, and contemporary bio-alternative thinking in recent decades is multiplying the forms of response, for a human sojourn with a small footprint on the diverse bio-diverse environments and resources of our Ecosphere.
But... There remains another more uncertain task to produce a "shift" : that of raising the awareness en masse of the entire human community on the fundamental issue of the twenty-first century:
That of undoing oneself, disembodying oneself from the dictatorial world of artifice, leaving behind the illusory, and step by step discovering this masked world, the fantastic unknown that neighbors the five dimensions of our cosmos (time, volume, the mutation of the living, etc.).
The critical approach of the "indigenous peoples" who remain is part of this movement.

04 - From impatience to insurgency... Building in low-print-living

Times can no longer be, in immutable and segregating urban barracks, in the real estate market of the ephemeral shelter, which flies away, drowns, or self-destructs at each manifestation of planetary moods.
They are no longer in the bioclimatic architecture...

It is now a question of **revising the** erroneous approach, pursued over the long term by humans, without regard for the living other and in defiance of the mechanisms in force on Earth, and to be:

- To develop forms of life and places of stay designed on **approaches that support bioclimatic architecture:**
- To **mutate into an articulation of symbio-compatible Spaces of various natures** ;
- To **move by developing reusable construction processes,**
recomposing systems, making it possible to build within the ecosystem environments alongside
Ecotopes, marks of a lighter biospheric co-evolution of humans on contexts
biophysics of the planet-
- **To generate built spaces that do not disturb biological parameters,**
pedological, climatic, physico-chemical environments approached.
- To take into account the diversity and variability of the installation contexts, to define
Forms of ecosystem conciliation, "almost" without imprint- To **develop during the stays of human groups** an intrinsic comfort of life in
almost self-sufficiency, in protection from climate variability –
- In construction, to make the best use of the bio-based materials in place

The first steps of the insurgency

The human being strong in the vernacular approach has the necessary knowledge to lead the company today as "Makers" and "Open-source", in collaboration, mutualization, and empathy

Do it Yourself ...

The "Makers" movement testifies to a need **to change "working life" into coactive life by reformulating "Acting in Common", "Doing" on a global scale**, **based on a culture of knowledge and collaborative learning in open source, based on "Think global, act local".**
This movement generates **low-tech/low-cost technologies**, based on 3D technologies for the reproduction of objects in machines or sheltered spaces, which belong to this new society in emulation mode, and not competition.
It promotes **sobriety, self-sufficiency, and attachment to practices for the production of durable, evolving, or recomposable goods**, aware of the reductions to be made in an increasing way on the local and global impacts generated by the act of: designing - using - disseminating - reproducing.

Low-print-living ...

During the twentieth century and the first decades of the twenty-first century, a great deal of research was carried out in architecture and engineering aimed at responding to disaster situations following wars, climatic disasters, etc.
They have produced **low-tech** housing concepts based on the combination of elementary industrial components or even components from existing resources (bamboo used by the architect Shigeru Ban and a few others).
Other contexts, beyond the requirement to produce at low costs, have encouraged the designers – Architects and Engineers of the "Emergency" – to make the "shelter" constructions easy to assemble and disassemble, and even for some to allow the recipient occupants to perfect them into "ready to finish", by adapting them to the physical and climatic characteristics of the installation site.
More broadly, the notion of "Light Housing" has been the subject of prototype studies whose best-known designers bear the names of: Eames, Jeanneret, Perriand, Rice, Prouvé, Buckminster, Gropius, Candilis, Shigeru-ban, Laplane, etc.



Jean Prouvé


Shigeruban


USA Tiny-House

The approaches, some of which are imbued with Frugality before the Letter (Jean Prouvé), obviously generate low energy consumption and carbon emissions, little waste in post-life, except for the minor part of materials that do not enter bio-degradation, and are dismantled and reused.
Modularity is a constant, and implementation by the future user is often sought to commit to the sustainable management of care and maintenance.

Movement - Homelessness - Exploration

The eco-compatible alternative can be found by Humans, in an escape from the barracks cities, setting out to meet and discover a real world that is complex to live in order to **reinvent oneself "With": in humility and biospheric awareness, in research and discovery, in collaborative autonomy...**

Humans, to date, have acquired the tools and capacities to live the "Commons" in a relationship with Nature and others (face-to-face / remote), without the obligation to settle for life in a place... As a traveler, discoverer, explorer, on the move, in a permanent encounter with biospheric resources, driven by an insatiable curiosity.

Revealing a malaise generated by segregating alienating contexts are the "Tiny-Houses": A simplified habitat, without land, mobile on the public network of roads and lanes (launched in the USA by the Federal Agency for Homeland Security of Natural Disasters), opportunely diverted by impoverished families forced to make a forced mobility to follow the offers of precarious jobs in the territories that are remunerative for a time.

05 – Projects in Europe

Contributions: Architectures of social and bioclimatic approach

"Symbiosis exists only in a pure relationship of reciprocal efficiency." Davis

In recent years, innovative projects have been concerned with implementing sobriety in the consumption of resources, pushing the challenge to the point of offering to replace artificial climates with high consumption of fossil fuels, with natural climates generated by the shape of the interior volumes and the characteristics of the skins in between.

The achievements are numerous, they relate to the equipment installed, the technologies and materials used, the plasticity of the structures, the climates generated and adjustable (natural light, sound, air quality), the transition to a mixed energy mix, the sobriety of consumption (water, energy, materials), the reduction of waste produced by their transformation or recycling.

A set that is expressed in Architectures committed to scripting the pleasure of living, the Intimate, and the Common at will in diversified spaces calling for the expression of all.

The following statements aim to report on the progress made in this area over the previous decades, before questioning the fields not covered.

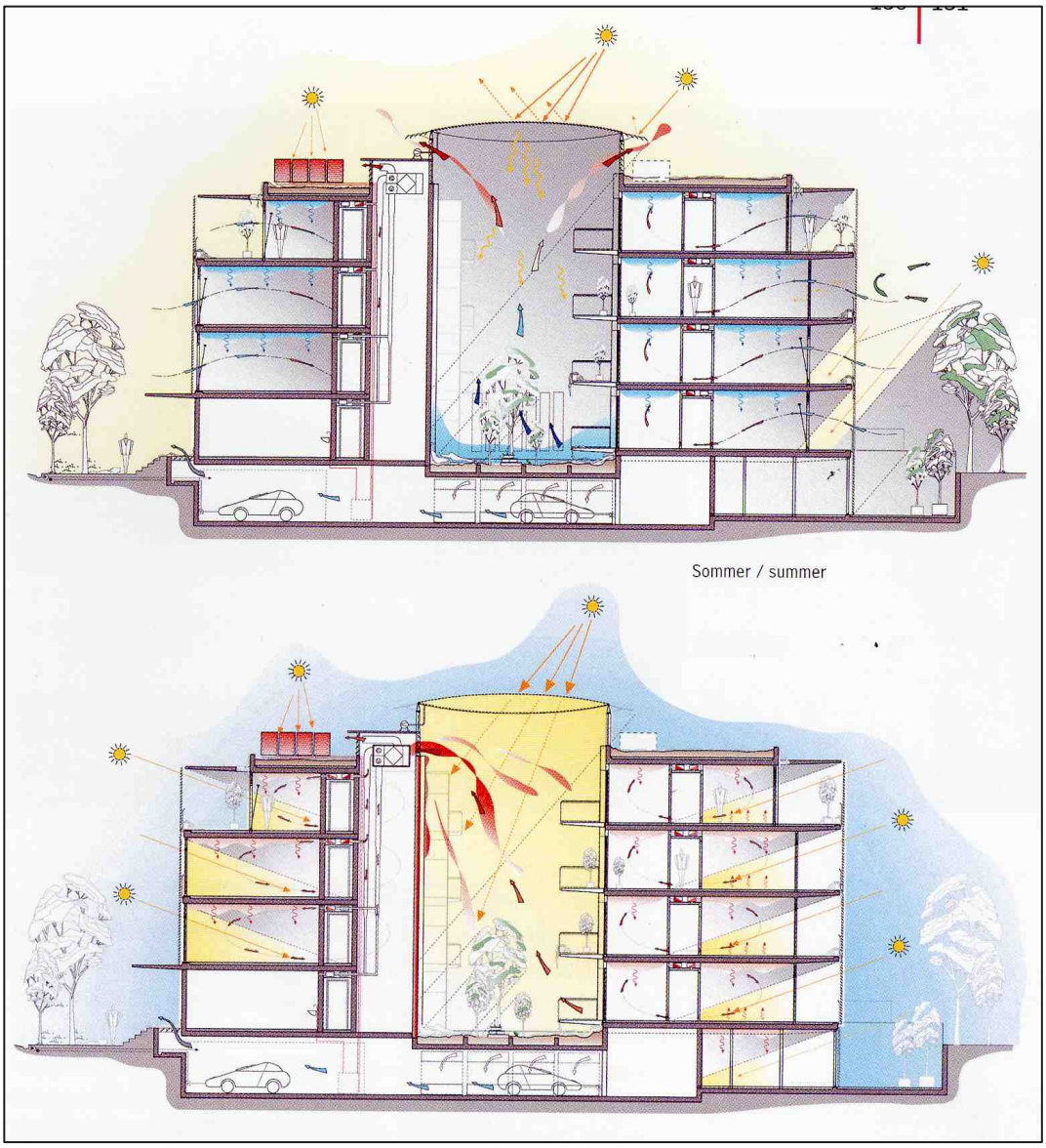
Housing "Micro-climate" Europe - Residential building (Kronsberg)

Collective housing program with natural ventilation.

The concept of Natural Ventilation adopted here is designed to adapt to summer, winter and mid-season climatic regimes. The building consists of a central green patio framed on these 4 corners by "pillar" structures in which the houses are inserted on four levels.

The patio cover is made of an airy, transparent mattress made of three flexible and dissociated ETFE membranes. Each of these membranes is screen-printed according to a pattern that is offset to create a screen against the sun's rays (reflecting or through) when they are brought together or separated (inflation process).





In summer, the membranes are brought together to create a protective veil from the sun's rays (Silkscreens attached).
The openings in the roof around the perimeter of the system allow the evacuation of the hot indoor air by thermal draught. The internal structures are cooled at night by introducing fresh air at ground level on the planted and lagooned central patio, evapotranspiration of the planted vegetation and in depression.

In winter, the screen-printed membranes separate into three distinct layers to let the sun's rays pass through, and promote the insolation of the interior structures. The fresh air is then taken from the tree-lined patio and introduced into the dwellings after passing through a heat exchanger on extracted air.

Water target - The roof terraces of the housing plots are planted. Rainwater from the roofs is partially used to supply two water tanks, each 35 cubic metres in size, placed under the floor of the Garden Patio. This water stored inside the building envelope is used to feed the plantations, participate in the regulation of inhabited spaces, the cooling of structures, and contribute to the overall humidification of the ambient air by the general thermal draught exerted.

The surplus rainwater, captured by the covers, is directed to a planted basin located in the heart of the block. This retention basin, which gradually infiltrates the substrate, is associated with the surrounding green spaces which also function by absorbing rainfall.
The accommodations are equipped with separate hot and cold water meters.

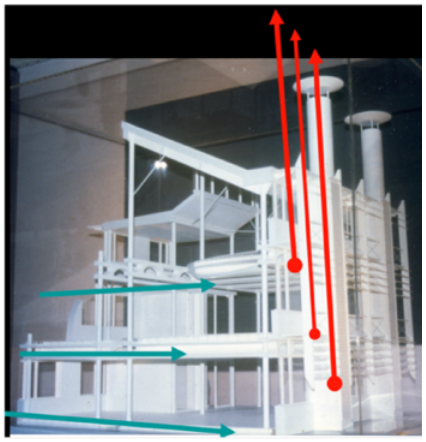
Offices - Feilden and Clegg - Architects

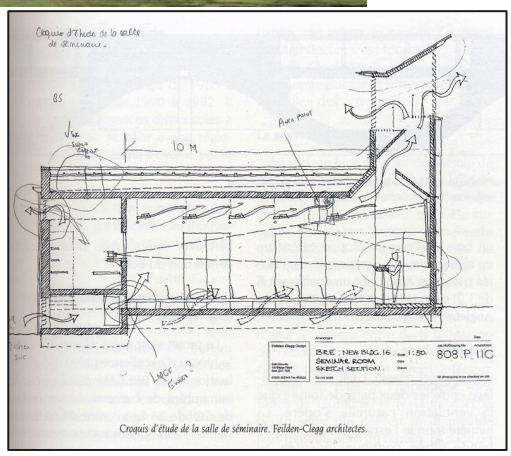
"Millennium Offices" BRE Headquarters in London (Cstb English) –
Fordam and Partners thermal design.

The building is for tertiary use, but could be assigned to housing on a "plan-libre" model.
It is oriented north-south, with a 7° shift to the northwest so as not to have to withstand the summer overheating at the end of the day.
Its north face is covered with bay windows, it is adjoined to a wooded area (humidity and shade).
The south face is made up of bay windows protected by sun visors. Its linear length is punctuated by solar chimneys, with an upward draft accentuated by an exposed face treated with glass materials.
In the upper part of the windows and outside, adjustable sun visors made of frosted glass slats are placed. In a horizontal position they protect the premises from glare, and vertically their translucency ensures optimal natural lighting during the day.

The ceiling of the building is crossed by wave ducts that conduct fresh air (North Face) into the volume of the rooms. The upper layer of stale air is drawn into the ceiling by vents with controllable openings placed to the south in connection with the adjoining solar chimneys.
The north bays are equipped with transoms (such as an adjustable shutter) which make it possible to regulate the movement of air within the ducts.
On the south side, the solar chimneys have adjustable shutters to intervene on the extraction of stale air and control the vacuum within the spaces served.
The device makes it possible to bring the building to life in a natural draft that can be adjusted according to the user's feelings, giving him the possibility of acting on the temperature and the speed of movement of the indoor air.
The humidity in the day and night regime changes according to the micro-climatic variations of the wooded area located on the north façade.





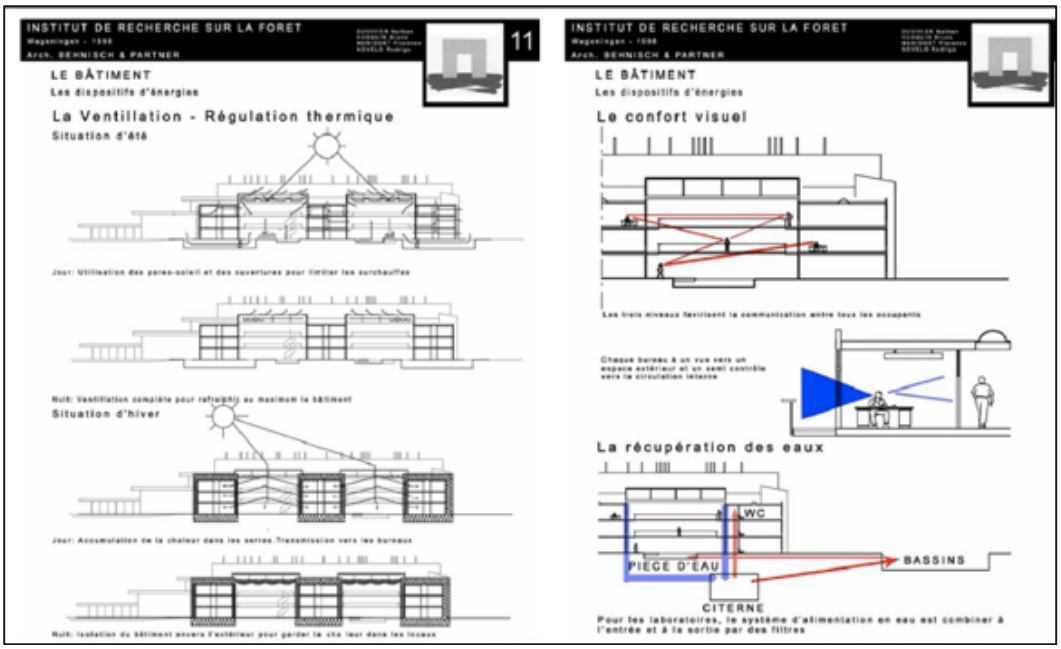


Croquis d'étude de la salle de séminaire. Feilden-Clegg architectes.

Offices - Public Institute of Forest and Nature - S. Behnisch Architect

The entire Wageningen Institute is developed in a comb on an east-west axis. It consists of an elongated building (laboratories), on which three other buildings (offices) of three levels abutt, enclosing gardens under glass roofs. These two environments form the two lungs of the built body.
They distribute natural light on workspaces and regulate indoor climates, during seasonal variations and day/night effects, by means of devices that allow occupants to manage the parameters of bodily comfort: air quality, temperature, air speed, luminosity, evaporation of the plant and aquatic environment on board, and bird songs...

In summer, each garden adjoining the back building (Laboratories) on its north face evaporates about 3000 liters of water per day. The thermal draught between the north and south facades ensures the transport of the cooled air into the office rooms, a role usually attributed to electric air conditioning systems.



The architectural concept is based on the desire to provide humans with sober, simple and manoeuvrable technical tools to create a controllable climate within the various enclosures: that of the greenhouse, with a general climate that can be shaped; and that of the singular workspace with no other input of energy than that required by the intervention of the interested parties (light, temperature, air renewal, sound environment).

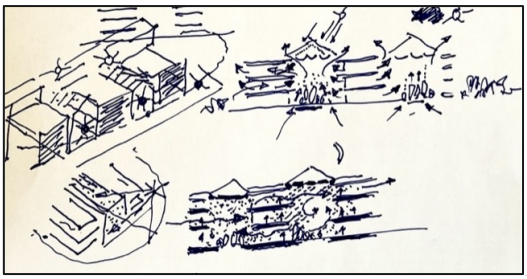
The climates resulting from the natural phenomena coming from the site are recombined with the intrinsic characteristics of the buildings (materials and shapes of the built spaces, regulation of integrated greenhouses-gardens), which are themselves managed by the occupants according to their daily feelings.
The green spaces under glass roofs open onto a glazed façade, with adjustable or retractable openings on the south, facing the cultivated plots developed by the Institute.
The three sequences of offices open east-west onto the atriums with basins filled with water (rainwater recovery) and tree plantings.
The inserted and lagooned plant mass, apart from its role as an atmosphere, consists of providing a level of humidity in the general natural ventilation system that is appreciated by users, and in part participates in a general self-purification of the circulating air.
In the summer period (night regime) it participates in the cooling of buildings, by generating continuous evapotranspiration.

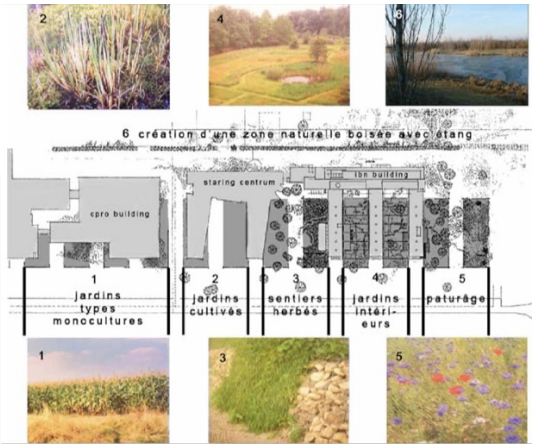
The building is built of wood, with the exception of the inertia floors and support columns, which are made of reinforced concrete.
60% of the interior walls are glazed, with double-glazed windows on the facades.
The single-glazed glass roofs receive a reflexive complex on their inner face, which partly prevents the transfer to the outside of the heat gains gained during the day in winter.

In winter, the sun hitting the glass roof reduces the day-night temperature differences in the atriums.
The inertia given to the floors ensures thermal stability within the office complexes placed on this sequence of time in independence.
In summer, the draught air in open rooms leads to air circulation on all East-West-North-South orientations, from top to bottom. The occupant has his own manual workspace adjustment system.









This building shows, beyond the pleasure of rubbing shoulders with living nature, fauna and flora, the interest of associating the built space (artifice), with open ground soils, plant masses and water basins.
It shows that a significant part of energy consumption (heat and ventilated coolness) is only justified by imposing on humans an existence in confined isolates.
Life in this Institute proceeds from a collective dynamic, declared to be amplified by the continual links woven between the occupants and a reactive environment within a space with interdependencies placed on the menu.

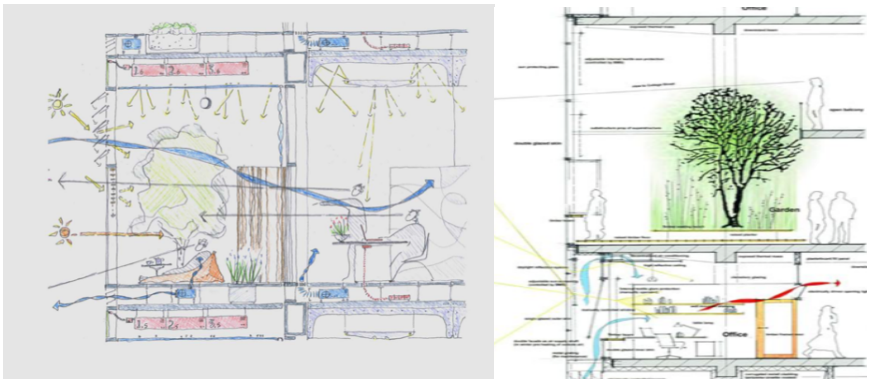
Multifunctional complex - S. Behnisch Architect

From the lockdown variant to the deconfined.
Stefan Behnisch is guided in his projects by the desire to provide, within a functional space, a wide range of choices in terms of bodily comfort, allowing each user to determine the parameters of a personal well-being without interfering with the other occupants.





In the Hamburg project (offices in the upper part of the floors associated with other urban activities) the concept is a new type of workspace, designed to adapt to the varied needs, individual or collective, of the occupants.
The workspace has a recomposable volume and surface, in connection with the skin of the facades, to allow the staff to create a specific working climate and atmosphere according to the activities developed during the day, to the point of offering everyone the opportunity to have an isolation area with a specific climate over a given sequence of time.



This singular comfort is given to each person looking for a temporary retreat, by intervening on the combination of two menus: the one provided by the devices installed indoors in the office (ventilation, acoustic treatments, openings, internal/external blinds, lighting, etc.), and the one coming from the skin on the façade allowing the outside air, the sounds of the city, to enter, heat or cold, direct sunlight or shade, occultation or full view of the horizon.
The freely chosen comfort parameters can be erased to return to the initial state, that of the regulated common space.
The different facades are expressed according to the activity of the occupants, and according to the corrections they make to the internal and external climates (orientation of the facades, time of day, seasons, activity of the surroundings).
From the lockdown to the end of lockdown.

Waste-Waste Neighborhood Almost Zero » J. Eble - Architect-Urbanist

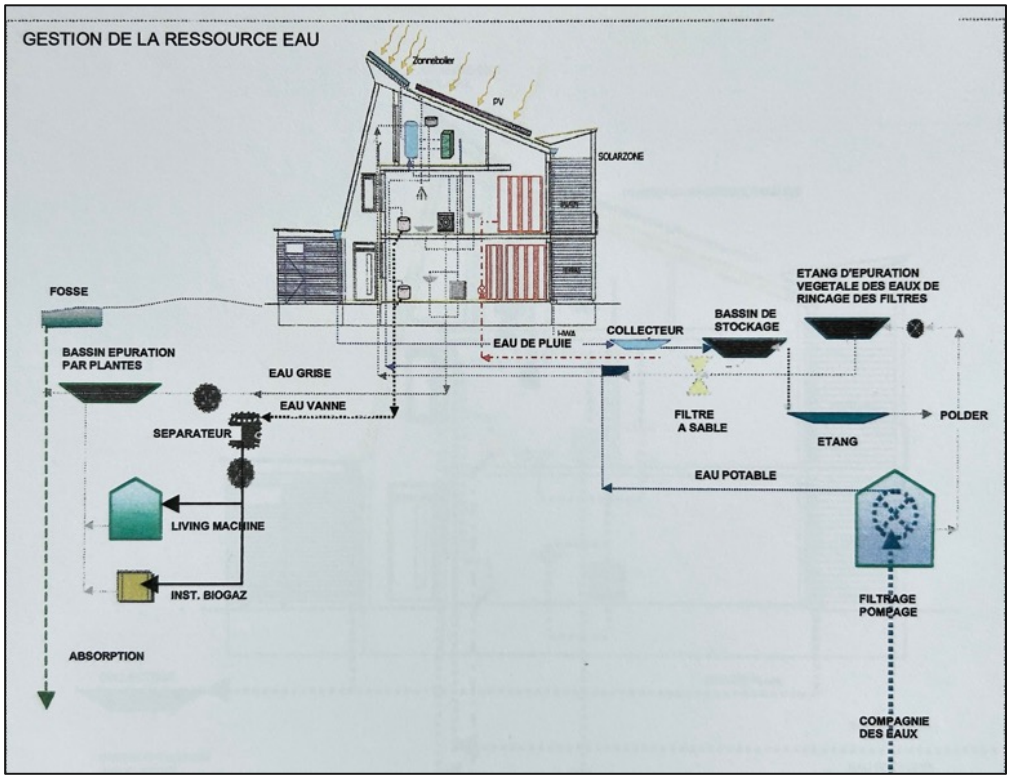
It is a question of inserting a new district into a Polder (a specific biome), without modifying the state of the soils in permanent percolation through construction and outdoor development (Netherlands).
Within each of the blocks that make up the district, the housing units are spread over several buildings that form a central heart designed to suit the neighbourhood. The location favours a wide solarisation of the dual-orientation habitats developed on three levels. Each house has access to the alley and access to the shared garden (Cœur d'îlot). All exterior floors are made of permeable materials, but not accessible to motor vehicles on the right-of-way of the City's drinking water catchment plan integrated into the land.



To lighten the load of constructions on low load-bearing soils (Polder), the construction process is wood-framed, the façade walls are made of bricks and clapboard.
The main roof slopes are oriented south, south-east or south-west and are covered by photovoltaic panels.

Water resource management - Supply, evacuation and reuse cycle.
- The homes are connected to two qualities of water: drinking water and water from cleaning the filters of the nearby pumping station. They discharge wastewater into three networks: rainwater, grey wastewater, and black water (urine and faeces).
- The precipitation collected on the roofs is collected at the foot of the north and south facades and is directed to open-air retention basins equipped with sand filters. After settling, the overflow is reinserted into the polder to maintain its water content;

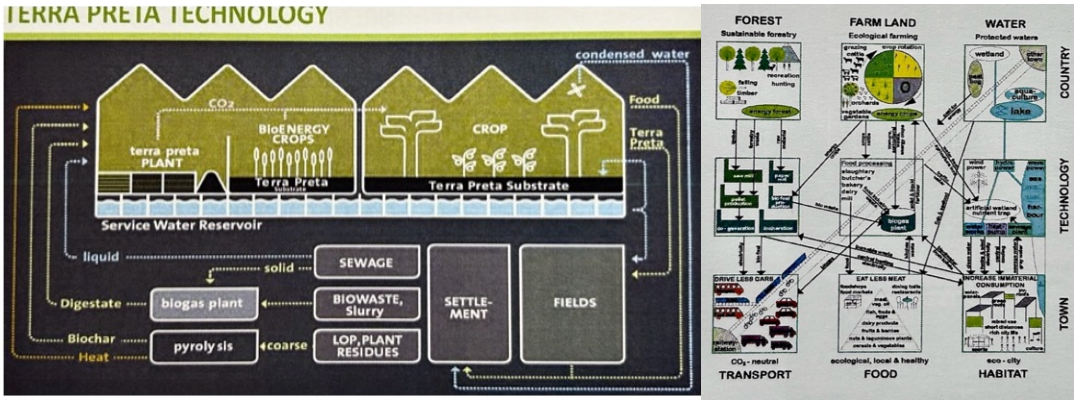
- The water from the toilets is supplied by basins of raw water resulting from the cleaning of the water extracted by the pumping station (which produces the drinking water of the agglomeration after specific treatments);
- Black water is directed to a separator and fermentation tanks (with biogas recovery) before being basined and treated with bio-purification, then used to spread it on the plantations in the district. Solids associated with green waste provide fertilizers;
- Grey water is led to basins to be purified by plants (reeds, etc.) before being used to water the neighbourhood's plantations or reinserted into the polder.



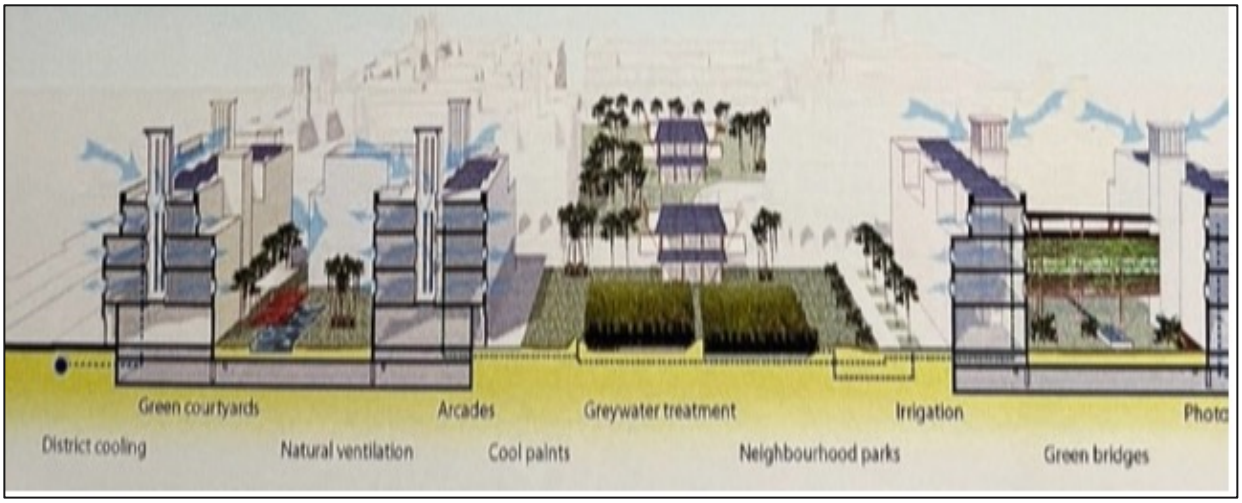
Habitat with a low systemic footprint - Joachim. Eble - Architect

Revalorization of resources consumed by humans.
Second-use cycles make the most of the material consumed by reintegration into other forms of employment.

"Terra-Preta" and similar technologies consist of treating for reuse, materials and fluids discharged by human activities (neighbourhoods), by recycling or transforming the material; and for fluids, water purification followed by its return to the surrounding nature (heart of islands or arable land).
The depolluted water reused in the islets helps to improve the general climate of the urban site while constituting a micro-climate that accentuates comfort within the neighbourhood units.
The system of material flows from the neighbourhoods is connected to the system of "green belt" infrastructures around the area (gardening or urban agriculture strips developed in permaculture).

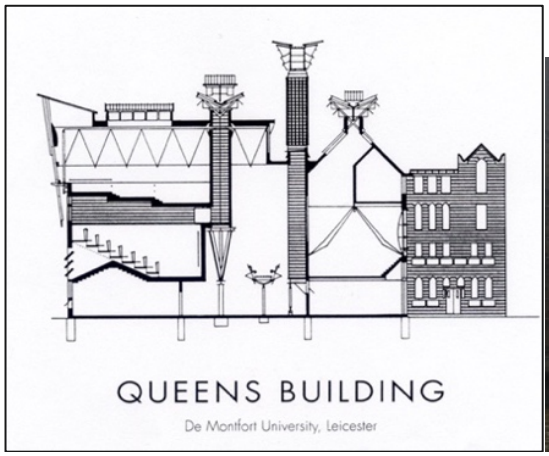


The process described in the Culemborg operation has been reinterpreted by the Joachim Eble Architecture Workshop in a project carried out in Abu Dhabi, which combines this concept of resourcing and reassimilation with waste from human activity (materials, gases, fluids).



A concept of urban organization where a built environment is expressed that takes up the features specific to the bioclimatic architecture of the Middle East: **natural ventilation by "wind chimneys"**; accentuated volumes in the elevation of the inhabited rooms; patio gardens. A multi-millennial dynamic already mentioned, which is played out between an irrigated garden and a solarized ventilation chimney, creates an indoor climate with natural ventilation with low energy consumption and day-night comfort.

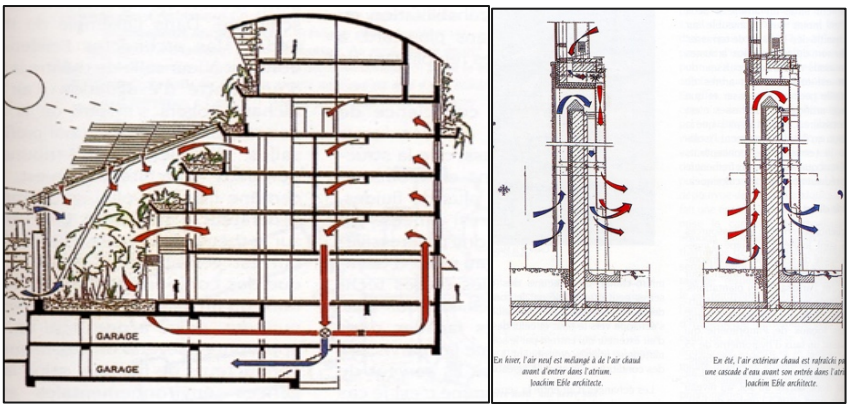
The demonstration was to be made, initiated in Great Britain in the 2000s by the architects **Feilden and Clegg** on various public works (Bat.Administratif et Universitaires). Below are the tertiary premises of the English Parliament in London





"Greenhouse building" - J. Eble Architect (Prisma Block – Nuremberg)

The living space linked within the same structure combines an office area, a body of housing, a "hothouse" hall and offices in the basement.
The "Halle" space is intended to be a place of social exchange open to the City, climate-regulated, combining the combined effects of a reactive and controlled envelope (solarized, shaded, breathing) according to the seasons; a wooded heart of the block; and low-temperature basements with little summer-winter variation.



In the summer regime, the heart of the green block provides fresh air introduced into the lower part of the greenhouse.
The air mass is cooled by a "Cascades d'eau" device placed at the foot of the façade, and sucked into the Hall by the vacuum created in the glass roof (open vents).

Through the play of variations in outdoor temperatures Winter / Summer, the system: in Winter introduces fresh air, from the heat pump placed in the basement, a source supplemented by the solar energy contributions of the greenhouse to the south (greenhouse then closed in its upper part), to provide fresh air to the offices.
On a limited footprint (in the city centre), based on a green block centre, the concept makes it possible to combine several urban functions into distinct atmospheres and generate seasonal climatic comforts with very low energy consumption.
Existing neighbourhoods that can be resourced by the heart of blocks on public land?

Multi-design platform housing / free evolution - Frei Otto - Architect

It is a housing assembly of several dwellings, those of the Architect and his Berlin friends.
After the land was serviced, it was carried out with the construction of reinforced concrete, on several levels, **of superimposed floor sheets**, of various shapes, resting on pillars, and having hoppers for a later connection to the general networks.
After the framework was completed, each floor was the subject of a **self-designed project** by each of the recipients: composition of the interior space, equipment, materials for making the internal-external walls, various ways of arranging the terraces, etc.
Then, on the basis of the different forms of installation planned, the different levels were connected.
Apart from the framework, the project, for the most part of the inserted volumes, can be dismantled and reconditioned in other sites.





The building that is woven - Ed. François - Architect

To live the in-between on the three dimensions, a fourth in co-evolutionary interlude

It is Édouard François' field of research and action, on the projects proposed to him, to question the relationship between the intimate and singularized space of withdrawal, and according to the sites of operability provided, to implement various formulas of conversation between species, of relationship to biospheric variants... Architectures to live and free oneself. (Montpellier, Paris 20th ...)

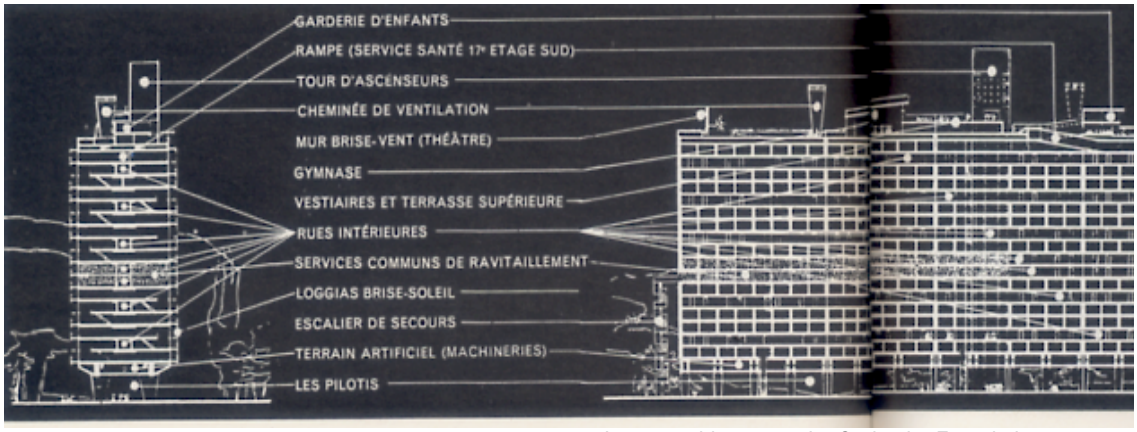


Photos - Atelier d'Architecture Edouard François
External open room extensions on wooden pillars

Neighbourhood Unit - "Cité Radieuse" 1945 Le Corbusier - Architect.



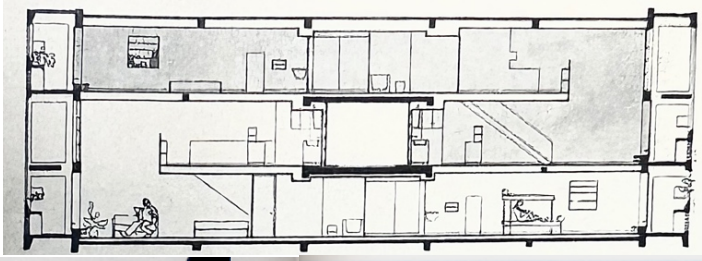
This building is not a building!
It is an ocean liner, an islet, or maybe even Noah's Ark.
It is a space formed to receive the sun, wind, rain, the air of the open sea or the mountainous confines of the sea, and to let the grass grow between the toes. It is also a rock populated by inhabited caves, at the top of which the planet and its dynamics are taught and also human life is dramatized.
It was designed in 1945 and built in 1952



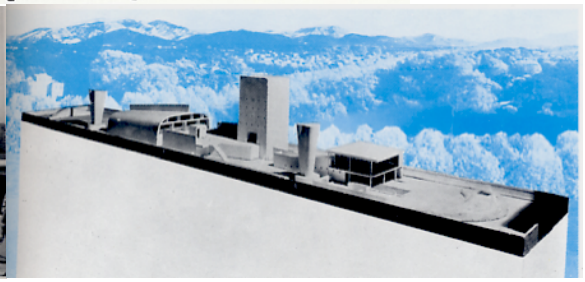
Iconographic source: Le Corbusier Foundation

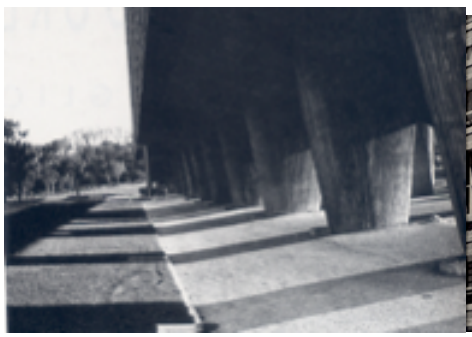
The entrance to each apartment opens onto a double-height façade, and its loggia with sunshade and indoor/outdoor reversible seat. The staircase placed in this first volume gives access to the first floor of the bedrooms with storage space and shower room. The children's rooms are separated by a large movable partition forming a sliding blackboard to express themselves and study (the accommodation is reconstructed at the Cité de l'Architecture – Paris)

The building has 17 floors accessible by 8 superimposed interior streets. It integrates various activities on the upper floors: food retail, offices, hotel-restaurant, convivial spaces, etc.
The **interior streets** allow direct access to the homes of postmen and delivery people and the deposit of delivered parcels.
On the **terrace** are: A School, a Gymnasium, a Swimming Pool, solariums, a running track, an open-air Theatre and an open-air cinema screen.
The **ground floor** is a vast open space in the open air, punctuated by stilts supporting the structure, it allows multiple activities sheltered from the rain and gives access to the peripheral green spaces











Source Icono: Le Corbusier Foundation

The **construction system** uses a framework of reinforced concrete posts and beams which rests on 17 gantries (piles) freeing the entire structure from the ground. The housing units are made in place. For their framework they use wood and metal and are independent of each other (acoustic barrier).

The **way in which the housing units are assembled** makes it possible to place a service circulation on all three levels and to give it the size of an "inner street", suitable for maintaining an exchange within the neighbourhood. The interior streets, interspersed with halls, serve the lifts and stairs and form small squares onto which the common rooms of the clubs and associations open
The dwellings are essentially duplexes (one level bedrooms and one level common room, kitchen and loggia) offering a view of two horizons, in opposition to the exposure. The device allows the occupants to manage the thermal draft between the two facades.

Neighbourhood Unit
Have you ever come across a block in the city where housing is dual-orientation, where housing provides local public and private services, accommodates 337 families, i.e. a population of about 1500 people, for a land use of 135m x 24m?
An average block in the city that would house an equivalent population in number, would have approximately a footprint of about 160m x 80m ...
The "Cité Radieuse" neighbourhood unit places all the houses out of water by resting them on a Palace with a hundred columns, surrounded by green spaces and vegetable gardens, and is located close to public transport links.

"The Villa Building" - New Spirit 1925 Le Corbusier
This concept proposed a modification of the forms of inhabiting.
The fabric of the City is frequently formed on an orthogonal grid that generates Neighbourhoods and Blocks: Blocks set around them by a built environment allocated to housing and shops (on the ground floor).
The buildings that have been built are generally originally made up of double thicknesses, only to be filled in over time by warehouses and craftsmen's workshops or, worse, by the overloading of other residential buildings (Description of the phenomenon p 221)

This architectural and urban concept was supposed to assemble "**tiered villas**" of the duplex type around a Nature and Leisure area , composed of two wings enclosing a gardened or wooded patio.
The housing was of the crossing type (Street and Heart of the block) and in multi-exposure, with vertical circulations and common services oriented on the island face, that of neighborhood activities.
In the urban fabric imagined by Le Corbusier: the block was 400 x 200 meters, to form in its flared center an area of 300 m by 120 m (heart of the block).
The traffic axes in the district were divided into 3 categories: High traffic, medium traffic, and private street.



- Design of the "Pavillon de l'Esprit Nouveau" in 1925 -

Le Corbusier proposed to "eliminate all intermediaries between producers and consumers by setting up a food cooperative for each Villa building. The cooperative is equipped with refrigeration equipment, receives its deliveries directly from the provinces and delivers the products to the buildings. »
"On the roof are installed relaxation areas that complement the interior garden of each building-villa and the general facilities of the heart of the block." - *Fondation Le Corbusier*

A century later, the concept can easily be continued: to associate co-activity premises and public, private and associative local services; collect rainwater; recycle after phyto-purification of grey water from homes; provide access to digital networks; placing photovoltaic installations on roofs or facades, etc.
We then find ourselves with living spaces, in an "open city" energized by its convivial islands with partial autonomy to withstand part of the climatic hazards.

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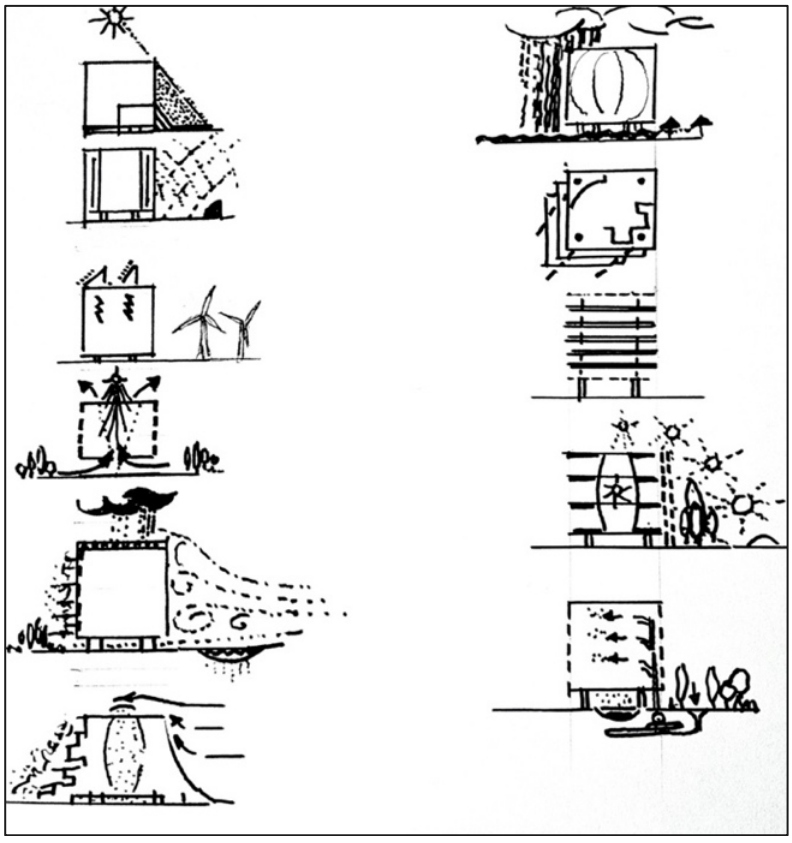
In summary,

We can remember that the space of expression in mutuality and conviviality explored in recent decades by the Alternative movement, sheds light on the means of leaving the "Highway", and exploring the byways to find the links with the biospheric world.

We know, having already experienced it:

- **Convert** the Urban Block, located on the ground in a position of fragility, exposed to increasing climatic effects: into **a Neighbourhood Unit**, raised, faired, momentarily able to pass into a **regime of self-subsistence and autonomy of operation**;
- **Dissociate** the prefabricated and reusable skeleton of the structure (**framework),** from **the evolving spaces** (inserted) implemented with components that can be partly dismantled and reused or modelled with materials from the support region;
- **Creating** living spaces (housing and activities) with **low energy consumption**: "Passive" concept combined with renewable energy inputs transformed in place;
- **Design and implement** intelligent, non-artificial human architectures that take advantage of the different forms **of reactivity of facades,** taking into account, depending on the orientations: exposure to climatic stresses, and horizon views (mono-orientation of homes being obviously prohibited);
- To create elevation structures, of a **microclimatic nature**, **reactive** to external climatic effects in order to "natural draught" (if necessary assisted), **to improve the health quality of living spaces and the physical comfort of each person by direct management** of the enclosure parameters;
- Treat liquid discharges (washing water) from homes within the building to **decontaminate** them and **reuse** them in a dual network with rainwater; or initiate a **degradation process** (methanisation or phyto-purification) of the wastewater;
- **Reduce drinking water consumption** in the home, and bring it from 140 liters/day/person (current average in France) to 30 liters/day/person
- **Integrate plants** - Provide the living levels: gardens, greenhouses, loggias, terraces, etc. Depending on sun exposure, prevailing winds, rain and elevation level;
- Build **living spaces that generate at their heart** (horizontal or vertical island) a manifestation of **social life,** encouraging pleasure, collaboration, mutual aid within the neighborhoods;

...



Many Architectures have been explored in the previous chapters... They vary in height, ground seating, heart-garden, internal autonomy, renewable resources, which combine the flow of activities and social dynamics. They reveal a part of the evolution of thought, but without an active revision of the Ideology of Profit and the Market, which only allows for an expression on the Margins.

One **field of research** remains **unexplored**: that of **the relationship between the world space of Ecosystems and the "station-installation" of human activity**, conceived since the appearance of the fragile Species as the imperfect shelter against the fear of an outside: hostile, harmful, contaminating, invasive...
We must **return to the objective situation.**
Living Together is in accordance with the rules of evolution of the planetary base, and the Human Species cannot, because of its biological conception, be an exception to the rule and think of freeing itself from the Earth... It can only **endeavour to revise past cosmologies, based on multiple false beliefs, and to seek the forms and framework of the links to be woven with the whole living world in place.**

06 – Developing singular spaces in evolution-compatibility of the Living

To each Merizotopic weaving an Ethology *-- "Ethology as the science of animal behavior, traditionally centered on the relationships between conspecifics of the same species, and the ecology of communities, as sciences and relationships between species."*
B. Morizot - Rekindling the embers of the Living -

Does rethinking the living space of humans lead to:
- **Test on different temporalities and situations (microclimatic, geophysical, etc.) our ability to exist in the biosphere and to rewrite with humility and poetry the "living of the human" in common, without property;**
- **To re-establish the forms of our adequacy to a generative physico-biochemical framework,by gradually slipping towards a de-territorialization of our occupations and de-metropolization of the footprint, to grasp the immense co-creation project that is opening up in terms of rebuilding our ecosystem compatibility within the of a world in continuous evolution-revolution;**
- **Establish a reciprocity of exchange with the ambient environments of the Living by equipping oneself of a "language conveyed between Species", without monopolizing them, without considering them to destroy, to eat them (unless we reveal in our country a hidden part of psychopath", as Sébastien Bohler wonders in "Human Psycho");**
- **Reform our systemic conceptions, to design biotic poles of inter-acting stays with the geo-bio-physical contexts encountered;**
- **Giving life to the built forms, and thinking about their membranes in permeability, to give free rein to the creation of spaces between the human, <u>the explorer, the learner</u>, the and the living worlds around.**
  ...

Reflections, applied research, and achievements in the field of social and ecological alternatives are developed through "open source" networks, on a daily basis outside the field of media communication."
They make it possible to conceive "**contestant**" installation projects , which experiment **with the "interlude**" by seeking to **adjust to the real world of interdependencies and singularities, to sketch step by step the adapted forms of encounter between worlds in a biospheric itinerancy of the Human, and in search of a shareable language.**

Stay in evolution-compatibility.

The essence of the Being: the conjoined Living One.
We know that the Dwelling Unit or "Living Unit", given the physical and biological fragility of the Species, is the key element to express a human presence within an "Earth" container without disturbing the environments approached.

We know how to produce diversified, passive, bio-sourced, thermally regulated, erasable, movable, flexible, user-friendly structures... Allowing the self-regeneration of borrowed and mistreated environments.
On the path of an inventive, insatiable marginality, a movement has developed in recent decades that has endeavoured to enunciate and experiment with an alternative world of sobriety and mutuality between humans, but not only!

In recent decades, exploration has been carried out in fields such as social, economic, political, biospherical, multicultural, etc. Then, carried by groups of actors, it was translated into space at the different scales of the intra- and extra-human relationship.
Some examples have previously been examined in terms of their dynamics: self-management; life goals disconnected from the sphere of work (work); reduction of the ecological footprint; sobriety of consumption; participation in the design of internal-external "shelter spaces"...
These initiatives, which focus on the **redefinition of the collective as a resource** within human settlements, have benefited from a movement linking several spheres: in science and engineering, but also in the inventions of the space of the concerted and acting commons... Among other things, this was the era of the "Barefoot Architects", and of users aware of the urgency of leaving behind a model without follow-up in order to experiment with the degrowth of the anthropo-imprint.

Alternative architectural concepts have developed on the basis of concrete knowledge visible in the vernacular architecture of past times, those before the transformation of heat into mechanical work.
Knowledge relearned, in Europe and in other territories, by a few rebellious youths. In France, in 1968. Thanks to Alexandroff, Massiah, Lautier, Candilis, and many others...

This knowledge has marked the entry into contemporary construction of an **architecture in motion**, assembling social, bioclimatism and scientific and technical invention.
This "Movement" offered itself: access to renewable energies, solar, wind, geothermal; possible independence from centralized energy production and distribution networks; and consequently the possibility of designing headquarters roaming...
The contemporary world of consumerist excess, of course, has hindered the expansion of the fascinating experimental field led by these architects, engineers and anonymous people, who have worked to show that the path of escape into intelligence is not that of the confined, preconditioned cellular space, which shapes the unthought (Artificial Intelligence), but that of an exchange to invent spaces that are renewed according to expectations and are combined with external dynamics Available. (Cf: Corbu, J. Eble, S. Behnish, Hassan Fathy, Gilles Clément, and many others...)

The Envelopes of Life: Spatial Variations and Microclimates



Horizontally, six families of envelope spaces: – Vertically responsive to operational factors

In terms of the built environment, the diagram presented mentions most of the fields tested in Europe in terms of living quarters, introduced at the scale of urban blocks in search of sobriety and almost autonomy, which combine the need for comfort in the confined activities carried out by humans in the "four seasons", and the contributions of external microclimatic components.

Innovative architectures have emerged, which reinterpret vernacular techniques and combine in a sober and energy-efficient approach: Exchanges with the outside air (temperatures and qualities); the contribution of light; energy inputs and inertia and their storage; the use of water and its unpolluted return; the effects of plants (humidifier, purifier, etc.) existential).

These **concepts of shared living space associate internal space with external space and attempt to formally rewrite the person's relationship to the world formed in open communities, i.e. in collaboration and open source.**

The Architectural Alternative

L'Alternative has focused on the comfort of the atmosphere and health of built spaces, to the point of developing concepts of use offering the means to each occupant to create a personalized climate in common life structures.
These approaches have not opened the way to a liberation from the concepts of Urban Planning and Architecture, which are still based on the concepts of fixed infrastructures in underground networks, on agglomerated and controlled sedentary lifestyles, on the stabilization and concentration of the mass consumer, etc.

In these times of the "Interlude", **Bio-Alternative Architecture** has been moving towards technologies that passivate envelopes and the use of existing renewable energies (Passif-Haus, Germany), or has been interested in designing the nature and reactivity of envelopes to be lived according to the variability of local external phenomena acting and the resources offered in situ (characteristics of seasonal micro-climates, and resources: formal, material, physical and vegetal).
It has equipped itself with **indoor/outdoor "green lungs"** to purify the air, regulate temperatures and indoor humidity, or bathe in natural light (Yannis Xenakis, Le Corbusier, Hans Sharoun ...).
It took advantage of the inertia walls and the "natural draft" resulting from the strong temperature gradient between opposite facades, to create manageable interior climatic regimes according to the feelings of the occupant and without electronics, on a multi-oriented apartment system.

The brakes, again!
"The through apartment": A formula rejected by the private real estate sector, preferring the mono-oriented apartment model, due to a more profitable ratio of floor area to façade area for the developer... In defiance of the future occupier.
Here again, there remains to be brought down a "Vendôme Column": that of the Marketing-Producting System for manipulating the individual.
That of **decorative and consumerist architecture,** committed to burdening itself with falsely "green" technologies, to falsely sell itself as "Eco +", or French as "Positive Energy" of 80% nuclear origin.
The first positive energy buildings were built in Germany in 1996 by the architect Rolf Disch. Their positive energy balance has been verified by the University of Wuppertal. The RT2012 has taken up the term according to a false advertising principle since it does not impose renewable production and consumption can exceed 100 kWh/m2

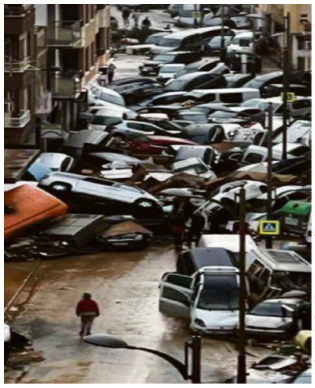
In abundance, the architectures of the "inhuman" are growing on asphalt to rise until they cling to the clouds and hope to store 11 billion addicted consumers on distribution areas by 2050.
We can already see in the megacities of Asia (from 20 to 30 million inhabitants), these forests of Tours, but we are careful not to communicate about their inhabitants who close their windows, to the point of depriving themselves of daylight and views, which their homes no longer offer on the blocked horizon!
Have they become forced to resemble insects?
Perhaps, this is to train future Martians?
For the middle classes parked on the ground, the future is no better, which puts their feet in the water, carries away or explodes the fragile materials that make up their homes, during repeated tornadoes, hurricanes, or rains. According to the media, "unlucky phenomena presented as temporary".

Is the countdown to cure ourselves of the **Greenhouse Effect**?
This does not seem to be the case yet, **green-washing** now operates under the identity "AI". This " **Artificial Intelligence**" whose names are hidden in order to better introduce it as an indisputable source of the human mind, cutting short in the long term any access to the conscious and to reactivity.
Could this be the way found by the civilization of Profit to puppet the Human?

07 – A STEP FORWARD...

Conceptual resources, in "horizontality of relationships"
Biocompatibility, sobriety, risk prevention, self-management, collaboration
Interconnection...

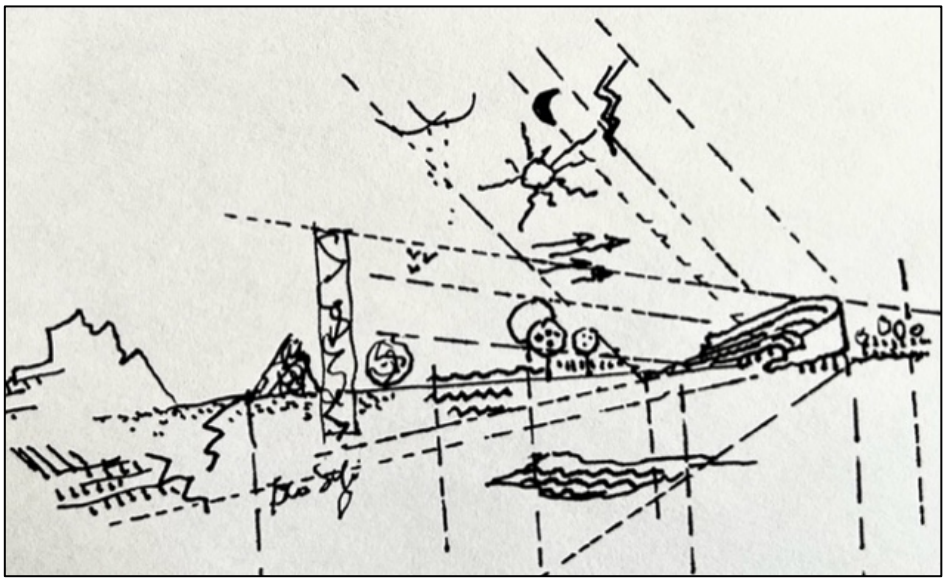
"The hell of the living is not a thing to come; If there is one, it is the one that is already there, the hell that we live in every day, that we form to be together. There are two ways not to suffer from it.
The first is easily successful for most of them: to accept hell, to become a part of it to the point of no longer seeing it.
The second is risky and requires attention, continuous learning: ***To seek and know how to recognize who and what, in the middle of hell is not hell, to make it last, to make room for it...*** *»*
(Marco Polo to the Great Khan) - "The Invisible Cities" Italo Calvino



071 – Acquis and conditionalities

Within the framework of the options explored to date by Architecture and Global Ecological and Social Engineering, there is a conceptual and operational field that is still to be developed: that of preventing material and human risks incurred as a result of the climato-biocidal manifestations observed and supposed to reach cataclysmic forms.

The prevention of future climate risks requires, on the one hand, the evolution of construction concepts towards a notion of a multifunctional space-retreat adaptable to external contingencies, and on the other hand capable of entering into temporary autonomy of operation and resource, and strengthening or reshaping where it is still possible the infrastructures and buildings in place.



The necessary and preliminary condition for any prospective remarks is to consider that the evolution of the modes and forms of a sustainable stay in Earth eco-compatibility requires for Humans a change in the conception of their relationship to life, the elaboration of another cosmology.

A cosmology without exclusion or eradication of others, nor appropriation, nor depletion of planetary resources, but conceived on reciprocal exchange and the understanding that diversity is the foundation of evolution on Earth, and the condition for a follow-up to be given.

At the present time, some of the **"Alternative" concepts** developed in terms of the construction of living spaces are based on a **sober stay, an eco-reconcilibility, an attraction for a joint control of the living environment...**
This framework gave rise to "Shared Well-being" Architectures, which assumed that the "Greenhouse Effect" problem was in the process of being solved and that the planet would soon or eventually be tranquilized?

Today, the only scenario of slow climate recovery (produced by the IPCC) capped at +1°5 in 2050 (compared to the beginnings of the industrial area), seems unlikely since in 2024 the +1.5 degrees have already been reached, and without effective correction of the current economic model attached to product-speculative growth should reach +4 degrees in 2100:
The entry into a phase of disruption with increased and unforeseeable manifestations is therefore to be taken into account.
In this context, we will choose the "**step forward**" represented by the too belatedly declared option of a human world that must enter into degrowth, sobriety and biophysical compatibility, and to which we must now add the **prevention of the risks** generated by a period of turbulence and destruction, estimated at several centuries.

What do we have to protect ourselves from climate deterioration, assuming that it can be limited or stabilized in order to hope for the maintenance of the most fragile living systems, including that of humans?

072 – Biotope - Ecotope

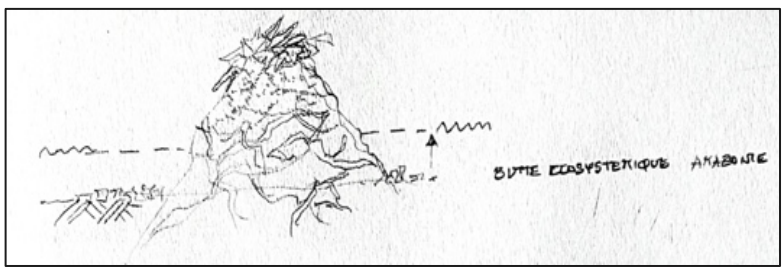
The concept adopted on the "**microclimate"** Neighbourhood Unit (cf. Hannover kronsberg) is a first step that can serve as a **matrix for the concepts of ecological and social innovation of built places**

These **Architectures in the "Preface",** explored in the previous chapters,
operate by the use of captured renewable energy, possibly stored, distributed and converted (light can be used directly without conversion, heat must be stored and distributed). They integrate the outside world by bringing in the site's water resources (capture and storage), they introduce a plant that purifies the air and regulates temperatures and humidity levels, they manage the natural draft (thermal) based on forms of organization of the interior volumes, etc.

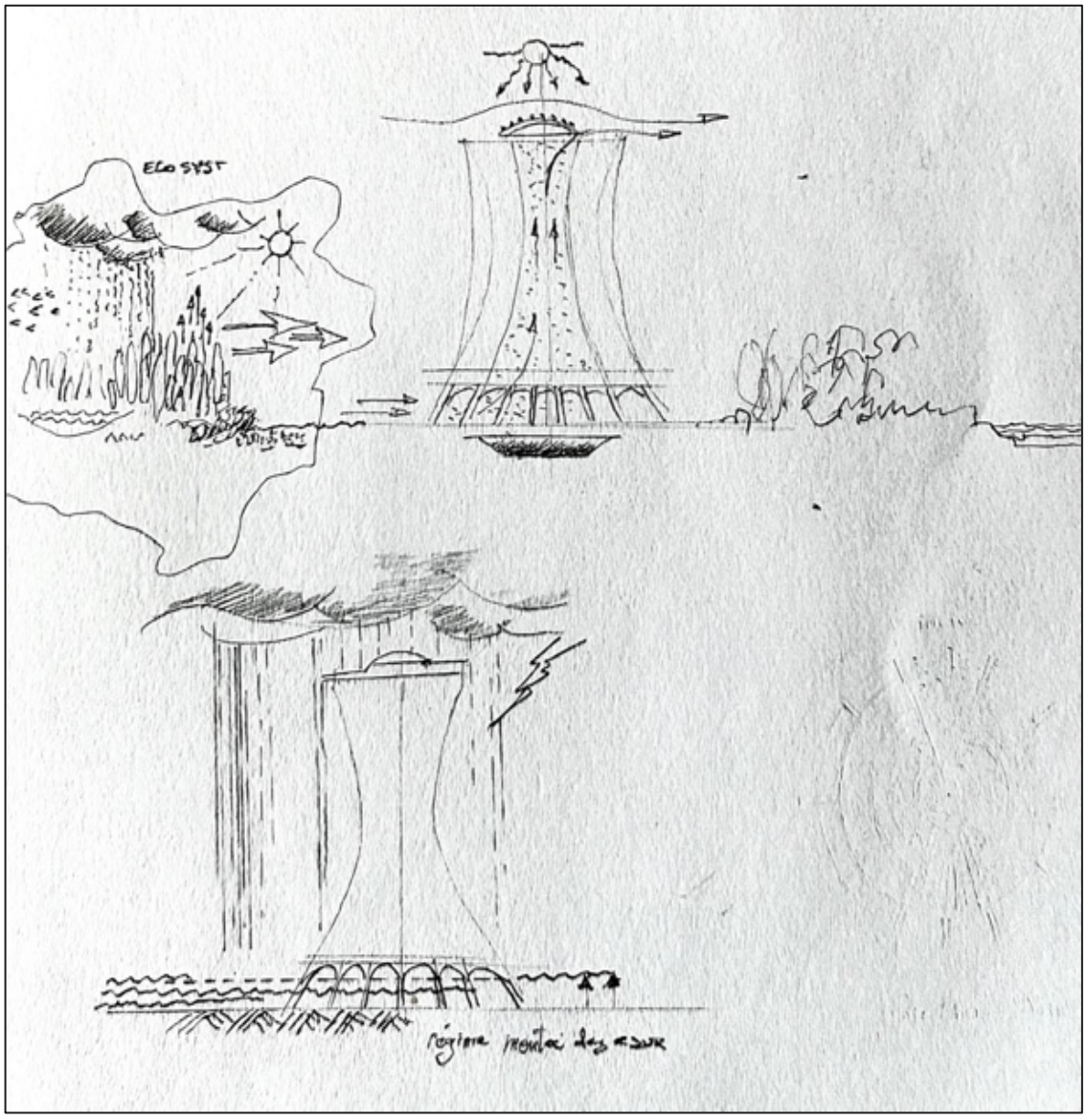
Architectures now have to enunciate an "**Ecotopic**" path of evolution correlating the human settlement with external biophysical manifestations, that of bioclimatic disorder, and that of the "Other Living" actors and makers of an overall eco-system reconciled with the singularities expressed by the geophysical and climatic domains in place.

This evolutionary transformation consists of reducing the footprint of imported structures, to borrow the minimum of living and absorbent open ground soils, and during deinstallations, to allow the restitution and regeneration of the soil without waste (without foundations or networks). That is to say, to conceive life entities and activities as temporary erasable imprints.

The approach introduces another need, imposed by the vagaries of the climate, that of having temporary autonomy in operation to protect the resident population for a fixed period of time, while ensuring its connections, its supply and the operation of the facilities.

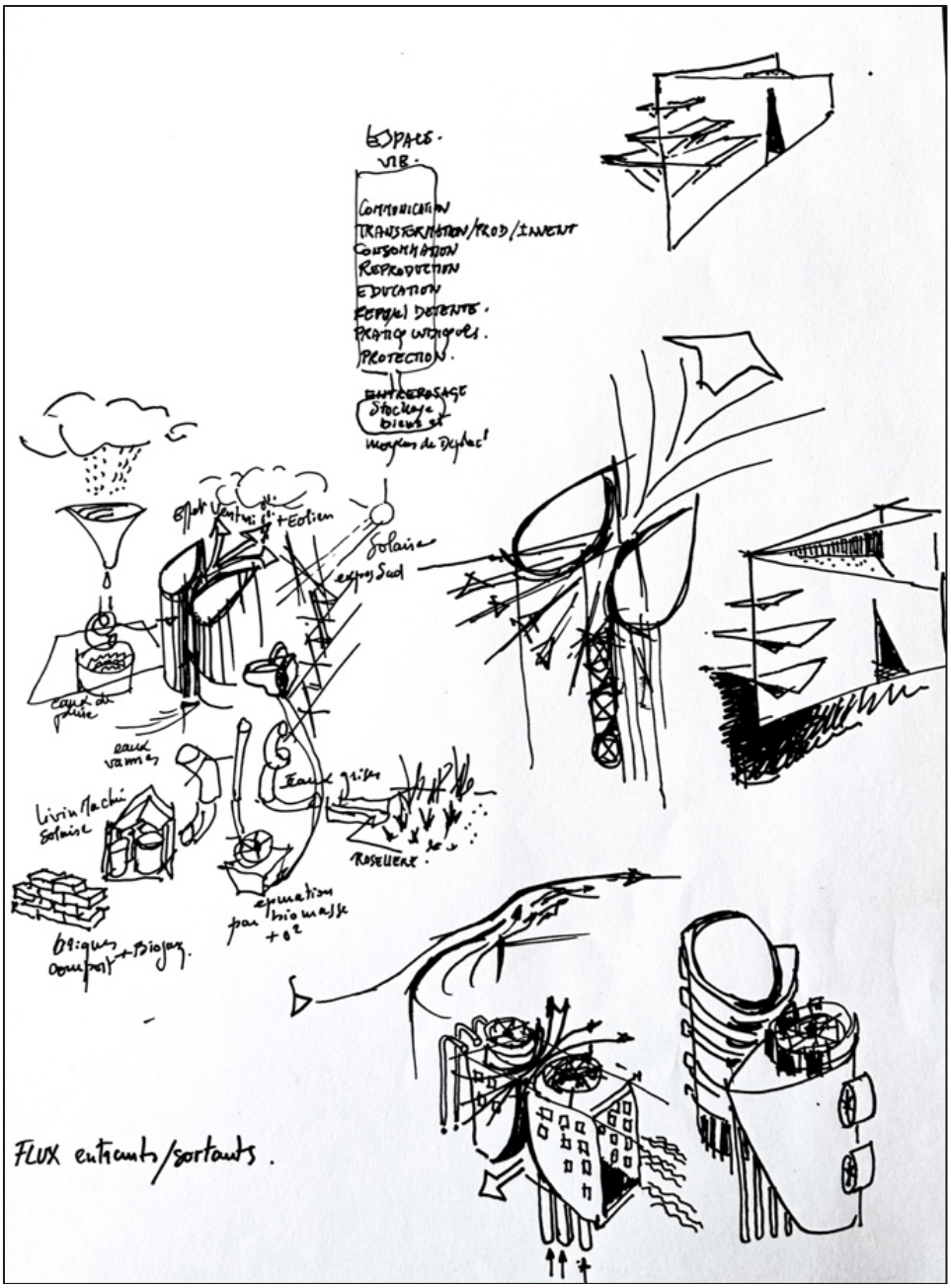


The first ages of ecosystem buildings saw several species cohabit within the same structure in forms of co-exchange of knowledge...
The twenty-first century makes humans discover the necessity of acclimatizing the species to the planetary environment in order to exist.
Will he make it take the second Amazonian step, that of taking into account the terms of an Inter-Species co-evolution?



To tune climatic, ecosystem and physical resources in motion, and human dynamics in awareness of reality.

The multiplicity of knowledge acquired today makes it possible in any establishment on the planet to obtain: the conversion of climatic energies into electricity, motor skills; condensation of water vapour; desalination of seawater; the purification of the air and its displacement by formed depressions; food by selected plants developed in greenhouses or permaculture; collaborative exchange and learning through digital networks... Subject to agreeing on forms of sobriety adapted to each of the installation locations.



Internal-external flow management techniques

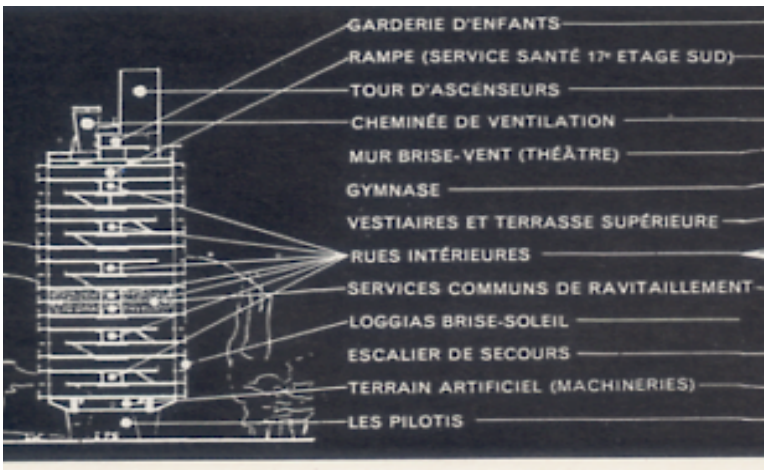
073 – The Concepts of Neighbourhood Living Units: States and Potentials for Evolution

Among the "Built Spaces" concepts previously presented, four of them hold our attention, by the fact that they lend themselves to a neo-transcription in a context of co-evolutionary worlds.

The "Vertical Housing Unit" "Cité Radieuse", designed by Le Corbusier
"**The Neighbourhood Life Unit**", a Berlin work by Bruno Taut;
"**Microclimate**" (Hannover - Kronsberg) of the "**Island Neighbourhood Unit**" type;
"**The Eco-motte",** designed by Frei Otto.

Neighborhood and verticality: "Unity of Life"

On this theme, Le Corbusier's projects (conceived in 1945 and realized a few years later) are **anticipations** that can still be visited today, as in Marseille at the "Cité Radieuse" of the "Fada".



Le Corbusier "The Unité d'Habitation"

The Architect brings together the city-dwellers, by distributing the **functions and services of everyday life (mini-market, hotel, community premises, etc.) mixed with the dwellings through central interior streets, placed every three floors, in the manner of cities crossed by streets lined with R+2 dwellings.**

These **17-storey vertical neighbourhoods do not lie on the ground: they open up daily life to an alternative never taken up by the private real estate market of "chicken cages"; They offer everyone, without spatial segregation, apartments on two levels, with double orientation, with loggia terraces, with games on the interior partitions allowing the living space to be recomposed by the occupant.**
Today, we could continue this statement and develop on the first platform a "boutique street" combining Commerce and Crafts in the manner of the Bazars d'Orient, and on the lower level, on the ground floor between the building's load-bearing stilts, develop spaces for exchange (open room), as were the old market halls in the centre of the Bourgs. Alternate over the course of the days: play areas; a weekly AMAP market in conjunction with the surrounding farmers; and other cultural and festive events...

In terms of its **structure**, the Corbusian "**Unité d**'habitation" model dissociates the frame elements (in reinforced concrete) from the living spaces, shaped independently and on site, with manufactured components, or with locally manufactured products (for Le Corbusier, "sliding housing").
The concept, which made it possible to place and connect the components in two stages, was imagined but not realized, due to the lack of an order addressed to the Architect,
The framework is developed by **the tiering of four concepts of use of space**:
The first sequence on the ground floor consists of an open-air stage, punctuated by the "stilts" of the supporting structure; the second sequence is a technical platform; on the third, the living spaces are tiered in repetition of a formula composed on three levels; and the fourth gives access to a "All horizons" universe, between Heaven and Earth.

We can remember:
- That the architectural concept here assigns different functions depending on **the altitude of the levels** (to the support ground, to the floors and to the roofing part), thus placing the human in connection with distinct horizons and varied neighbourhoods;
- That the **Corbusian elevation** makes it possible to place living spaces outside of floods and floods;
- That the **reinforced concrete skeleton resistant** to the effects of extreme wind is the support of various functions of human activity, and allows to a certain extent to place the neighborhood in relative autonomy during intense climatic effects.

The concept of the immovable load-bearing structure, which is chosen here, could be reinterpreted as a metal frame or glulam timber frame on buildings of lower height.
It would allow removal, transport and reassembly on other sites, extend the life of structures components that escape the current rate of demolition, and consequently reduce the extraction of

fossil materials (required energy expenditure, destruction of ecosystems, pollution, etc.). felling-replanting devitalizing the soil).

The Villa building: micro-block

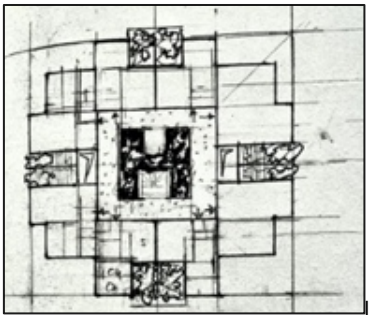
The Corbusian "**Villa building**" project has since led to variations on the "Garden building", including those carried out in France by Yves Lion, Architect (Orly), also translated differently in an IBA Berlin operation.

On the IBA-Berlin operation, the building is located in the centre of a green plot, its square base provides access to all the housing units from a wooded patio in its centre on the R+1 level.
The apartments placed at the four corners of the building share on each floor the gardens located in the middle of the 4 external facades.
In this concept: the roofs are equipped with solar collectors; the through patios of the "green-living room" floors can be covered in summer with sails protecting from solar radiation; The elevation of the courtyard patio above the ground makes it possible to keep the building out of water.

The housing units are accessible by external passageways that balcony the central patio on each level, thus reinforcing the dynamics of the habitable around a place of exchange, of neighborhood.

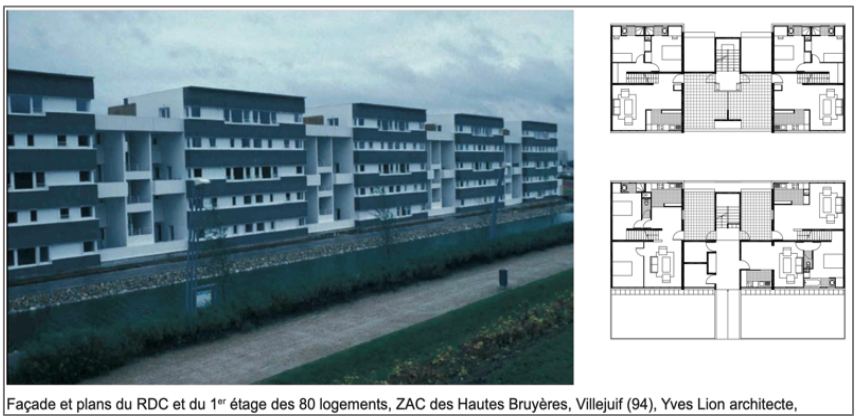




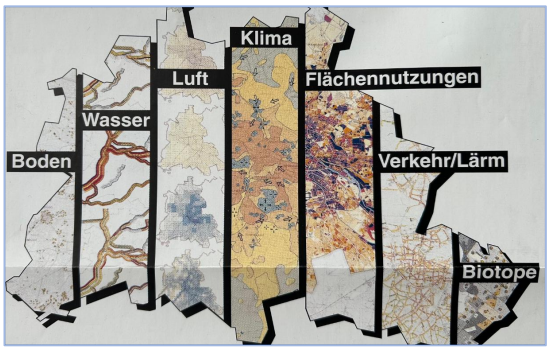


IBA Berlin

The same is true for the concept developed by Yves Lion (R+4 building) which develops a link by a common staircase that distributes the floors from the crossing of the Gardens-Entrances placed on top of each other.



Façade et plans du RDC et du 1er étage des 80 logements, ZAC des Hautes Bruyères, Villejuif (94), Yves Lion architecte,



The "Hufeisen" concept - Micro-district

The concepts presented in the previous chapters (Page 179 et seq.) focus on the "Hufeisen" floor plan by Bruno Taut - Architect, commissioned during the Weimar Republic (30s of the 20th century). This Ground Plan provides another basis for interpretation in terms of protection and autonomy of the Neighbourhood Unit. In tense social, political and economic contexts, it offers **a stronger anchoring to the site of installation, a form conducive to the expression of social dynamics and the invention of multiple internal and external places**.



By adopting a **semi-elliptical Ground Plan, the Living Unit** presents a curvature to the prevailing winds that reduces its impact on the envelope by the lateral flows generated.
The geometric shape creates a **depression intrados**, which places in the hollow of the arch formed an **open space** on a natural, conjunct horizon, on which life manifests itself, and solidarities are built.

This architectural concept, placed in the context of the developing climatic adventure, is suitable for combining housing with common functions of use (services and economic activities, neighbourhood festivals, gardening, etc.) to form a multifunctional Neighbourhood Unit. An active and supportive living centre capable of maintaining temporary autonomy during extreme weather events.
In future operations, it could even lend itself to a distribution of levels such as that designed for the "Cité Radieuse" housing unit, where the housing units are inserted into the built body in crossing mode to benefit from a double orientation (duplex), and where the distribution of housing and integrated sectors of activity is ensured by interior streets every three levels.

The Immersive Approach

Designing an answer in terms of a "**micro-ecotope**" requires a prior reading and analysis of the site. It consists of: inventorying the topographical and geological state; evaluating the resources in place and their renewability; understanding the site's responsiveness to future climate changes; examining the state of the ambient biodiversity and its resources... To determine the conditions for maintaining the dynamics of the living in coexistence with a specific human group, and in the long term **to generate forms of mutuality within the formed bio-neighborhood** .

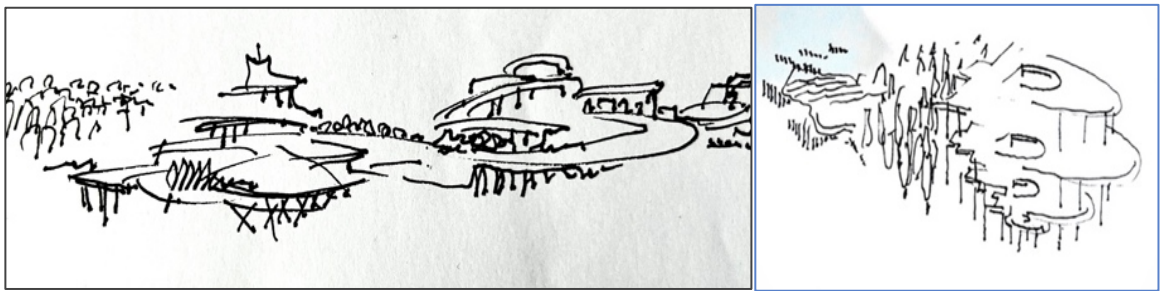
The installation sites must then have a drinking water resource nearby, be accessible to air and ground equipment, etc. **Interpreting oneself as a parent ecosystem in collaboration with Indigenous communities**



Frei Otto Architect - Scalable Living

Such as the self-interpretive and evolving habitat, developed from a combination of an infra and a supraskeleton, which allows post-interpretation by their occupants on load-bearing plateaus. Such as the work designed by the Architect - Frei Otto -

In some contexts, a **judicious choice of installation** can lead to a reduction in the general protection measures of the structures, and the selection of fallback sites protected by natural ground movements that weaken the seasonal climatic effects of varying intensities, and guarantee an economy of resources in the living area.
To make it possible to call in architectures with malleable structures accommodating various functions in temporary stays, even nomadic such as Observatories, Haltes-refuges or Site Bases.

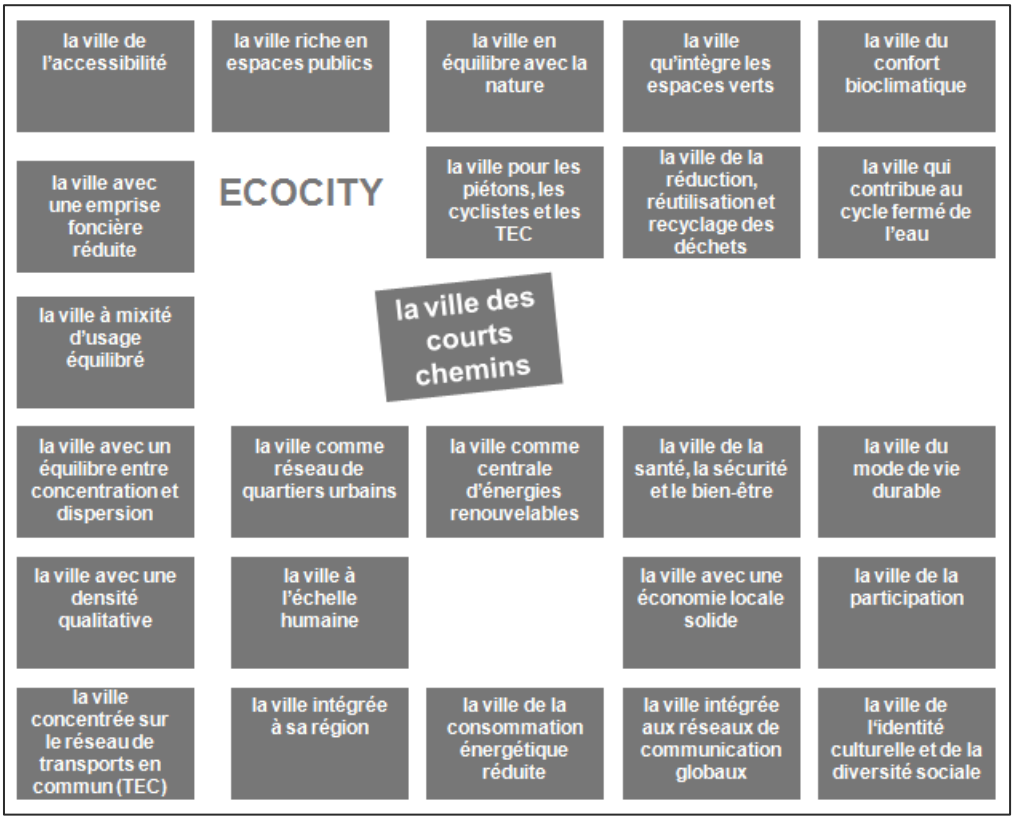


074 – The Place - Approach, Tools and Means ...

The Ecocity Approach

In the present - For the majority of human groups, **active citizenship is developed on a small scale**: in the neighborhoods of cities, towns, villages. It is maintained collectively in various forms (cooperatives, associations, volunteers, etc.).
It is **a ladder of encouragement and training for the debate on doing together**, which no longer needs to be demonstrated since the development, among other things, in recent decades, of the "**Ecocity**" movement.
This movement is committed to exploring the application to urban areas (Medium-sized cities) of the notions of "short distances", "short circuits" in production and consumption, "bioclimatic housing" in the creation of solar and wind farms in cooperatives, etc. By relying on the populations of the blocks and neighborhoods to implement responses and then popularize them to as many people as possible. (an approach in France that was shunned and misused by the State structures, the Public Authorities, and the Constituted Bodies of the time).

The conscious acquisition of an eco-cosmopolitanism is now spreading through the link to digital technology without borders, and over time makes it possible to self-assess contexts and to nourish a citizen exchange on local and global political orientations and the follow-up to be given.



The **eco-poles at the scale of the neighbourhoods created, ~~the innovations brought (~~** development of the space in a convivial way, links with biodiversity, the innovative nature of the structures to live and work, neighbourhood services located nearby, etc.), **are accompanied on the sites by an intensification of exchanges to materialise, in forms of life in the Commune, and invention**, on:

A daily life in the use of "short paths";
The preservation and development of ambient biodiversity;
The search for energy autonomy of the installations;
The increasing use of renewable energy production in the agglomeration;
The reduction of the car fleet replaced by two-wheelers and public transport networks,
...

More broadly, they awaken in each person a collective consciousness that opens up to the development of neighbourhood relations and working together, and leads to reducing one's footprint on natural environments, to reinventing one's way of exchanging on a daily basis and collaborating in the evolution of the urban commons... To gradually dare to project ourselves to re-establish together a relationship of compatibility with the entire Ecospheric system...

Would we dare to continue the development of this co-evolution in interdependence with existing biophysical environments within Ecopoles formed in networks **?**

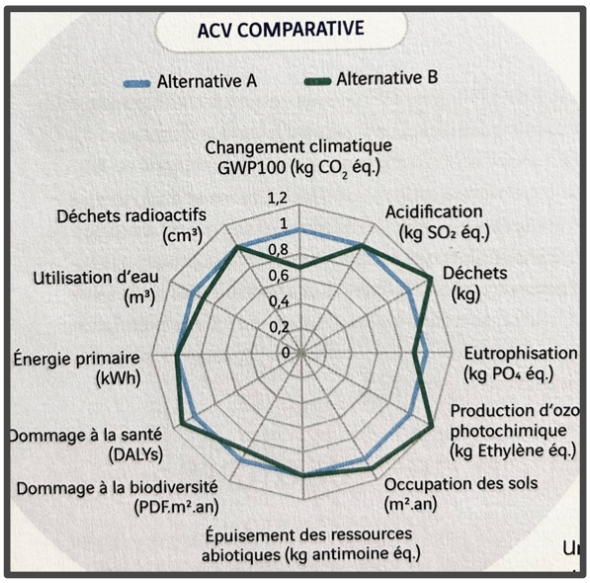
- Micro-Ecopoles: Forms of temporary or itinerant installations, with erasable footprints, with specific missions within given ecosystem areas.

- In Mezo-Ecopoles: Network nodes, on the bio-geophysical areas where they are located, responsible for ensuring inter-communication at supra-scales, and organizing stewardship over the entire geosite in compatibility with the neighboring Inter-species universe.

Tools of analysis and means of action

- Dynamic Life Cycle Assessment of Buildings - LCA

Tool for analysing buildings and assessing their impacts on biophysical environments



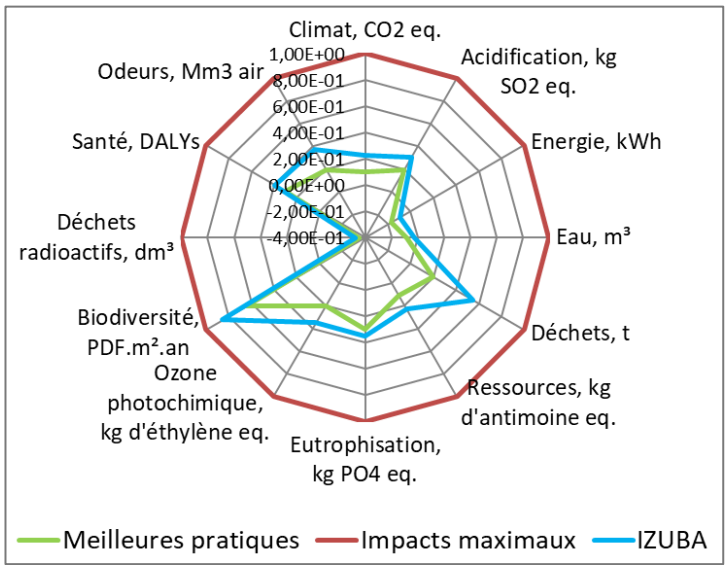
LCA Document

Life Cycle Assessment is a systemic tool developed at the École des Mines de Paris by Bruno Peuportier and European scientific and technical partners.
It is a simulation tool used to assess the ecological impact of construction **programs**, and to reduce their harmful effects.
In the initial formalization of a project, the tool provides an assessment of the environmental impacts on 12 targets of the planned structure

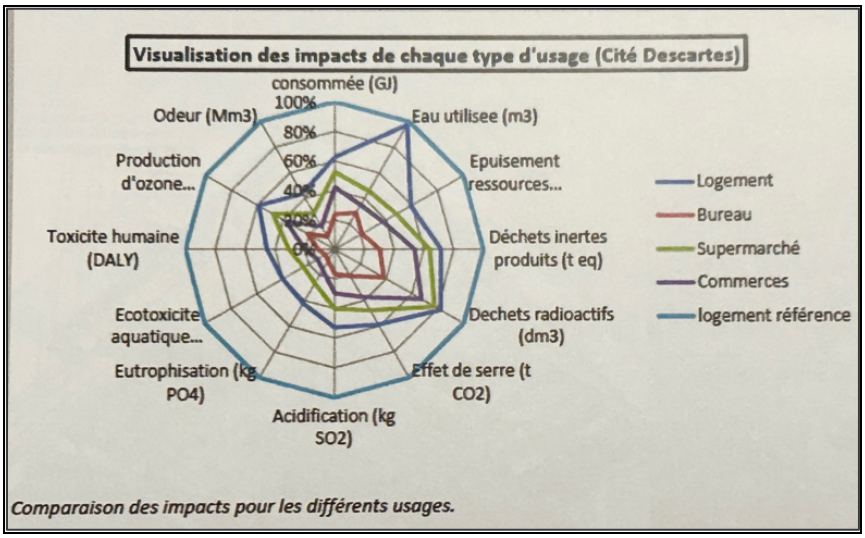
The impacts are obtained after: the characteristics of the materials and components constituting the structure and the site assigned to it have been recorded; determination of the service life and the functions inserted (for buildings generally 80 years).
The LCA in the first exercise is used to situate the Preliminary Building Project in relation to the environmental requirements attributed to the work by the client and the public community, in terms of responsibilities. In the second phase, after the project has been brought into compliance with the set targets, the performance profile is established on 12 indicators representing the environmental targets, and the final project is launched.

The calculation tool is based on a European database "Ecoinvent". Database that collects all the data (environmental impacts calculated on 12 targets) generated by the products and components used in the construction of the structures.

The Indicators subject to the evaluation are:
Climate change, acidification, waste, eutrophication, photochemical ozone production, land use, depletion of abiotic resources, damage to biodiversity, damage to human health, primary energy, water use, radioactive waste
For each indicator, an interval between minimum and maximum impact values has been deduced from thousands of calculations, which makes it possible to evaluate the performance of a project, see the figure below.



In this chart, each axis corresponds to an indicator. The maximum value is considered as a reference (red curve). The minimum value (in green) and that of the project under study (in blue) are represented in relative value: for example, for the climate indicator, the minimum value corresponds to 10% of the maximum value. The example above corresponds to the headquarters of IZUBA energies, publisher of the LCA tool used to evaluate environmental indicators. The graph shows that the performance of this building is close to best practices. The minimum and maximum reference values are evaluated for different types of buildings (single-family houses, multi-family housing, offices, schools, healthcare). LCA can be applied to an urban project comprising several buildings as well as roads, networks and green spaces.



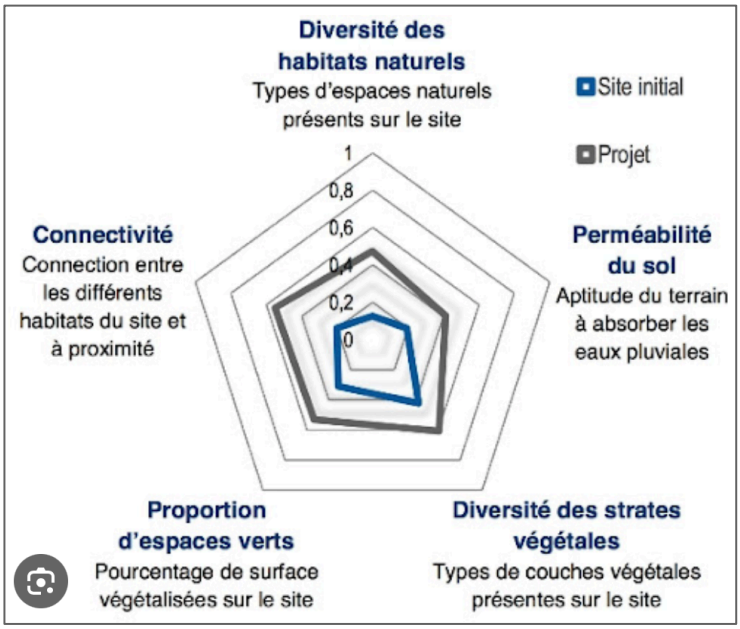
LCA Document

Currently, sites intended for construction, with a few rare exceptions, are not subject to requirements on the protection of ambient biodiversity, emissions of polluting or carbonaceous particles, the consumption of available water resources in buildings, etc.
The reason for this is the prevailing laxity, ignorance of the existence of the means of calculating the environmental impacts generated over the life and use of a building, and players in the real estate sector who are too tempted by the profitability of their business to go beyond a few "announcement effects" indicators, by resorting to simplified calculators and incomplete data.

- Strict Biodi (V) -
Tool for assessing the local impacts of a development project on biodiversity.

ACV and Biodi(V)strict are 2 complementary tools that are integrated into the Ecodesign approach.

"To preserve or improve the many services provided by nature in the city, it is necessary to **know the state of biodiversity,** to **predict the impact of a construction,** rehabilitation or development **project on this biodiversity, and to develop innovative techniques to preserve the proper functioning of urban ecosystems**.
The comparison of the ecological potential of the initial site and the construction project makes it possible to highlight the impacts of a project and the margin for improvement covered and remaining. This analysis of the results is the starting point for the definition of an appropriate biodiversity action plan
to the project.



"Biodi(V)strict was developed by the Laboratory-Ecology-Systemic-Evolution
Nathalie Frascaria Agro ParisTech - CNRS and Univ Paris-Saclay –

The assessment takes into account the proportion of vegetated spaces, the diversity of habitats and plant strata, intra-site connectivity and soil permeability.

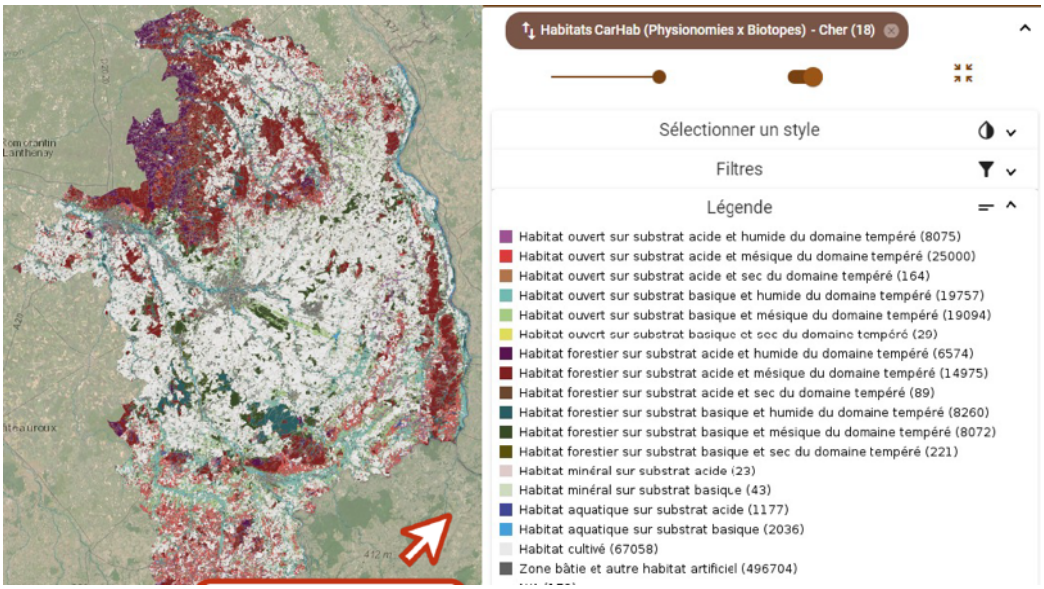
The biodi(V)strict calculator calculates 5 indicators on the initial site, and for the project and the visualization of the results is done in the form of a simple and understandable radar that allows to compare the ecological potential before and after the project and to identify the impacts of the project on the biodiversity of the site.
"The indicators shown on a diagram are:
The **diversity of natural** habitats, type and proportion of natural areas present on the site; The **permeability of the soil**, the ability of the land to absorb rainwater;
The **Diversity of Plant Strata**, types of plant layers presented on the site;
Intra-site connectivity, connection between the natural habitats of the site;
The **proportion of green spaces**, percentage of vegetated surfaces on the site. -

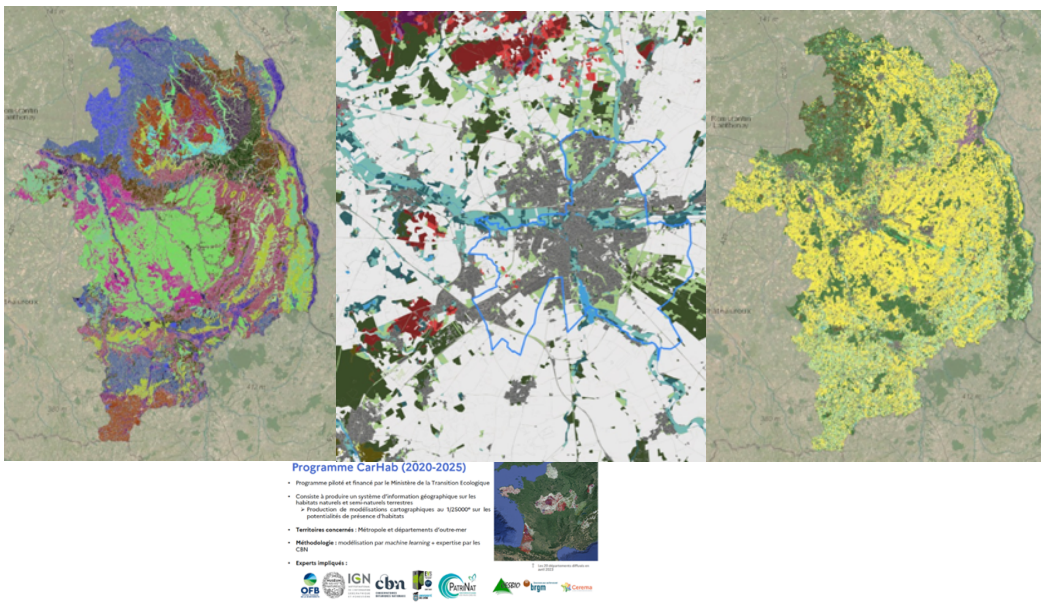
- Ecosystem mapping
A tool for understanding human movement in biotopic immersion

The in-depth study of terrestrial ecosystems seems to be taking on a new development.
It is gradually giving rise to the development of detailed maps of certain territories in the world, to refine the state and characteristics of the systems.
At the present stage, these inventories are rather intended to deepen (enrich) human knowledge of phytocenosis, and seem to attach less interest to the relationships that associate them with other forms of life (animals, insects, bacteria, fungi, etc.).

It is true that the politico-economic systems under the Anthropocene are only interested in **amplifying the share of ecosystem services** that bring them back.

However, this research has the merit of extending and clarifying the mapping of terrestrial ecosystems at different scales of observation.
They provide data on the present state, they offer the possibility of establishing a follow-up on the different modes of evolution of the Ecozones, and could make it possible in other contexts to undertake a deepening of the mutations and dynamics of inter-exchanges of living ensembles, at the micro and meso scales.



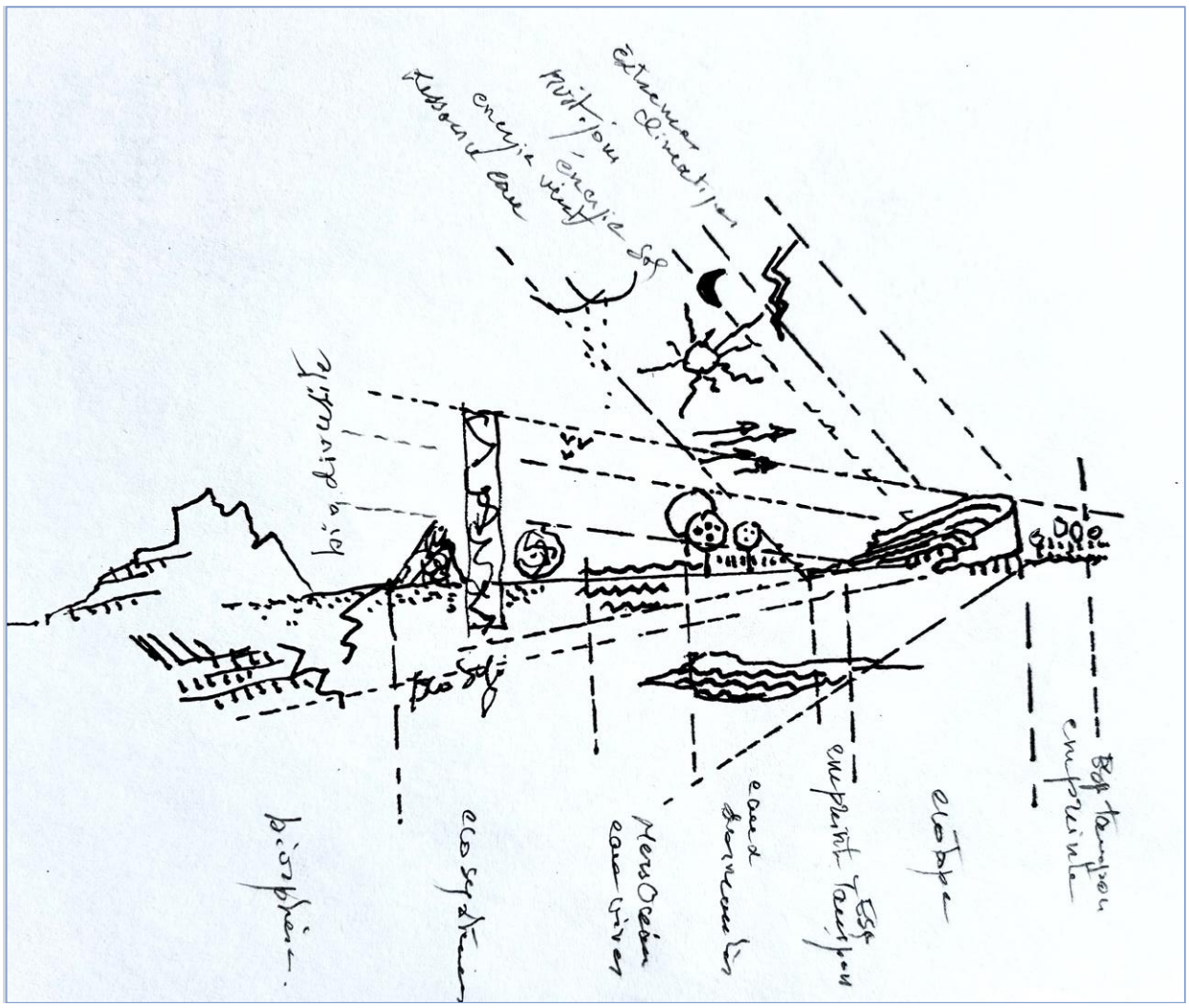


These **systemic maps** can inform us about the complex nature of exchanges within ecosystem environments at all scales of living space, states and evolutions.
They can also be able to enlighten us in the context of a "**reverse thinking**": that of approaching the Earth from the aspect of a geography of ecosystem dynamics and not of a road map and airlines.

08– SPACES - SPECIES

Essai d'approche de milieux conjoint en saisi des une langues de co-évolution .





Dynamic Natural System
Layering of dynamics: subsurface, surface soil, airspace, stratosphere;
Variantd physico-thermochemical manifestations;
Diverse scales of ecosystems and forms of interactions with their biotopes
Variable ecological footprints of species on the earth's crust...

*"An **Ecosystem** is a living entity formed by a grouping of different species in interrelations (nutrition, reproduction, predation, etc.), among themselves, and with their environment (mineral, air, water) on a given spatial scale.*
- National Center for Scientific Research - (wikipedia citation)

*"To think **of a non-state** political form based **on despecialization and the collective reappropriation of the ability to participate in decision-making**. Human activity must be freed from the demands of work for an **evolution towards cognitive work.** » Building autonomy. – J. Baschet –*

"*The living around us preserves a form of life (Individual, family, population considered from the point of view of its evolutionary potential, but just as well biotic community) which, although transformed by its contact with human technical activity, takes back control, that is to say, imposes in the course of the future the dynamics that are induced by its own eco-etho-evolutionary power, and not by the strict desiderata or effects of human activities that bend it*. --
- The Unexplored - B. Morizot

081 – Micro-Ecopole, Osmotic Ecobase

The steps taken by the Human Species at its beginnings, in the non-degradation of its matrix, are established, but remain classified in the "Primitivist" epochs, not to say animal epochs.
However, from these pre- and post-Neanderthal times of general co-evolution of life on Earth, we can retain a manifest progression of human achievements, moving from its recovery, to walking, then to a migration in discovery, the creation of fire, the invention of the tool, and then after stabilization on all continents: the hybridization of plants, the domestication of animals, etc. until the statement of the "Laws of Evolution".
An open door to physical, chemical, biological, botanical and technical sciences, which makes it possible to convert matter into energies and products; to invent electronics; to continue on digital technology and the transmission of data around the Earth, and today to try to divert human inventiveness to serve the capitalist schizophrenia tempted this time by the conquest of the Cosmos...

Can we still **conceive** of alternatives to this drift?
Non-destructive modes of presence **of the environments encountered,** as the means of engineering today can allow**, and refound the notions of residence and forms of borrowing of humans from the planet...**

Roaming?
carried by knowledgeable communities, committed to carefully exploring the extreme complexity of a living non-separable planetary environment, and by stages led to pave the way for modes of **Re-Evolution**:
Semi-autonomous; learning and collaborations; in search of a shared mutuality with ambient biophysical states; in permanent dissemination (open source) of knowledge ...

A thought carried by "travelling" human commons?
Missioned, interconnected, placed in temporary stays on specific bio-geophysical entities to experiment with para-symbiotic approaches on specific forms of **stays developed in "sharing", "in collaboration" or in "free-evolution"**

A movement?
Necessary and patient to discover the complexities of the earthly reality and its permanent mutations and "Step by Step" to detach the Species from the anthropocenic simplism of eradication-destruction, anchored in a culture of manipulation.

Ecosystem immersion?
The construction concepts adopted over the centuries and millennia inform us about the forms of approach that the communities, most of which are itinerant, have translated into a place of stopover, of retreat, for stays without an imprint on biodiversity.




Doc.Wikipedia

The protection from the winds and cold of the steppe gave rise to the Mongolian Yurt.
The monsoon carried the houses on stilts and led to the integration of adjustable permeability devices on the vertical walls, and to the construction of solidly fixed multi-layer green roofs...
Seasonal mobility has led to: the invention of lightweight structures that are easily portable, assembleable and dismantled; to seek their small size; to analyse beforehand the nature and variations of climatic effects on temporary installation sites; to ensure that fundamental resources are present on site, to keep themselves alive, etc.

We know that **the wonder of wonders** was and still is in this matter: thermally insulable; waterproof; heatable by radiation; ventilable in summer by its low sides set apart from the ground, with an envelope volume adapted in winter to the average 80 Watts that each component of the family group carries within it; to the load-bearing walls made of accordion lattice system (Khana), with small cross-section woods mounted in joints; without wind resistance, and with a waterproof and insulating coat made of animal wool, braided and greased?

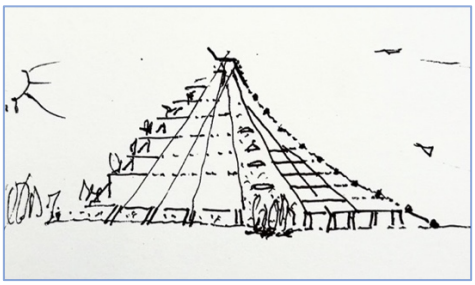
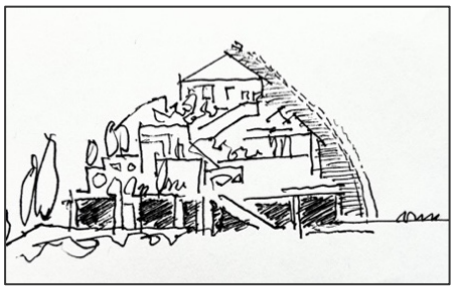
These data are found in contemporary Bioclimatic Architecture, which is hampered in its development by the current laws of the land and real estate market...

Eco-friendly structures



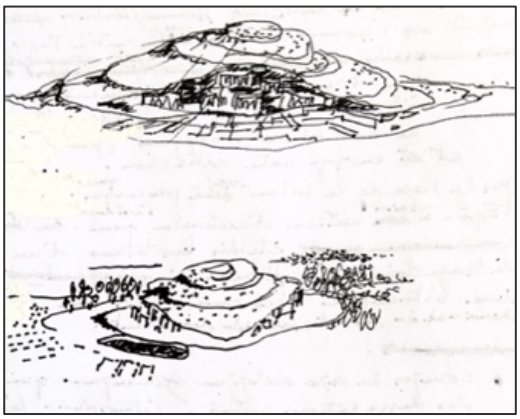

Frei Otto Arch. – habitat Berlin

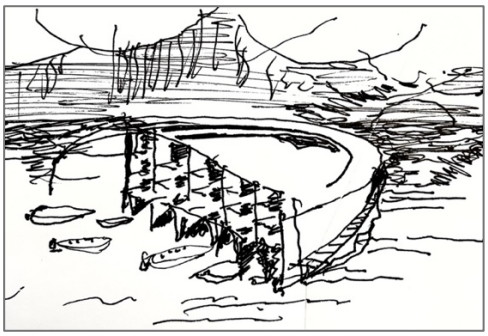
In our climates, yesterday "temperate", the concept sketched out by Otto Frei, of superimposing "free floors" supported on posts and beams, with a general volume in the shape of a clod, with little wind influence, with a distribution by stairs around the perimeter, and connections provided in the center: Is a way of thinking for the installation of elementary neighborhoods, in self-management and self-making of a co-evolutionary systemic life.

The transposition of the Motte concept can lead to freeing floors from the ground, to composing facades adapted to the stresses that apply to them (transformation or protection),
to acquire semi-mobility through the use of prefabricated and removable light structures: to constitute a **semi-autonomous living base and refuge.**

Osmotic Structures – Merizopoles





Ecosystem Architecture
welcoming the Human is associated with **the Architecture-Nature** or Exo Architecture of the surrounding environments, with the Indigenous Living, topographical and relief, tectonic and atmospheric effects, with local resources (materials, energy, water, air quality, etc.): to **establish the terms of an exchange that brings a reciprocity of benefits to the various environments.**

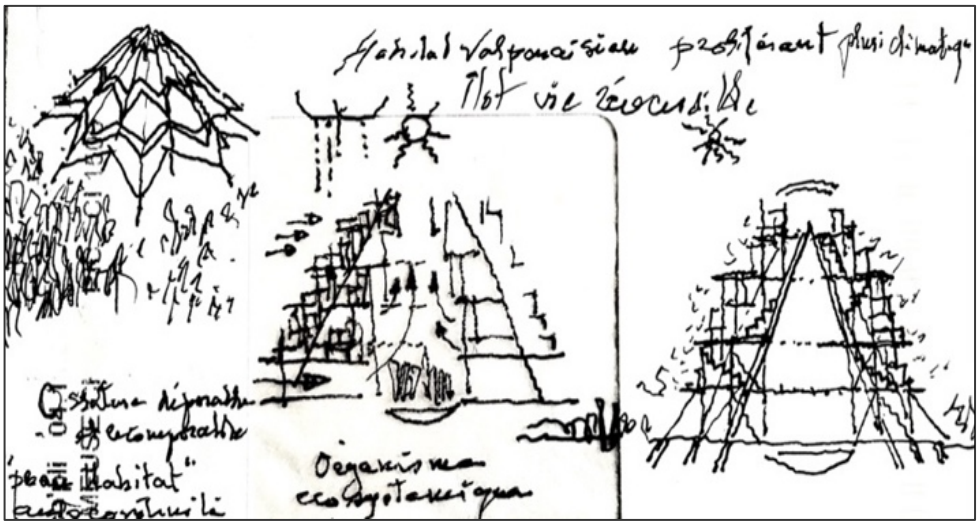
It is sober, is organised on site in an "almost autonomous" way of operation, is compatible with the characteristics and dynamics of the environments, and implements construction systems that provide a variety of living spaces, adapted to the missions entrusted and given durations (sedentary, temporary or exploratory roaming).

The **construction of the built space by laying-off-reuse**, consists of assembling a mechanism of structural components intended to fulfil two functions: a **mantle structure** and an evolving organic whole: "**lodge**".

The first function gives shape to an external, load-bearing and irrigating volumetry.
It **borrows the techniques of assembling** wood, bamboo, metal... To build a support structure on the elevation composed of guyed masts supported on screwed piles (depositionable), and braced in its elevation by stepped platforms (triangulated systems) supports of the living spaces to be made.

The **envelope volume** is woven, depending on the nature of the thermodynamic exchanges it undergoes, or maintained with its environment, and according to the orientation, the height of elevation, the base of support on the ground and the subsoil). Its skins have a variety of functions: waterproof, breathable, energizing, insulating, inertia, osmotic... And conversational between living environments (biodiversity).

The organic space is placed within the reactive space constituted by the general framework and the skins. It can be shaped into its central artery (Espace collégial de manifestation du Commun), and into its multifunctional spaces, including those intended for activities. The technical floors supported by the tiered platforms allow for free-plan partitions or micro-units in the structuring of the living space.

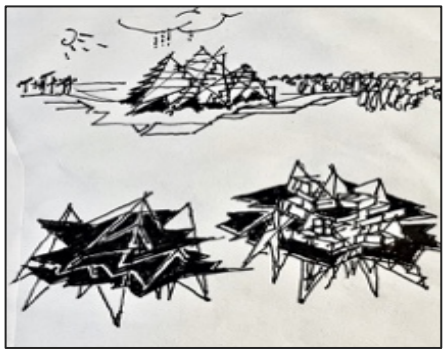


The "Fallback" space

The **housing part**, focused on the most soothing climatic orientation, is composed of two areas: one private placed in the body of the structure, in connection with the space of internal social exchange; and the other in free expression of the neighborhoods, intended to accommodate shared gardens in connection with walks, and spaces built in bio-sourced materials extending the housing through places of intermediation Humans / other Living Beings, according to each person's desires.

The first level, placed on stilts, protects against flooding and frees up a covered space on the ground on the ground, for free use except in bad weather.
On the elevation, platforms (three-dimensional structures on intermediate supports) with multiple uses are superimposed and crimped the central space.

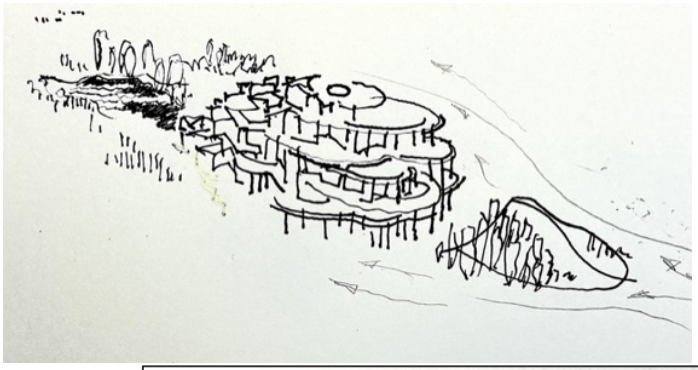
In the central "**heart-lung**", a mouldable interlude between the inside and the outside, the stairs, pipes, ducts are inserted... And the equipment responsible for ensuring protection-refuge and operational autonomy for the whole, during intense climatic activities requiring **withdrawal** into **relative self-sufficiency**
This cylindrical, cubic, or conical central volume... can also be dilated to integrate living cells and activity premises placed around the periphery, which are weakened during extreme climatic events.
The external parts exposed to the weather (intense winds) are protected by a fairing: Waterproof, resistant, breathable, diaphanous skin) placed on the external covering of a suitable structure (similar to the devices designed by S. Behnisch in Hamburg).

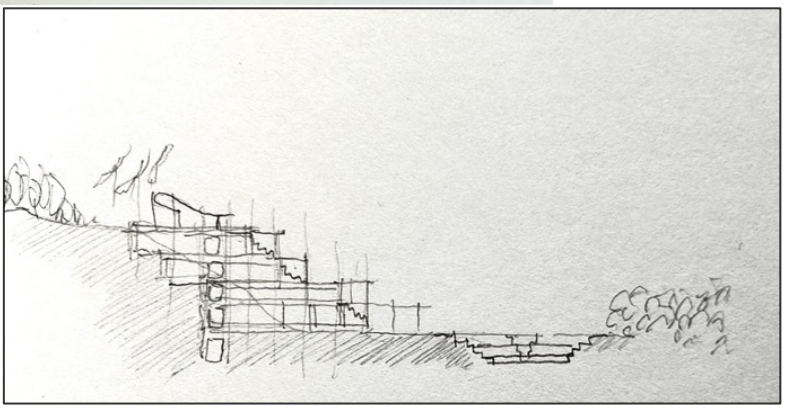




It is possible to develop hybrid architectural concepts of small size, in a free interpretation between the Ecosystem "Amazonian Motte" and the Han "Microclimate" type.
The central enclosure then provides the bracing of the living platforms placed on the faces sheltered from the prevailing winds.
Each portion of the volume offers functions in line with external climatic stresses in all three dimensions.
Various frameworks support volumes created according to the characteristics and resources of the sites. They are **primarily made with bio-geo-sourced components, manufactured, in place.**

The **post-design of the users** intervenes in the modeling of the interior volumes on the "free-plan" and in the design of the buffer space between human and bio-diversity.





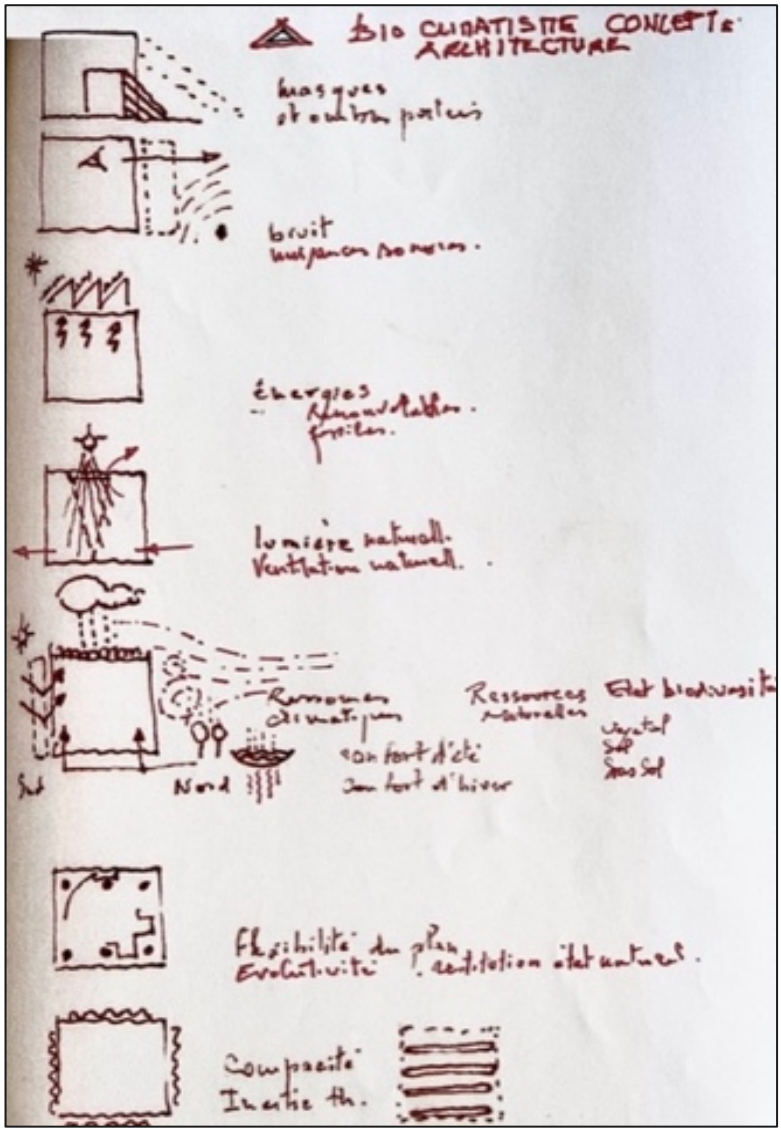
082 – Mérizo-Écopole: "Block-neighbourhood" concept
Inter-collaborating "unit of life", in mutation co-evolution

The **intermediate times** should be able to lead humans to **reconsider the way of implanting themselves, sitting...** To lead him to reason about his forms of existence and his erroneous relationships with the biosphere, to lead him to **adopt built structures built on a mode of Pose-Deposit-Move-Reuse, without breaking the dynamics of existence**:

In **exploratory** roaming,
In **semi-sedentary** lifestyle and elaboration and exchanges,
Sedentary **living** in poles located in sites, a "synthesis" of the geographical entity (often the case of so-called "medium-sized" cities in Europe, which have been established for a long time, and are subject to redefining themselves ecologically, socially and economically in **the prevailing Eco-Demos**).

In a context of shared sobriety, itinerancy or fixity, one might expect that humans would take a tranquilized and unconstrained form, which would generate a specific ecosystem leading them to reform their relationship with biocenosic environments, and would allow them to progress in a redefinition of the concepts of siege developing forms of neighborhood. in listening, discovery and eco-compatibility of neighboring dynamic environments.

In view of the climatic and biospheric contexts that vary in nature and intensity in the future, it could be conceivable that the bioclimatic building will evolve into "Living Bodies" **Merizotopic Architectures**, evolving in their devices (skin, volumetry, functions, etc.) into combinations compatible with the parameters of social and bodily comfort of the occupant, and in **interaction-mediation with external stimuli (climatic variables, nocturnal and diurnal regimes, seasons, etc.) and reactivity of neighboring ecosystems** in their specificities and behavioral singularities.
To generate singular sites in co-language and co-services, in a kind of "architectural Nastie", organically pursuing the Bioclimatic research in progress?



To bring about a climatic and biocompatible mutation through the gradual development of a concept of "**globalizing place**", associating landscapes and atmospheres from the outside to the interior places, to **introduce each of them into an overall reading and analysis of the contexts and phenomena that operate.**

We can **dare,** by associating technical, social and spatial concepts, partly set out in the previous chapters: To stop at the "Hufeisen" book which presents a "first step" in the formulation of a **Socio-ecotopic dynamic**





Let us return to the Berlin-Hufeisen operation (cited on pages 186 and 306)

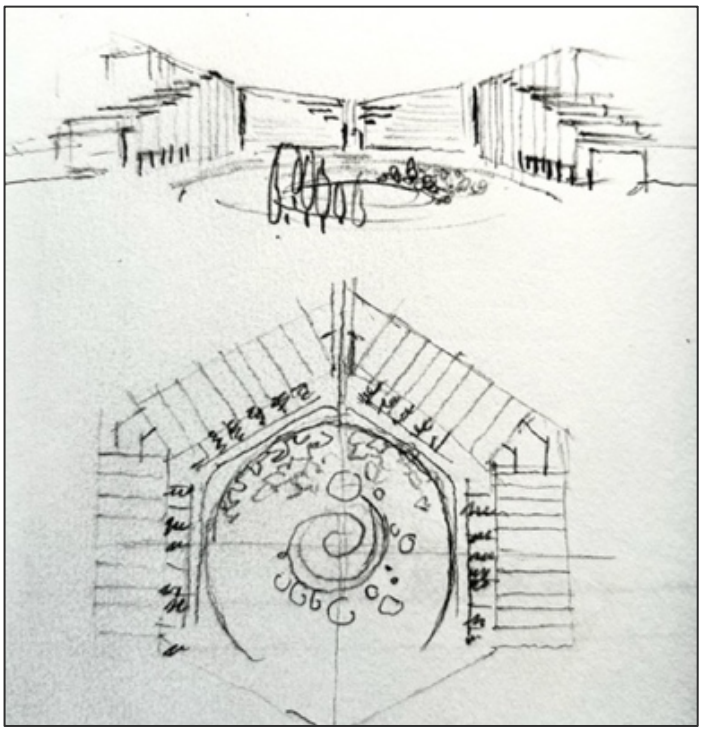
The concept adopted by B. Taut in Berlin has been manifested in a continuous social dynamic for almost a century. It maintains a reciprocal exchange between the occupants of the building and the neighbourhood, within the framework of a sharing of services or actions carried out jointly (festive or cultural events, etc.).
This success is not unrelated to the quality of management of the public operator and its spirit of openness, which encourages residents' initiative in all areas of the common area (internal and external).
This last point is essential. In any space that brings together a human group, the place must lead to an individual invention that finds its way into shared spaces, to bear witness to and maintain the dynamics within the neighbourhoods... (See also the operation cited in "Tübingen" by J. Eble)

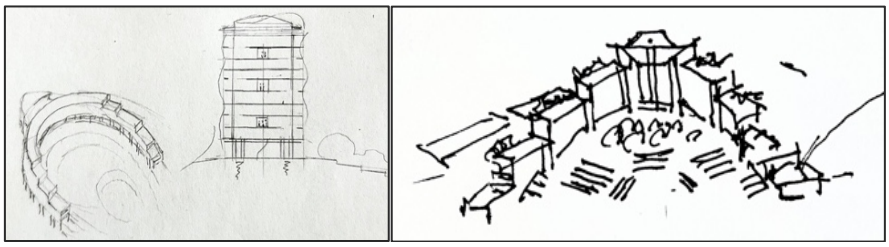
This Berlin location has other assets, likely to inspire another form of approach to "Co-evolution Units, in the Neighbourhood" in a century of climato-political uncertainty.
It uses an arched ("horseshoe") ground plan that encircles a semi-open plant space on the horizon. It brings a depth of visual field over multiple angles of view and depths to all users and settled populations, and generates an attraction that leads to the handling of the open public domain and its co-management.
The book itself, through its mosaic of collegiate gardens (in place at the foot of each staircase), introduces a **space of mediation** between the intimacy of the home and the manifest space of the community that calls for the encounter with the other.
Through its park modelled on a slope, to collect part of the rainwater at its lowest point, it creates an amphitheatre of greenery in the summer, it calls for the deciphering and learning of a language between the human and the other living, on an Earth "Interlude"
In this respect, the architectural concept has resources that can be reconciled with the passage of time, provided that the climate is stabilized

The co-evolutionist approach, in a tense climatic phase, can be declined within the framework of this Architectural Arc concept (social, functional, structural) to develop a whole akin to the ecosystem field, after a few conceptual marriages with the contributions provided by Le Corbusier in the neighborhood unit."

Let's visit the Sketch!

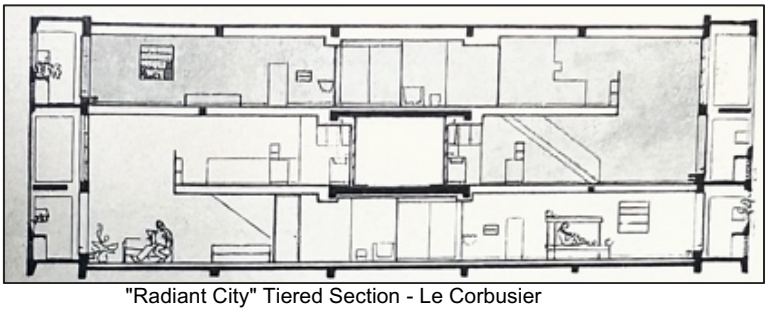
The orientation of the Eco-pole is defined according to the microclimate of the natural site.
The priority in this area is to control the effects of the winds on the upper surface.
The semi-elliptical shape, through the orientation of its tip facing the winds, combined with an external fairing, makes it possible to protect the structure while creating a space in the wind and a "leeward space", the latter sheltering the natural space in a central position.
The structure is supported by colonnades that raise it on the natural terrain to place the levels of active life in elevation and protect it from possible submersion.





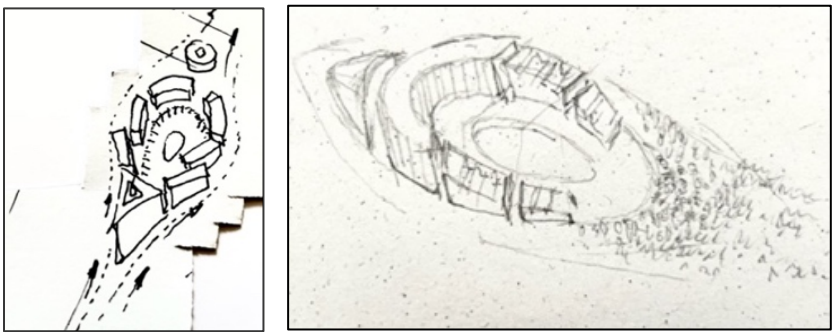
The living structure is tiered

The social dynamic, is created by an **inner co-neighborhood** provided by the Concept of "Tiered Streets", which can also be reminiscent of the Sicilian city of **Noto,** designed on a tiered of roads carrying the vital functions of public life and alleys-ascents, cursors ensuring the link between these levels.



"Radiant City" Tiered Section - Le Corbusier

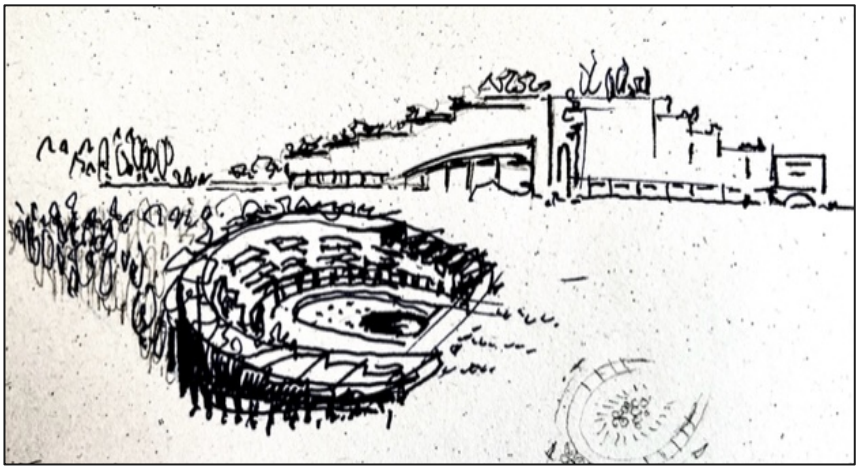
These streets distribute every three levels the Functional Units divided into sub-assemblies:
The Roof Terrace is assigned to teaching-study places and sports halls; the upper floors carry the Housing area (duplex housing) which is associated with Common Premises, assigned to inhabitant activities (Workspaces, 3D computing, etc.), premises placed in the central part of the building and spread over the floors.
On the first levels are the general services linked to the Community (tertiary activities, catering, etc.), and on the first level are housed: the technical platform for infrastructure and maintenance, and a commercial sector associated with a "Market Hall".
A weekly Market was held in the floor space under "Stilts". The "open air" level is partly allocated to the withdrawal of ground-to-air service vehicles ensuring remote mobility for residents, and is devoted in sequences to outdoor activities, sports-leisure, parties, etc.

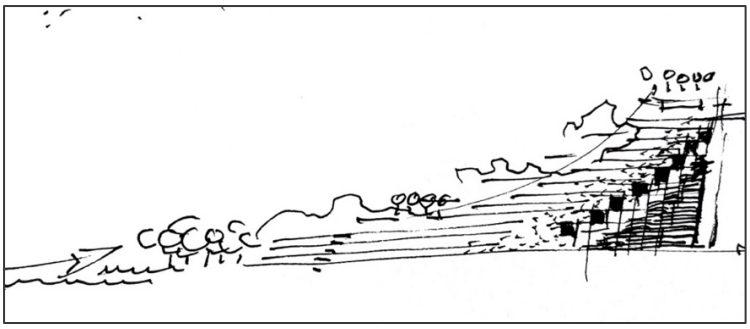


The **tiered interior streets** are shifted from each other at their two ends to make way for terraces **, with their backs to the prevailing winds.**
These terraces at the ends of the interior streets are assigned to the public facilities located in their surroundings (Library, Dispensary, Music School, Auditorium, Gardens, etc.).
The partial autonomy of resources and the introduction of various functions within the Living Unit make it possible to weather bad weather waves.
The **temporary operating autonomy of the Ecotopic Unit** is obtained: by the use of on-board technologies for the consumption of low drinking water (triple network); by contributions of renewable energies (subsoil, wind, sun) and associated equipment for the conversion of source energy and storage; by enclosures with low losses; and by a sobriety of the actors in terms of behaviour and consumption, obtained by the adoption of the **concept of Frugality** "The fair harvest of the fruits of the Earth".

The forms of operation of the Living Unit, due to the internal treatment of business waste and recycling by the appropriate technologies available today, do not require the use of underground infrastructures with the exception of circuits related to geothermal heat pumps, which can also be deposited at the end of their life.

On the sloping green grounds, placed in a central position, are landscaped for sunny days: shared gardens, lake, walks, festive median, outdoor theatre...

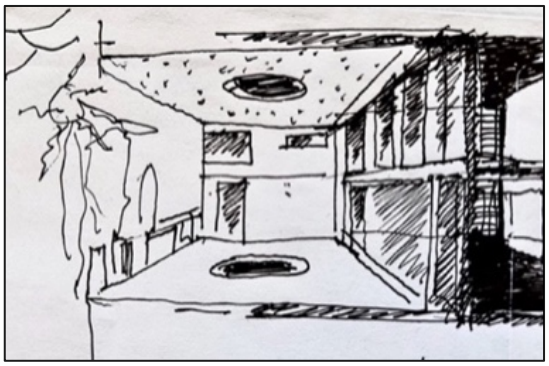




Construction Mode - The Alternative

The constructive hypothesis remaining the non-footprint at the end of its life, the framework is designed in the mode of assembly and bolting of parts, allowing the installation of a load-bearing, braced and self-stable body, and the composition of platforms by assembling elements.
The timber frame consists of screw piles that can be dismantled and reused.

This construction and operation method allows: the insertion and connection of modular multifunctional volumes; the introduction of interior streets in repetitive sequences and vertical services; and the introduction of living volumes on the Duplex models in double orientation, or tiered garden villas (Le Corbusier), or Plan-Libre (by assemblable components).
The face of the dwellings on the intrados of the curvature (temperate exposure to protect against the winds) can be added to suspended terraces (in light frames of wood, bamboo, etc.) and form a vocabulary of spaces contributing to broadening creativity in the form of exchanges between Species.
Chatty stands in tune with the central space of the open-air theatre.





09 – ECO-MERIZOTOPES
An Ethopolitics of Place
... Two steps forward

*" **Ethopolitical relations** are relations between living beings at the level of individuals, populations, multi-specific collectives, interspecific alliances whose clearest nature is **trans-action**, the **continued plural negotiation between forms of life** that are not atomistic individuals for which it would be possible to quantify and compare costs and benefits according to a single metric. They are weavings of co-individuation*

*"The **Communities of Intelligence",** committed to the reduction of a mutual nuisance, can in the long term place themselves in a position to revise their strategies of remote territorial implantation, in extraction of a diminished and feared natural environment,*
***to tend to free oneself from a sedentary and warmongering form of existence and to choose to exist in exploratory mobility**, conducive to **exchange in multi-systemic trans-action, while remaining unique in the evolutionary movement.** - B.* Morizot.

***"**Space of possible relations between humans and other living beings, which are neither the politics of the moderns, nor natural relations. **A space of relationships to be explored, imagined, rediscovered, invented to make the world liveable**" - B. Morizot – "the unexplored"*

*"As soon as there are forms of reduction of mutual nuisance; as soon as we are not in an absolute conflict or a competitive exclusion, but **in a woven, complex cohabitation, which is called an "ecosystem", then we are in things other than relations of nature, and this is where the "Terra Incognita" emerges** under our feet.*
*... **The political space is mutating and is no longer just that of humans among themselves. How can we give shape to this type of socio-political alter relationship, which takes place with the living?"*** - B. Morizot - The Unexplored -

***"The development of an Etho-politics** is based on the emergence and expansion of "**subject-groups**"* (F. Guattari)

091 – Alternative: Etho-politics on the entity "Earth"

It is necessary to deepen our knowledge of the community of living things around us, of the planet our host and its specific dynamics.
It is immediately essential to stop the development of a model-system that cultivates false certainties, false beliefs (killing each other in the name of the same god!), that acclaims the dictatorship of money and misery, and delights in seeing the billionaire caste buy itself today in broad daylight, for money "hard and fast" voters, politicians, states, As not long ago they bought slaves "freely" at the market... Is the re-adaptation of the human model to the earth's ecosystem still underway, while the consciousness of peoples is eroding and their knowledge is being converted into directed impulses-consumption and intoxicating games (platforms, games, etc.) to relegate the individual-mass?

If we can try to bring together the achievements, which are supposed to open a path of detachment and correction of a delusion that takes the human species out of its reason for existing, we should perhaps move away from the path of the millenarian revolutions that have only rebuilt what they had

just destroyed, and moreover by magnifying the ruins, in order to memorize the past and future model of the impulses of domination.
During the Third Reich, the dictator A. Hitler and his beloved architect Albert Speer were not proud at the design stage of the projects to have the parts of the buildings that they wanted to see in ruins in future times reinforced.

Departing from this model, which is always duplicated by economic-political systems, consists in focusing on the local scales of the relationship (Blocks, Neighbourhoods, Towns, etc.), those of: **daily life, the sharing of services, the exchange of ideas and knowledge, from which emerge collective invention and the need to exchange at other levels of the Community Planet, while continuing social experimentation on a daily basis.**
That of the "Subject-Groups" which for some time, long before that of the City-Cities, have derived from group dynamics: the pleasure of exchanging, and of inventing the consequences by analyzing the phenomena, by experimenting with the Doing, by memorizing the experience, by transmitting, that is to say, by keeping the mastery and the link with the evolution-phenomena.

Inter-related Subject Groups that today benefit from an "Off" dissemination of knowledge, interoperability, and a crazy desire to take action as "Makers".
This path taken is that of a "Re-evolution" at the Micro and Meso scales of a complex ecosystem world and no longer the mendacious one of the "AI" planet-ship preparing to conquer the Cosmos.
Micro-Meso scales that have proven in recent decades to be able to self-organize on a critical basis, and to set out various alternatives in self-management, organization of short circuits, modification of their relationship to biodiversity and non-domestication, rectification of false knowledge inculcated.

From dialogue to homelessness

The experiences drawn from neighbourhood initiatives, set out in the previous chapters, are nourished by an aspiration of "**human groups-neighbouring subjects**.
An aspiration to engage in a new kind of "dialogue", developing "**Transversality**" in a co-evolutionary world leading to a **redefinition of "non-subject" authors** (according to F. Guattari's formula according to C. Robics)

A **"dialogue"** that leads to a reconsideration of the fixed-sedentary lifestyle, the one that is translated: By the orthogonality of the human imprint, which imposes itself in the mode of degradation of the free invention of living nature; by the notions of "Territory" administering, agglomerating, alienating... To reveal the pleasure of building a conviviality on the scale of everyday life, of proximity, of the block, of the neighborhood, and to allow oneself to invent a society with other horizons.
Another possible of the human group "Subject": "marginal", multi-identity, in encounter, in shared exploration, **self-organization...**
The mobility found at the micro-scales of the neighborhood is that which leads to approaching the environments of the Living (classified as invasive), to conversing with their components, to the point of thinking of crossing the inhabited islands by corridors of biodiversity. Take action as in Freiburg im Breisgau.

At the current stage, "Humanity" has a light on the "long term" of its evolution, visibility on future alternatives, technological and scientific knowledge... But his role is about to leave the stage that is being played out on Earth: **In mutuality.**

The facts collected and other forms of ongoing demonstrations may suggest that the "enlightened" and "reactive" part of the human-subject groups, indigenous peoples and groups protesting the social and ecological alternative, today in invention-resource and "open source" dissemination, have acquired a sufficient awareness of reality to open the way to the development of an eco-societal alternative, in transitional installations (pose-and-deposit) within environments of biodiversity restored, without footprints, or in post-regeneration.

Alternative – An etho-ecopolitics of environments

The Etho-Ecopolitics of environments implies defining the places of pose (forms, functions, attributions, vocations) for human groups in open and united Commons.

Places:

- Or the means are created to make all forms of life (human expressions and activities) evolve without harm;
- Which establish forms of stay in eco-compatibilities differentiated according to neighboring ecosystems;
- Who, in the phase of restoring the planet's operating parameters, welcome humans in forms of life and consumption compatible with the renewability capacities of the Earth resource.

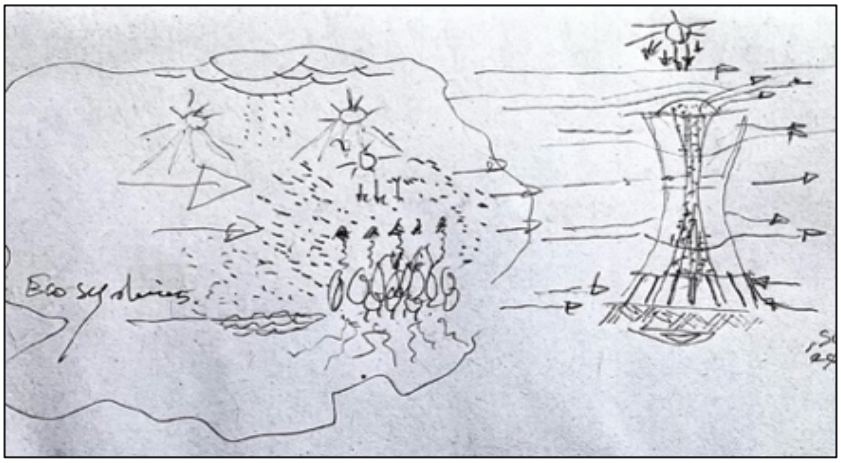
Places that take into account:

- The characteristics of the sites chosen (geology, topography, micro-climate and variability), the nature of the surface and subsoil soils, including aquifers and flowing water, etc. (Example cited from Culemborg);
- The nature of the plant and animal populations established and the ecosystem organizations developed (e.g. the Amerindian tribes of the Amazon and others...);
- A minimal footprint left on the site to allow a regeneration in free evolution over a long period of time (Mongolian steppe breeders and others...)
- Elements of well-being and use, expected by the human groups in their stay;

092 – Correlating the Habitus to the dynamics of the biosphere

It means designing and building specific places of stay, capable of : **combining with the sites and some of their resources without leading to their depletion; not exposing living spaces to the stresses of bad weather and cataclysmic forms; impregnating and regulating oneself on the atmospheres generated by local physical and biological singularities, to develop porosities with the surrounding ecosystems, without distorting them, i.e. to give itself a sober and contributory imprint.**
Our dependence on Earth's biodiversity pushes us to stop the process of advanced destruction.

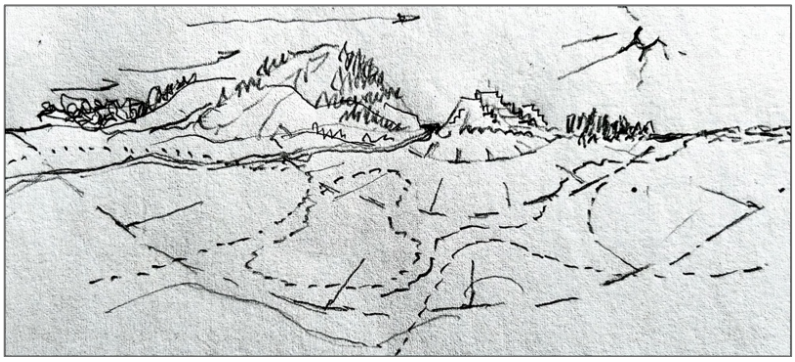
To do this, we must resolve to postulate that the fragile human species can only survive by mobilizing its cognitive capacities to develop a path that allows us to regain compatibility of existence with the entire living world in place: To identify, a way of rapprochement, concepts generating inter-compatibility in mutuality with all communities (ecosystems and species). Concepts declined in terms of space, temporal, relational, nutritional, language... And excluding any form of human invasiveness.



In this context, **the Site Effects** must be evaluated as a whole and examined before the choice of location, in terms of:

- The characteristics of the basement and the site (masses, slope of the soil, nature of the subsoil, etc.);
- Dynamics of incoming-outgoing flows and the capabilities of the place, in its natural state, to manage the solicitations on the presumed site of stay (wind, hail, rain, snow, subsidence ...) ;
- Capacities for regenerating ambient biodiversity and renewability resources in place.
- Ecosystem dynamics in practice

In this approach, **the Architecture of "Joint Environments**" is based on an analysis of the existing state and history of each site.
It is conditioned in its shape, structure, and functioning, by the microclimatic manifestations operating on the sites of installation.
It must grasp the parameters of life of indigenous ecosystems in order to find a way of reconciling it with the eco-societal dynamics of humans in the process of reinvention.



The Architecture of "Shared Places" or Merizotes offers a platform to: invent each other in co-evolution and mutual discovery on sites that retain their potential for regeneration in resources and biodiversity; to collect in stages the data leading to the understanding of the behaviors and languages of the living...
And on this basis, to develop a human trajectory in symbio-systemic compatibility, with all the components of the Earth movement.

The concept stated is no longer only "Microclimatic", it is "Eco-Merizota" to translate, through its functional and naturo-dynamic spatial components, the etho-evolutionary approach: without borders, without domination, nor domestication, or eradication.

One Space, One Respect.

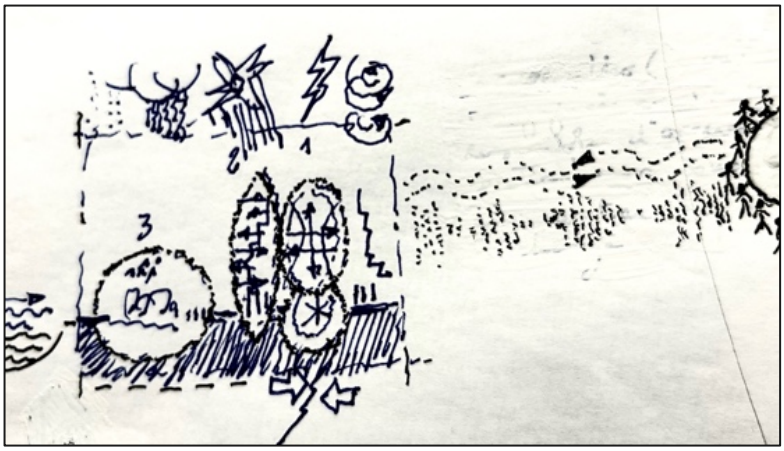
Creating a space-time of re-adaptation of the human model to contexts requires existing at the Micro and Meso scales of communicability between species.
The experiments conducted in recent decades, based on a critical analysis of human systematics, have made it possible to set out various alternatives: in self-management; in self-organization of short circuits; in the reasoned production and consumption of food and everyday goods; in energy autonomy, in changing the relationship with biodiversity; in rectifying false knowledge inculcated by self-centered human ideologies, inclined to maintain a system of exclusion from the living world.

In these fields of action, it was a question of **planting another way and environment of life,** that is to say with each actor in the ecosystem: **Establishing forms of presence and exchange with reciprocal benefits**, without harming native biota or attached biocenoses; and with each physical phenomenon in practice, translating its manifestations into resources without trying to exhaust them or acting to multiply and disrupt them.
This mode of evolution, without predation or forcing of environments, without disturbing the general enclosure of life (planet), leads to the instruction and precision of the terms and modes of community exchange to be adopted.

A Species Space, for learning a common language, is to be initiated...

A Species-Space, where the ecosystem spheres of a native living being and those of a shared human would rub shoulders.
A Species-Space composed of several sequences, which would initially allow the actors of the two worlds to identify in successive approaches the terms of a relationship, place, form, intensity, habituation and mutual recognition of specificities, then gradually by deepening scientific knowledge, would allow us to grasp the terms of a shared language, and the associated forms of non-destructive evolution of the Earth's environment.
... One of the first revolutions of the Human Being, did it consist, through the looks, gestures, various words carried between foreign communities including Neanderthals in Europe, Denisovans...(450,000 years and more), **at the time of the great migrations when borders did not exist, to find a key language to exchange, assemble, learn, maintain and create the interlink of the Living**,

Influences and links



Ecosphere Ecopole

00*- Resource factors (planetary climate)*
01- A joint space, a cocoon of life and retreat of the interconnected human species.
02- Volume envelope, biface of multi-systemic relationships maintained.
Permeability Body
03- Ecosystem domain of bio-diversity and free-evolution.

Two spaces (01+02) combined in a single set of reception, protection, autonomy, and maintenance of internal/external exchange flows. A language of intra-living coevolution.

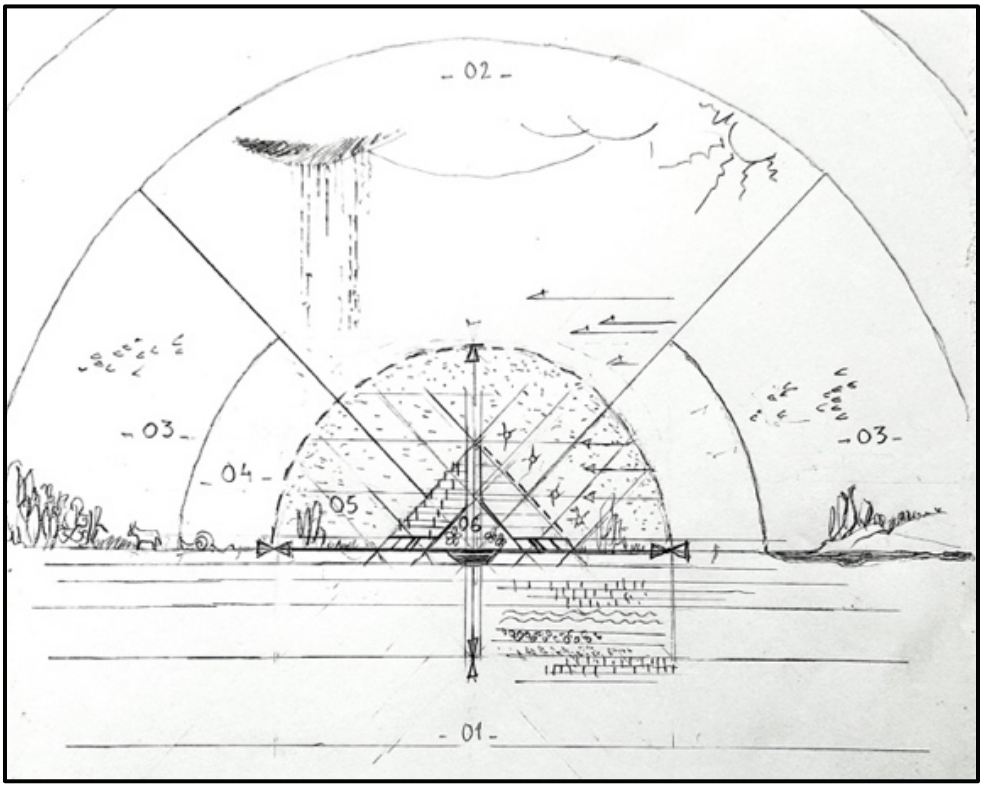
The search for the link is the act prior to any overall understanding and evolution.
The **Inter-living language** opens a stage of mutual recognition of the roles to be played in the Earthly scenario, it cannot be done without simultaneously lifting the **internal boundaries** between Humans and the **external borders** between the Human and the communities of the Living Other.

In a Sketch of the "Living Space" it would be necessary to consider the object built and lived as at the same time: a MOVING-LIVING SPACE in continuous redefinition, with impulses in tune with the effects generated by the planet; and a SPACE OF DIVERSITY, within which the actors in contact-approach to the surrounding contexts, would find to express their singularities, identities, collegiality...

Problem of the poles of life.

The environment of existence of human communities is placed in various modes of exchange with other environments (Lithosphere, hydrosphere. Atmosphere, Biosphere).
The present context requires us to leave behind the Anthropospheric thought that has been cultivated for more than 15 millennia, or even more.
Recent human time, which maintains an exponential growth in demography and related consumption, implements processes that make it possible to convert certain elements of planetary phenomenology into resources, not to lighten a footprint on the planet, but to increase the Market of Profits, and accentuate the related environmental imbalances.
This step backwards could be a step forward, if the environments or seats of humans on the planet were to gradually retract (progressive decrease of the human population and erasure of the sites of concentration), to make way for a tranquilized human species, called: to learn and discover; to establish a society of fair exchange in the preservation of operating systems, through the use of neutral eco-technologies; to look at a system of reciprocity in the exchange between actors of the planetary system, and not authors; not to disturb the rhythms of evolution of the planet.

In this context, the human environment could be placed in non-sedentary (proprietary) resourceable imprints, in exchange with the source and resource environments of life without causing the degradation of their mechanisms.
He could thus devote himself to conceiving the "places" of a co-evolution: in porosity, respiration and transference.



A domain of transfers, convertibility, combinations, restitution and regeneration of environments, mutual recognition, without monopolization

01 *Lithosphere and hydrosphere*
02 *Lower atmosphere*
03 *Ecosystems and free evolution*
04 *Ecotone*
05 *Osmotic Space - Interlude*
06 *Merizotope "Unity of Life"*

The Transfer and Convertibility Architecture

... Places to be invented collegially, to arouse in the "All-Uns" the idea of freeing themselves from artifice and indoctrination; to meet or discover the biospheric reality in movement and creation, and to explore it; to be able to elaborate forms of existence compatible with the characteristics of the earth system... Non-negotiable laws.

We can think that it is at the level of group dynamics (Associations, Assemblies, Colleges, Neighborhoods...), that of the Social Commons: that we learn to neighbor, to exchange, to collaborate, to experiment; that there is the possibility of exploring and discovering the diversity of phenomena, the dialectic of living environments near and far; that the consciousness of reality is formed in the totality of worlds and that we take a responsible role on the stage of the Living as a whole.

The global approach, of cooperation in mutuality, degrowth, non-depletion of organic and abiotic resources, inclines to define constructive processes:
Breathable, osmotic, scalable, dismountable, transportable, reinstallable, **adapted to the dynamics and resources of the sites, to their constraints**.

The co-evolutionivity introduced as a new function in the built space, can lead to the adoption of a **concept** of **ADAPTABILITY-CONVERTIBILITY** of the built body, designed until now in the spirit of providing withdrawal and protection, or even confinement, to the fragile human species, and at the same time translating into a multiplication of spatio-functional sequences between the domain of external ecosystems and the specific place offered to the withdrawal of the Human being, to give birth to a **MOVING AND MANIFEST INTERLUDE**, shaped in sharing with the ambient biodiversity

The permeability and flexibility of the thicknesses of the "habit-built" are capable of generating median spaces of conversion-conversation with the external environment by being concretized by the erasure-withdrawal of the outer envelope layer (contemporary façadism), to allow the creation of buffer spaces adjustable both to the biodiverse environments encountered and to the relationships and uses desired by each housed occupant.

Shaping the space for the reconstruction of co-evolutions with regard to contexts

It is to create and live a temporary or lasting meeting space for Species, where neither one nor the other is harmful or invasive, but studies each other to find common LANGUAGES without the intention of domesticating or hybridizing.

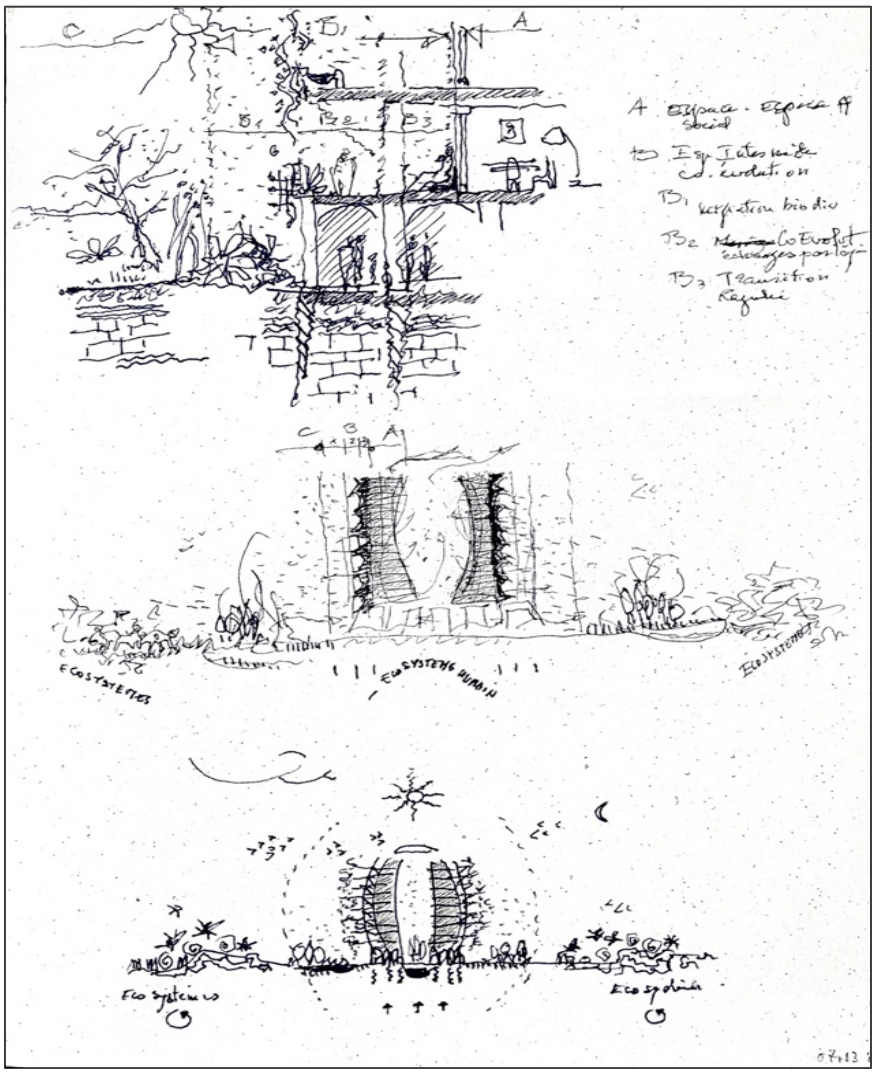
093 – Eco-Merizotopia -

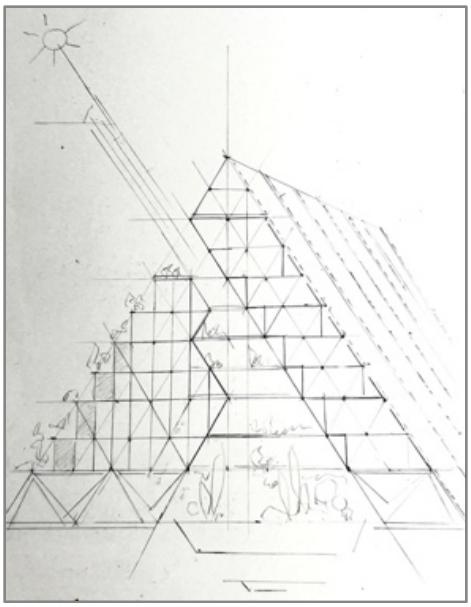
0931- The Trans-Place

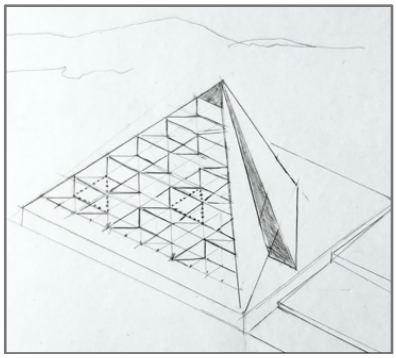
The architecture of the Merizotope could be that of a reactive organ, composed of functional spaces, which assemble in dynamic and reformable combinations, to follow the progression over time of the relationships maintained by the human group in residence with the local ecosystem and climato-physical environment.

A place, not driven by an "augmented artificial intelligence", but developed and managed in reactivity by the Community in stay (Let's remember the concept cited by Wageningen – S. Behnish**), on the basis of its feelings and the amenities expected in the use of various spaces, common or particular: A place simply in regulated links with the resources manifested on the site.**

We can then reassemble the pieces of the puzzle - The eco-architectural experiments developed in the Eco-Socio-Alternative field, cited in the previous pages, which testify to the capacity of humans to enrich themselves in the invention of mechanisms that learn from natural phenomena.







The "**writing" of the neighboring commons** (Examples cited in the previous chapters), calls for the invention of support spaces in various forms with resourceable imprints, to allow the seated or itinerant Human Communities to rub shoulders with the other unfathomable Living World in para-symbiotic modes adapted to their singularities.
In any case, for the new generations of spaces, **it is necessary to review the concept of the "second body", that of permeability, that of the beyond and the below of the Envelope.**

The Merizotope?

An inside-outside assembly that reconciles through successive degressivities the meeting of two entities : that of the domain of ecosystem biodiversity, and that of the "cocoon" domain of humans, committed to carrying out a mutation-transition towards an ecosystemic redefinition of their way of thinking and existence on Earth.
This new place and site of an inventive and exploratory life is intended to be at the same time reactive, evolving, revisable and reformable, in order to support the progress of a reconstruction of the relationship of compatibility between the Human and his matrix.

It is a trans-place, a trans-link that calls for all at the same time, to be: Crossroads of exchanges, Public square, Evolving and bioclimatic structure, Hanging gardens, Shelving furniture...
All elements recreated in a Trans-Architecture, sensitive, reactive, political, intended to participate in the seeding of a symbio-mutualist era.

Trans-Architectures are: moldable, deformable, movable, recomposable, to follow the evolution of uses over time, in connection with the evolution of behaviors and philosophies of life, in an ecological grammar convertible to the texts encountered and multi-compatible combinations.

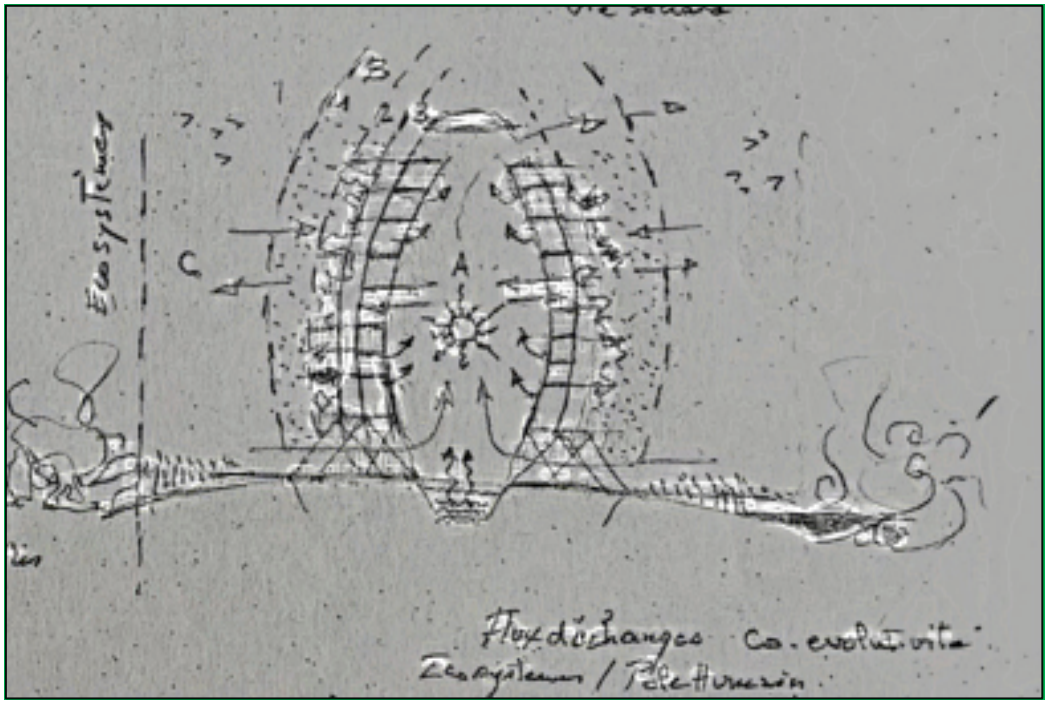
- Combinations: intimate, common, associated services and activities
A concept of living space borrowing doubly from the models of the Corbusean villa with its tiered garden-patio and from the "Neighbourhood Unit" in the inter-exchange of functions (verticality and horizontality), by exchange platforms articulating: Housing, Services and dedicated spaces (co-living premises, hotels, services, business sites, shops, sports halls and places of education and training, theatre, etc.)

- Driving autonomy: Comfort parameters, controlled by the user who is free to create his or her sensory climate by trial and error, and to progress to the point of inventing a pro-active living area (sun visor, curtains, lake area, plantings, deckchair, parasol) ... As in the social housing

operations of Bezons (Jean Nouvel Architecte), where the "Plan Libre" allows each occupant to shape his or her intimate space.

- Learning from the other world: In the manner of a collective laboratory with revisable dimensions, fluctuating according to the intensity of exchanges, evolving towards the revision of behaviors between the human being in learning and the other visiting species of the living, in a revision of the conception of the former on the erroneous notion of invasiveness and harmfulness of the latter. – (Wageningen Forest Institute – S Behnish)
...

0932- Conceptualizing Biospheric Immersion



Exchanges and relations flows:

A, The Space of Assembly and Composition of General Climates;
B 3, The Cocoon Space of the Human, Space of the Intimate and Singularities. ;
B 2, The Human-Fauna-Flora Neighbourhood and Weaving Space;
B1, The space for mutual observation and reserve between ecosystem actors and the human community) and the elaboration of an inter-language;
C, Zone for the Protection of Free Evolving Ecosystems (distant links).

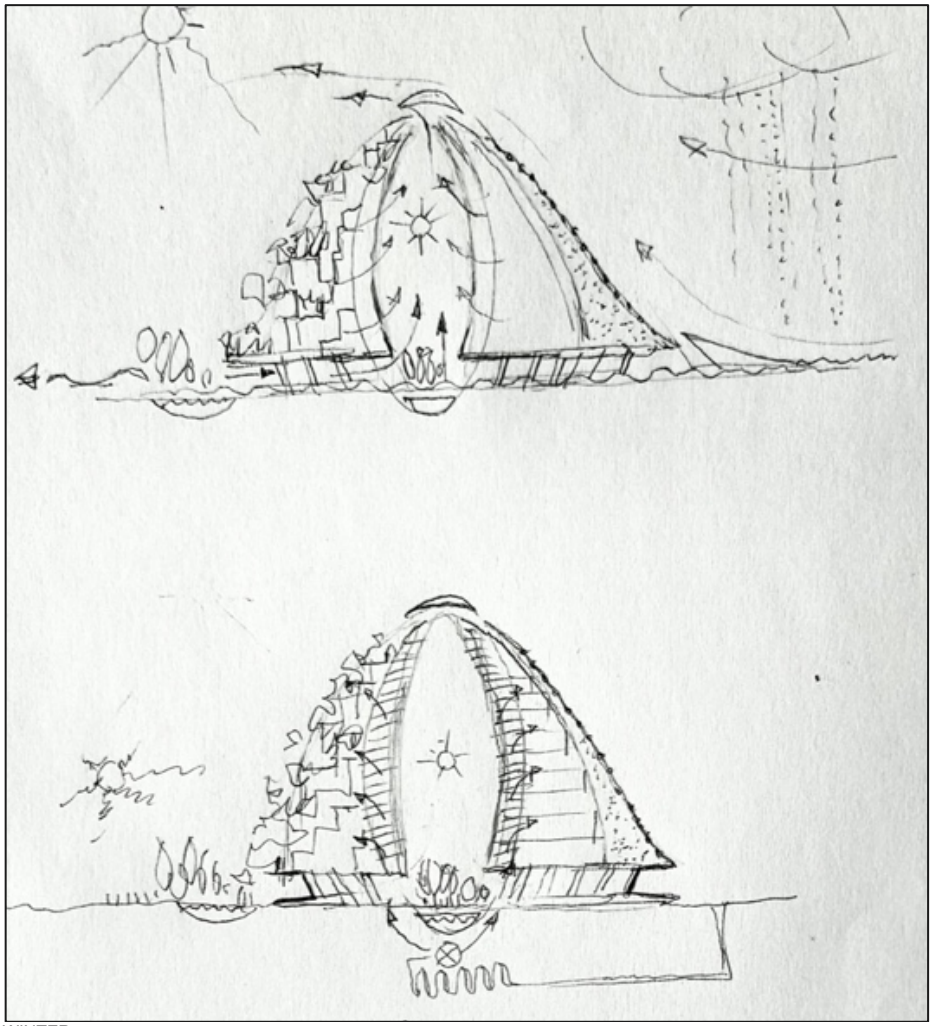
A concept of a structure that moves the walls, opens the walls of a pole of life, generates a dynamic of reinvention in response to forgotten fundamental questions.

The external face, intended for housing, arranged on the protected and solarized orientations, spreads out in steps by green terraces and patios (Ref: Le Corbusier "Villa Building")
The Habitat area articulated to the central patio (stairs + elevator and various networks) takes up the concept described above of **an intra-living "mediation" space**, in a double permeability of thicknesses.

The **sequencing of the living space**, on the path between the inside and the outside, allows each resident to configure his or her living space according to the links he or she maintains with the human collective, according to the language and conversation that he or she tends to establish between species, and according to the climatic comfort that suits him or her at the time and in the seasons.

The sensitive space to be formed, by its malleable, evolving character, creates **a mode of exchange between the surrounding and seated biodiversity, and the sojourning or itinerant human community**. A mode that is declined in particular conversations, with a chickadee, swallows, a spider, bees, a rose, a snail... Which will gradually extend to the various living communities in place, to **remove the boundaries** of incomprehension and **develop in the long term an evolving common language** that the neighborhood: Nature and Humans will accompany.

SUMMER-SPRING

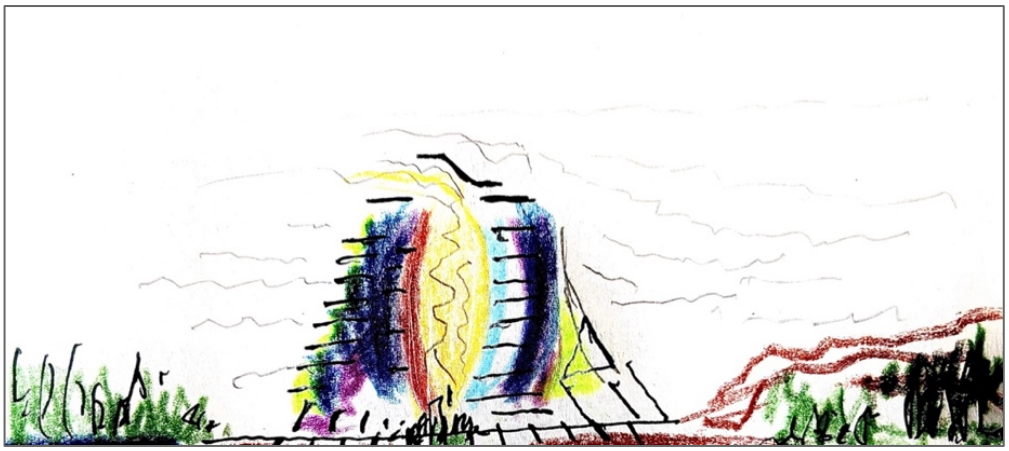


WINTER

Co-managed microclimates:

Internal/external organization of space

The concept of the Neighborhood Unit Facility adopts a **composition of several membranes with regulateable permeabilities, arranged between a Common Space of Distribution and Encounter in centrality, and a skin organ interacting between the worlds of the human and that occupied by the other living, constituted by layers functioning as evolving buffer elements.**



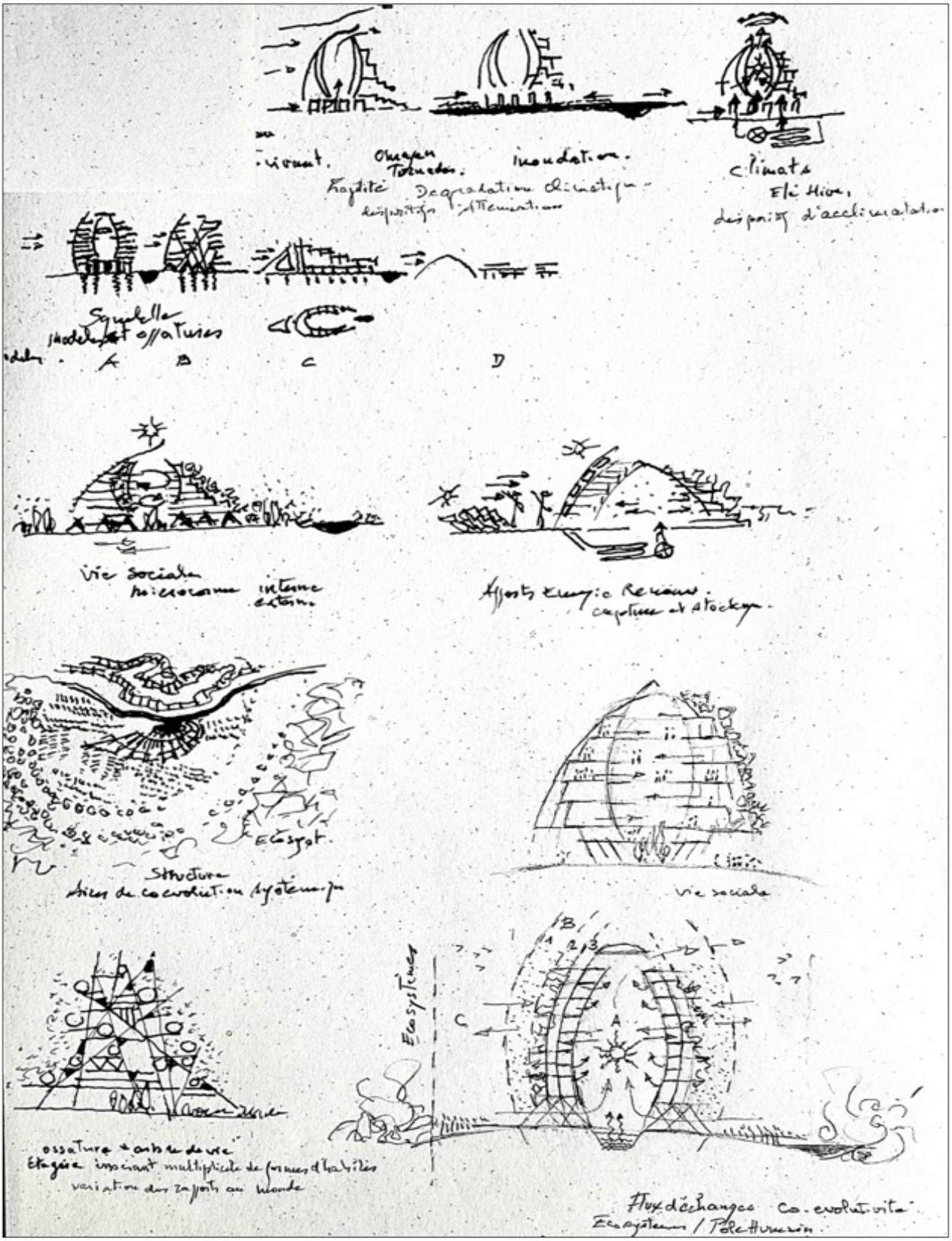
A variable indoor micro-climate is obtained by a permanent management of the parameters of indoor life (hygrometry, temperature, air quality, speed of movement) which matches the overall internal demand to the variability of the external climates in exercise on the structure, from a controlled depression of the Body (heart-lung), ascending space created internally (patios, skylights, courtyards or internal chimneys).
The Heart-Lung of the Living Unit ensures the distribution of tiered platforms, on which the various functional entities are dispersed, and conversely the shared functions are centrally grouped together: Proximity and co-activity services, etc. And access to a survival set in temporary autonomy of operation.

In summer, the base of the "Microclimat" patio, thanks to tree plantations and water basins placed in its centre, complemented by a developed afforestation on the outdoor land facing north, makes it possible to create a supply of fresh and purified air through the depression acting on the central open core at its top: a supply of fresh and purified air benefiting the habitats on all floors.

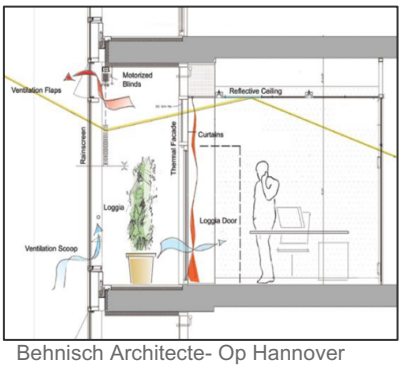
In the upper part, various roofing devices described in the previous chapters make it possible to modulate the solar gain **(heat, light, heat draught, air renewal, etc.) according** to the time of day and in all seasons, and **also to create climates that can be freely composed** in the spaces formed that open onto the façade.
The overall device finds its purpose here by allowing each occupant to come and refine a climate specific to his or her bodily comfort, even if it means commanding its inversion.



Presentation page 386



*The poles of life in their shelter buildings are covered on their periphery by a **"skin space"** composed of **malleable, extendable, compressible layers**, both adaptable by the occupant in the extension given to the Free Plan of Habitats, and reactive in relation to external solicitations operating differently and simultaneously on the different orientations of the built volume. (Operation Hamburg S. Behnish)*



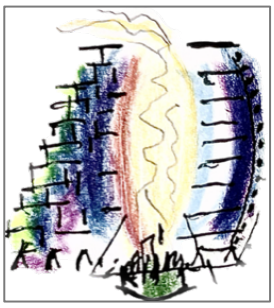
Behnisch Architecte- Op Hannover

Living environment – Habitability

On the inhabited side, protected from the prevailing winds, placed on an elevation of the natural terrain, there are on a multi-staircase layout (in the manner of the "Cinque Terre of the Genoese country") the gardened terraces and the spaces that form the interlude between the "free-plan housing" and the garden with identities shared with the surrounding biodiversity.
The personal living spaces are in "Free Plan" to let each occupant design the "**In-between**" placed between the central volume of common services, a place where co-activities are positioned (gyms, co-working spaces, micro-catering, guest rooms, nurseries, daycare centres, elementary education rooms, lounges, etc.) spread over the different levels of the Merizotae, and the outdoor area itself subject to free determination by the user of its Eco-conversations.

The barrier wall-façade of the past gives way here to a **domain in movement** that testifies to the forms of progression undertaken between the Human and the Living approached, to give birth to an active face, a "Hive Face", a sensitive face necessarily oriented to be protected from micro-climatic aggressions and spaces.
(quote from "Salon des Berces" Gilles Clément – On the evocation of living rooms without distinction between the built and the unbuilt). **A Face-Hive** without borders: made up of spaces forming a buffer, with adjustable comfort parameters between the external environment and the living space of the indoor cocoon.
It is one of the faces, along with the space on the ground, where the statement of a message translated into action is gradually expressed, on the evolution of the relationships between neighbouring species, and on the state of situated life dynamics.



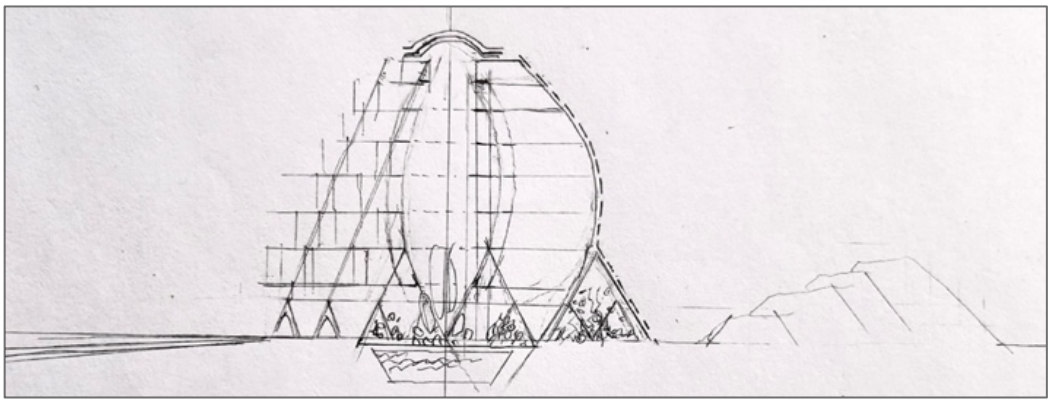


The borderless face is a domain of individual grasp of the surrounding biophysical contexts; a space for understanding partnerships leading to nurturing an invention shared between species, and gradually leading to the formalization-creation of an ecosystem human species compatible with others.

The **functional assemblies** that are assembled meet the following criteria: of access and distinct atmospheres, while finding a link with the functions carried out by the central body.

- The **integrated shops and neighbourhood services** are on the first platform and rest on stilts, they are arranged on the shield face of the structure (Op.Marseille -Le Corbusier);
- The "Co" places, associative, collegial places, places of study, are at the same level on the installation side of the housing;
- **Tertiary activities are placed in a body that is acoustically and functionally independent of the central core**. They are oriented on its side exposed to the prevailing winds, subject to high-intensity effects, and protected by a protective façade shrouded behind an in-between, within which are placed tree-lined patios staggered vertically (*Palais de Justice de Melun Architect F-H Jourda);*

- **The supporting ground**, under the built right-of-way, is left to a free use without permanent installation (weekly market, concert space, recreational games, etc.) within a space on columns.



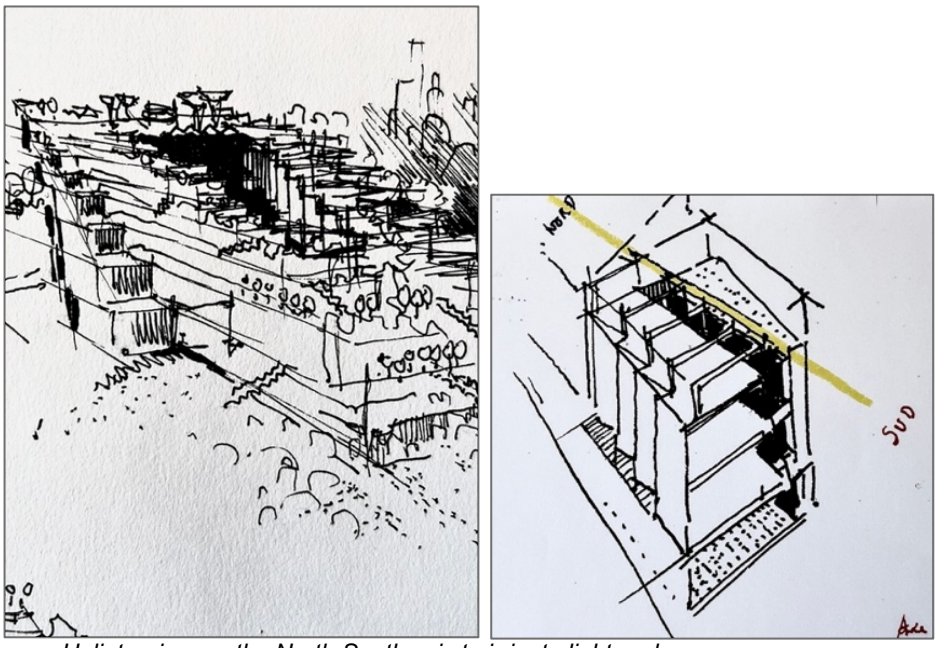
0933- The living environment in autonomy, in the convertibility of resources, in non-pollution, in post-renaturation...

The co-evolution living units, previously described, are able to have the associated technologies and equipment, created in recent decades, which make it possible to do without infrastructure networks for the most part, and to have multiple and convertible renewable energy sources.

- **Water resources**

In all parts of the world where **water resources** are present (in the soil, in the air or on the surface), humans know how to capture, depollute and transform this resource into drinking water The achievements concern: Low-tech technologies, capture, storage and recovery of rainwater in redistribution on a double network to current European bathing water standards; on methods of decontaminating grey water by settling, decontaminating, and lagooning within reed beds; on faecal matter and urine degradation modes, reactive fermentation producing biogas and appropriate effluent treatments for land enrichment; or in seawater desalination mode on coastal sites...

Conservation and reuse - Rainwater can be stored in cement tanks buried away from light, and under the effect of a bottom biomass be conserved and purified until water of bathing water quality (European Standard) is obtained. - *See page 224* -



Heliotropism on the North-South axis to irrigate light and energy
the space of the bleachers and the central plant theatre in a temperate climate

- Renewable energy resource

Wind energy (on the ground or by stationary kite, etc.), solar, geothermal, tidal, hydro, biomass energy, etc. differentiated technologies are transformed into electricity and heat.
Also available are the passive mass inertia that can be used on the masses used ("Trombe" wall, geothermal heat pump, thermal draught, etc.), as well as the natural draught exerted for millennia by solarized chimneys and controlled humidity...
Renewable energies: solar, wind, tidal... collected, transformed, and in the years to come more easily storable, while being used with sobriety.

- Organic agricultural resource

Following various modes of permaculture, agroforestry, agrovoltaics...

- Natural light resource

Skylight, Heliostat Technology (Mirror Reflector)
illumination of the sky within patios by following the path of the sun); Sun visors to protect against glare or overheating of south-facing facades in summer; Skydome devices as second inputs on study rooms; Reflexivity of walls, ceilings and screen shelves, by appropriate choice of material colours, plasters and coverings...

The useful and necessary, we know...

- **Water**, we know, with **low-tech technologies,** from various processes (phyto-purification, controlled fermentation, oxygenation, etc.), to reuse wastewater (water with detergents, water laden with faeces and urine, water from iron massifs, rainwater, etc.), and reallocate it to other uses or to return to the Earth for crops.
In conservation and reuse, rainwater can be stored in cement tanks buried away from light, and under the effect of a bottom biomass be conserved and purified until water of bathing water quality (European Standard) is obtained.

- The **renewable energy resource** generated: Wind energy (on the ground or by stationary kite, etc.), solar, geothermal, tidal, hydro, biomass, and differentiated processes and technologies allow conversion into electricity and heat, which are awaiting their storage in the coming decades in sobriety.
There are also passive mass inertia available on built structures or in the ground ("Trombe" wall, geothermal heat pump, thermal draught, etc.), as well as the natural draught exerted for millennia by solarized and hygrometry controlled chimneys, the modes of transformation by glass products, etc.

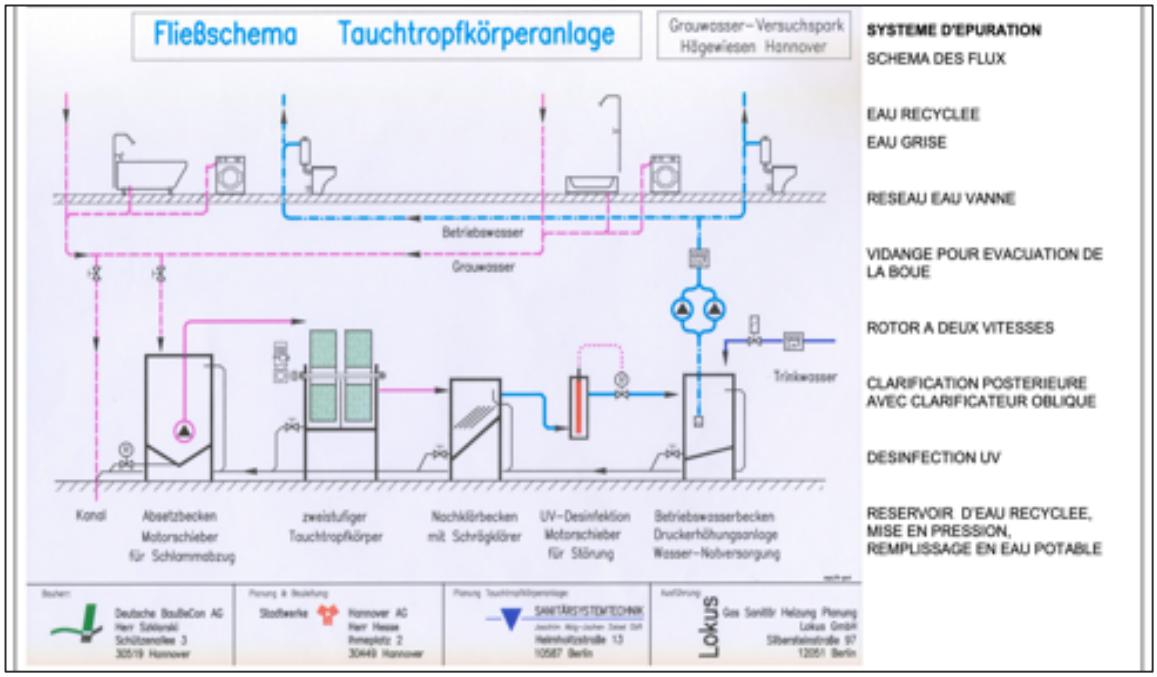
- We know how **to cultivate** in agro-voltaics, or cultivate without living or standing water, by trapping morning condensates
- We know how **to "grow" buildings** by developing a plant screen (deciduous or permanent) planted on the peripheral soils to provide varying shade or light, perfumes, coloring, but also fauna and flora).

- We know how to refuse to build for an average period of eighty years,
When we disengage from the logic of profit that animates the real estate and land markets of the "sufficient", authorized by certain politico-public powers linked to the logics of a renewed "market" of profit, engaged in the system of acceleration of the cycle of production / consumption / construction and demolition (perhaps even soon helped by the increase in climatic events destructive of infrastructures and built superstructures?)

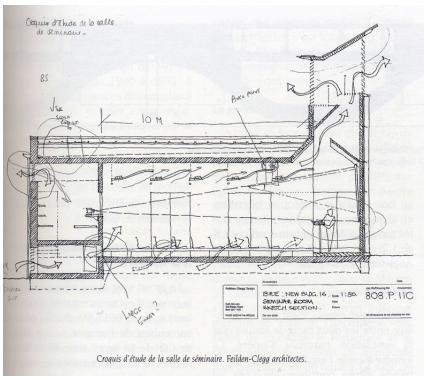
- We know how to extract ourselves from the giga-Megacities to find follow-ups and answers adapted to the contexts of installation, and to develop the forms of existence of a collective human. This "**On**", which generates a dynamic of reinvention in response to forgotten fundamental questions

- We also have most of the inventions to communicate with billions of humans in all places of transmission and reception, to expand our knowledge in open source!

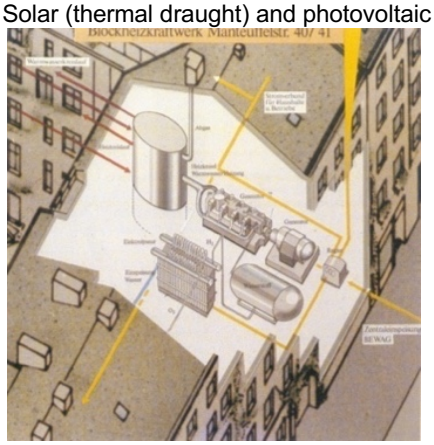
0934- A Footprint or Low Footprint Neutral Equipment Puzzle

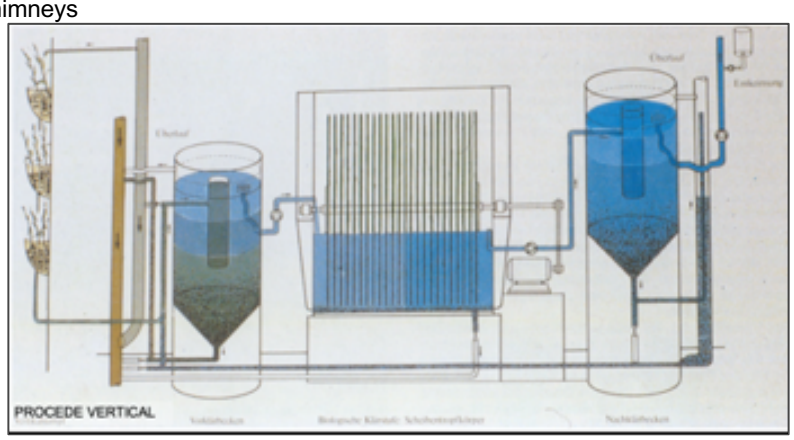




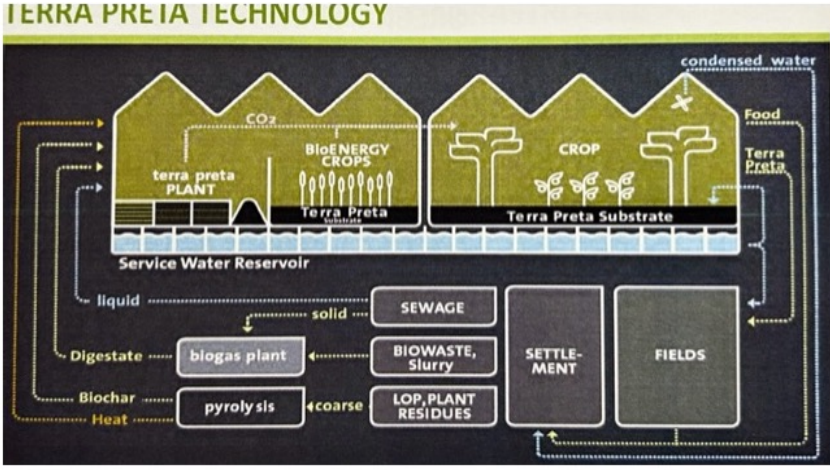


Solar (thermal draught) and photovoltaic chimneys





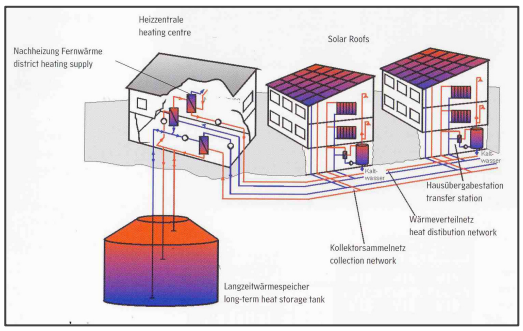
Grey water treatment – rainwater harvesting







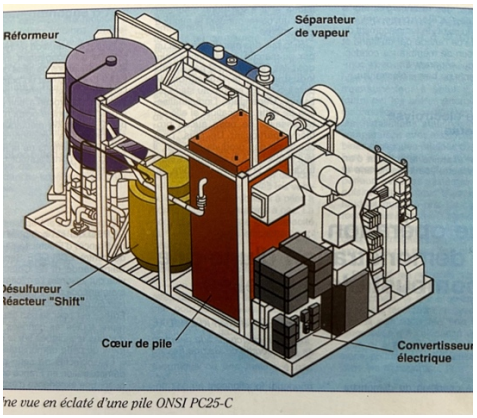




Black water treatment in the home and biogas production Solar hot water and underground storage







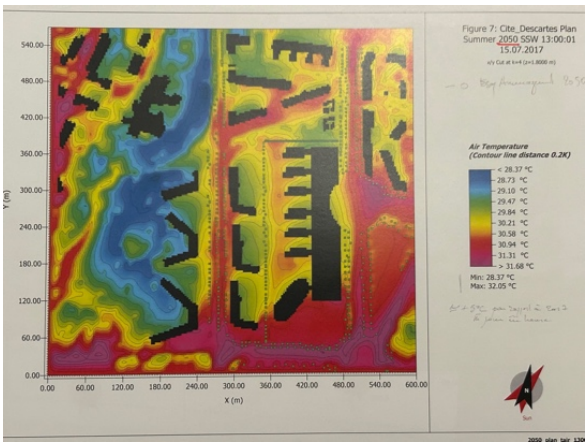
Photovoltaic Fuel Cell



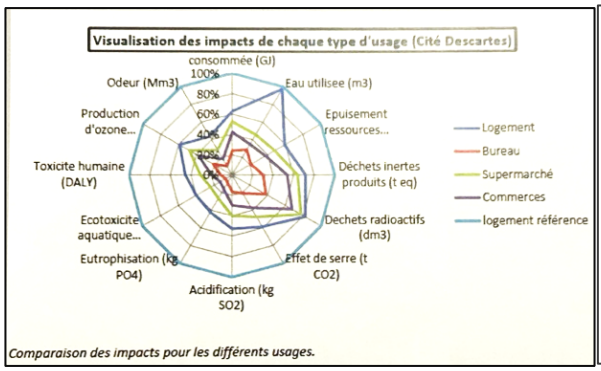


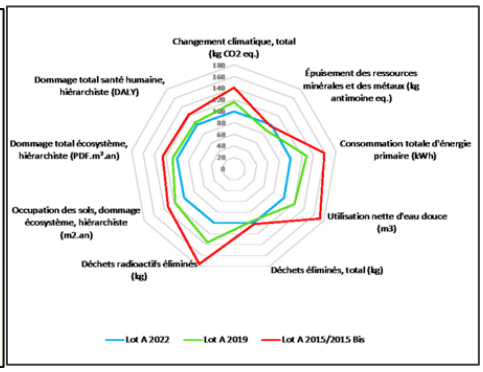
Photovoltaic canopies



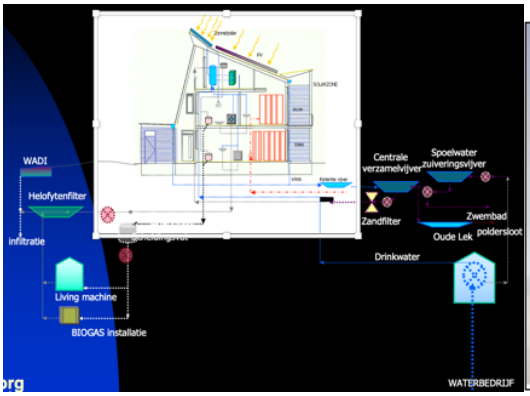


Hygro-parietodynamic system (cooling) Solar radiation and soil temp. assessment tool





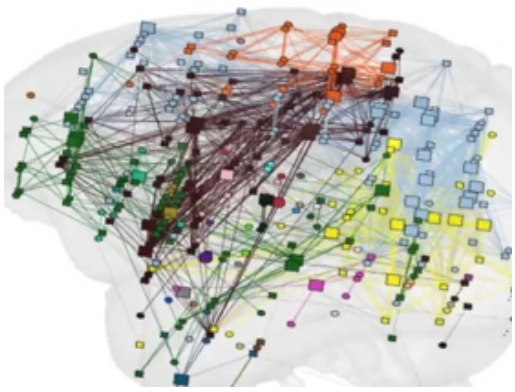
Dynamic "Life Cycle Assessment" tool for structures, by measuring impacts on biodiversity, the greenhouse effect, ecotoxicity, eutophys, acidification, health, etc.







Returning the existing water resource after use Wind turbines

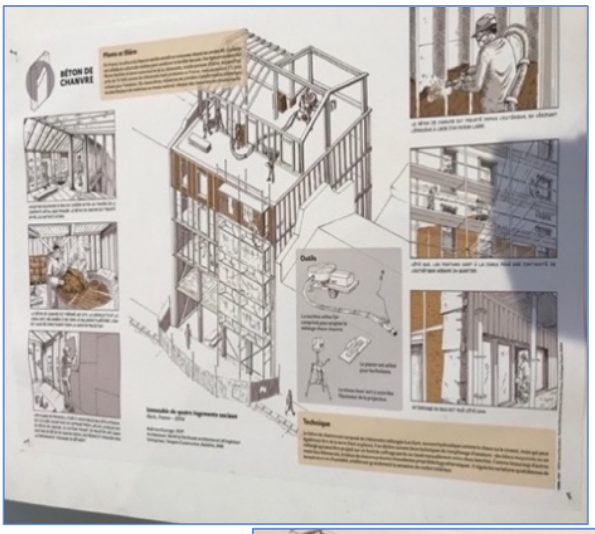


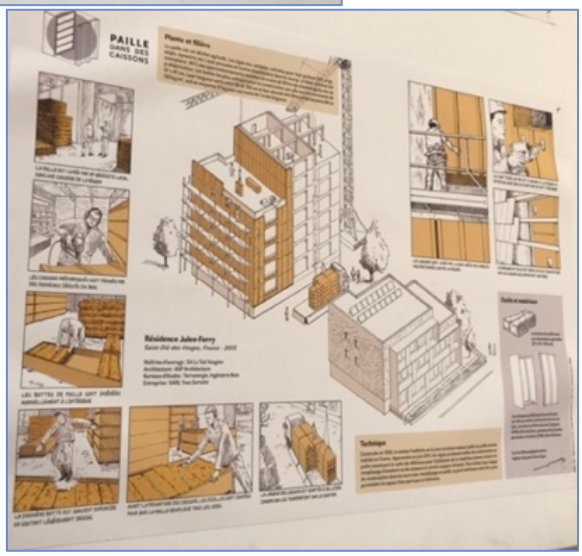
Planetary Interconnection Networks

Bio-geo-sourced finishing work

The envelope spaces (housing and activities) are made by the finishing trades, using dry processes and elements that can be dismantled at the end of the year. The use of local bio-geo-sourced materials is used for interior fittings and structures
Decorative (reusable or regenerable on site).

On the renewed path of **low-carbon construction,** the initiative is already taken in some contemporary constructions to use bio-geo-sourced materials that can be returned to the local substrate at the "end of life". These steps: led to the introduction of new manufactured products; open to the formulation of technical rules for implementation; and developed a conceptual field on carbon-free construction.
The following are now usable: hemp or raw earth (adobe) blocks, sandy clays armed with plant fibres; aerial lime plasters tinted with natural pigments, which can be substituted for industrial paints...
Some interior partitions and load-bearing walls can be made: in rammed earth (compacted clay with gravel, aerial lime, and fibrous plant waste), in cob on a wooden frame, or in sandy clay blocks + straw.





Paris - Pavillon de l'Arsenal Exhibition

Depending on the climatic zone, the wall complexes must take into account different responses, without ignoring the beneficial effects of siting the structures in avoidance, or reducing external stresses.
The body of the façade walls can be made of hemp blocks, or compressed straw bales associated with a removable-repositionable wooden frame, and rainscreen + wooden clapboards for external protection. In thermal.

0935 Architectures Écosystémiques

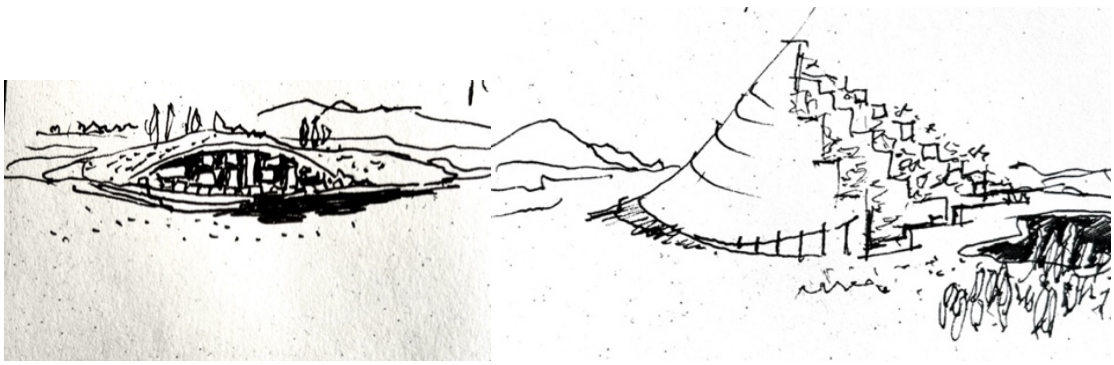
Les Architectures Écosystémiques, à faible empreinte et emprise au sol, à évitement des sollicitations climatiques extrêmes, pourraient avoir pour vocation d'ouvrir progressivement la voie à une génération de lieux de vie destinés à retisser dans l'espace et le temps le courant de Co-évolution abandonné de longue date (« maison longue » du Mode de Production Primitif).
Les technologies appelées à les réaliser sont à même de fournir, les assises vissées et l'ossature porteuse tri-dimensionnelle conçues pour être à terme démontées révisées et transportées sur d'autres sites, et les ossatures secondaires « plateformes » pour édifier et assembler les espaces à vivre et réseaux en des liens internes-externes, et établir ainsi un corps d'espaces de vie base de médiation entre la communauté humaine et son environnement Vivant.

Les architectures ainsi générées, et variantées**,** sont **dotées d'un espace de repli en autonomie temporaire (climatique, énergétique, hydrique, alimentaire, inter-connectique...), lors de sollicitations climatiques intenses censées s'exercer sur le site d'installation**
Les **ouvrages** sont revêtus de peaux réactives (membranes respirantes, transparentes, occultantes, protectrices des vents, des pluies...) pour répondre aux sollicitations climatiques de natures variables.

Pour ne pas avoir à subir de dégradations (inondations) ils se dégagent du terrain naturel. Le mode de fondation des constructions, à « empreinte effaçable », conduit à utiliser des fondations ponctuelles, vissées et rétractables.

Sur le premier plateau en élévation couvrant l'espace Hypostyle (en rez de chaussée, à l'air libre et non inondable), se placent en sécurité hors intempéries les installations nécessaires au fonctionnement d'ensemble de l'ouvrage.

Le squelette étagé (ossature porteuse) est irriguant, au sens où il porte et conduit les réseaux d'alimentation-évacuation-régulation liés à la plateforme base (niveau 1) de l'Unité de voisinage.



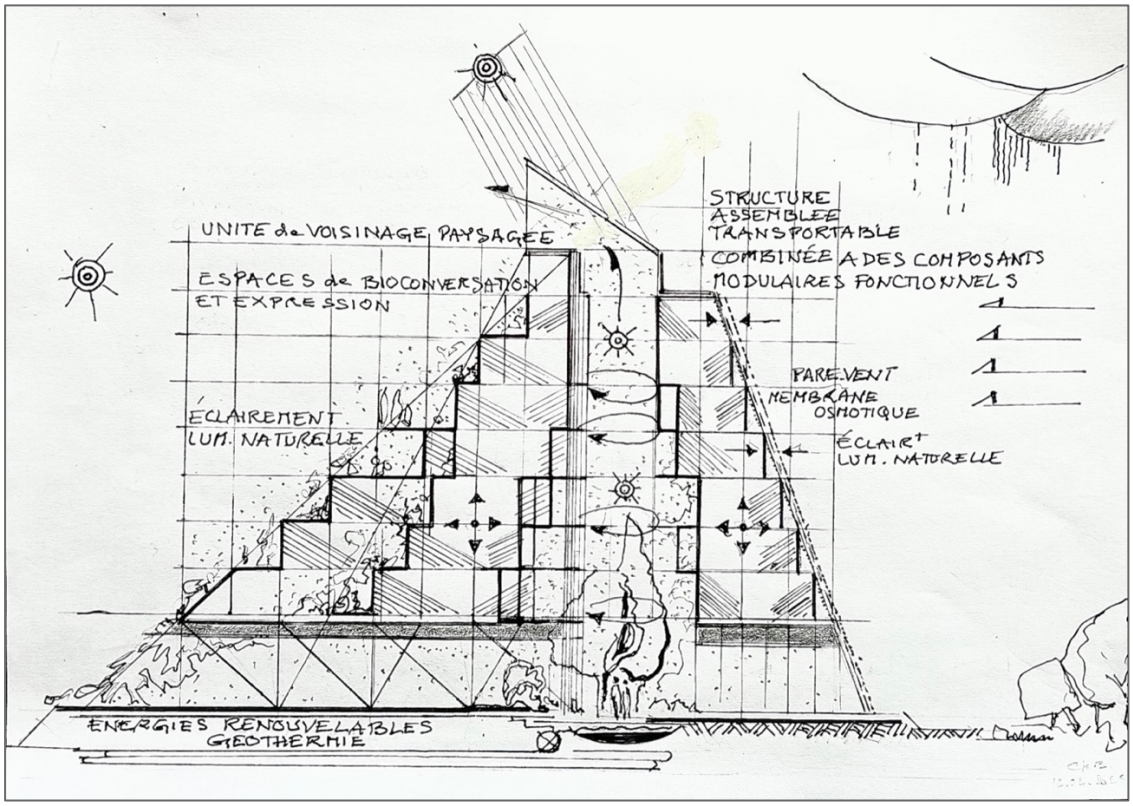
Les niveaux se développent en combinant les échanges horizontaux et ceux verticaux, sur plusieurs concepts spatiaux.

La vie civile se décline au sein d'un ensemble composé de formes variées d'habitation (espaces d'intimité) sur un mode tubulaire « plan-libre » (trait-d'union), liant le dehors (vision horizon) au-dedans de l'activité sociale portée par un « Cœur-Poumon » central. Un lieu vertical composé d'espaces variés et recomposables, à vocation d'échange, de collaborations, organisé autour de placettes, de jardins serres, d'espaces de coworking, et de locaux associatifs...
Cet espace central est régulé en fonction des caractéristiques climatiques externes. Il a pour rôle de fournir des profondeurs de champ, des éclairements naturels, des ensembles végétaux, et autres formes d'ambiancement, ainsi que tous éléments concourant à qualifier les échanges et relations de voisinage et cohérer l'ensemble de la communauté dans les périodes de rupture climatique.

Le « « pôle vie » d'expression et conversation donne sur l'orientation protégée des vents extrêmes. Il dispose de plateformes multiples, en prolongement des cellules de vie (loges habitantes). Il permet au quotidien d'établir des formes variées d'observations et liens avec les espèces autochtones, et tisser par étapes des inter-compatibilités en non-dépendance ni domestication.

Les flancs des Unités de Vie exposées aux effets climatiques extrêmes font l'objet d'une protection renforcée par façades carénées ou autres dispositifs.

Sur ces faciès sont placés les domaines regroupant les moyens techniques, scientifiques, et d'études, relatifs aux missions attribuées.
Ces lieux logent également les Espaces dédiés au repli en sécurité des occupants, lors des phases de dérèglement climatique et de suspension des activités du pôle, ils fonctionnent alors sur un régime en autonomie de fonctionnement sur ressources stockées.

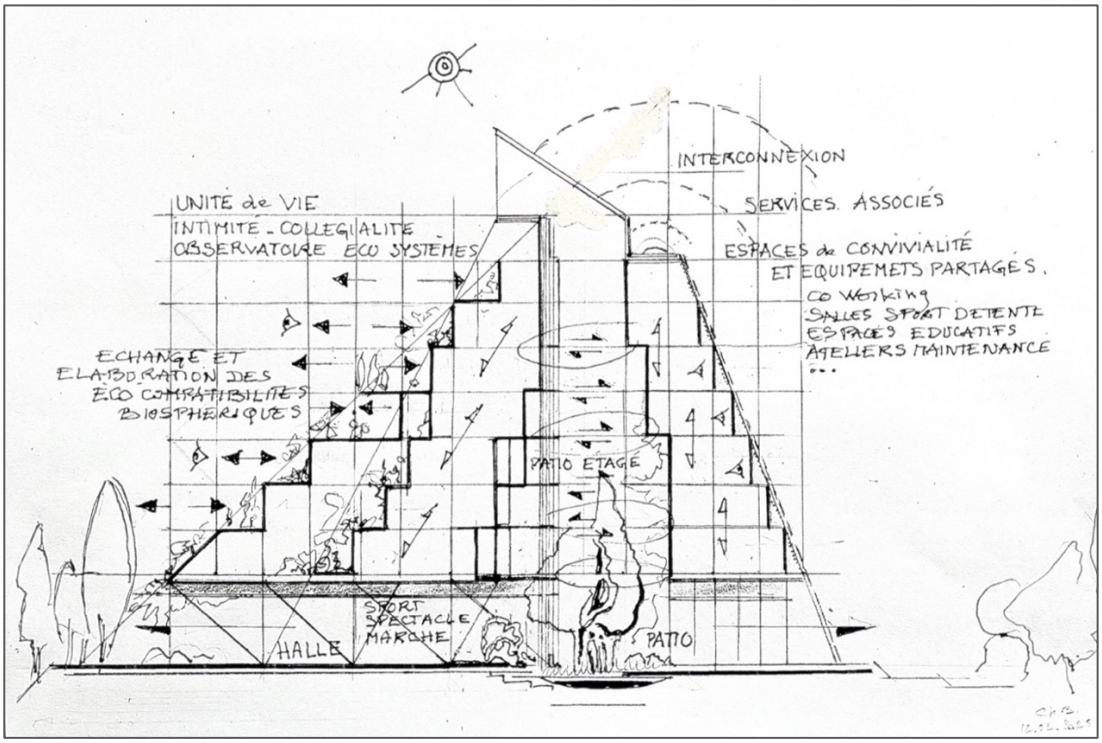


Le lieu central à deux cœurs et un poumon, se nourrit du sol et sous-sol, du soleil de la pluie et du vent des variations de température au cours des saisons, et au cours des heures de la journée de la biodiversité et des échanges entre résidents.
C'est le pôle de relaxation, conversation, et décision sur le Commun partage qui donne au lieu son appellation : **MÉRIZOTOPE**

Le Cœur-Poumon est le lieu de confection de climats variables produits à partir du climat extérieur corrigé par les dispositifs de forme de l'espace interne, et des technologies ancestrale intégrées en son sein (eau, végétaux, couloirs de vent et tirage thermique, hauteurs des volumes associés...). La réactivité de l'architecture ainsi créée est orchestrée par l'occupant, selon les saisons de jour et de nuit, pour produire une symphonie climatique diffusée à la communauté en séjour.
L'hygrométrie ambiante est tirée de l'évapotranspiration nocturne des masses végétales implantées indoor, ou des boisements et bassins ou lacs ménagés en face Nord de l'ouvrage ;

Les lieux intimes greffés en grappe sur la face Sud-Est (sous nos latitudes - Europe pour se protéger des vents forts et des surchauffes) peuvent être déconnectés du climat intérieur et recomposés selon les paramètres de confort corporel de chaque occupant.

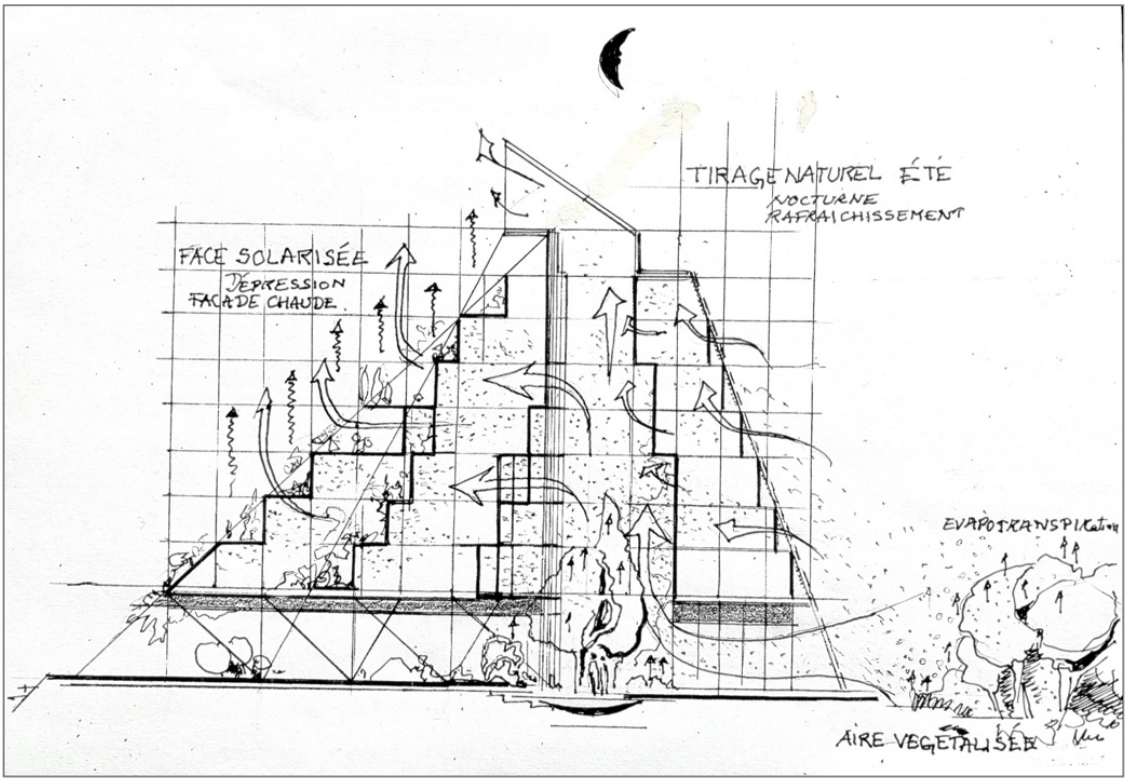
L'espace extérieur, face tempérée, est conçu pour témoigner des apprentissages menés par les occupants, en matière d'éco-compatibilité de l'Espèce au Vivant d'ensemble, et sont en lien avec les spécificités des bio-écosystèmes environnants.

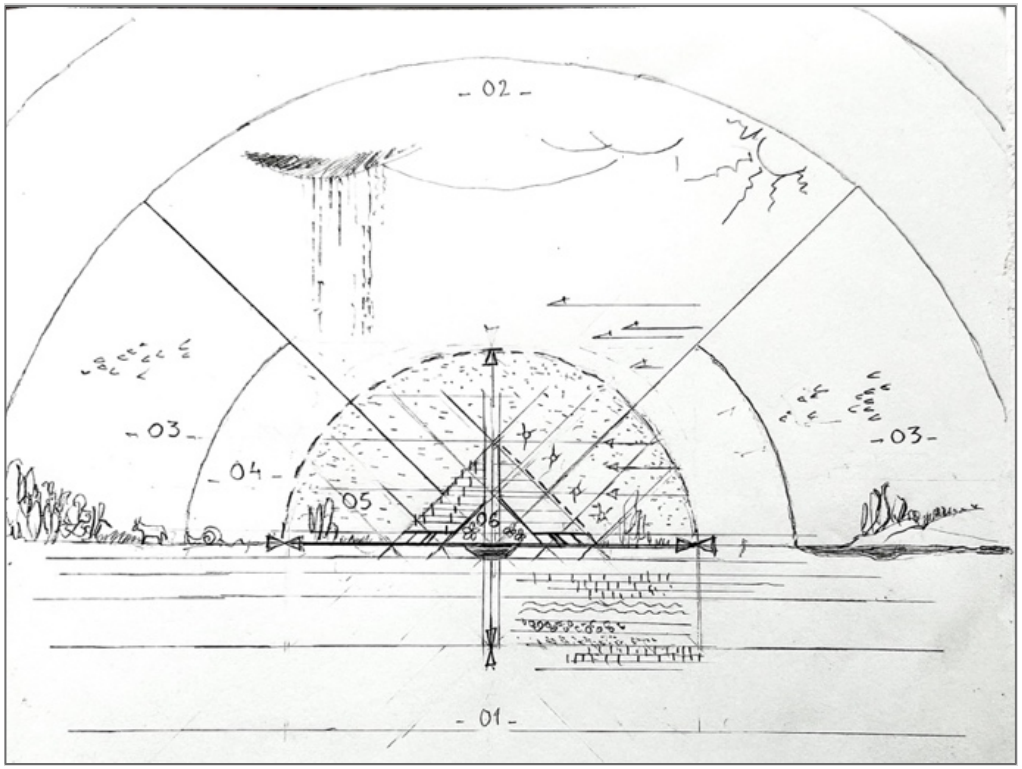


Dispositifs et ressources

- Les apports en énergie sont de sources : Éolienne, Solaire, Géothermique, hydraulique... et sont associés à des formes embarquées de stockage.
- Les ressources énergétiques sont offertes pour partie par les variations saisonnières : température de l'air extérieur, température base du socle-masse, solarisation des parois et sols externes, tirage thermique (ventilation naturelle intérieure) ;
- La ressource eau provient pour partie d'un stockage des précipitations extérieures et de leur conservation (traitement en phyto-épuration) au sein de réservoirs enterrés en bêton armé. L'eau de consommation peut provenir après traitements des nappes aquifères présentes sur le site ou d'eaux vives contrôlées - sans épuisement de la ressource (Cf- vernaculaire des plateaux Iraniens) ;
- Les eaux noires et grises sont traitées par procédés de décantation ou fermentation (biogaz) et épurés, en fin des processus d'épuration elles sont versées en arrosage des cultures aux abords
- La ventilation intérieure est en ventilation naturelle contrôlée associée au tirage thermique généré par le volume central (Coeur-patio : couvert par un dispositif à membranes sérigraphiées à révolution), et en base au niveau du sol par les ouïes d'un péristyle : base aux perméabilités contrôlées (intérieur/ extérieur).
- La lumière naturelle introduite du sommet vers la base est régulée au cours des saisons ou lors d'évènements climatiques intenses par une couverture transparente et sérigraphiée « ETFE » à filtrages variables de la lumière.
- L'orientation des façades - et les dispositifs ajoutés (volets, ombrages, végétation, verrières...) suivant les orientations choisies ont des réactivités différenciées aux : agents climatiques, couvert hydrique et végétal, et régimes jour-nuit ;

...

- 
TIRAGE NATUREL ÉTÉ
NOCTURNE
RAFRAICHISSEMENT
FACE SOLARISÉE
DEPRESSION
FACADE CHAUDE
EVAPOTRANSPIRATION
AIRE VEGETALISÉE


- 02 -
- 03 -
- 04 -
05
06
- 03 -
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Mérizotopes et Éco-systémie

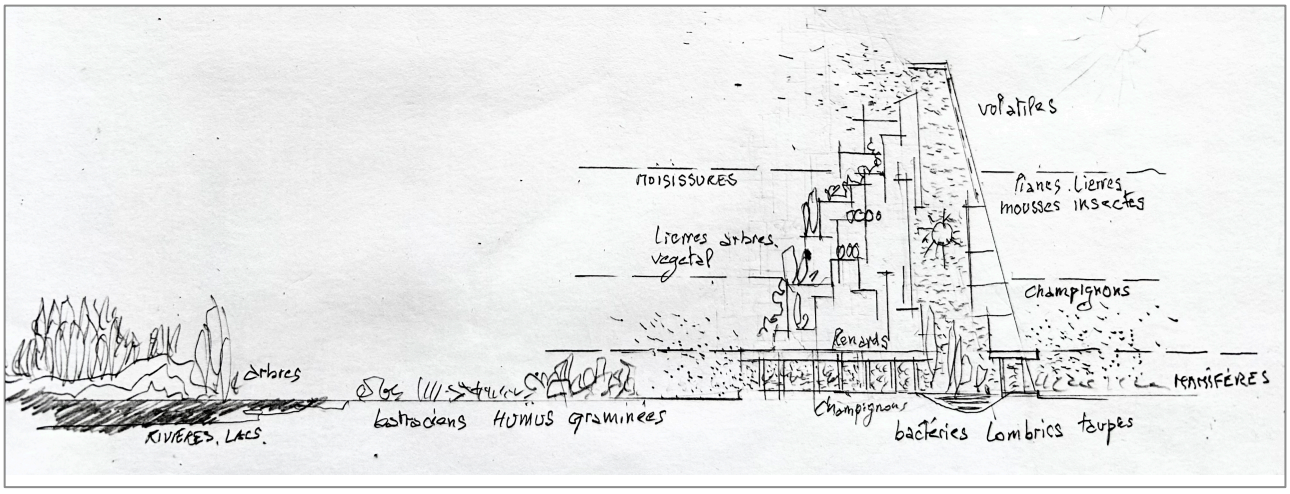
Les Architectures Mérizotopiques se caractérisent par l'intégration de fonctionnalités concourant à obtenir un optima d'allégement de l'empreinte écologique exercée par l'activité humaine au sein de chaque géo-biotope d'installation, optima destiné à maintenir les évolutions spécifiques des milieux physiques et vivants cotoyés.
Ainsi chaque lieu de « pose » décline une interprétation adaptée des échanges, à réciprocité d'avantages, entre des ressources spécifiques apportées par le milieu humain, et celles des Habitats dits « Naturels » ou l'action de l'Humain s'exerce en mutualité, avec des impacts temporaires et effaçables à faible échéance.

Ces Architectures « Éco-systémiques » aux caractéristiques et procédés constructifs durables, offrent à la communauté humaine séjournante, un confort de vie régulable dans le cadre d'activités menées en éco-compatibilté avec les biotopes en place.

Elles peuvent offrir également un post-usage après le départ du site des groupes humains...

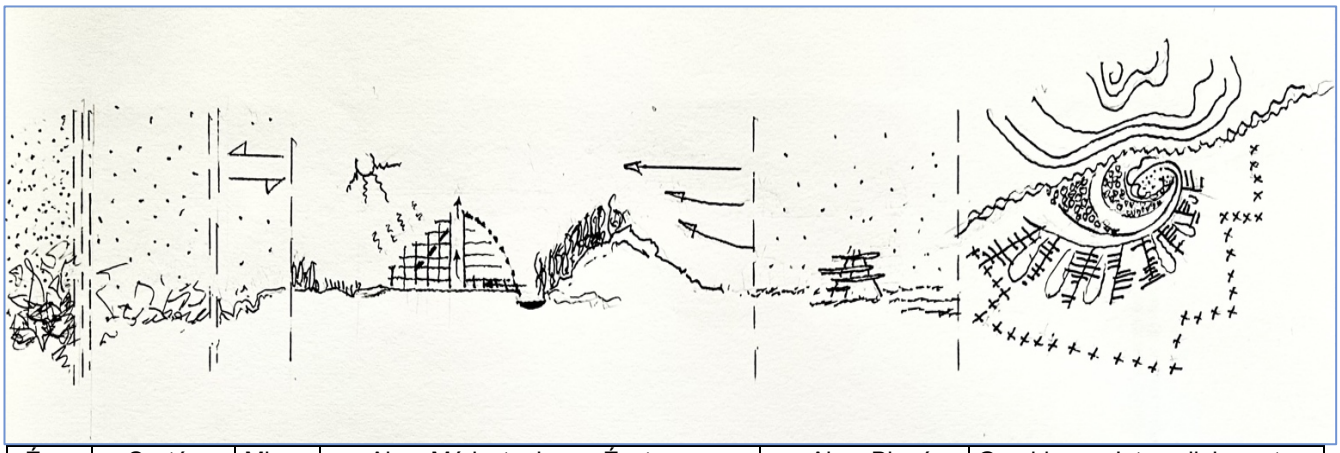
En fournissant, aux espèces autochtones présentes sur des sites tests un espace-abri particulier : Celui d'un environnement bioclimatique autorégulé et aménageable à façons, en fonction de la variabilité des paramètres de lumière, humidité, ventilation, formes, et des échelles et altitudes variées des volumes logés.

L'ingénierie humaine, fait alors place à l'ingénierie Nature et à son opérabilité au sein des différents biotopes (France : « Corine » biotopes), **et permet de saisir le dénominateur commun des comportements, usages, et inter-compatibilités offertes par les structures bioclimatiques laissées en « récifs »... Trouver matière à faire évoluer les Architectures planétaires vers des espaces Éco-systémiques, des lieux formés Éco-Mérizotopiques de dialogue, chassant l'obscurantisme cultivé par l'Anthropocène**



Les champs de « Buttes » *- Des lieux où s'assemblent des communautés étrangères, qui conjuguent leurs aptitudes pour gérer les sollicitations du milieu extérieur, et poursuivre leurs activités propres en des habitats spécifiques, articulés intérieurement. »*
« *Pendant leur exploitation et après l'extinction de ces civilisations, des locataires organismes-ingénieurs s'y sont installés de façon coordonnée (termites, lombrics, champignons, insectes, micro-organismes, plantes…), jusqu'à former un écosystème auto-organisé verticalement entre populations »*
S. Rostain - « La forêt vierge d'Amazonie n'existe pas » (page 270-)

MÉRIZOTOPIE



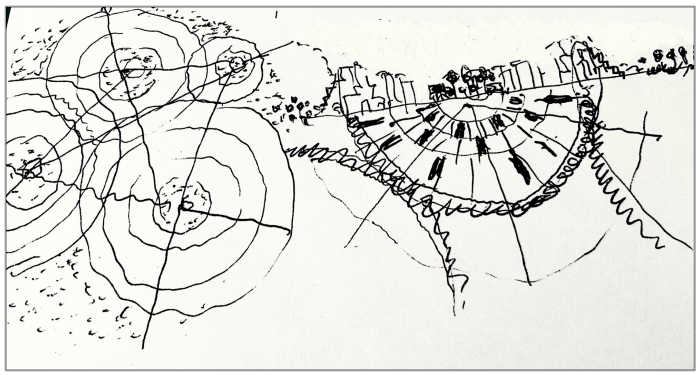
Éco	Systé Biodiversité	Mie	Aires Mérizotopique - Écotopes	Aires Biogéo	Graphiques Intercollaborantes
ÉCOSYSTÈMES Libre évolution	ÉCOSYSTÈMES Espace de réensauvagement	ÉCOTONE Horizon des reliances biotopiques	MICRO-ÉCOTOPE - Domaine d' élaboration appliquée de la co-évolutivité biosphérique par le groupe humain Installation temporaire à empreinte Ecosystémique régénérative des milieux biotopiques autochtones côtoyés Domaine public, co-géré par les séjournants Base de recherche-Étude des voisinants systémiques Biomasse Consommable en sobriété Autonomie fonctionnelle + ravitaillements externes, ... : Ouvrages (ossatures, et enceintes). Composants interconnectés (pose, dépose, repose) - cycle de vie avec entretien-réparation -reconditionnement	Espace des Itinérances (base d' exploration) Halte temporaire, à plateformes permanentes et noyau de repli (micro- climatique), aménageable en matériaux biosourcés et techniques néo-vernaculaires Ossatures permanentes laissées en « récifs Amazoniens »	MÉZO-ÉCOTOPE – Domaine public, co-administré par les séjournants réunis en Assemblées d' îlots A vocation de co-évolutiion systémique Co- voisinage en mutualité Humain / biodiversité Séjournement séquencé des usagers Sobriété : Prélèvement des ressources naturelles (eau, Aliments, matières...) sur la part renouvelable et dans l 'équilibre des ressouces Naturelles / consommation sur site. Bases de collaboration-intercoonection Inter géographiques

In the absence of having taken the necessary measures in time to stop the causes of climate degradation, by simultaneously reducing greenhouse gas emissions, and the process of destruction of marine and continental biodiversity:
The "Capitalocene" has chosen to strengthen its power over the Species by developing its anchoring on a neuro-directive model placing the human-individual under addiction to the most ephemeral consumer goods.

Today, humans have poles of expression of their responsiveness and creativity, at the level of proximities (the block, the district, the village, the town, etc.). because of the ways in which they meet and the forms of support and mutual aid that they promote (neighbourhood communities, associative networks, mutual insurance companies, public services, etc.).
And a recent phenomenon: from a digital tool of interconnection in relation to Human Knowledge and its authors-actors, strengthening their autonomy of action and invention to build an Alternative, to the accumulation-alienation that is opposed to them.

This new situation leads to an increase in the number of initiatives in terms of mutual services, and in stages to build a human fund, cooperating, collaborating daily within self-managed common services (community workshops, carpooling associations, shared gardens, cooperative accommodation, etc.) to concretely build the way for an Alternative finding its resource within direct and diversified relations of exchanges while having zooms on global and international initiatives. "open-source" data, disseminated by other collectives.

We must see the pioneering initiatives, underway, from the perspective of a testimony of the human being to always and again have the ability to govern oneself by combining differences.



Multipolar site constituted by the articulation of radioconcentric ecological districts

Merizoples

The partial autonomy of the poles of life, seats elaborated almost without footprint, requires the use of installations in osmotic or symbiotic modes so as not to harm the bio-systemic and physical ensembles that are close to each other.
In these accommodation options, the share of food resources (see Chapter VI) must be ensured around the perimeter of the living site in a way of resourcing the soil: Permaculture, Agroforestry, etc.
In forms of cultivation compatible with the nature of the substrate, the climatic regimes, the geographical specificities, the regenerative capacities of the environments used, and the use of devices for decontaminating the "consumed" (materials, liquids, materials consumed, etc.).



A shared Sitting Space...
The mega-giga-density urbanity or proliferation of its base, which is characterized by immovable territorial anchors, an expansive predation that eradicates the bio-geophysical environments of the planet, which offers itself as a camp of mass extermination during genocidal conflicts: must be abandoned and rethought.
It is still possible to **envisage the "stay" of human groups in symbio-compatible relationships with autochthonous living species, within the framework of a conception of traveller lifestyles, in sequenced pose-and-deposit, without a lasting imprint**, **on shared sites** (which is still practiced by the heirs of ancestral peoples on the different continents and bio-geosites).
... **Provided that** the selection and choice of semi-autonomous places of stay of the "Human Commons" is preceded by: evaluations of the physical, topographical, water, microclimatic and energy states; and analyses guaranteeing the renewability of the regeneration-evolution potential of the biophysical environments chosen.



Taking into account local ecosystems (forests, lakes and marshes, moors, etc.), a surrounding topography that protects against the prevailing winds, soils that support activity outside the flooding of the river, arable land in the heart of the block or on the immediate periphery, social living spaces left to the free expression of the neighbourhoods, buildings intended for a protected retreat during intense climatic effects: Gives a meaning of life turned towards learning about the non-domination, the non-invasiveness of the Species; opens to learning the terms and laws that govern the Living Planet.



Chb

"Man, by his selfishness, too short-sighted for his own interest, by his inclination to enjoy all that is at his disposal, in a word: by his carelessness for the future and that of his fellow men, seems to be working for the annihilation of his means of preservation and for the destruction even of his own species."

(1820.) Jean Baptiste LAMARCK - French naturalist

Humans have acquired knowledge in terms of communication at all scales of the Earth's space, the exercise of forms and lifestyles with low impacts on biodiversity, knowledge of living environments and acting abiotic factors, to the point of being able to leave the straitjacket of a world society (civilizing, doctrinating, and proprietary), based on the exploitation of Man by Man and inclined to accelerate the destruction of a planet that creates life.

The history of humanity informs us about the past forms of collapse of societies, as well as the past and present forms of extinction of species.
For the Present-Future, the mistake would be not to link the current runaway of a cultivating societal system: artifice; racial segregation; social and intellectual inequalities; the exploitation of the labour force; the extinction of biodiversity, the deliberate degradation of the climate... with the undermining work now undertaken by "Tech-Cyber-Capitalism" to recondition human knowledge as it pleases.

Wouldn't the grotesque or murderous path of dis-evolution under development be that of a new civilizational cocktail, combining the path of elimination of the Human Species from its living environments (Hiroshima, Nagasaki, Saint-Malo, Dresden, Coventry, Aleppo, Mariupol, Gaza...), with that ideologizing a cosmic escape on the basis of a reshaping of the human cognitive?
Could this not then be the logical culmination of a solitary mode of development that began about 13,000 years ago, with a first attempted and successful attempt at domestication on biodiversity?

Are we still able to halt this trajectory, to collectively regain control of the ongoing process of degradation, to disalienate ourselves, to fight fantasies, fake news, addictions, false beliefs... to search for the terms of a language of intercomprehension and coevolution between actors of the Living in the Biosphere, and to jointly elaborate the domains of life of the Species that are neither discriminatory, nor tools of domination or extermination?

Today, people are at the level of local communities (neighbourhood communities, associative networks, mutual insurance companies, public services, etc.). It has a digital tool for interconnection to human knowledge (open-source) and intercommunication on a planetary scale, which allows it to exchange in the moment with all the Explorers-Actors of the Socio-political-ecological Alternative, and in return to spread locally the gains learned to participate in the enrichment of options for living in Common, anti-dote to the Anthropocenic path launched in a formatting of Human Thought.

This **new situation** is expressed in the ongoing initiatives mentioned in these pages. It contributes in stages to building a human background, cooperating, collaborating daily within self-managed common services: Cooperatives, Community Workshops, Shared Associations, Cooperative Accommodation, Coworking, Mutuals, Clubs, Open-source networks, Public Services...
It develops within the framework of a concrete Co-evolutionist Alternative, finding its resource within the direct and diversified relations of exchange linking the local to the global, while placing the human species in compatibility with the whole of the Living System...
These pioneering initiatives must be seen from the perspective of a testimony of the Human being to always and again have the ability to **govern oneself** by combining differences in a "**Learner**" posture.

Can we expect a "Tipping Point"?
A Shift, which, on a foundation of critical analytical thought available today, would move towards a mass counter-culture committed to concretizing the Ecological Alternative in a daily life on a planetary scale, and would be able to engage in an Era of co-evolution between "Living". (Animals, plants, micro-organisms)?

Translations performed by Microsoft software

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Dessins et croquis de Ch. Binétruy -

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