#### Vital Phantasy...

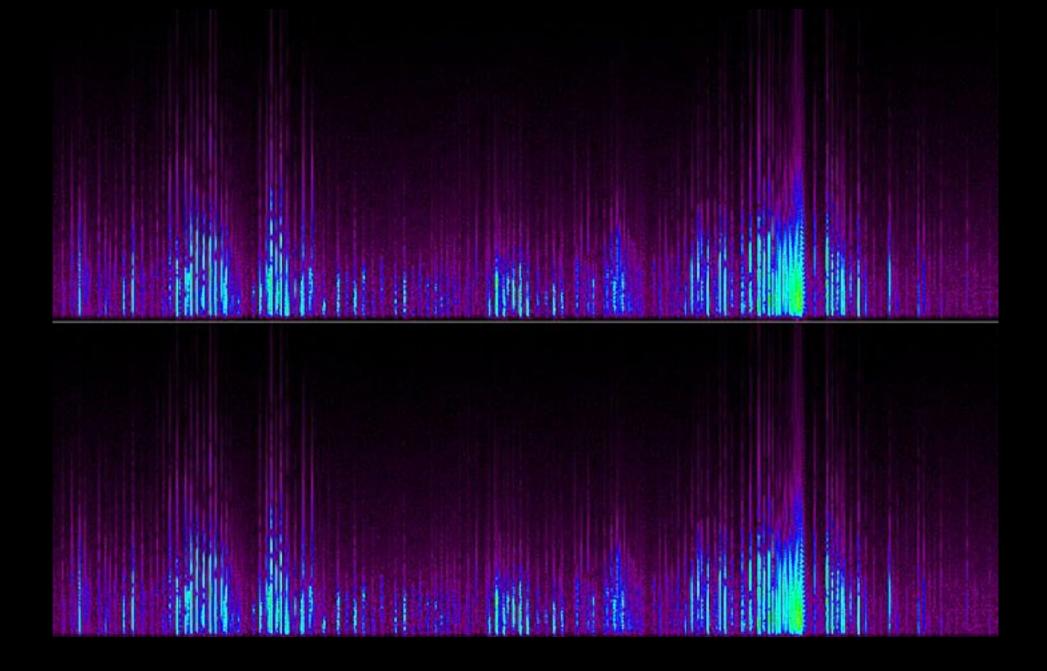


#### A stitched story

Animism,
Evolutionism
and More-Than-Human Earth...







At the beginning, of the nineteenth century...

...Western scientists finally came to agree about the fact that Earth...

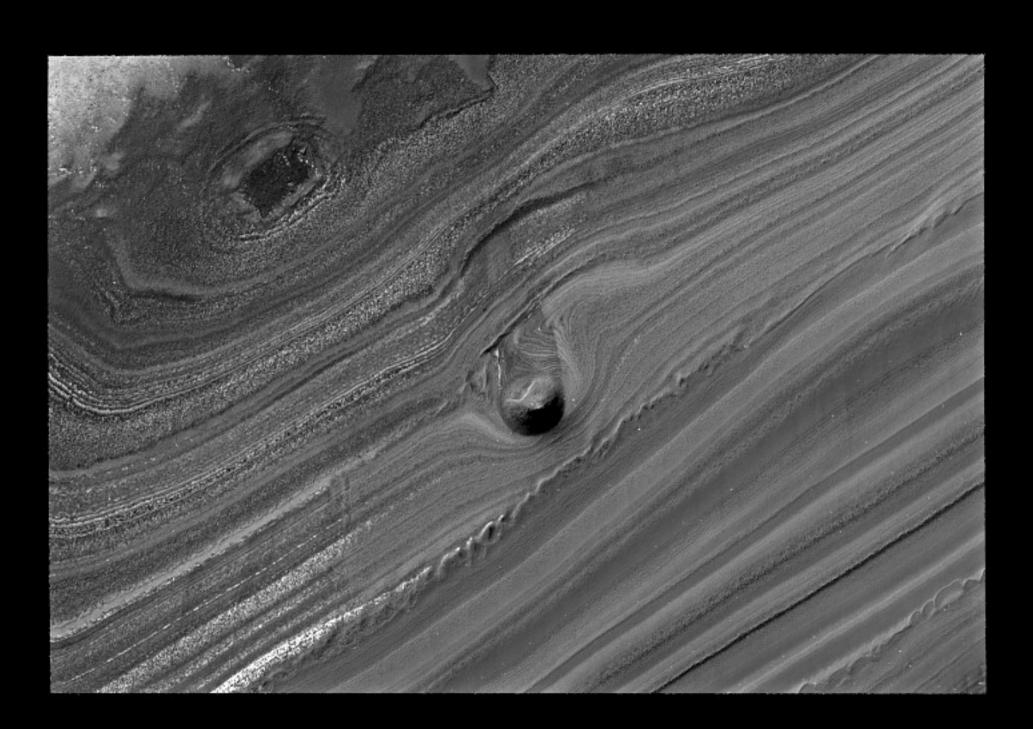


...had indeed been the subject of transformations in the course of ages.

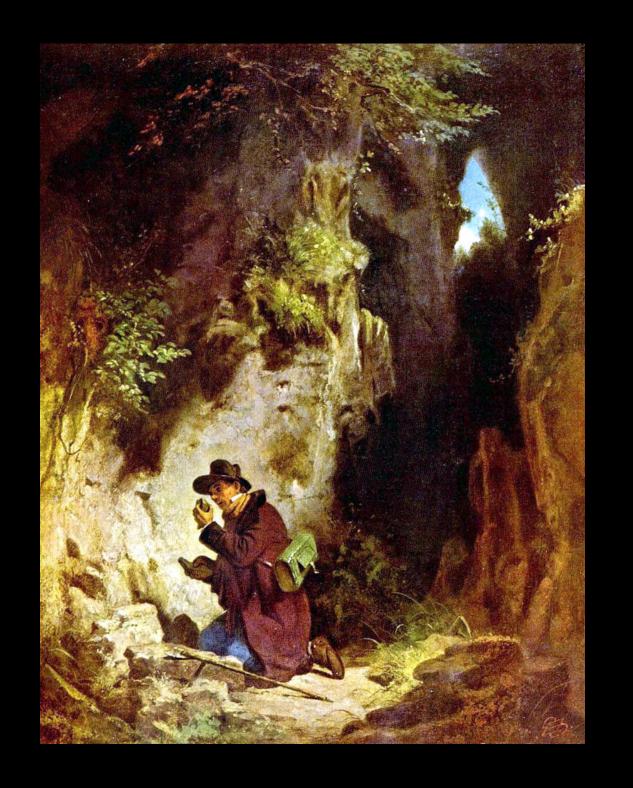








But field research, which produced the proofs of these transformations,



...also brought to the light a completely new set of evidence...

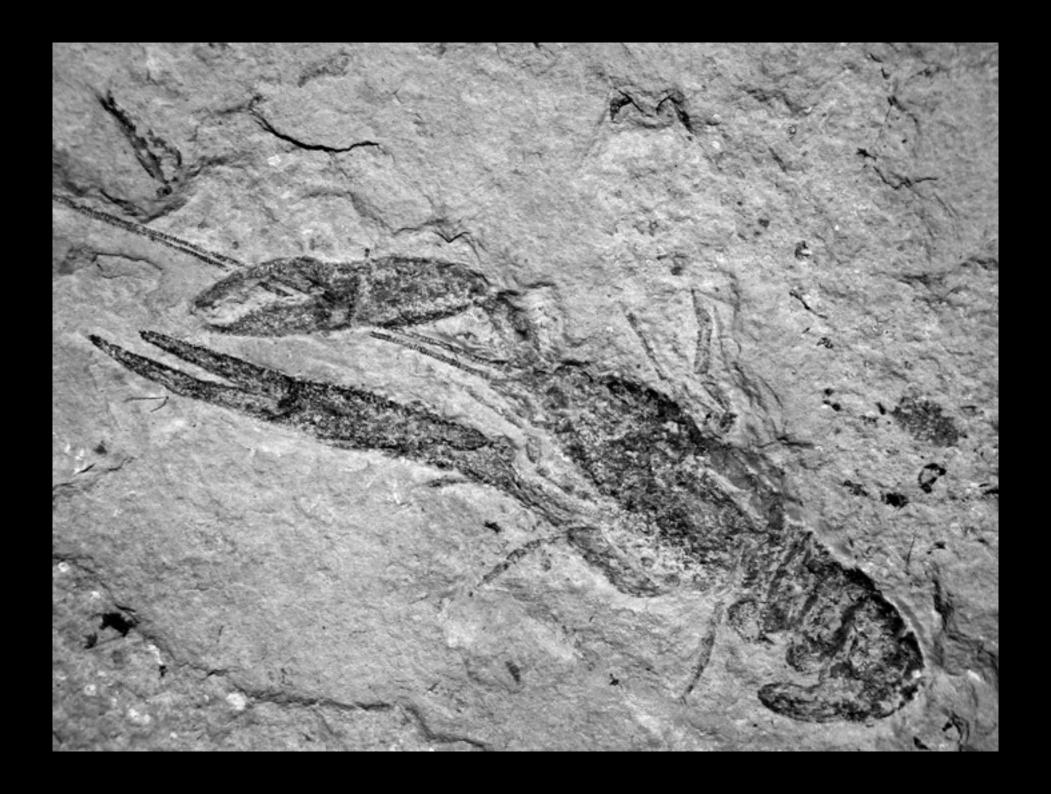


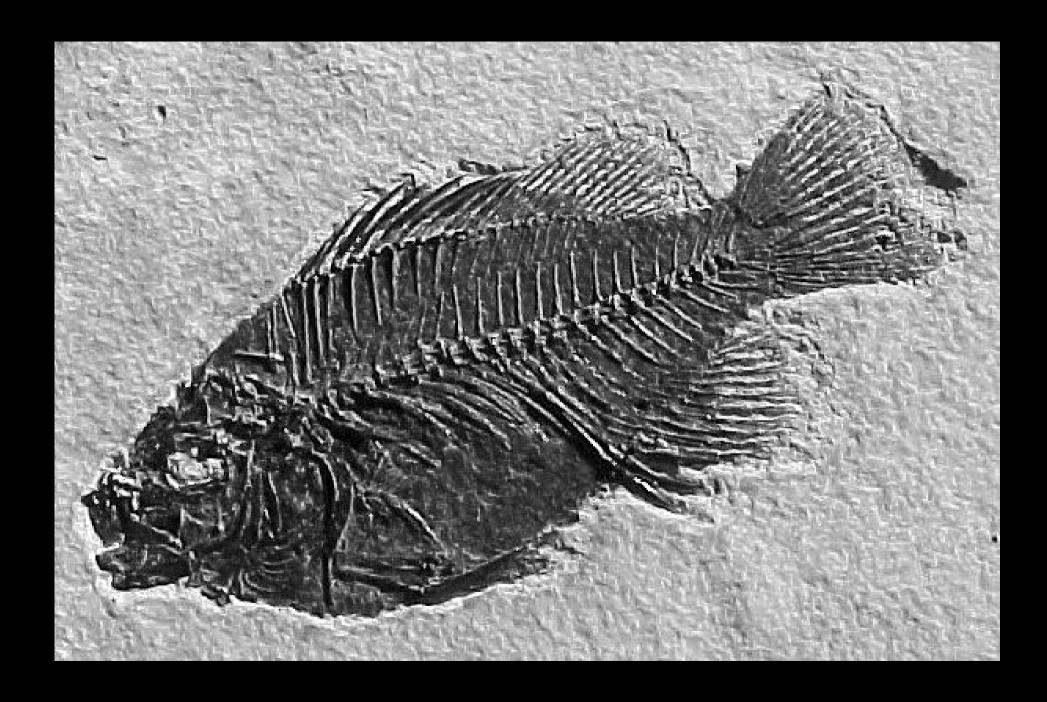




### And what to conclude from those remains, those prints...

...those "fossils" that were discovered everywhere?





How to understand those life forms,

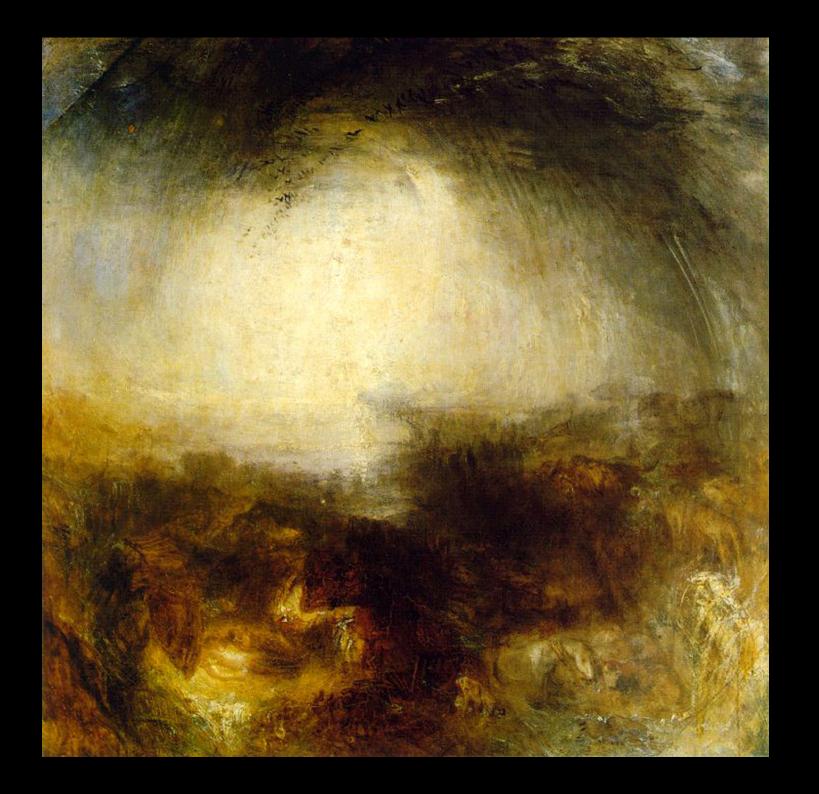


...which did not belong to the present fauna or flora,

...which were thus apparently... extinct?



## Were these extinctions caused by the Bible Flood?



# Or by some gigantic natural catastrophe?



Would "Man the Hunter" be the exterminating agent?

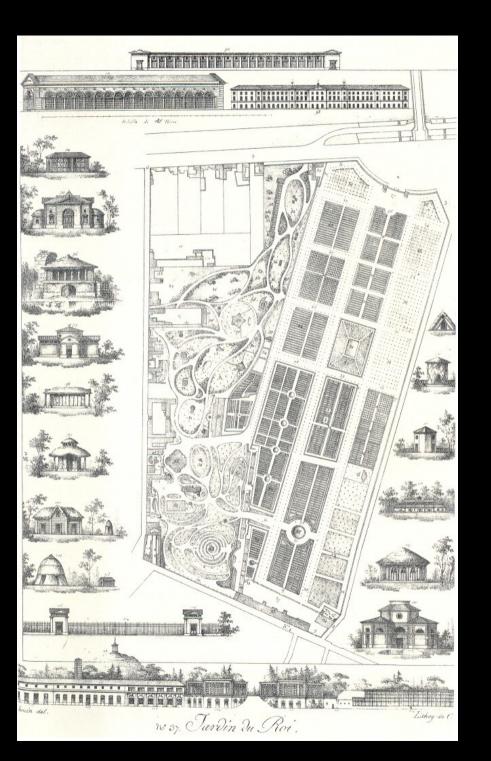


In 1809, Jean-Baptiste P. A. de Monet, chevalier de Lamarck (1744-1829),



...who was the curator of the famous collections of the Museum in Paris,



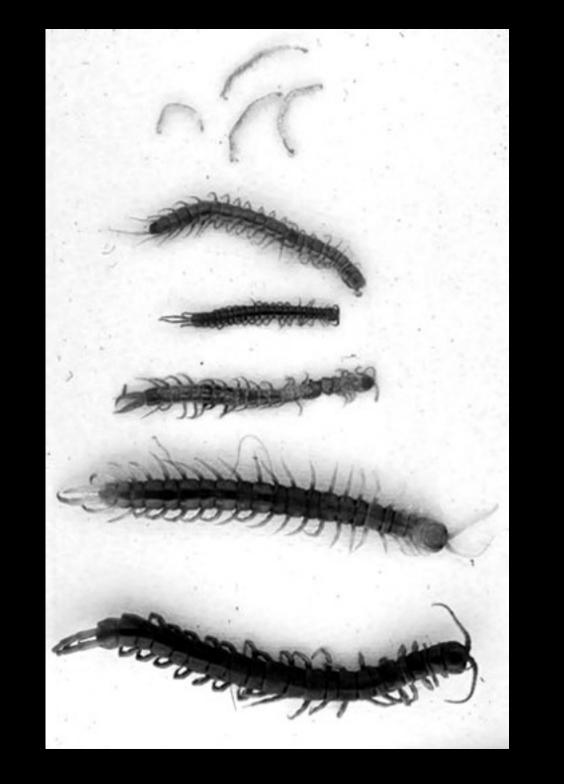


...used those collections as a virtual experimental field.

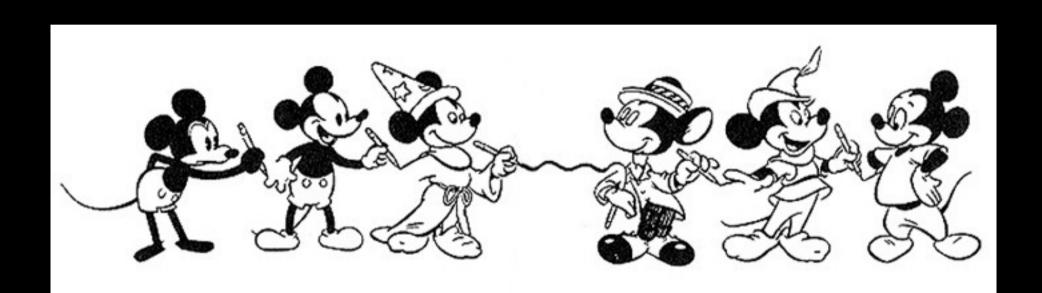


Paying intense attention to tenuous resemblances,

...he was able to produce continuous series of organisms...



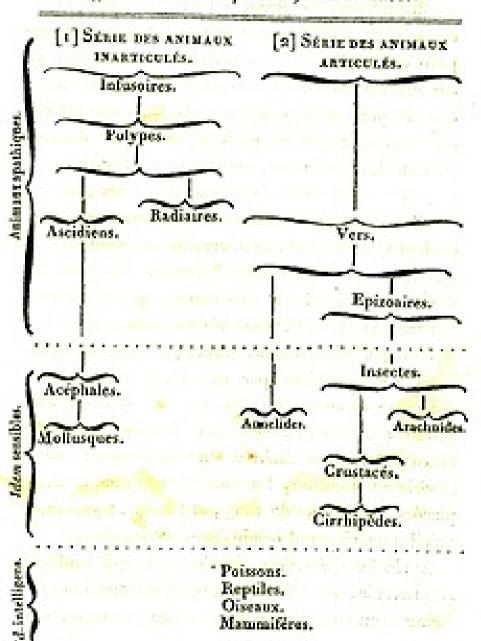
# ...that would link those fossils with contemporary fauna!



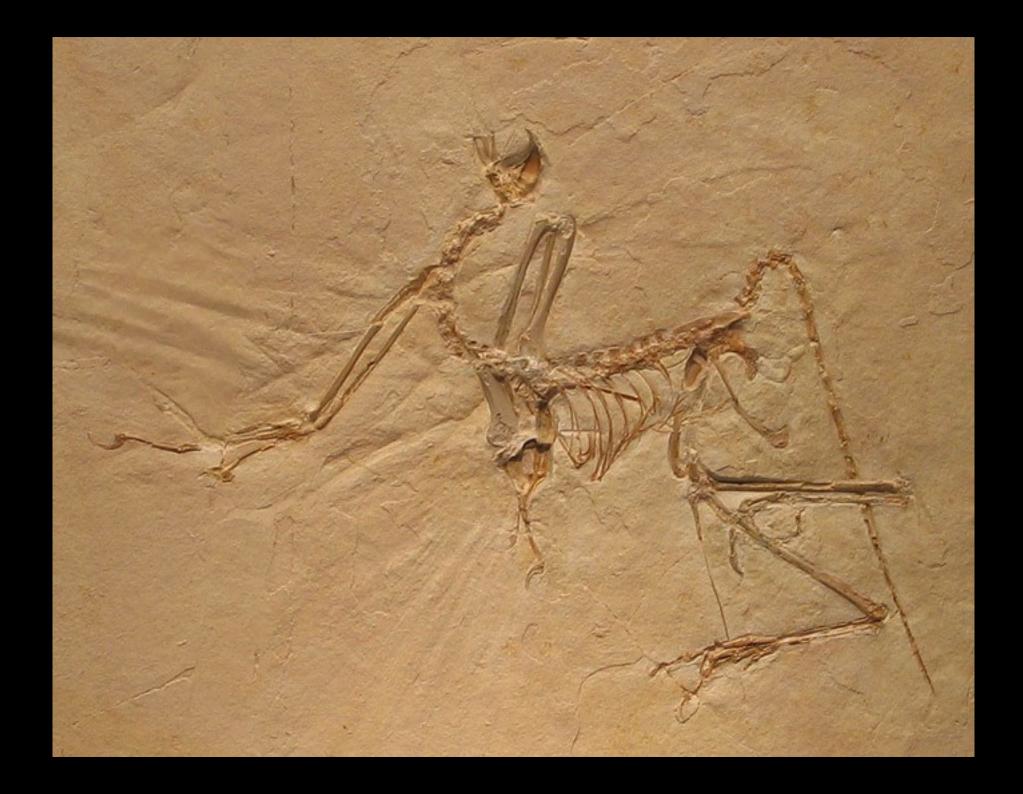
# Aligning his specimens along temporal lines,

# ...Lamarck was telling a completely new natural history!

ORDRE présumé de la formation des Animaux, offrant 2 séries séparées, subrameuses.



# All those unknown species haunting the theories of naturalists...



...were not extinct at all!

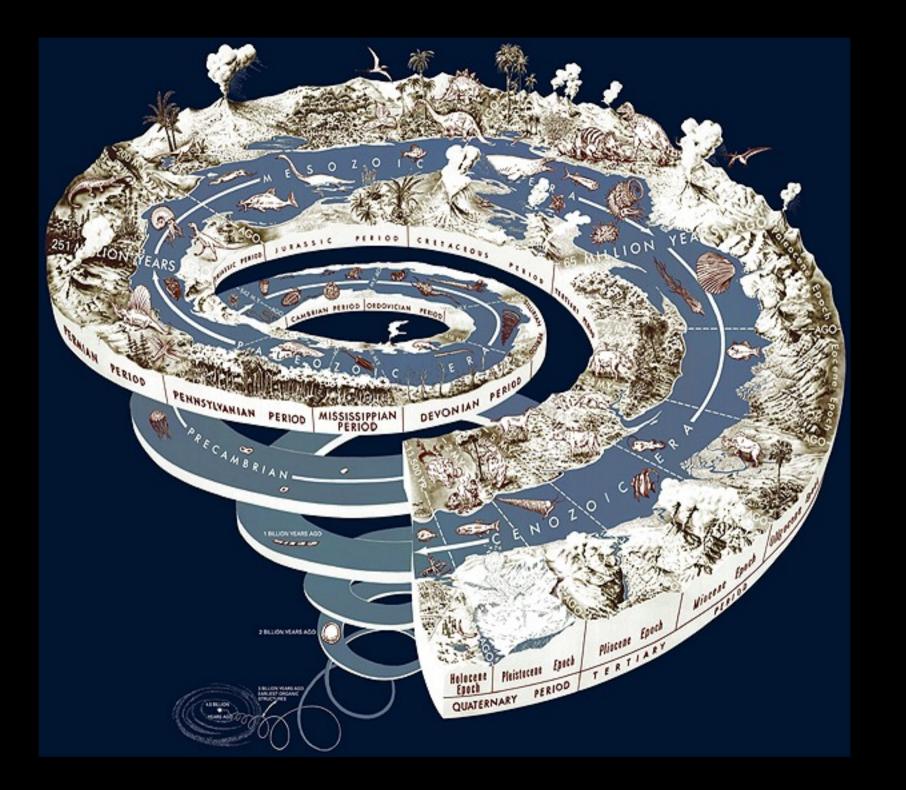
Neither flood, nor catastrophe, nor massacre...



## ...those haunting forms had "only" been trans-form-ed over time!



# Fossil forms were the ancestors of today's forms!



It was "only" a matter of learning to see those gradual modifications...

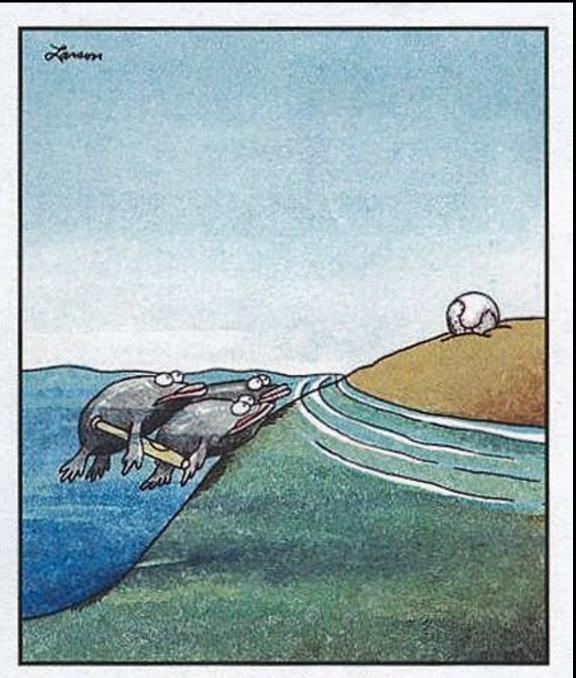
...and aligning the specimens into series...

...they would then exhibit morphological and evolutionary genealogies.



# Species could now be understood as the best balance...

...between optimization for the present and flexibility for the future.



Great moments in evolution

## "Ceaseless change became the fundamental fact of Western nature!"

Stephen Jay Gould, 1979

Even if some continue to argue...



# This new theory has led to new types of "classification systems"...

### SYSTÉME

DES

### ANIMAUX SANS VERTÈBRES,

O U

TABLEAU général des classes, des ordres et des genres de ces animaux;

Présentant leurs caractères essentiels et leur distribution, d'après la considération de leurs rapports naturels et de leur organisation, et suivant l'arrangement établi dans les galeries du Muséum d'Hist. Naturelle, parmi leurs dépouilles conservées;

Précédé du discours d'ouverture du Cours de Zoologie, donné dans le Muséum National d'Histoire Naturelle l'an 8 de la République.

#### PAR J. B. LAMARCK,

Pe l'Institut National de France, l'un des Professeurs-Adminictrateurs du Muséum d'Hist. Naturelle, des Sociétés d'Histoire Naturelle, des Pharmaciens et Philomatique de Paris, de celle d'Agriculture de Seine et Oise, etc.



#### A PARIS,

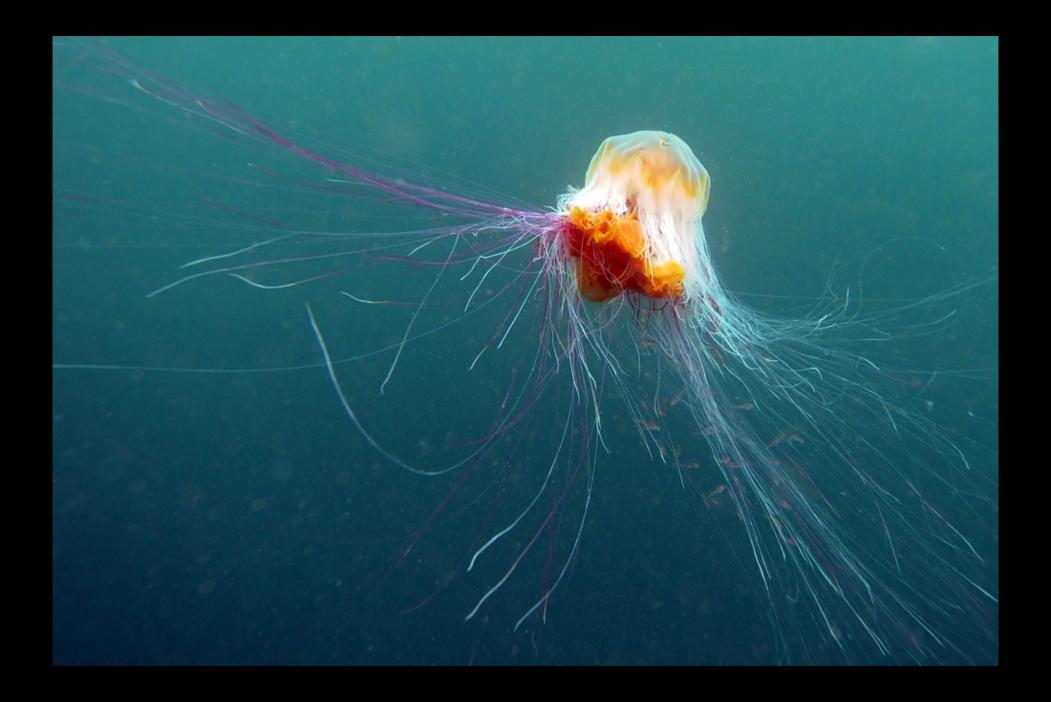
Chez L'AUTEUR, au Muséum d'Hist. Naturelle;
DETERVILLE, Libraire, rue du Battoir,
n° 16, quartier de l'Odéon.

AN 1X - 1801.

Here are some fragments of the classification proposed by Lamarck himself...

## First Sub-Division:

"Those which vaguely swim in water"...











## **Second Sub-Division:**

"Those which crawl or creep on their belly"...







## **Second Section:**

"Those which are permanently covered with a true shell"...







But the classificatory systems themselves have undergone "ceaseless change"...

J thinks

Difference of the state of the sta

The betwee A & B. ching

Eng of whiten. C + B. The

frient gradation, B & D

rather greater distriction

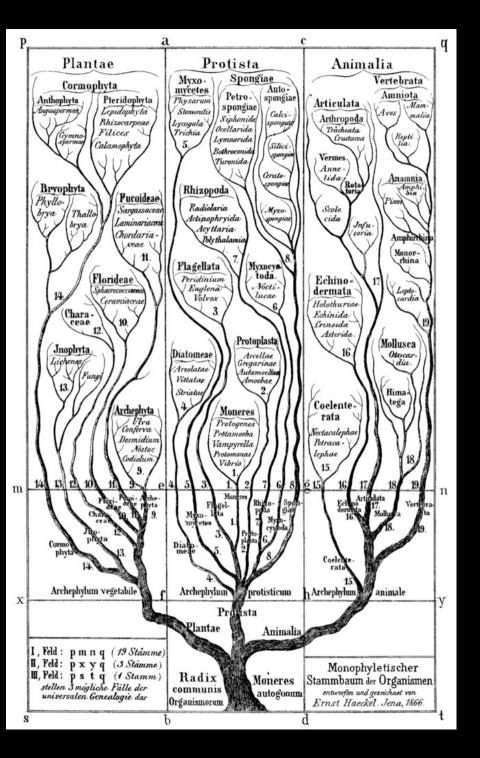
Then genne brown he

fromed. - bienry whiten

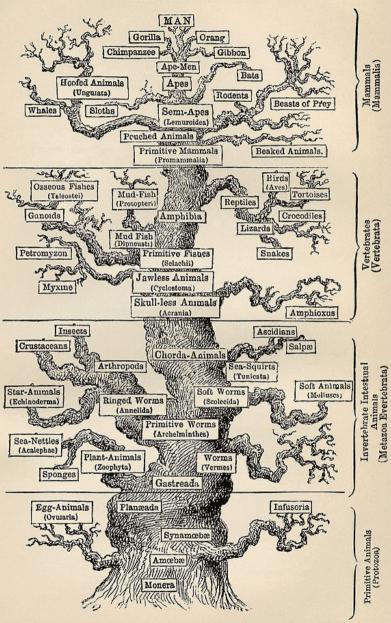
From the first sketch of Charles Darwin, over diverse attempts of Ernest Haeckel...

§ 437. Stambaum Jos Trinaten.

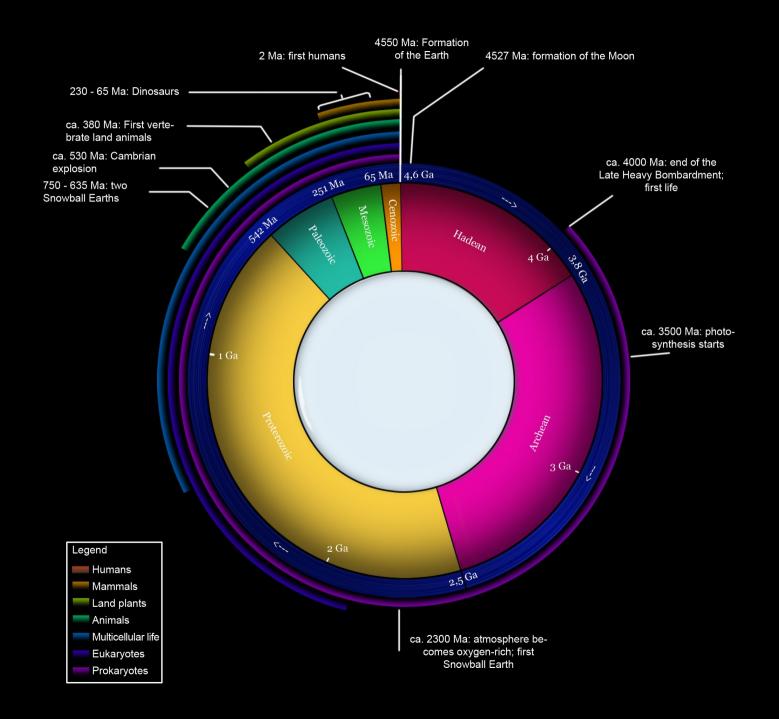
Anthropomorpha Anthropoider chithropoidos asigticas Homo africance sapions Latures orang Homo styridus. Hylobater Vitheoad thropus Pliquitheres Platymhinae tatarrhinae Dymopithera Cynopithera Myretor Yourspithere atabur 1 Colum Carropithere exystipi theres Hortonithan Hayalida Papiomonha Cydosephalida Lemuravida Lamurogona thirolements Inaptomorpha ( Thisonrys Verrolemores Autolemures Lamuravida Ungulata Tachylamuras Camasna

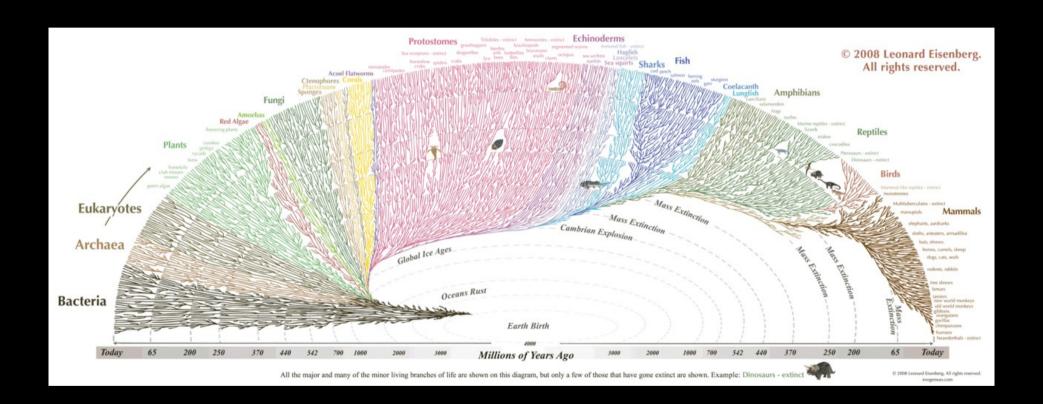


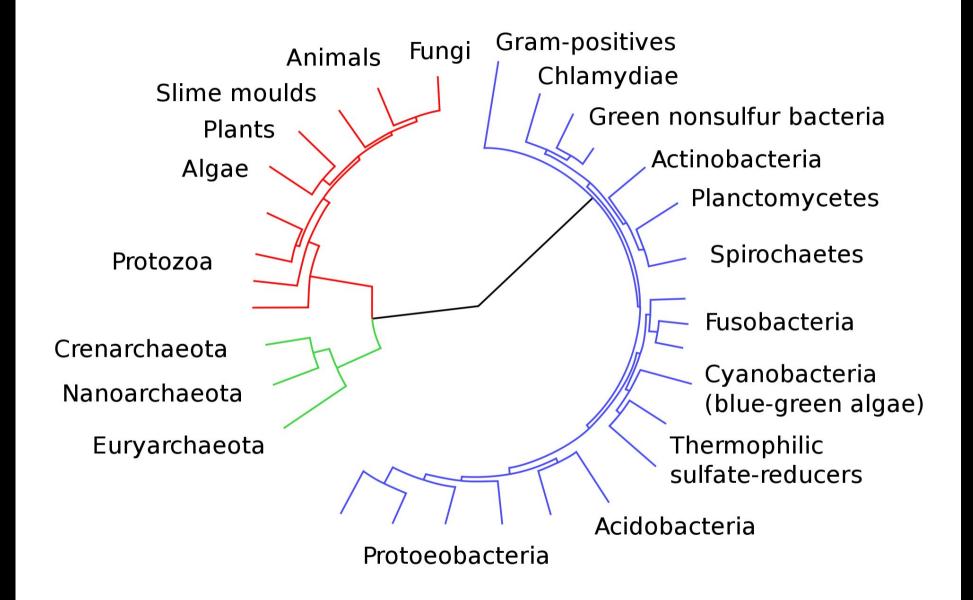
#### PEDIGREE OF MAN.

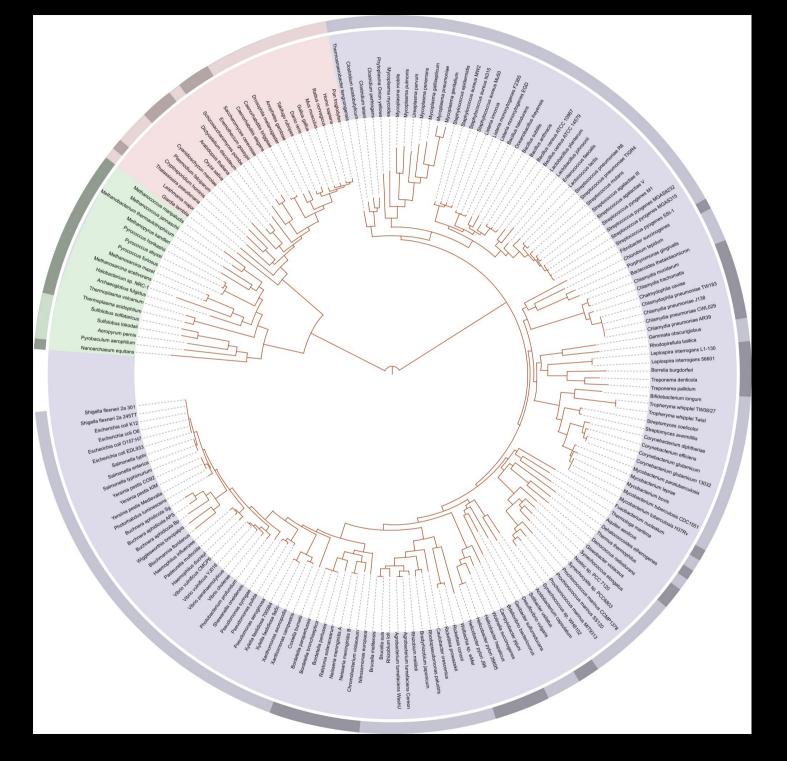


# ...to the last elaborated and contemporary representations:

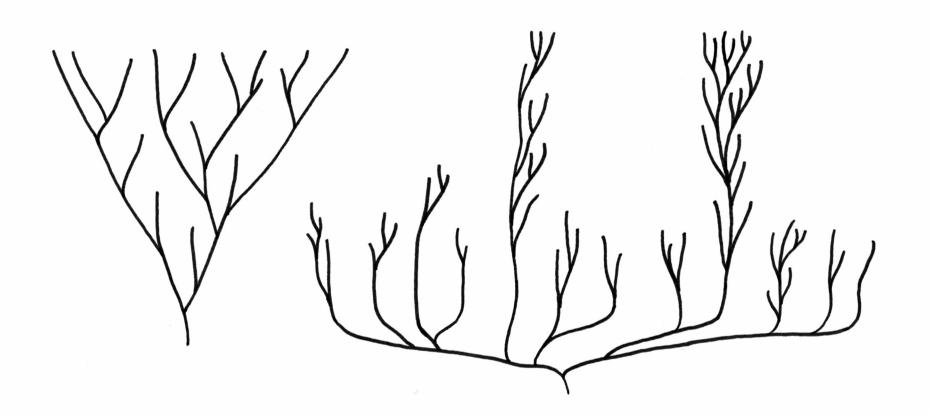






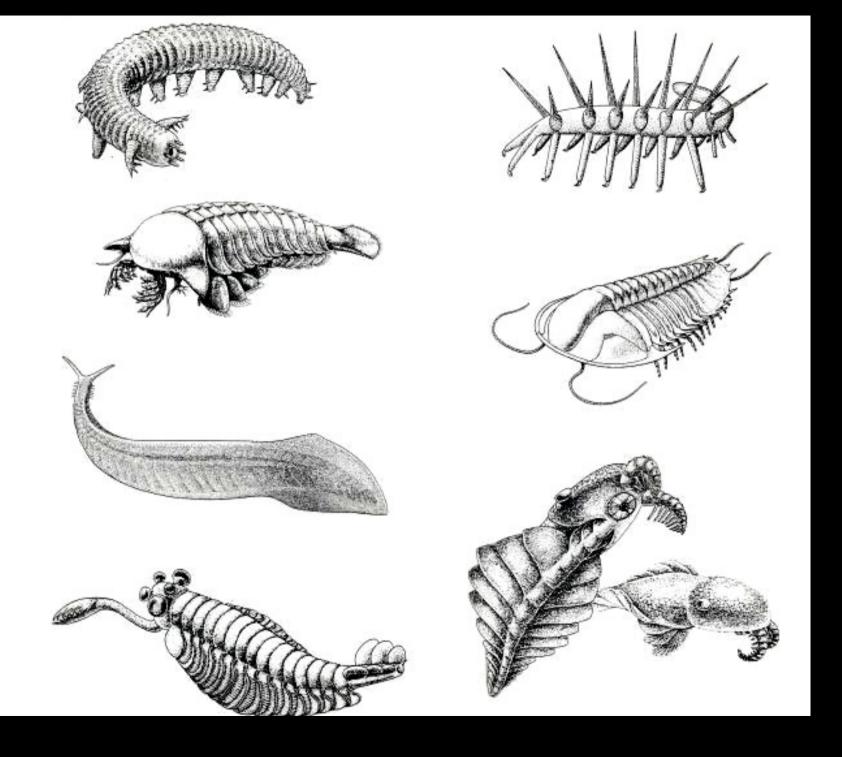


## But one must be careful: it's not only a question of representation!



These two drawings tell us a completely different story...

...about the "wonderful life" forms encountered in the Burgess Shale Formation!

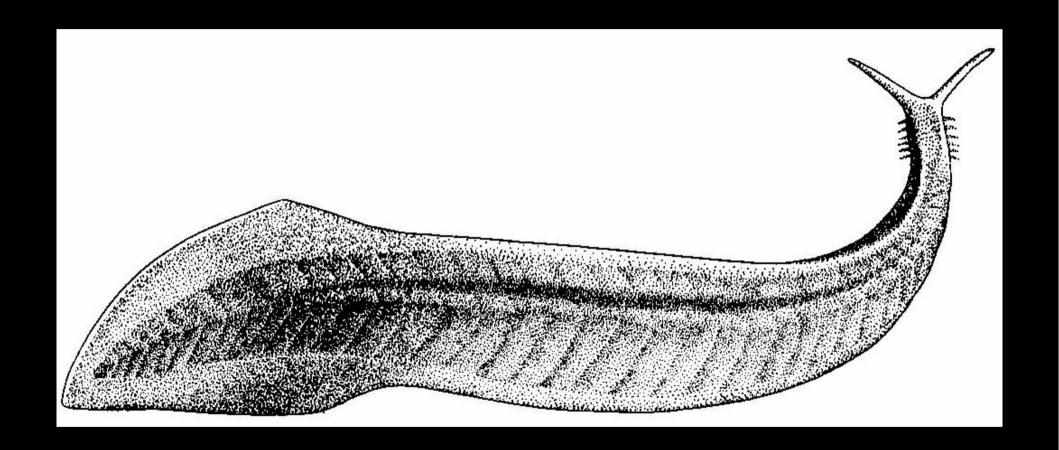


Are these: ancestral forms of creatures which belong to our own lineage...

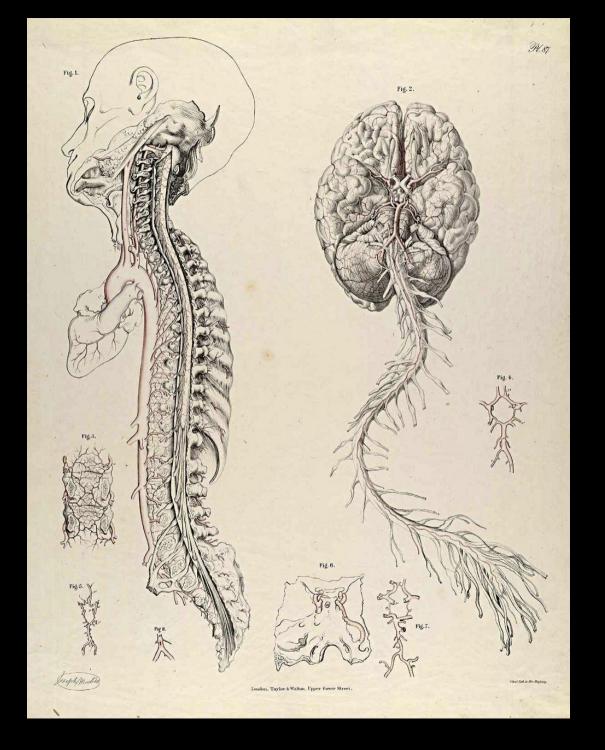
...or freaks, most of them extincted with no descendants?

#### And this one:

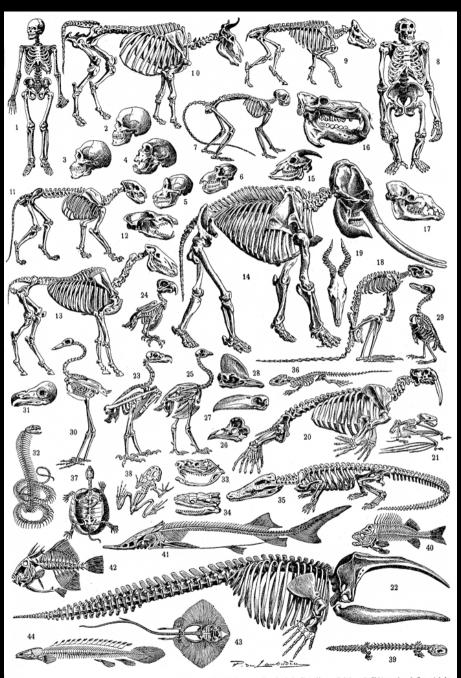
Pikaia gracilens of which only 16 fossil specimens are known...



...and who is considered to be the ancestor of all the Vertebrates!



## How to honor and recount his/her unbelievable success story?



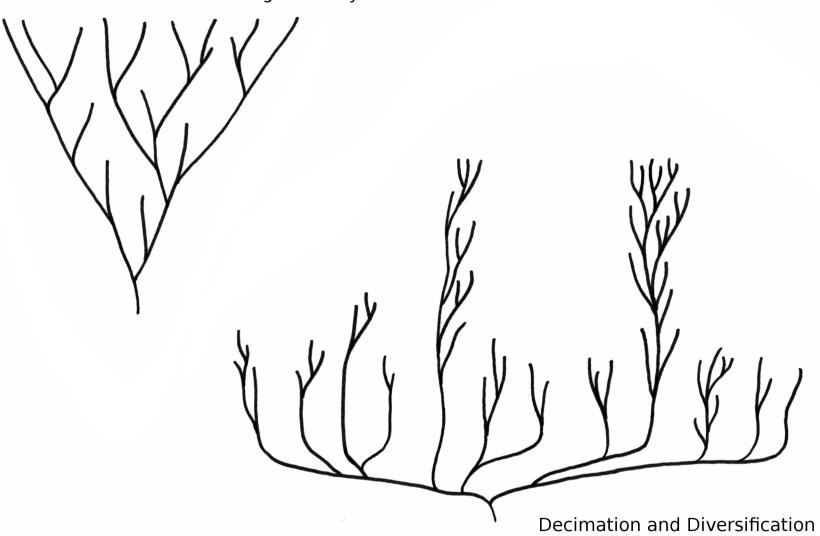
Squelettes: Mammifères: 1. Homme. — 2. Crâne d'Européen. — 3. D'Australlen. — 4. Fossile, de la Chapelle-aux-Saints, — 5. Chimpanzé. — 6. Cynocéphale. — 7. Semnopithèque. — 8. Gorille. — 9. Sanglier. — 10. Beuf. — 11. Lion. — 12. Loup. — 13. Chevel. — 14. Riephant. — 15. Chèvre. — 16. Hippopotane. — 17. Charau. — 18. Kanguroo. — 19. Antilope. — 20. Morse. — 22. Baleine. — 01/seauz. 23. Aigh. — 24. Perceptet. — 25. Poule. — 26. Coq (cope du crine). — 27. Toucan. — 23. Casoar. — 29. Pingouin. — 30. Grue. — 31. Ediraic. — Reptiles: 32. Naja. — 33. Crolaie. — 35. Crocodile. — 36. Chevelle. — 36. Chevell

By a chronicle of the Hazard?

A sketch controlled by pure Determinism?

## Or by counting a tale of intertwined events and contingencies?

The Cone of Increasing Diversity



However, all those systems do have a common goal:

...to establish evolutionary kinship between species.

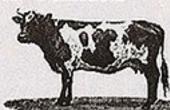
#### LES ANIMAUX DE LA FERME



TEMMEST



CAMILAC



KIRARIN



MANAGENTE



mr



RIP



CAMBRAER



ASHN



BRISDME



MURRIAN



VIEWWAY.



MIN



CHROSENZOV



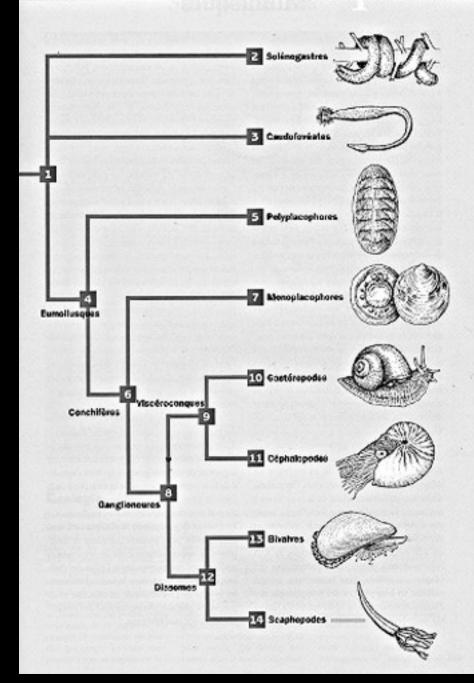
SWA



RESOUTED

For instance: the ancestors of the 130,000 contemporary mollusk species...

#### Mollusques







- . Il liveralis assert. A II. Nessender assert.
  . Il Gignera assert. A II. Fella assert.
  . Il Mysende assert. Il liveleta assert. Il
  - or or p. H. Matthe America
- ZUAN 3



A Lyansers a A Fragilia

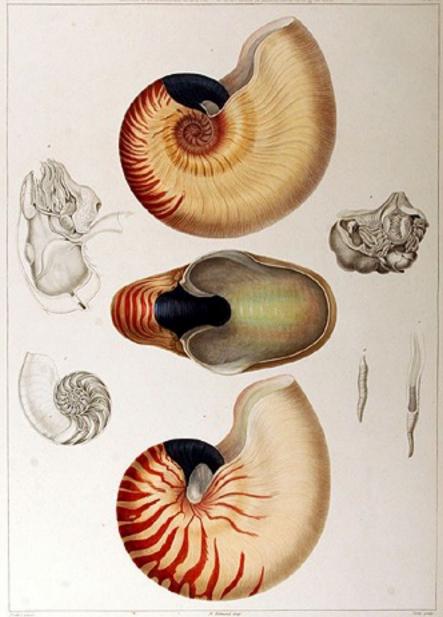
A Lyansers a A Fragilia

A Lyansers

A Particularia

A Fractions

A Fractions



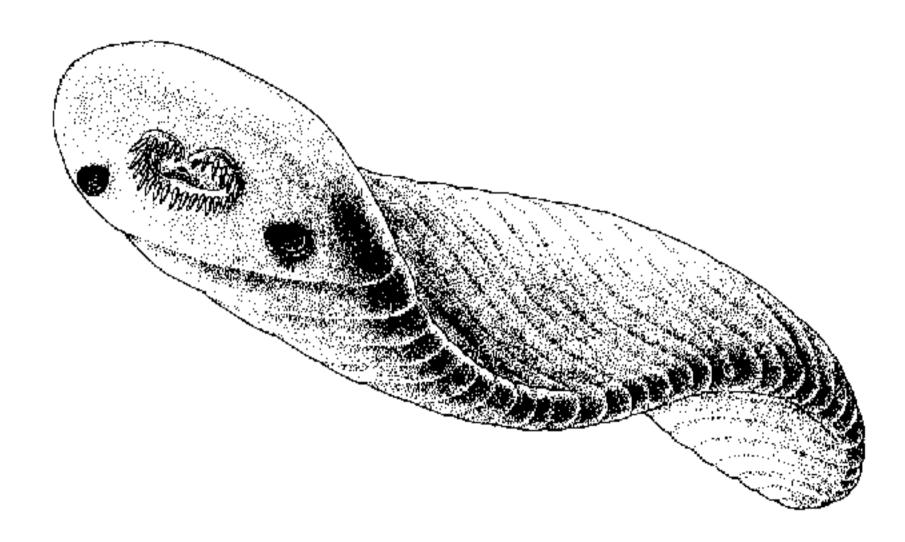
6 NACTILES Line

, S. Cabbrata out. . A Poplar out.

...would have appeared 500,000,000 years ago.

#### Also found in the Burgess Shale Area:

Odontogriphus (literally "toothed riddle")...



#### ...considered as the best candidate ancestor of all mollusks!

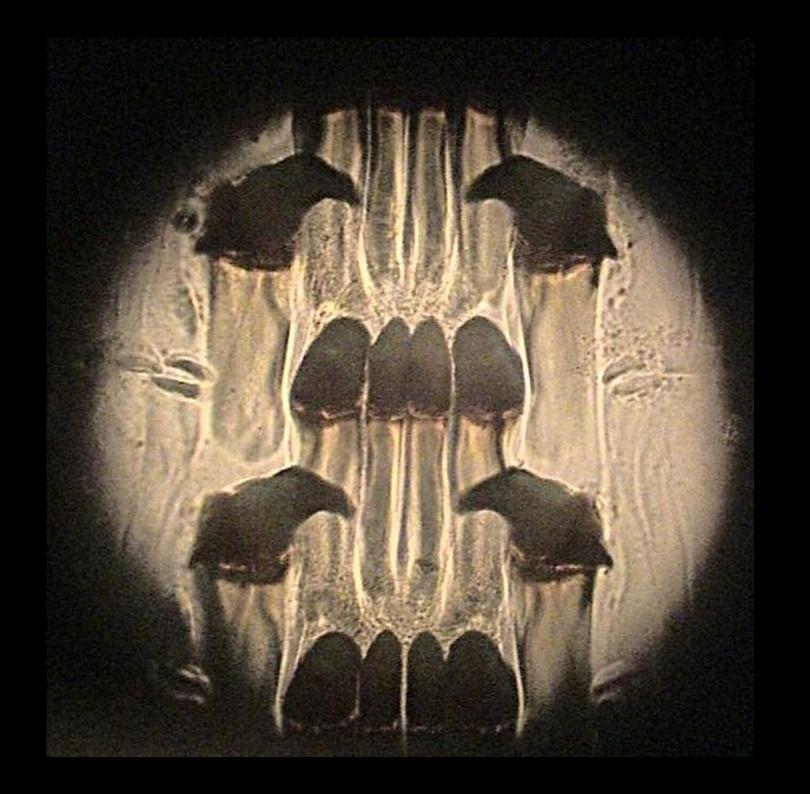
#### A physiological feature serves as the signature of this emergence...

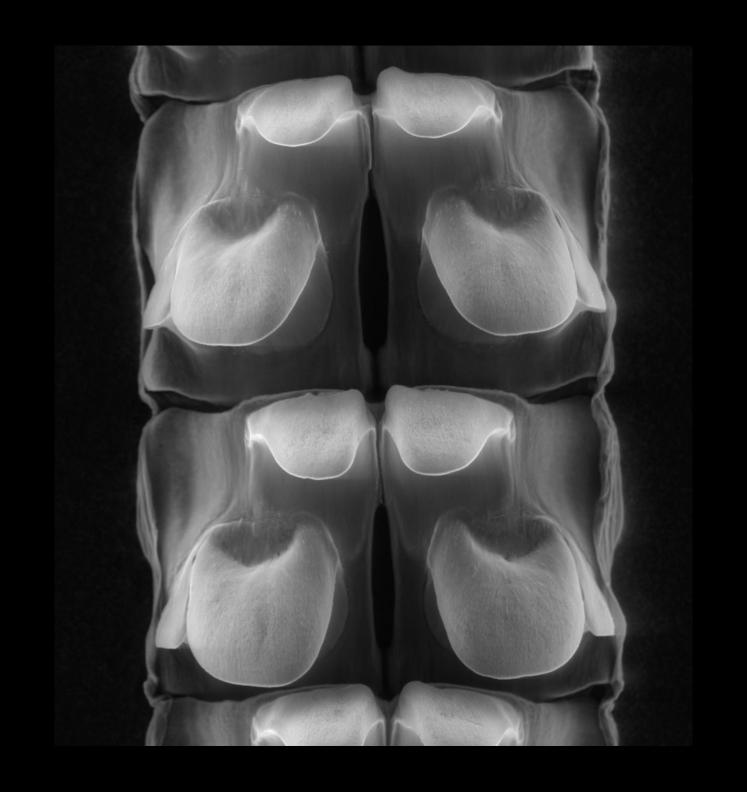


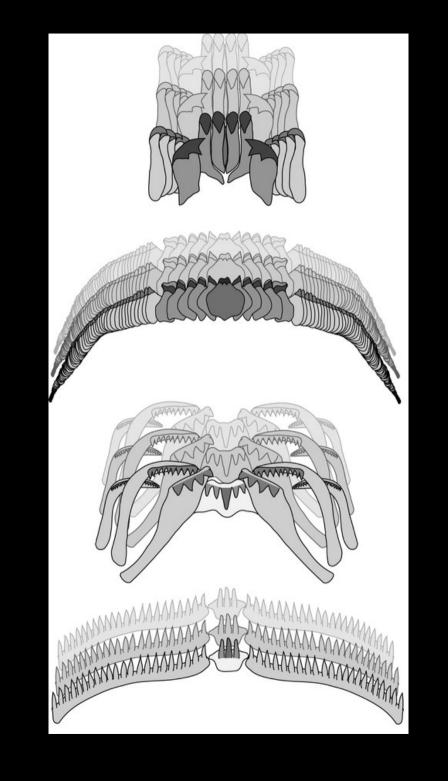
...these ancestors are the first organisms that do no longer swallow their food,

## ...the first to have invented the art of grazing!

### All mollusks have a "radula" - a kind of raspy tongue...







...they are thus able to get hold of their food by tearing off parts of it.

A quite minute change!

But at the level of material availability...

...this equipment enabled mollusks to get access to new sources of nourishment!



## All gardeners know something about that!

# STONING SUCCESS ST(0)

NON-TOXIC GRANULES



SUITABLE FOR ORGANIC GARDENING

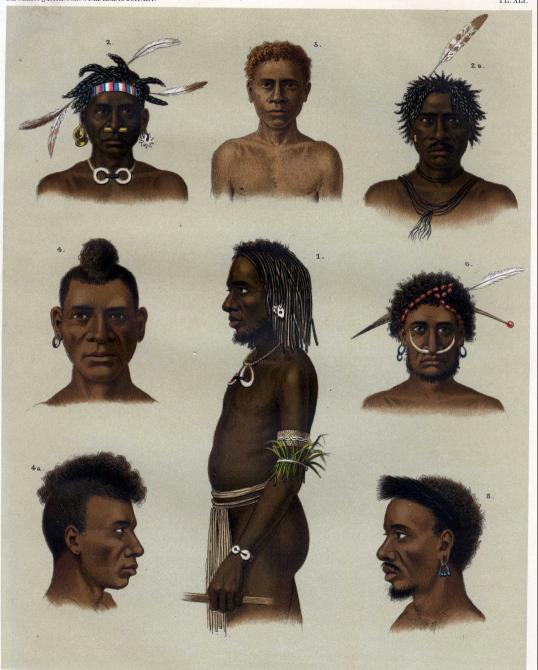
#### In Lamarck's time, some Western scientists opened other fields to classification...

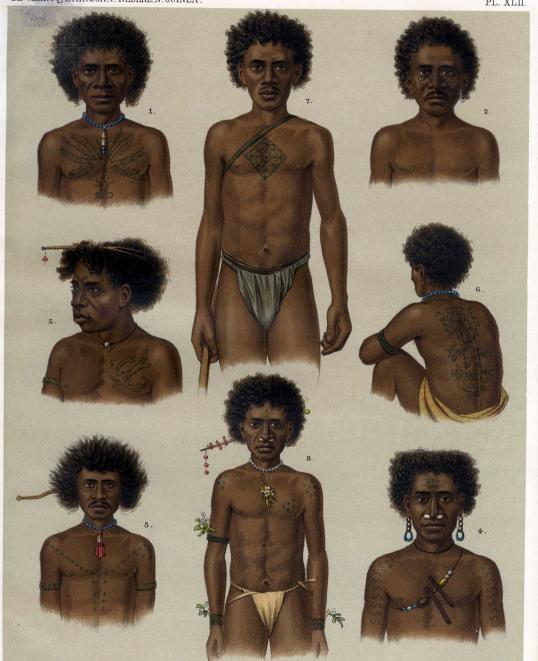












# Native cultures also were defined as objects of Science.

#### PRIMITIVE CULTURE

RESEARCHES INTO THE DEVELOPMENT OF MYTHOLOGY, PHILOSOPHY, RELIGION LANGUAGE, ART, AND CUSTOM

BOX

#### EDWARD B. TYLOR, D.C.L., LL.D., F.R.S.

PROFESSION OF ANTHROPISCOUNTS THE LASTER OF HANGEST, ETC.

"Co d'est par dans les providibles, c'est dans l'homes même qu'il faut d'order l'homes : il ne s'agir par d'imaginer ce qu'il auroit più ou d'à faire, mais de regarder ce qu'il fair, "Du Baccam.

IN TWO VOLUMES

VOL. I.

FOURTH EDITION, REVISED

JOHN MURRAY, ALBEMARLE STREET

LEights of Translation and Reproduction operiors;

Thus in 1871, Edward Burnett Tylor (1832-1917),

# ...presented himself as a "confirmed scientific rationalist" and "cultural evolutionist"...



E.B. Tylor Act. 67
From a photograph by Moult and Fox

...proposed a theory of gradual modifications in the history of human cultures:

...Animism, the belief in the individual soul or "anima"... ...of all things and of all natural manifestations...

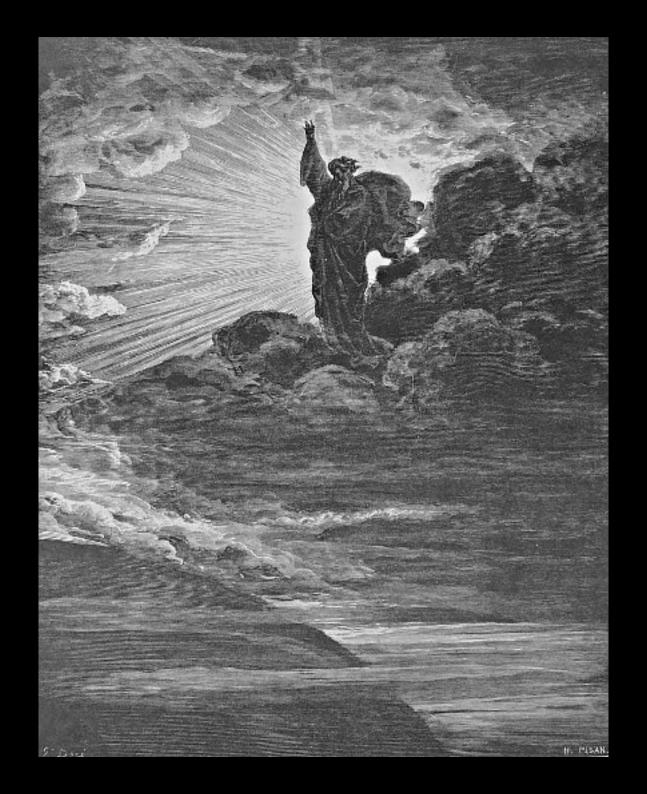


...was the first step of all human religions.

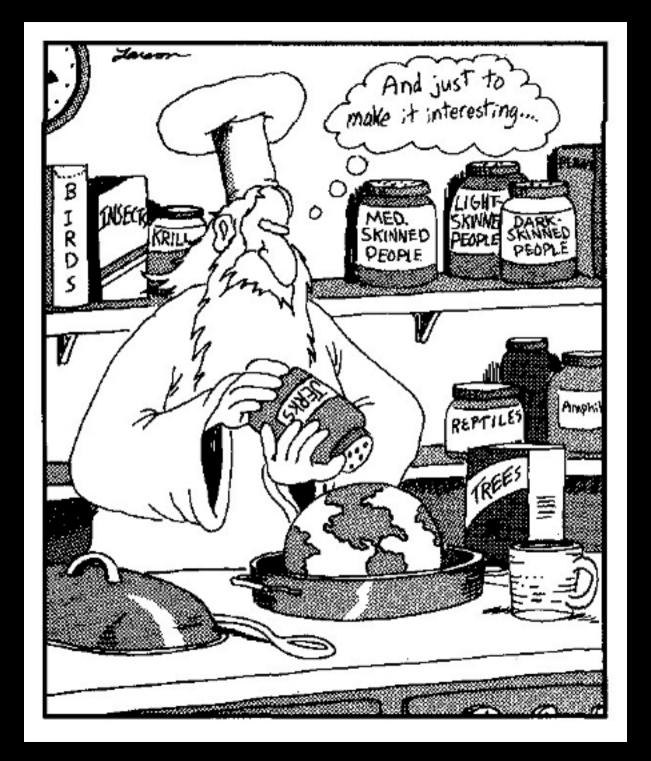
To be followed by Polytheism...



and Monotheism...

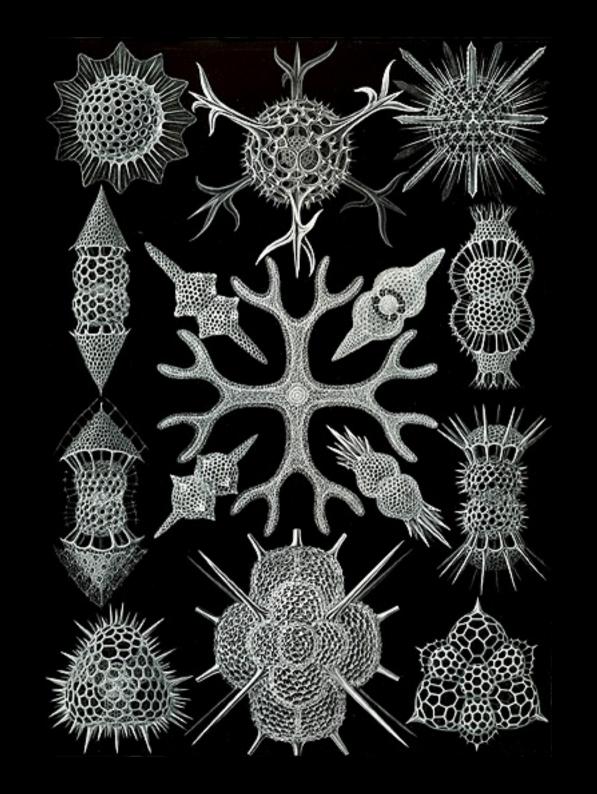


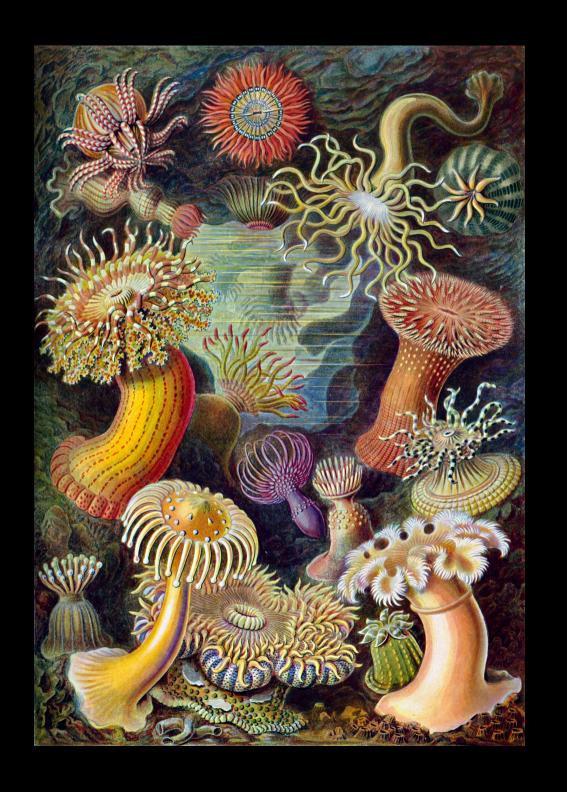
### ...the most advanced stage: the Western one!



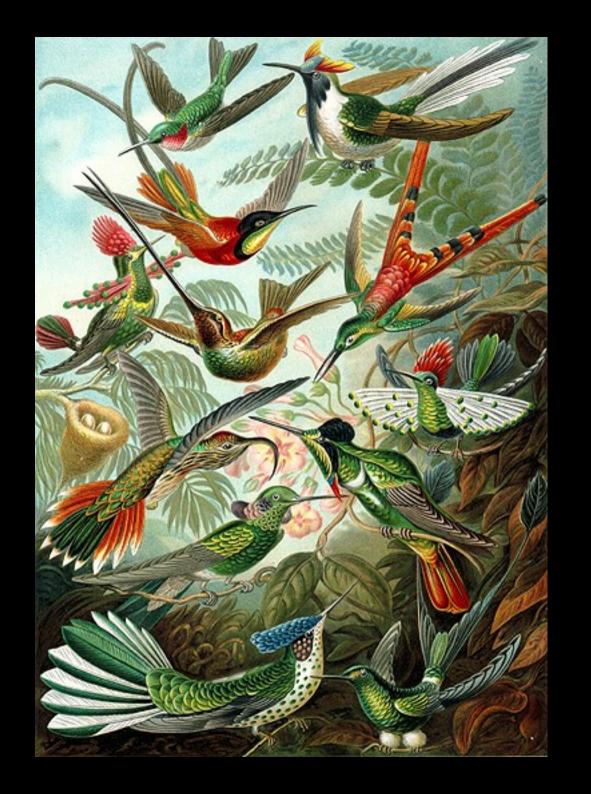
But at the same epoch, other Western scientists...

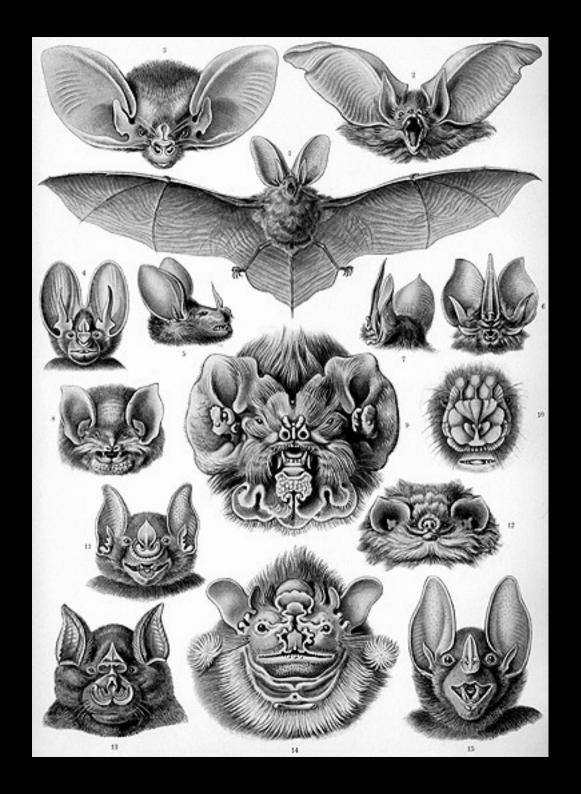
...some of them famous for their interest in the Beauty of Nature...







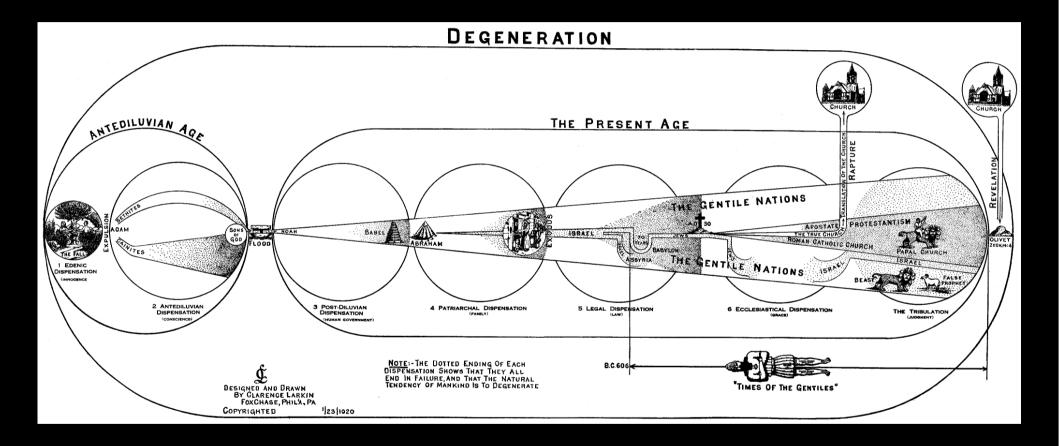




...also produced representations of human evolution with very different aims...



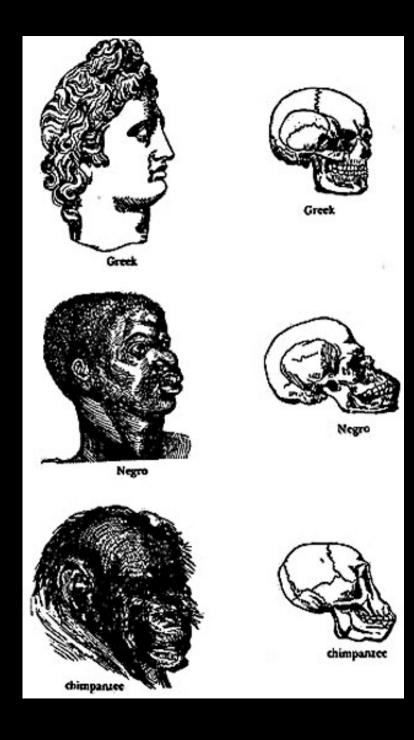
## Some set up a "theory of degeneration" - very popular at that time.



For its supporters if the new theory of biological evolution was valid,

...it means that the biological history of mankind was no longer a unitary process:

...some human races had to be considered as "degenerate".



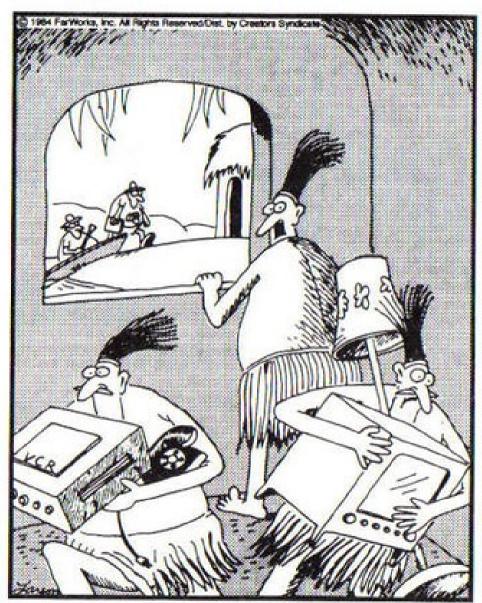
### So?

Firstly, for sure, nowadays this cannot be considered as a scientific fact.

Secondly: all cultures do have a History!

There is no "culture living in the past"....

### THE FAR SIDE" BY GARY LARSON

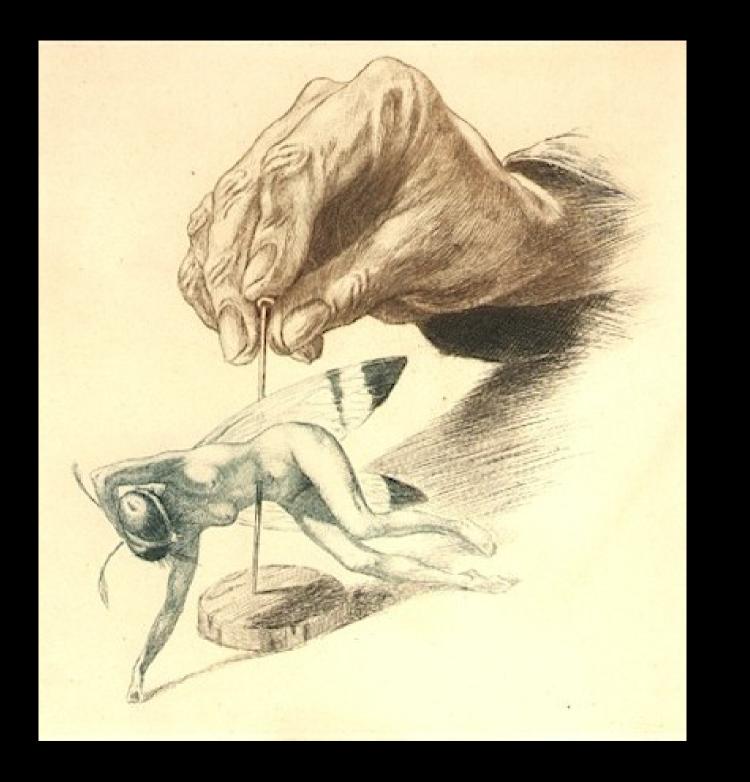


The Far Side® by Gary Larson © 1984 FarWorks, Inc. All Rights Reserved. Used with permission

Anyway native peoples have rapidly learned that anthropologists never came first nor alone...



...and that they have to be very cautious!

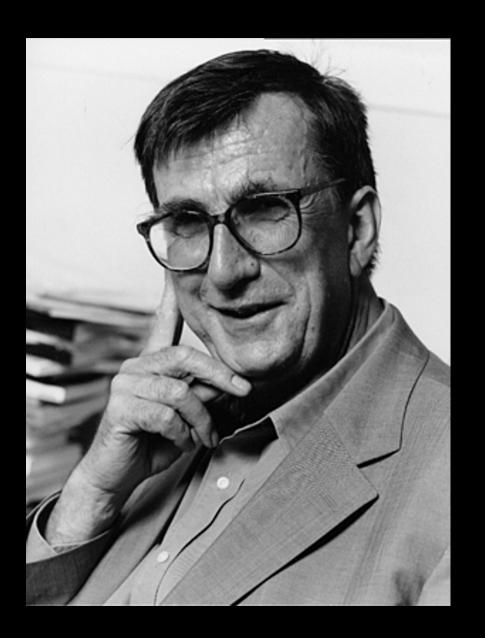


#### But the collections that give their field to Western naturalists,

...how are they produced?

By which kind of practices?

Let us follow a scientific expedition to which Bruno Latour (1947 - ),



...the well-known science adventurer, joined himself...

Bruno Latour

#### La clef de Berlin

et autres leçons d'un amateur de sciences



Ceci est une clef.

LA DÉCOUVERTE

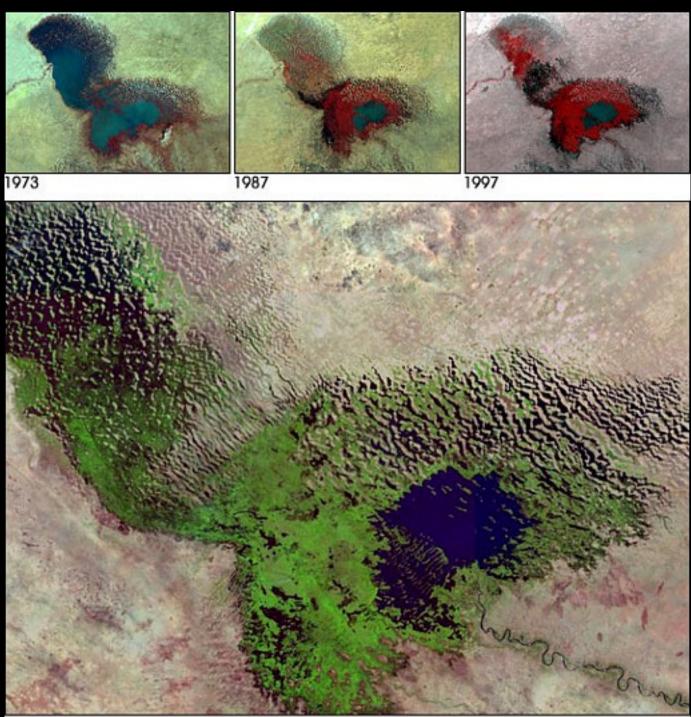
## A team of botanists and pedologists met, in Amazonia...



...on the edge of a forest and a savannah

One question led them there...

...what is actually gaining ground over the other: the forest or the savannah?



A question which - in the context of global warming - could be of some importance!



#### First let us meet the fetish tool of these pedologists...

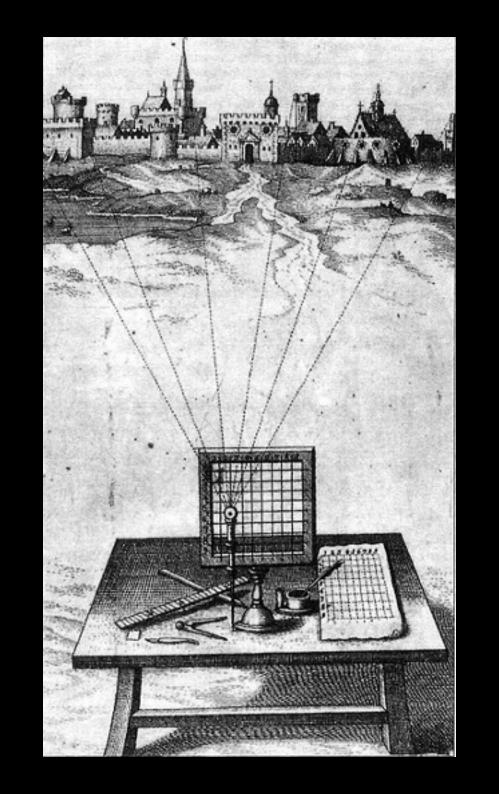


Yes: this is a true scientific device!

It is a "pe-do-com-pa-ra-tor"!

## In spite of its ordinary and modest look, it is a powerful tool!

#### It belongs to the very prestigious branch of the "Gnomons"...



...one of the most ancient among scientific tools: from three to two dimensions!

#### This pedocomparator is able to master space and time...

...to transform the world into coordinates...

...to change matter (soil) into text!



#### But how does it work?

(Remember: scientists want to know which type of vegetation overruns the other)

# To start with: the pedologists must make sure they know where they are...









Then: they have to integrate the initial work of the botanists...







And this to be able to decide where to start exploring and encoding the plant frontier.



### But above all: they should never, never lose track of what they are doing!

This is one of Latour's major discoveries!

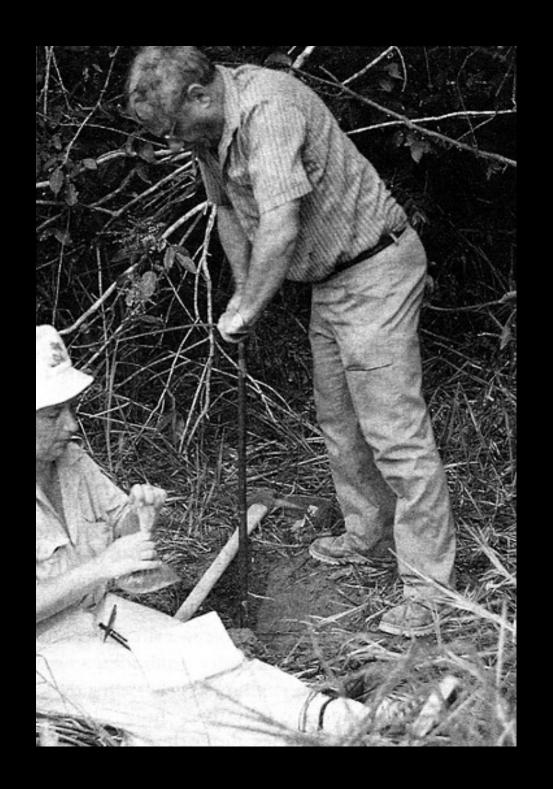
In Western Sciences...

...there is always a "small logbook" which warrants the protocol...



# ...and which so warrants future comparison between the data!

Pedologists can now begin: dig a hole and collect small pieces of earth...



...taken at different depths in the soil, and fill the boxes of the pedocomparator.



#### Aligning those different boxes in one same column...

...will allow them to register a track of the different earth layers...

...which compose the soil at this precise spot (of the forest-savannah transition).

And they all do it over again and again: another hole, another spot...



...till they are able to connect the different types of soils that form this frontier.

# At this point the pedocomparator is empowered!

Along with the final diagram that summarizes and organizes all the data collected by the expedition...

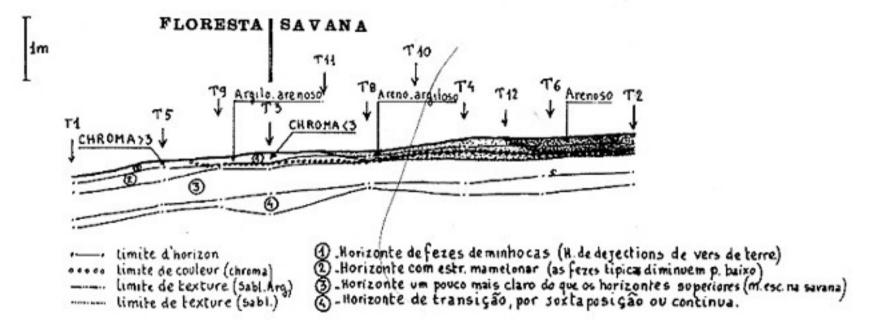


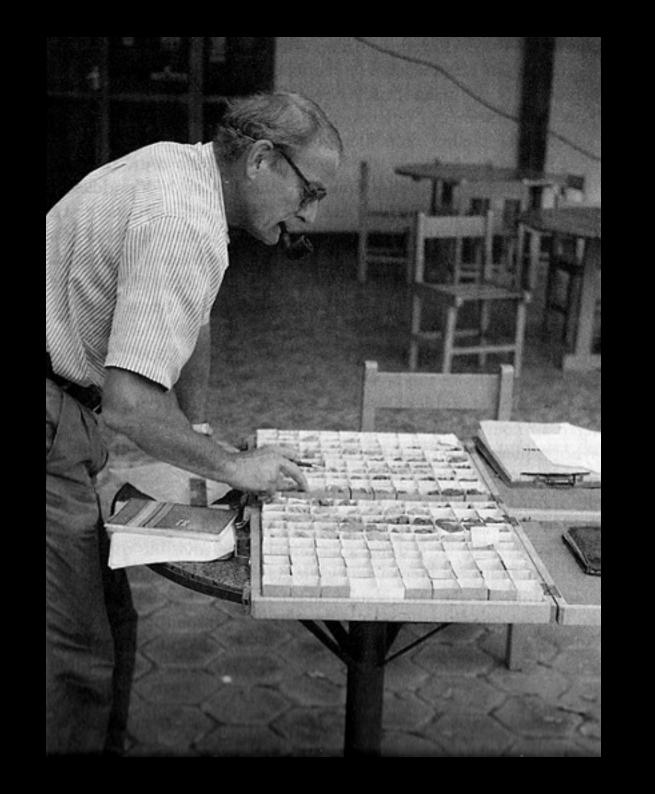
Figure 3. Coupe du transect 1

...the precious tool is now able to exhibit the edge's story!



From the pedologists' standpoint, this part of the Amazonian space...

# ...is now fully and perfectly represented by the collection of boxes!



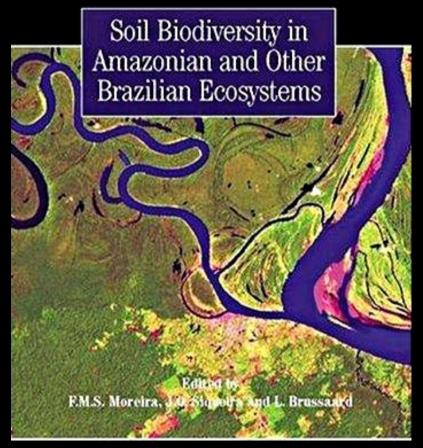
Thus: for Science, there is no "external world" waiting to be discovered.

Western scientists meet the world through a complex succession of "operations".

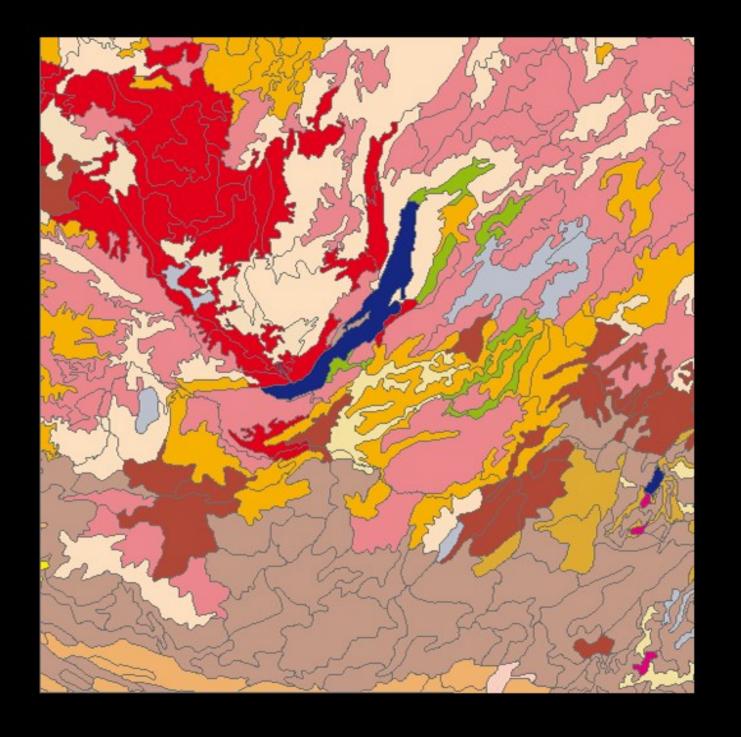
#### In order to be known the world has first to be:

"aligned, transformed, constructed"!









#### But, haven't you noticed a rather remarkable absence?

#### No Amerindians!

Neither in the team, nor even in the landscape...



Fig. 1 — Chef de Mandans. (Amérique.)



Fig. 2. -- Guerrier Cherokov. (Amérique )

Here as elsewhere...



Fig. 1. — Peau-Rouge. (Amérique.)



Eig. 2. - Incs. (Amérique.)



Fig. 1. - Galifornien. (Amérique.)



Fig. 2. - Aurzeanien du Chili. (Amérique.



Fig. 1. - Femme des îles Carolines.



Fig. 2. - Indigène des îles Marquises.



Fig. 1. - Cafre amakese.



Fig. 2. - Nègre de Nozambique.



Fig. 1. - Habitant du bavre Dorey (Neuvelle-Guinée).



Fig. 2. - Théodai. (Habitant de la Nouvelle-Zélande.)



Fig. 1. — Toulé. Jeune fille Tonga-Tabon.)



Fig. 2. - Montai, chef. (Nouvelle-Guinée.)

...so many natives have been exterminated...

...that numerous places on the Earth have now fallen silent.





## From this point of view, colonialism belongs to a precise Western lineage...







THE WITCH No.3.

### BILL

FOR

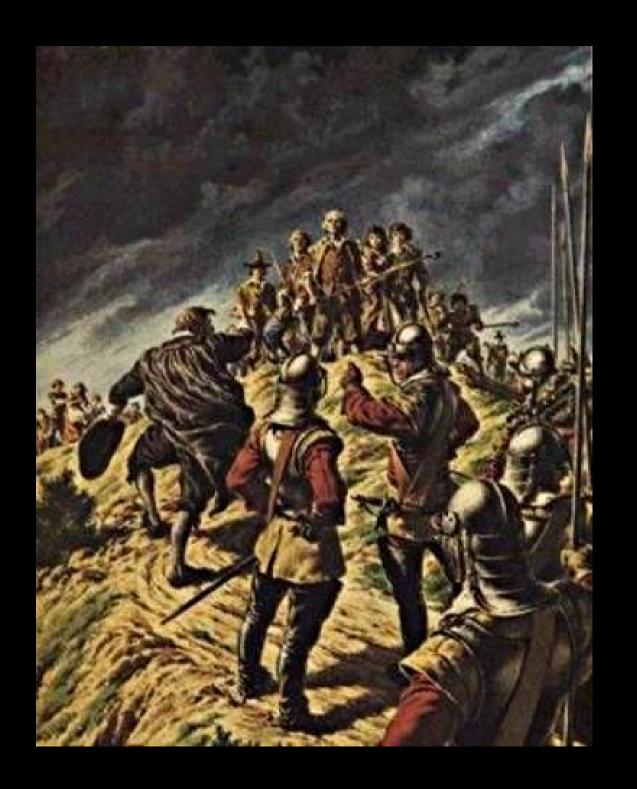
Dividing and Inclosing the open and common Fields, common Passures, common Meadows, common Grounds, Heath and waste Ground, in the Manor and Parish of West Haddon, in the County of Northampton.

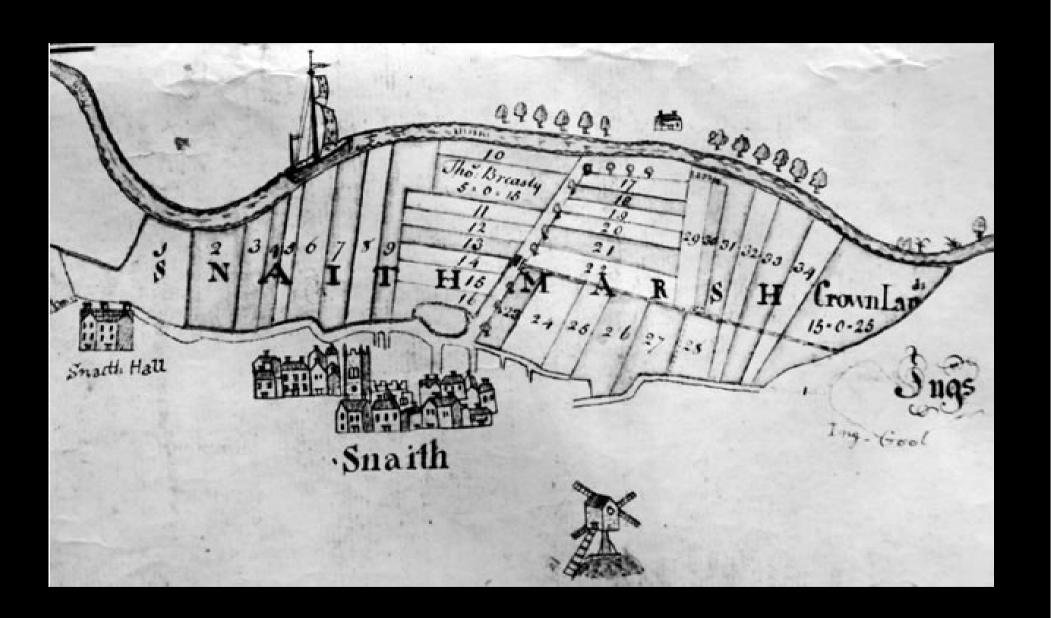
1764

"England is not a free people, till the poor that have no land, have a free allowance to dig and labour the commons..."

Gernard Winstanley, 1649













### ACT

POS THE

AMENDMENT AND BETTER ADMINISTRATION

OF YES

### Laws relating to the Poor

181

ENGLAND AND WALES.



#### LONDON:

PRINTED BY GEORGE EYRE AND ANDREW SPOTTISWOODE, PRINTERS TO THE KING'S MOST EXCELLENT MAJESTY.

1895.

(c) Petro Programme in





# Sometimes only scattered traces testify for those who have disappeared...





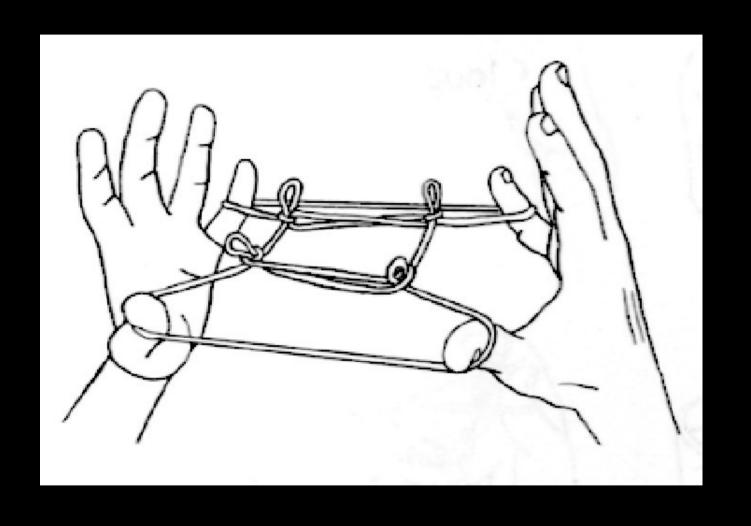




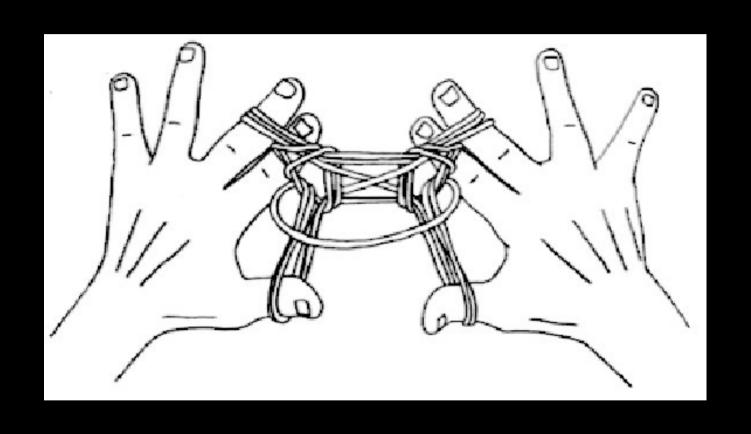
...traces, the meaning of which is often lost.

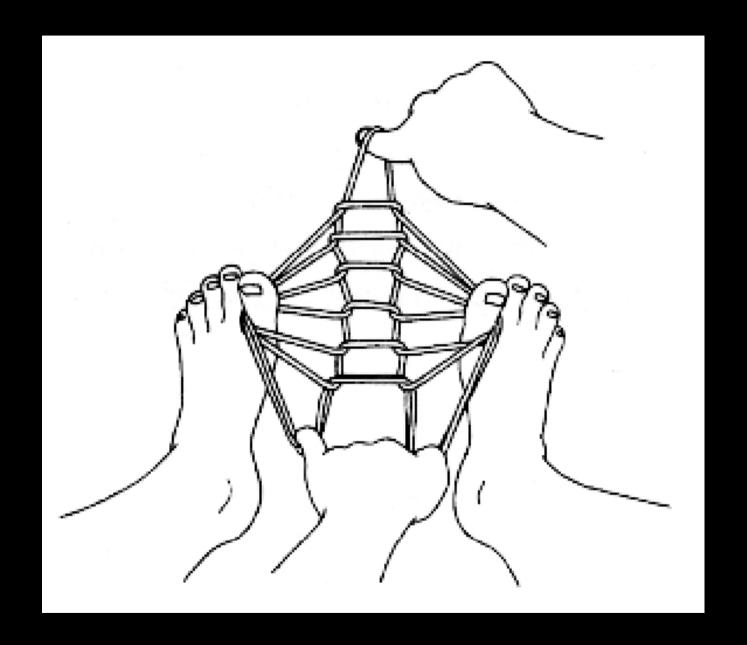


# But other types of "inscriptions" in the world,



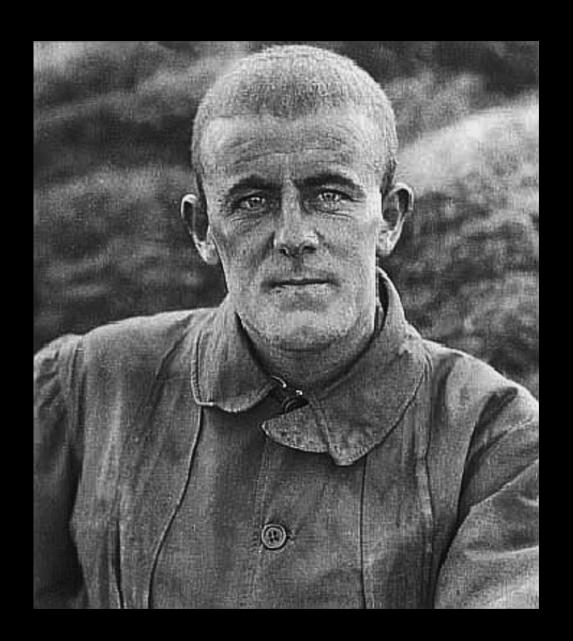
...even short-lived ones, have found their survival paths.





Coming from native people, maybe "discovered" later,

...testimonies gathered by more attentive keepers.



For instance:
Diamond Jenness
(1886–1969),
"pioneer of Canadian anthropology"...

# Arctic Bdyssey

Hrctic Odyssey
THE DIARY OF DIAMOND JENNESS
1913-1916



Edited by Stuart E. Jenness

TED BY STUART E. JENNES



...who not only paid attention to the singular 'string' talents of his hosts...

...but was also able to share and respect the words of those he wanted to encounter:



Part of the Kelle Falls of the bolumbia River. 1860.

"White man writes everything down in a book (so it will not be forgotten)...

...but our ancestors married animals, learned all their ways, and passed on...

#### ...this knowledge from one generation to another"

A Dakelh (Carrier) Indian of the Bulkley River, quoted by D. Jenness, 1943

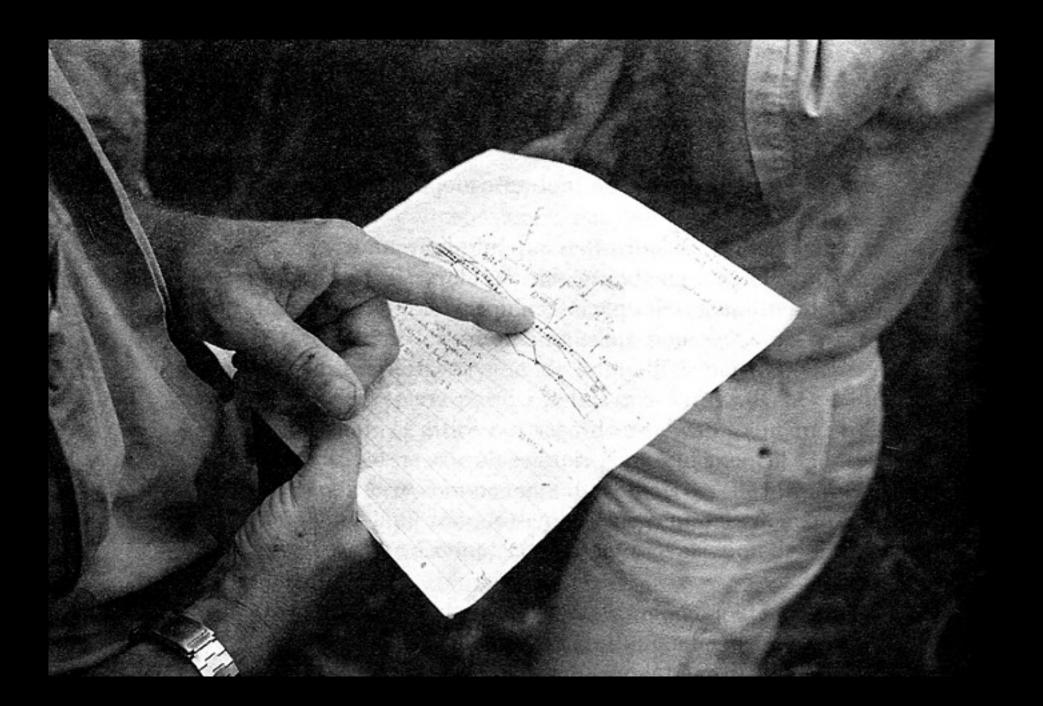


The Dakelh
"those-who-go-by-boat",
as well as many other natives...



...came to question, as regards knowledge,

...the strange and new power brought by the white man:



...the alphabetic writing!



## If it is difficult for Western minds "to approach the vividness...

...and intensity with which surrounding nature...

...spontaneously presents itself to the members of an indigenous oral community"...







...it was also difficult for native minds to figure that when white men:

"...focus their eyes upon these printed marks, they immediately hear voices... ...spoken words, and witness strange scenes or visions... even experience other lives!

As inanimate elements speak to natives, the "inert" letters on the page speak to white men!"

#### **DON'T READ THIS!**

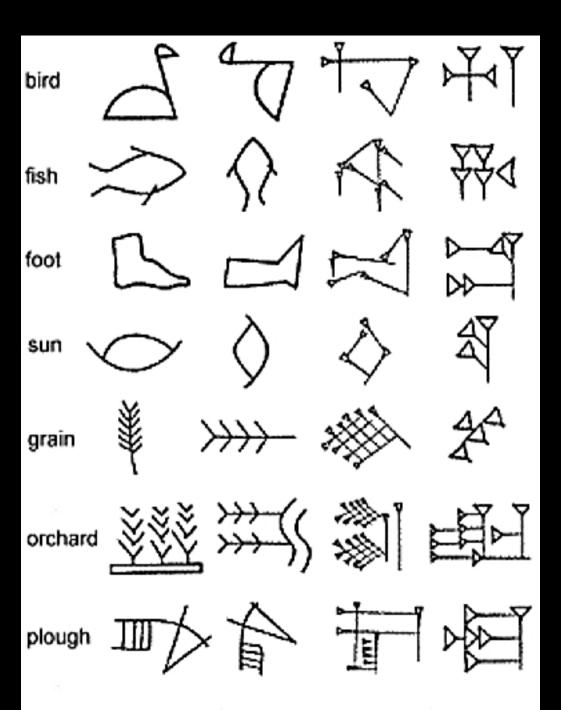
Animism, isn't it?

"For a long time, I went to bed early.

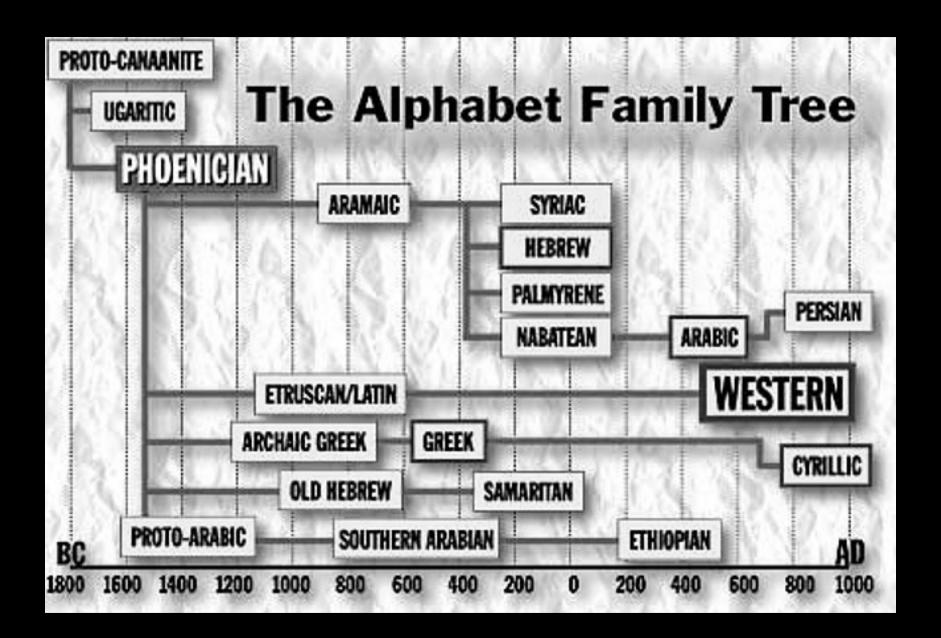
Sometimes my candle scarcely out, my eyes would close so quickly that I did not have time to say to myself: 'I'm falling asleep'. And, half an hour later, the thought that it was time to try to sleep would wake me; I wanted to put down the book I thought I still had in my hands and blow out my light; I had not ceased while sleeping to form reflections on what I had just read, but these reflexions had taken a rather peculiar turn; it seemed to me that I myself was what the book was talking about"...

Marcel Proust (1871-1922), The Way by Swann's, 1913

### The history of the advent of the alphabetic writing is a long one...



The development of Mesopotamian cuneiform script

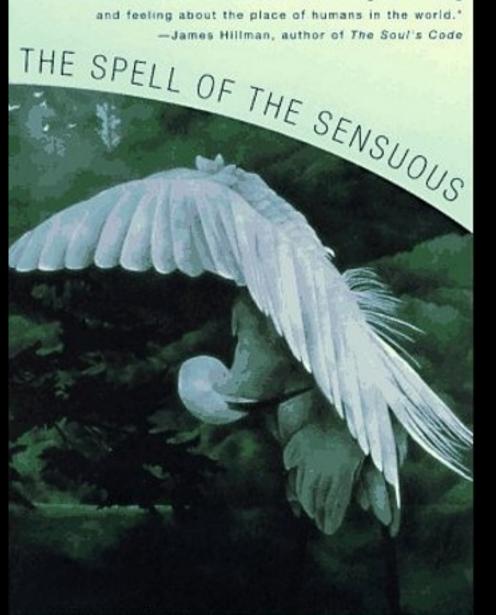


Modern Roman	Α	В	G	D	Ε	F	z	Н		ı	K	L	М	N		0	Р		Q	R	s	Т
Early Latin	Α	B	<	D	E	F	Z	Н		>	K	L	M	N		0	Γ		Q	P	5	Т
Greek	Δ	Δ	7	Δ	7	٦	z	8		7	ĸ	1	7	٦		0	π		Φ	P	Σ	Т
Phoenician	K	9	^	Δ	=	۲	Ι	目	Ф	1	7	L	7	7	Ŧ	0	7	۲	φ	٩	w	+
Early Aramaic	۲	y	٦	Y	3	,	1	n	6	1	y	ι	7	5	•	o	ງ	r	P	ŋ	*	r
Nabatian	צ	J	ゝ	ነ	υ	٩	ı	ų	Ь	ა	ៗ	J	D	J	У	y	9	P	٩	ነ	F	r
Arabic	L	_	_	5	Δ	9	J	7	Ь	۷	<b>5</b>	L	þ	J	Ŧ	۲	9	<b>ഫ</b>	و	ı	ш	_

But according to the already quoted
David Abram
(1957-)
ecologist, philosopher, and magician...



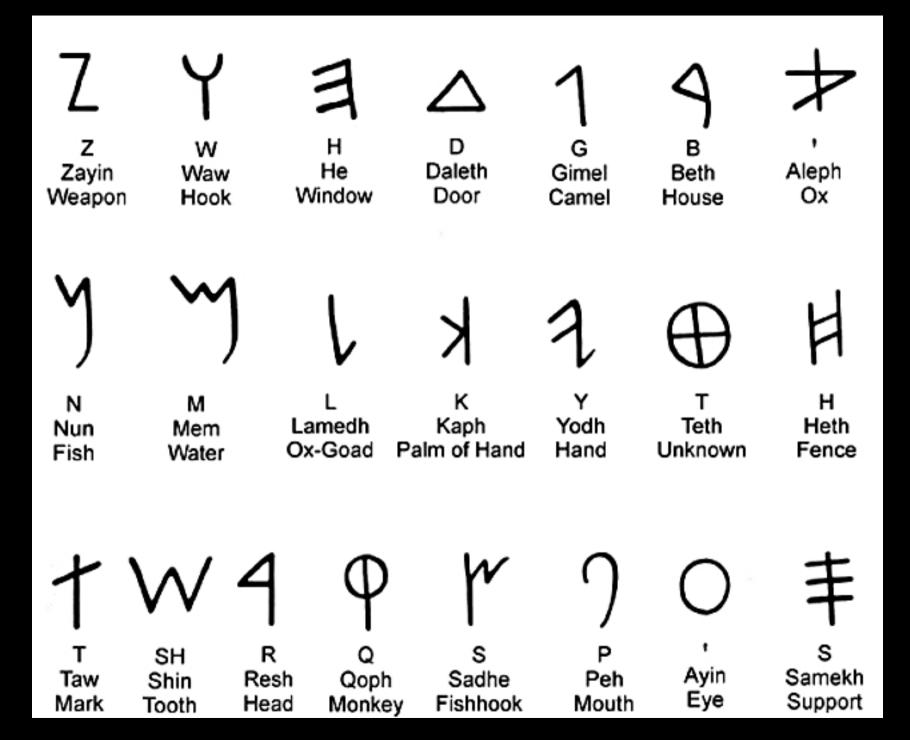
"I know of no work more valuable for shifting our thinking and feeling about the place of humans in the world."



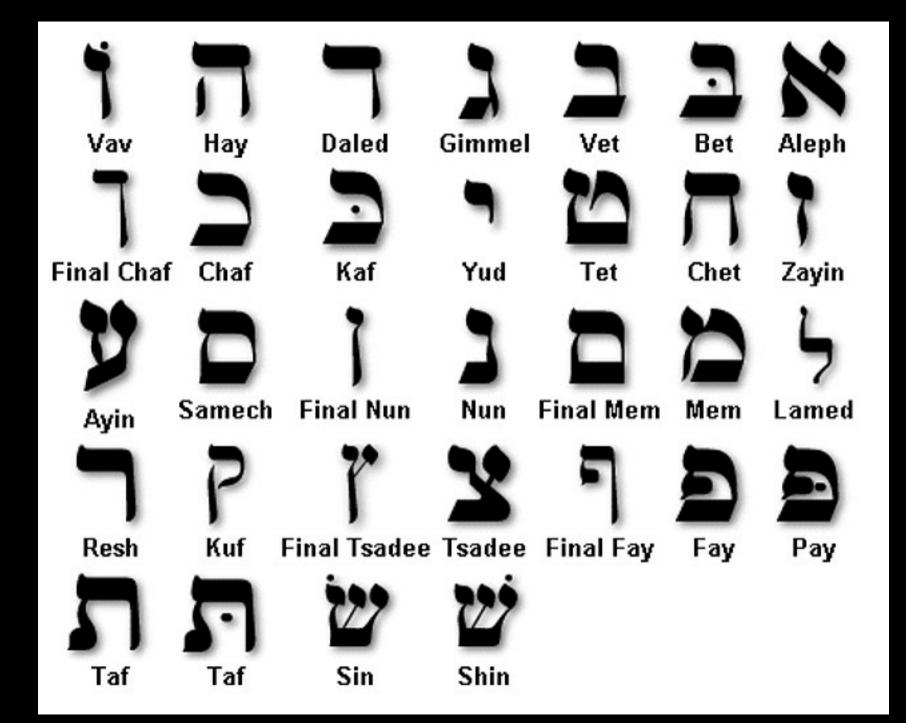
\*One of the hundred visionaries who are changing the world." —Utne Reader.

...a most crucial moment in Western history...

...was the transition from the Phoenician "aleph-beth"...



...and the Semitic "aleph-beth"...



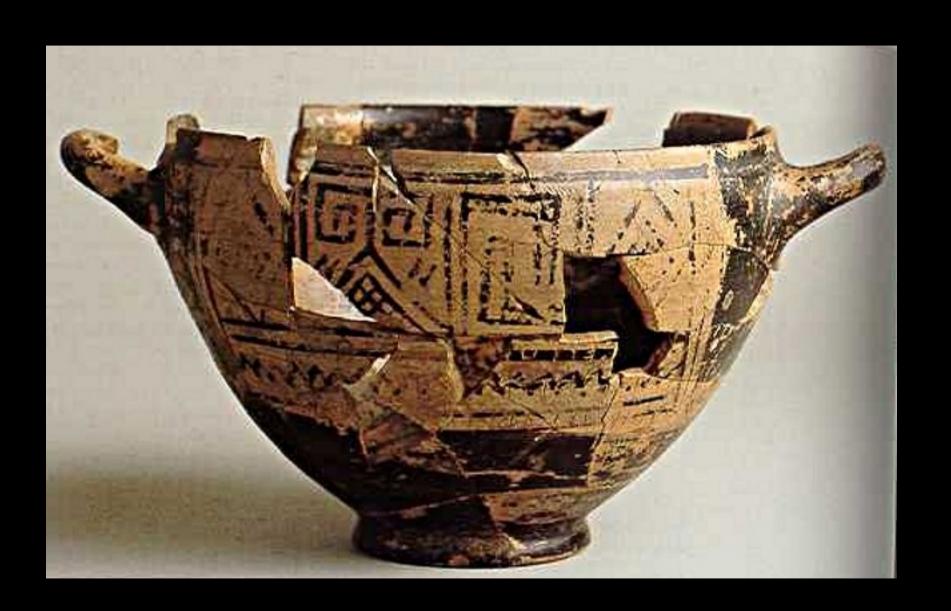
...to the Greek alphabet!

T Tau K Kappa A Alpha B Beta  ${f Y}$  Upsilon  $\Lambda$  Lawbda I Gamma  $\mathbf{M} \mathcal{M} u$ ΦPhi  $\Delta$  Delta  $N \mathcal{N}_{u}$  ${
m X}$  Chi ΨPsi  $\Xi$  imesi E Epsilon O Chricron Z Zeta  $\Omega$  Onega H Eta  $\Pi$   $\square$ Theta P Rho I Iota  $\Sigma$  Signa

A crucial moment...
but the oldest traces of the Greek alphabet...

FROTER FET OFO HODATOAEA BILLED TESTOROS: EPROJ: EVROTON: POTRALON
VESTOROS: BAIDESEI: KALLIST ROD. AKA. ECTOPOSEPIEZI: POTEPIO: POTEPION BODA FOZ: BAIPEZEI: KALLIZTEDANO: AM. 

## ...are inscriptions on a wine cup and a wine jug!





And they are about euphoria...



...and the power of Aphrodite's beauty!



"Nestor's cup I am, good to drink from.
Whoever drinks this cup empty...

...straightaway the desire of beautiful-crowned Aphrodite will seize".







## At the time of these first written inscriptions (around 735 B.C.E.),

## ...Greek nature is:

"still felt to be mysteriously animate and alive...
filled with immanent powers".

David Abram, op cit.



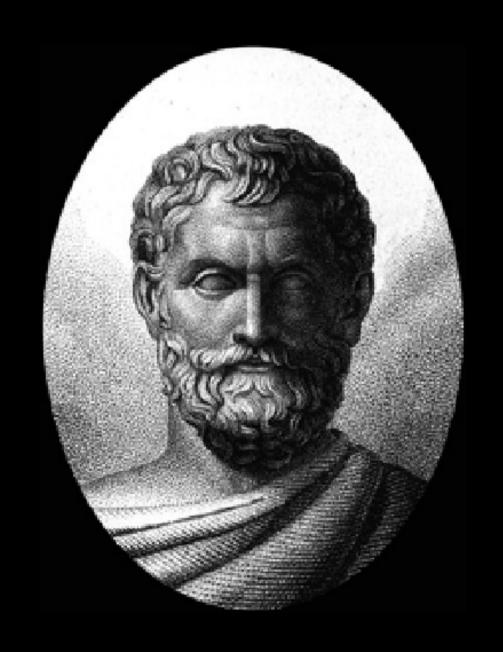


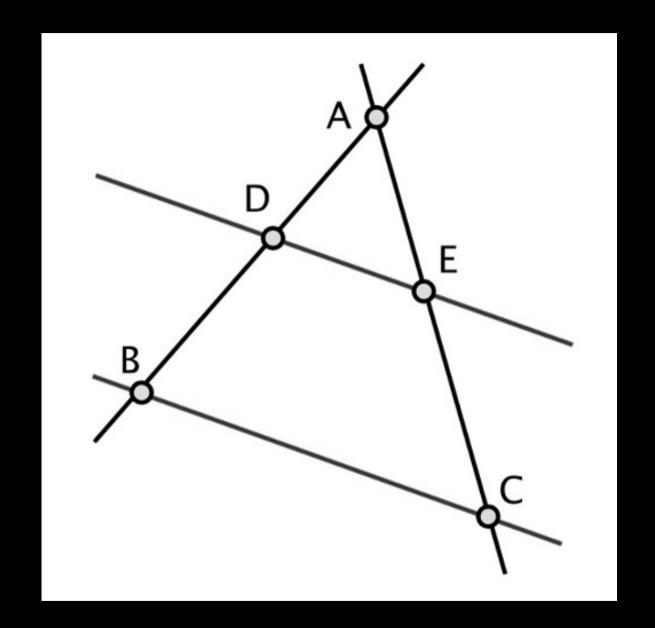






Even Thales of Miletus (ca. 624 BC – ca. 546 BC),





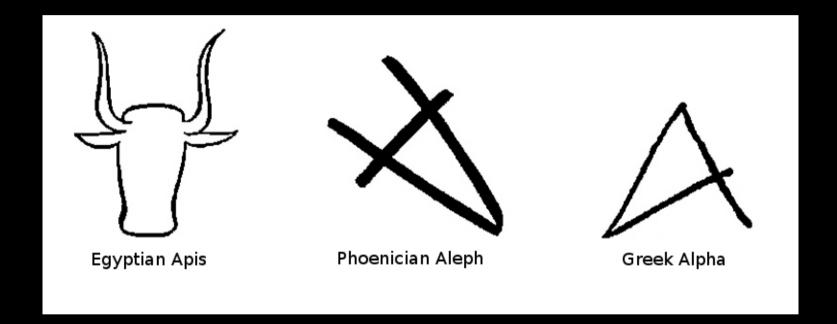
...considered as the first Greek philosopher and mathematician...

...could still profess:

"All things are full of Gods"



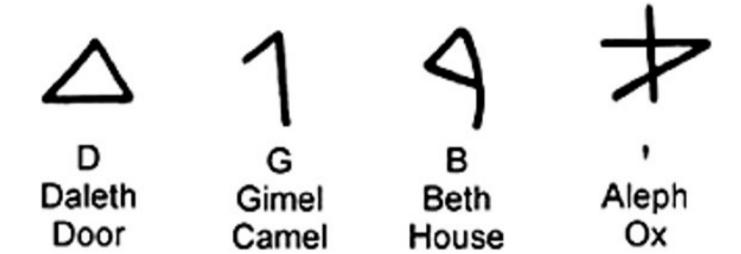
## Yet, with the transformation of this written sign...



...a new relation with the surrounding Earth comes into existence!

For the Phoenicians and the Hebrews, "Aleph"...

- the name of their first letter - also means "Ox"...



...and thus refers to a sensorial entity commonly imaged by the letter.





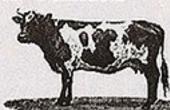
#### LES ANIMAUX DE LA FERME



TEMMEST



CAMILAC



KIRARIN



MANAGENTE



mr



RIP



CAMBRAER



ASHN



BRISDME



MURRIAN



VIEWWAY.



MIN



CHROSENZOV



SWA



RESOUTED

With the Greeks, "Aleph" becomes "Alpha"...

...which, however, has no sensorial reference at all.

Alpha is just Alpha...

# ...the name of the first letter of their alphabet!



"With the advent of the Greek alphabet, a new distance opens between human culture...

...and the rest of nature (...) the written characters...

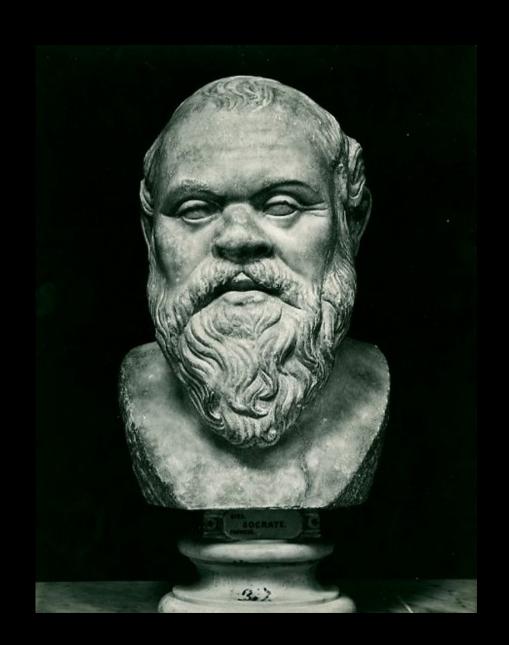
...no longer refer us to any sensible phenomenon out in the world (...)

...but solely to a gesture to be made by human mouth.

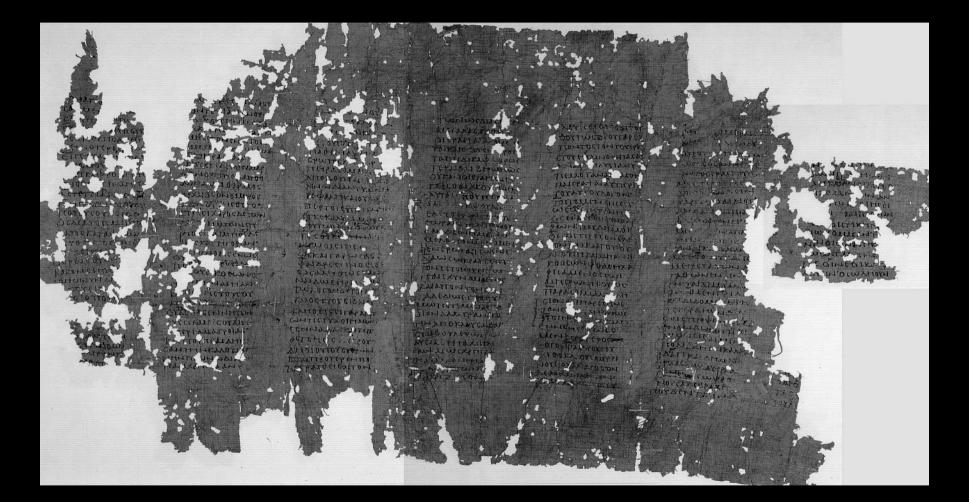
David Abram, op cit.

#### ...BREATHE...

And so Socrates (469 BC – 399 BC),



...the wise and legendary father of Western philosophy...



...is a witness, in his "dialogues", of this new and radical cultural change:

"I'm a lover of learning, and trees and open country...

### ...won't teach me anything, whereas men in the town do"

Socrate / Plato, Phaedrus, around 370 BC



Forests are cut down.

Gods and Goddesses are fired...



Earth becomes silent.



"A new power of reflexivity was thus coming into existence...

by the relation between the scribe and his scripted text"

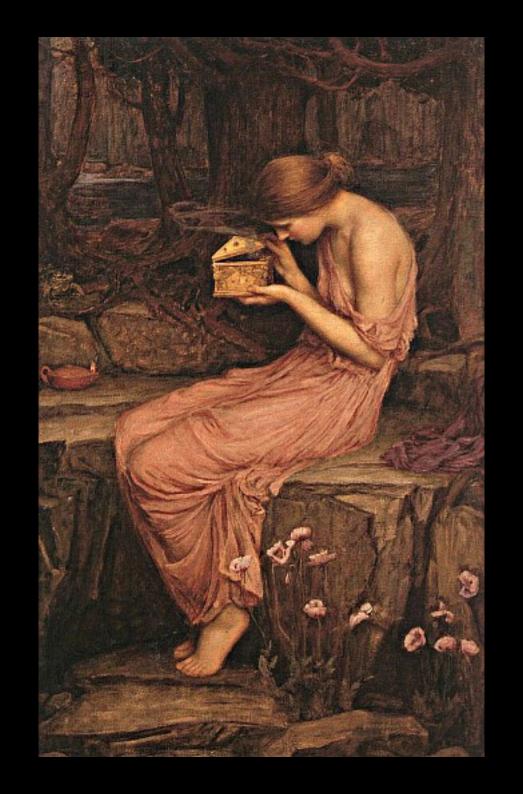
David Abram, op cit.

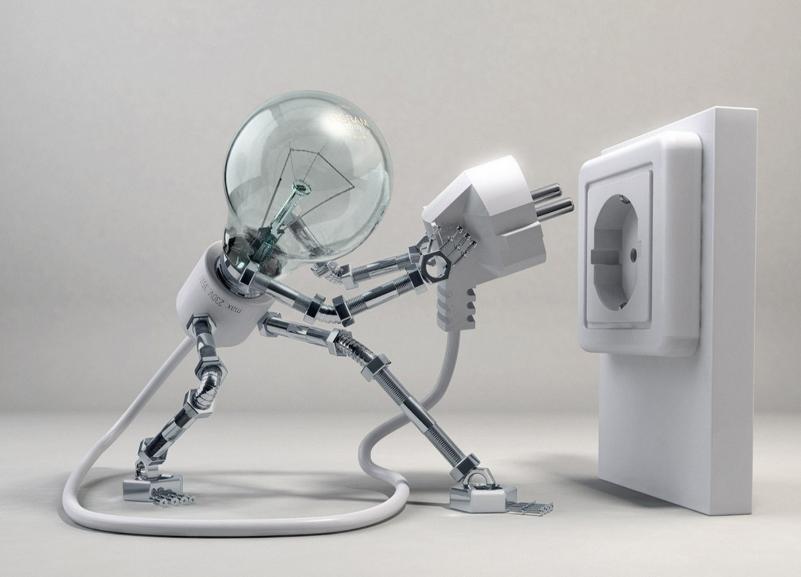
P

**PS** 

### **PSY**

### **PSYCHÊ**





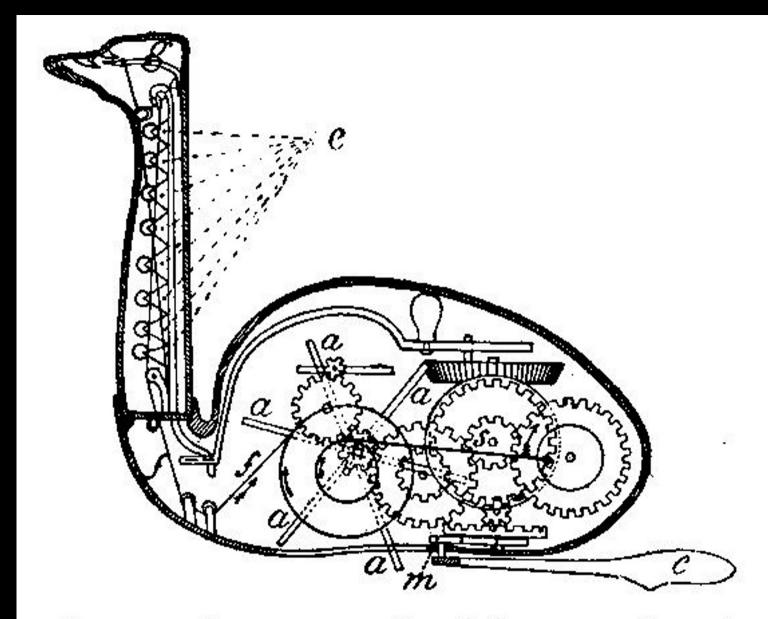
### COGITO, ERGO SUM

A few centuries later, René Descartes (1596 – 1650),

## ...considered as the founder of Modern philosophy...

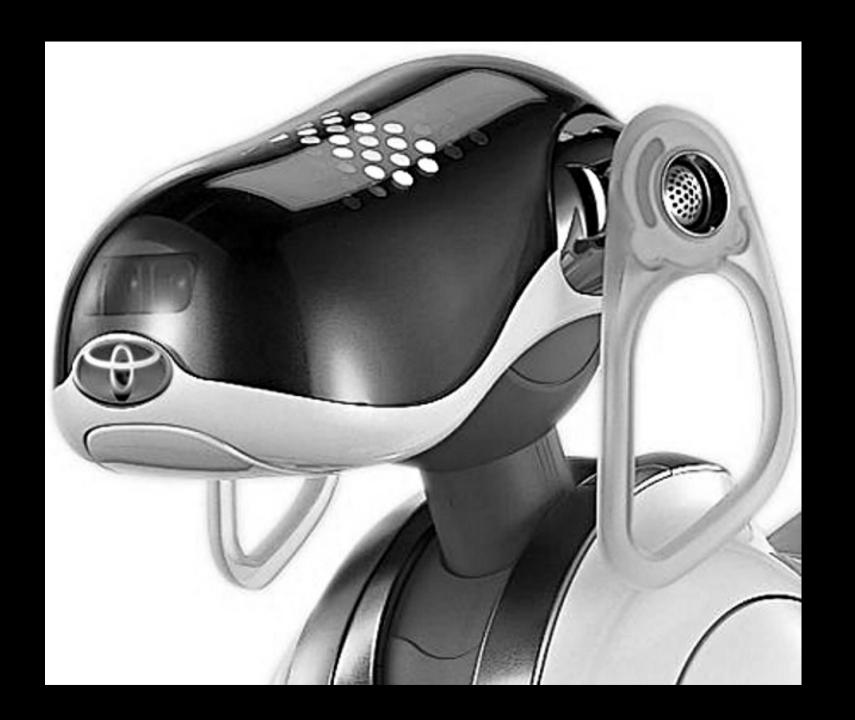


...stated what has become one of the most reductionist dogmas of Western thoughts.



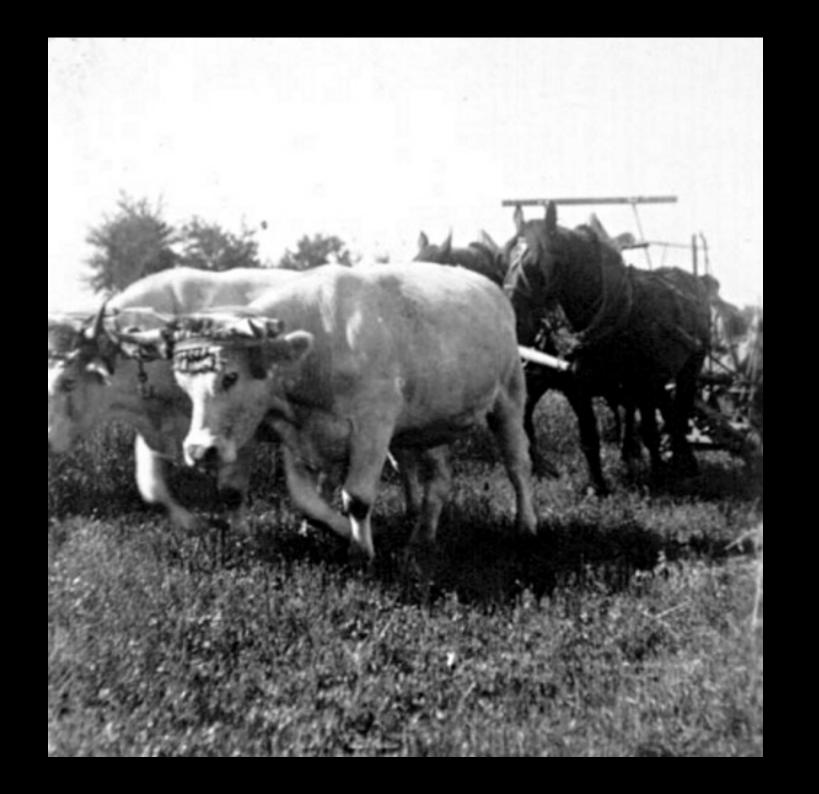
Le canard: a, roues à palette; c, patte palmée; e, châssis, f, corde à boyau; g. ressort; m, levier horizontal; s, pignon.

### He claimed that animals are like machines...



...only moved by "animal spirits" - by reflexes.

No initiatives, no feelings...



It was a consequence of his new theory of the human soul or the "res cogitans":

#### DISCOURS

### DE LA METHODE

Pour bien conduire sa raison, & chercher la verité dans les sciences.

PLus

LA DIOPTRIQUE.

LES METEORES.

ET

LA GEOMETRIE.

Qui sont des essais de cete METHODE.



A LEYDE
De l'Imprimerie de I AN MAIRE.

Clo lo CXXXVII.

Auec Privilege:

...if some "cogitatio" had been attributed to animals,

...how then to deny the immortality of the soul even to... oysters or mushrooms!



## For "the delicious shellfish", who may know?

But for mushrooms...



...a single Armillaria mycelium has found the way to colonize an area of 9 km².

## It has been estimated to be 2,400 years old!



## So becoming the world's largest and oldest known organism...

# Not bad for a soulless fungus!



However, among the – alas - numerous heirs of Descartes, one of the most famous...



...Burrhus F. Skinner (1904-1990) has spent his entire live refining and promoting... ...his "major contribution to animal psychology":

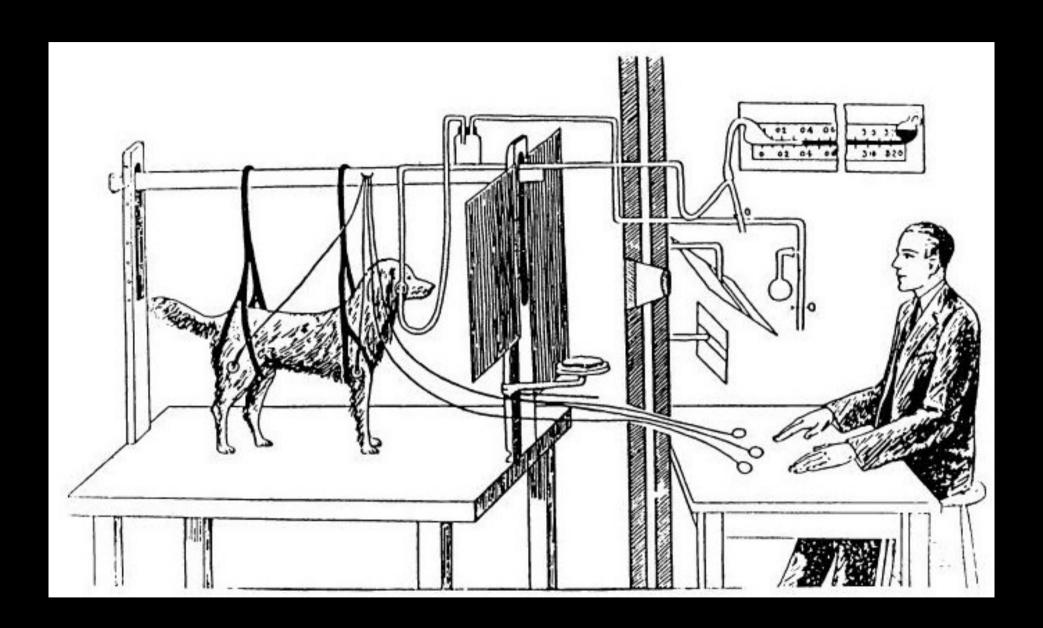
 $S \rightarrow R \rightarrow C$ 

Stimulus → Response → (operating) Conditioning

He argued against the classical Pavlovian model:

$$S \rightarrow (I) \rightarrow R$$

Stimulus → (Individual as a black box) → Response

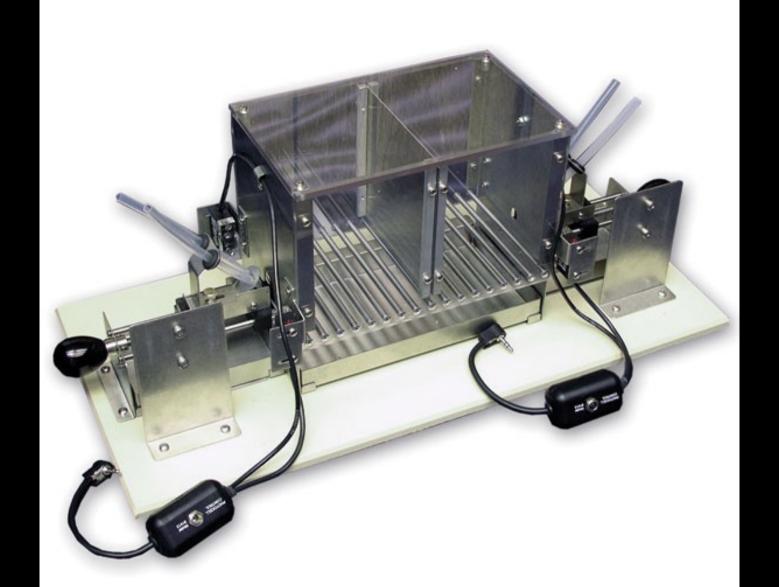


For Skinner, even in his beloved mechanistic world, animated beings are not only driven by reflexes...

...they also possess, to a certain extent, a capacity to learn and improvise!

But how to study such "intangible" capacities when standard behaviorist theory states that...

...there are no accesses of any sort to the thoughts and beliefs of animated beings?

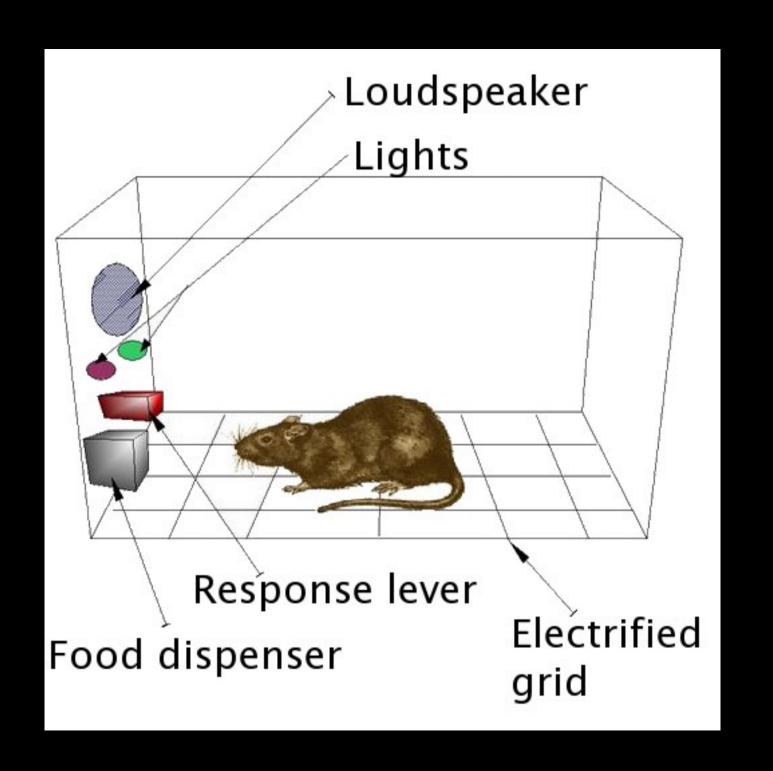


To elucidate animal psychology scientists can only measure visible behaviors,

...so Skinner sets up boxes that show that behavior can be learned by conditioning!



For example a rat is trained to obtain food by actioning a "response lever"...



...when a sound is playing and a green light is on!

It did well?

Reinforcement: food is provided!

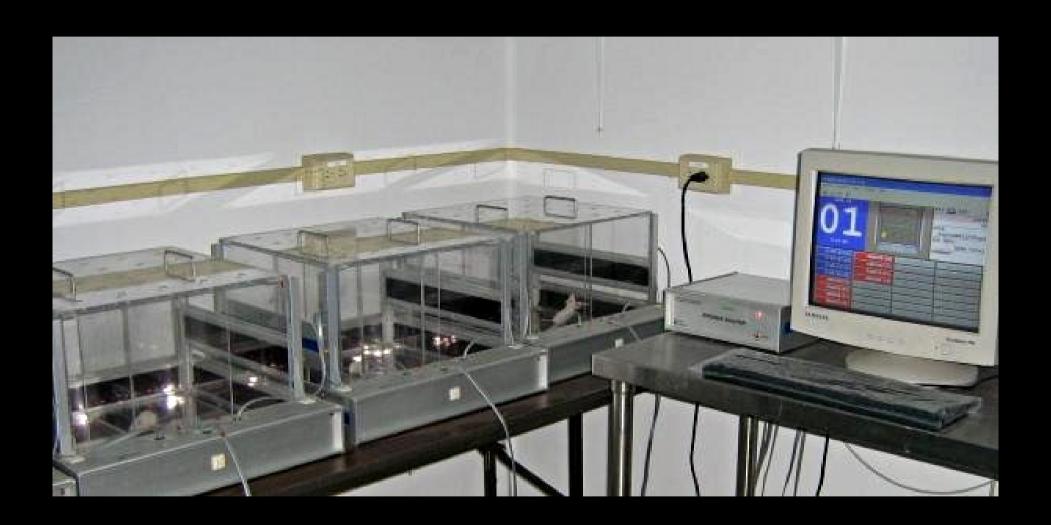
Did it wrong (e.g. when the red light is on)?

Punishment: the electrified grill is switched on!



And so on... and so on: during decades.

Changing that, correlating this...



...learning nothing about animals, except their incredible capacity to survive...



...sacrificing thousands of rats and pigeons,

and... conditioning thousands of students!



Yet as so many know, since so long, if one wants to obtain something from animals...

...one has simply to learn how to politely ask them to collaborate!







Even some animal psychologists have discovered that when they tickled their laboratory rats...

...the latter were more willing to collaborate and experiments gave better results.







On the other hand, food industry still may hire researchers disposed to dedicate their lives...

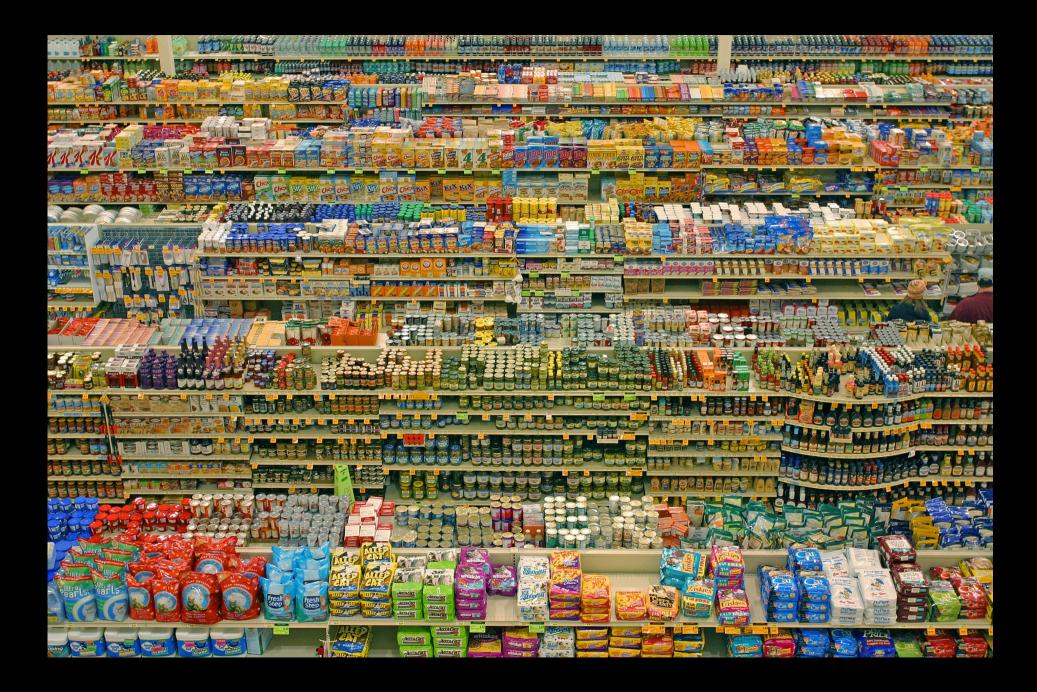


...to create, manage and improve places where animals will really be treated as machines!

## Places which are now often seen as a close approximation to hell...



But those "chicken and egg problems" are since long known as particularly complex ones!



Finally, and even if it took me some time, I guess I found an actual field...

...where the Skinner's behaviorist formula:

 $S \rightarrow R \rightarrow C$ 

Stimulus → Response → (operant) Conditioning...

...could be directly applied to some animated beings!

## 



50,610		50,600/	50,620)			
58,330						
43,750		43,725/			LIN	
62,870		62,850/	62,870)		MAN	
4,416		4,416/	4,417)		MEO	48.7
51,440		51,430/	51,460)		MRK	
42,815		42,790/	42,820)		MUV2	110.9
56,080		56,060/	56,090)		RWE	44,0
13,380		13,370/	13,380)		SAP	44.0
11,270		11,265/	11,270)		SDF	55.7
23,235		23,230/	23,235)		SIE	97,5
51,870		51,870/	51,890)		TKA	30.8
70,920		70,910/	70,960)		VOM3	
	105,450 68,250 58,330 43,750 62,870 4,416 51,440 42,815 56,080 13,380 11,270 23,235 51,870	105,450 ( 68,250 ( 58,330 ( 43,750 ( 62,870 ( 4,416 ( 51,440 ( 42,815 ( 56,080 ( 11,270 ( 23,235 ( 51,870 (	105,450 (105,450) 68,250 (68,250) 58,330 (58,310) 43,750 (43,725) 62,870 (62,850) 4,416 (4,416) 42,815 (42,790) 56,080 (56,060) 11,270 (11,265) 23,235 (23,230) 51,870 (51,870)	105,450 (105,450/105,500) 68,250 (68,250/68,290) 58,330 (58,310/58,330) 43,750 (43,725/43,750) 62,870 (62,850/62,870) 4,416 (4,416/4,417) 51,440 (51,430/51,460) 42,815 (42,790/42,820) 56,080 (56,060/56,090) 13,380 (13,370/13,380) 11,270 (11,265/11,270) 23,235 (23,230/23,235) 51,870 (51,870/51,890)	105,450 (105,450/105,500)   68,250 (68,250/68,290)   58,330 (58,310/58,330)   43,750 (43,725/43,750)   62,870 (62,870 (44,16/4,417)   4,416 (4,416/4,417)   51,440 (51,430/51,460)   42,815 (42,790/42,820)   56,080 (56,060/56,090)   13,380 (13,370/13,380)   11,270 (11,265/11,270)   23,235 (23,230/23,235)   51,870 (51,870/51,890)	105,450 (105,450,105,500)   HEN3 68,250 (68,250,68,290)   IFX 58,330 (58,310,58,330)   LHA 43,750 (43,725,43,750)   LIN 62,870 (62,850,62,870)   MAN 4,416 (4,416,4,417)   MEO 51,440 (51,430,51,460)   MRK 42,815 (42,790,42,820)   MUV2 56,080 (56,060,56,090)   RWE 13,380 (13,370,13,380)   SPR 11,270 (11,265,11,270)   SDF 23,235 (23,230,23,235)   SIE 51,870 (51,870,51,890)   TKA



At least as effective as Skinner boxes: the jungle of the soulless stock-exchange trade!

## BUY SELL

## However, even in the depths of the never-ending mechanistic era,

...some scientists' looks at animal beings were brought to change...



They had to learn awareness...









## They had to learn seeing ingeniousness and beauty in all details...









They had to learn to distinguish coordination from randomness...





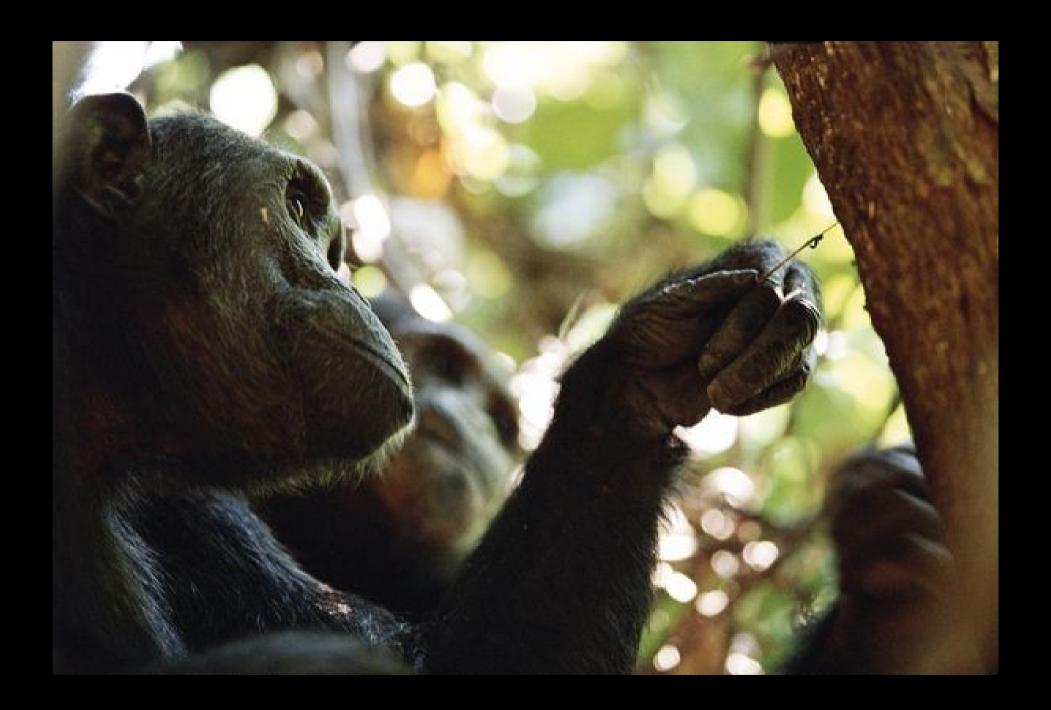




## They had to learn recognizing cultural abilities in the use of tools...





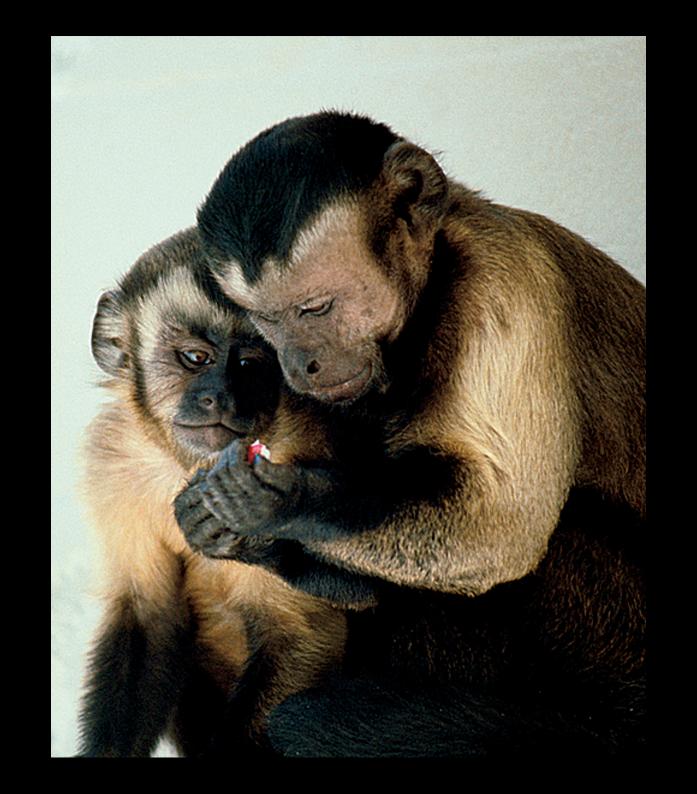




They had to learn to celebrate the power of the curiosity of youngsters...



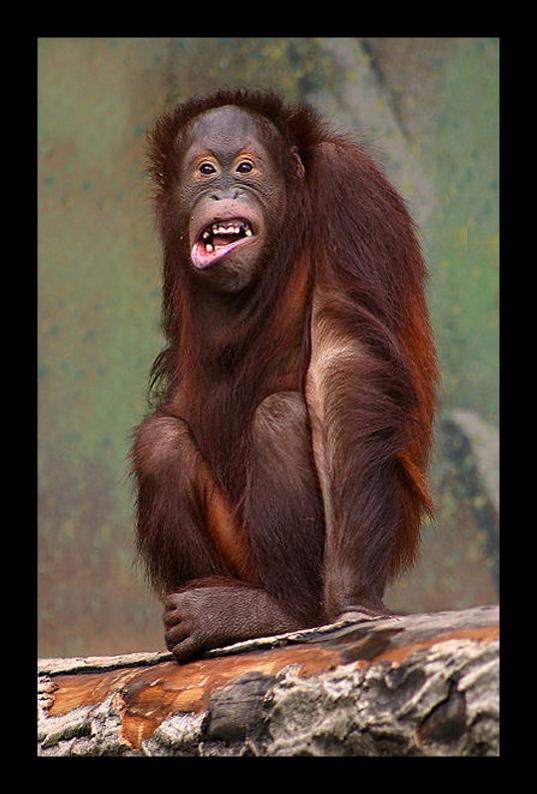


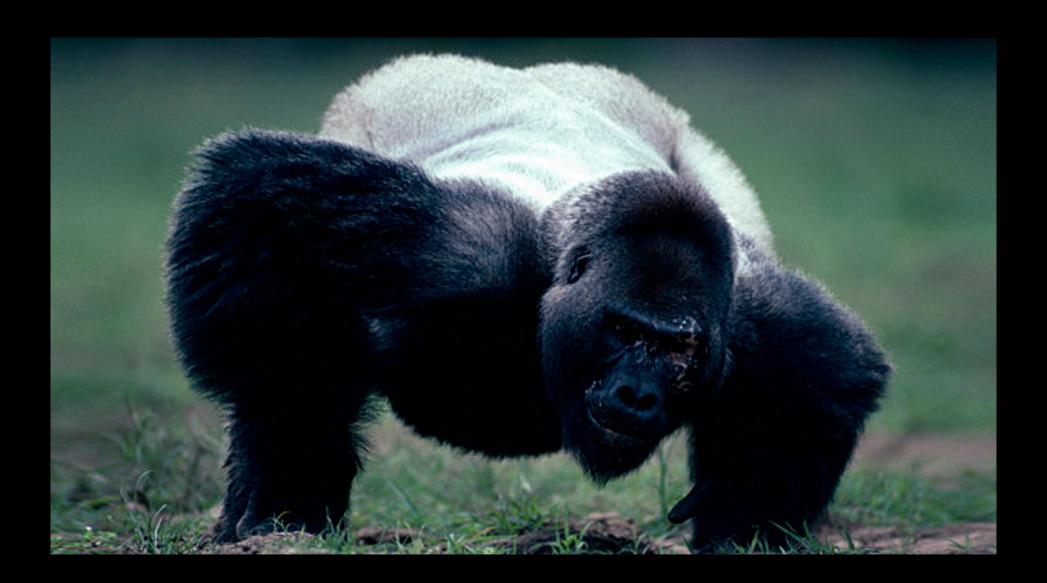






They had to learn to forget the rule of "strictly hierarchical relations"...







For my part, if I have learned that it was possible...

...to be the unquestioned leader of a wolves group...

...without conforming to the sad caricature of the "dominant"...

...it is thanks to "Yeux Clairs" (1996 – 2008)

In Memoriam...



Learning may imply making use of our own sense of friendship...







## But learning also implies being aware of...

...the empathic power of our own feelings and emotions...







We had also to learn to face our responsibility in captive animals boredom...





Finally: my personal best Western naturalist is...

Donald R. Griffin (1915 - 2003)



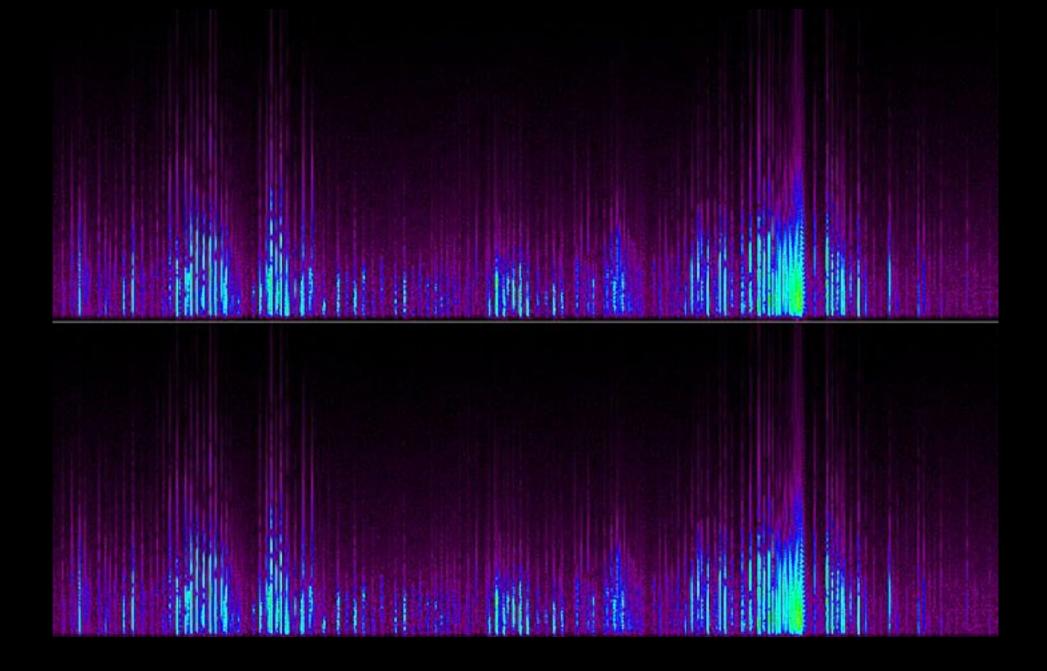


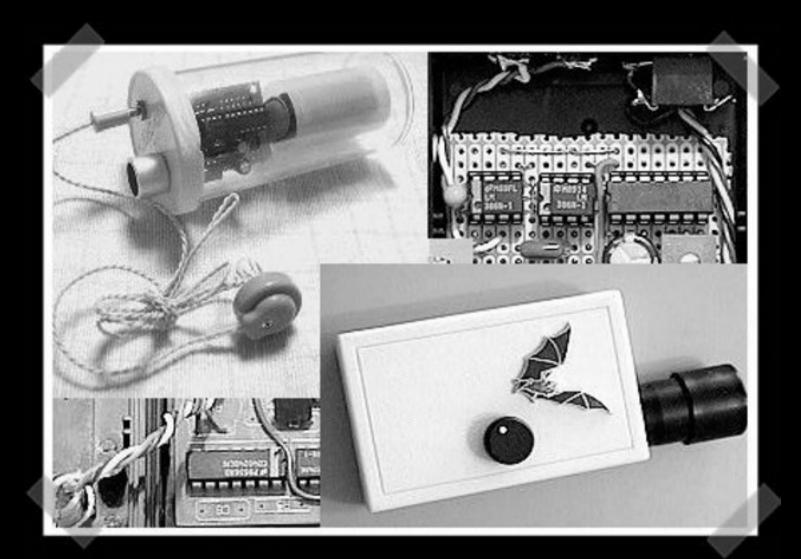
His fortune may have been to have begun his career studying bats.

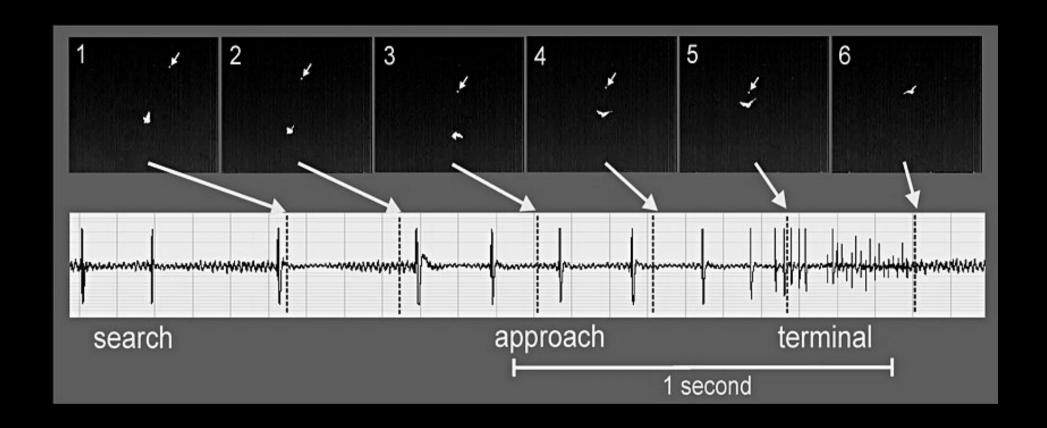


## They have never ceased surprising him: no sooner had he established...

...their ability to find their way with the help of ultrasonic sounds...







DONALD R. GRIFFIN

## Listening in the Dark

Bats, Birds, Fish, Men: how they hear their way

...that he had to recognize they also use their sonar system...

...in order to locate their preys in the depths of the tri-dimensional space of the night.



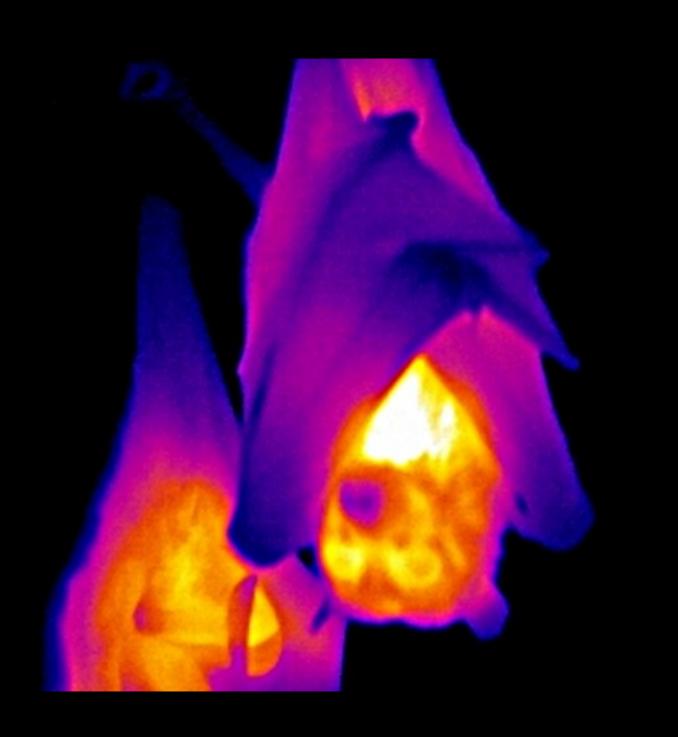
Next: intra-specific communication and "social calls" came to the front.



Then: echolocation learning from the mother to the youth...



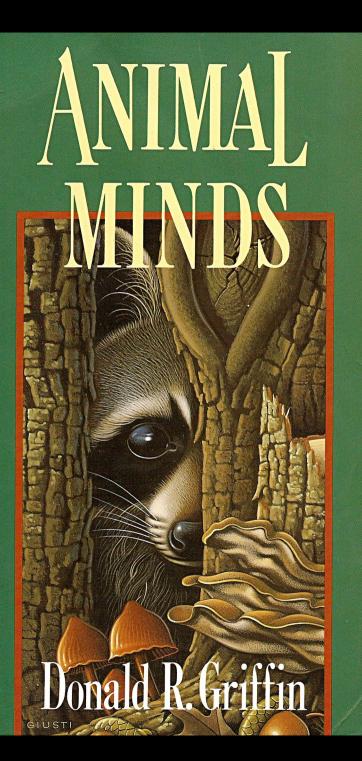
It may be that it is his experience to have, again and again, been obliged to concede new abilities to bats,



...which has activated Griffin's passion and search, with other animals,

...for what they have been deprived of (in the Western academic world):

...awareness, emotions, cognition, consciousness... minds.



"Now that there are strong grounds to dispute Descartes contention...

...that animals lack the ability to think, we have to ask just how animals do think.

Animals thoughts and emotions presumably concern matters of immediate importance to the animals themselves,

...rather than kinds of conscious thinking that are primarily relevant to human affairs".

Donald R. Griffin, 1994



"Wait! Wait! Listen to me! . . . We don't HAVE to be just sheep!"

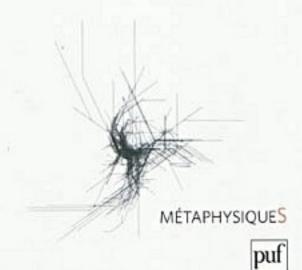
### And now as an echo and an homage to those Western naturalists...

(especially to Thelma Rowell)

...let us listen to
Eduardo Viveiros de Castro
(1951 - )
a "multinaturalist" anthropologist...



#### EDUARDO VIVEIROS DE CASTRO MÉTAPHYSIQUES CANNIBALES



# ...about his vision of the Amerindian understanding of animals:

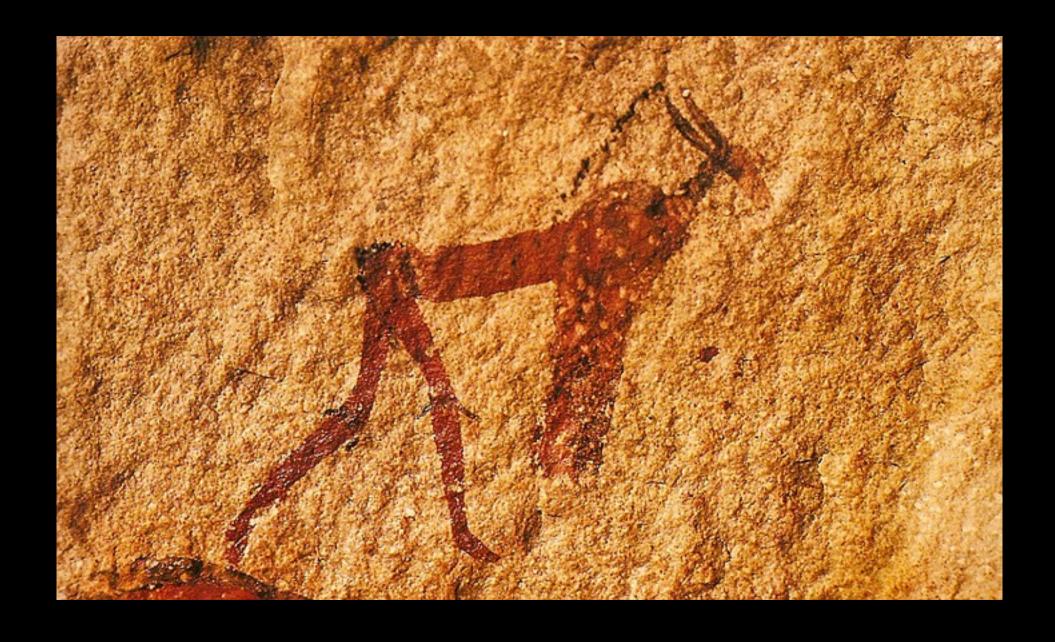
"Animals see in the same way as we do, things that are different from the ones we see...

...because their bodies are different from ours. I do not mean physiological differences...

...but affects, affections, powers that singularize each kind of body:

## ...what it eats, the way it moves, how it communicates, where it lives"

Eduardo Viveiros de Castro, 1996



To me, those words possess a distant but deep resonance with the work of...



...Jacob von Uexküll (1864 – 1944),

and his famous - and tricky: "Umwelt"...

591.5 Ue 89

#### Umwelt und Innenwelt der Tiere.

Von

J. von Uexküll.

Dr. med. bon. c.



Berlin. Verlag von Julius Springer. 1909. ...which he has defined as:

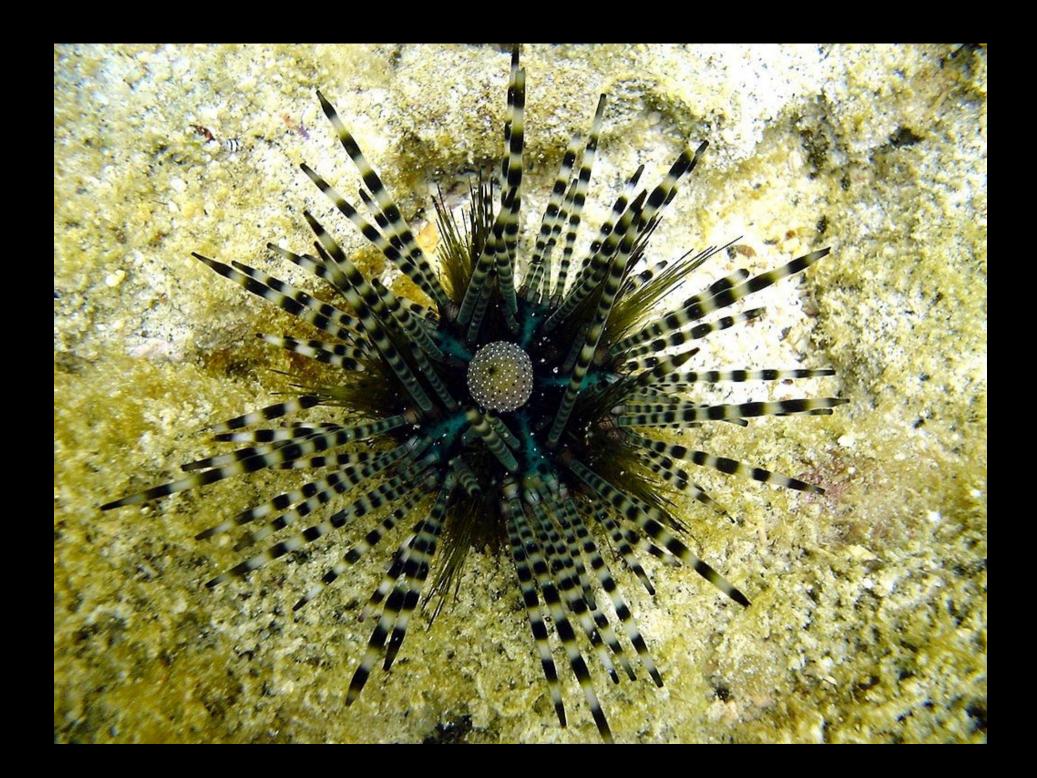
"...a perceptual world in which an organism exists and acts as a subject".

He established that *every* animated being does possess such an "Umwelt":



...an "environment-world" which is specific to its own ways of acting.

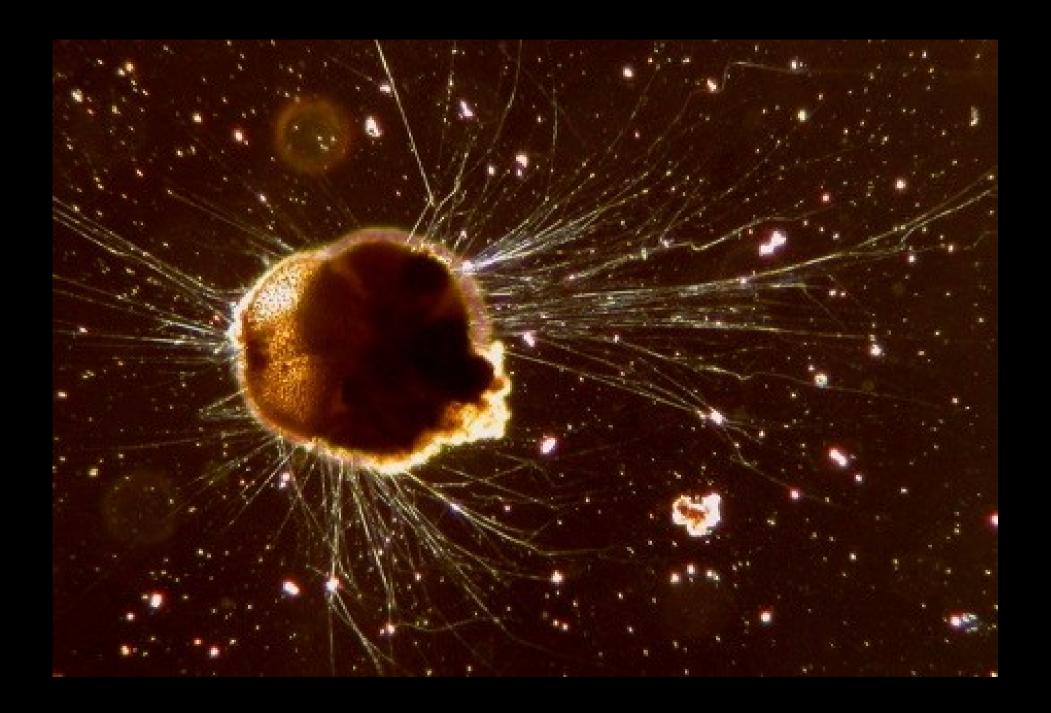
Action which is in relation...



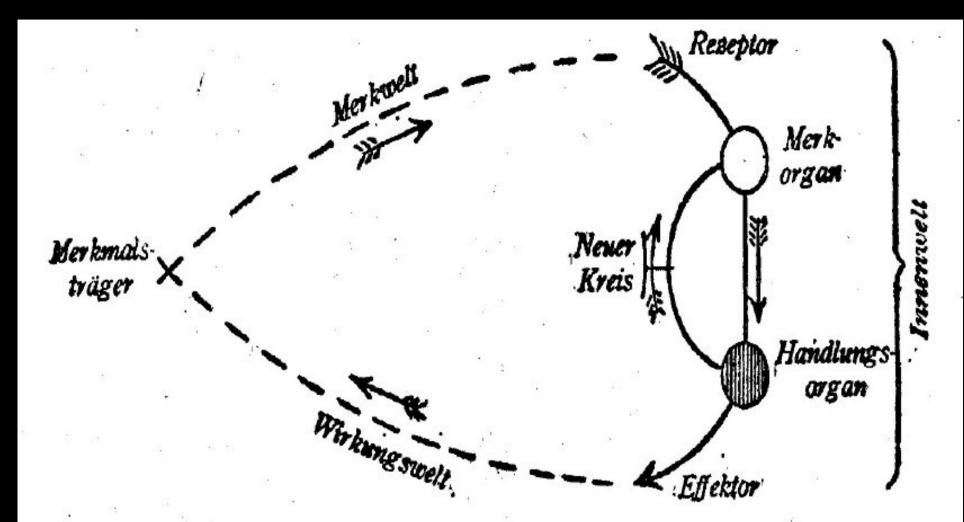
...with what its body and ability had selected as possible significances from its surroundings...



...elements to whom it has a perceiving access (and which had in return build it as it acts now)



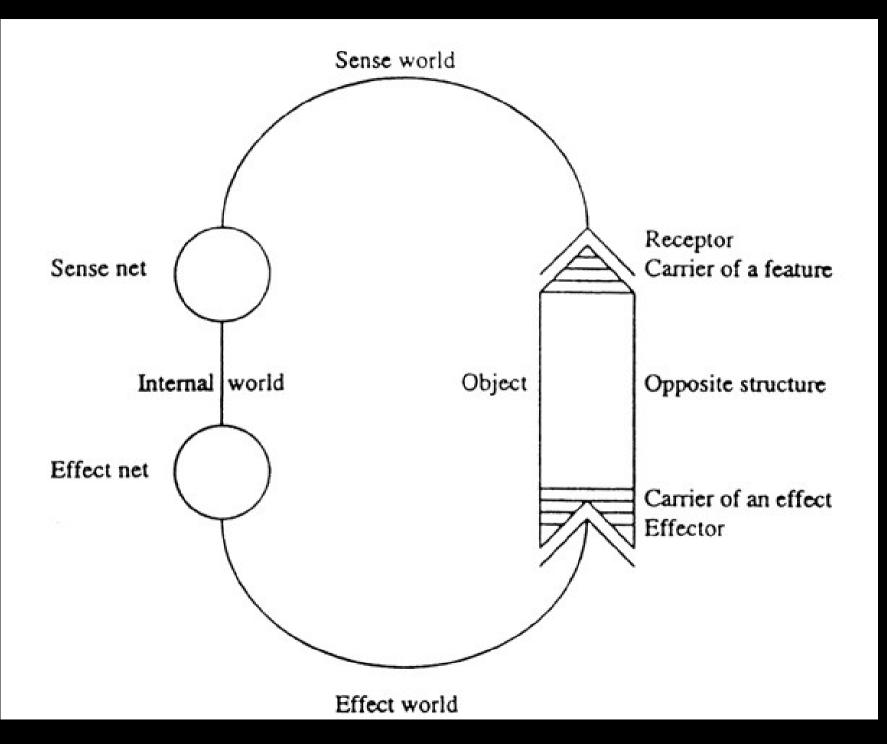
# What matters to it, what affects it and what it belongs to...



Figur 4.

### For every animated being:

..."its exterior is a projected interior, and its interior is a selected exterior"...



And now let's have a look to some attempts of representation that von Uexküll produced himself...



Photography of a village...

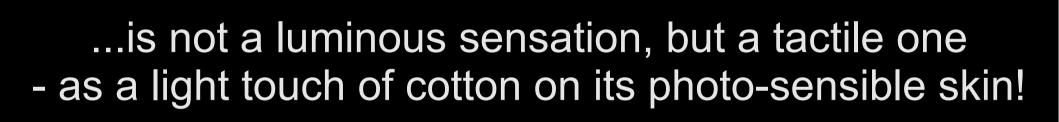


The same village for fly's eyes...



Idem... but for mollusk's eyes

But even with those representations, one has to be careful: from mollusks' Umwelt, a shadow...





And for this dragonfly on its way to a branch, that branch is not only a "perceived character",

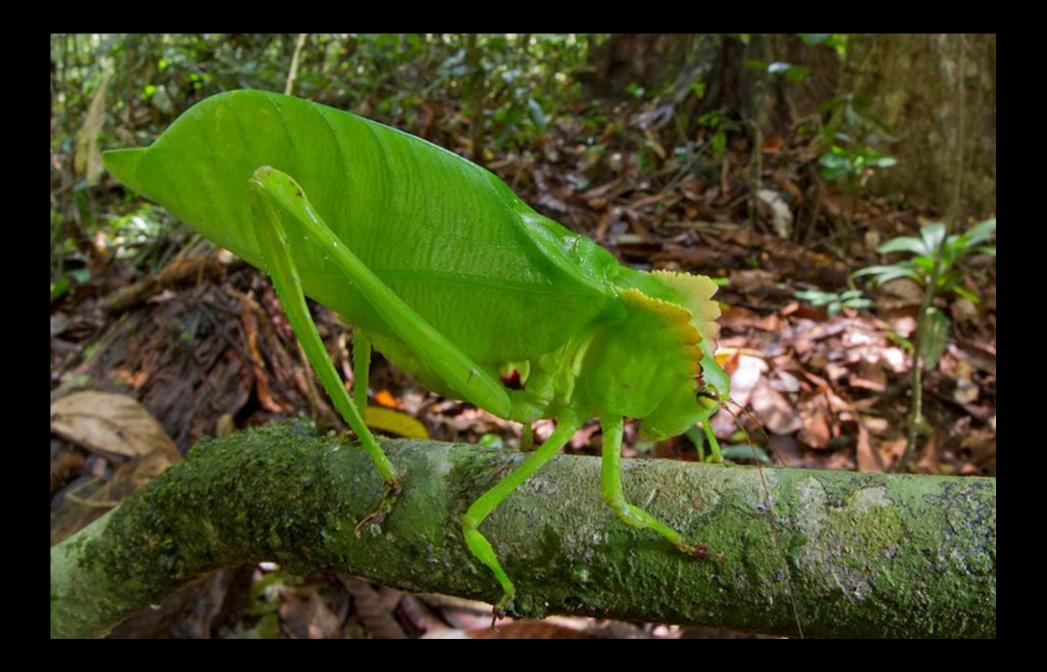
...it also exhibits the connotation "to land"... which makes it distinguishable and preferable!







And even if we – "seeing-beings" - could at once get that some preys are difficult to catch...



...on the other hand, it's quite difficult to believe that for birds, motionless grasshoppers...

...are not seen at all!

And this, not because they would be well disguised:



..."from the point of view of the Umwelt of birds", "still insect's forms" simply do not exist...

...until "some-form-things" fly away!

Their (delicious) body come into existence only through move.



And it's not only a simple question of perception: because the same birds...

...are totally aware of others "still insect's bodies"... and even perfectly capable of catching them!



But, in order to exist (as birds' prey), grasshoppers must be on the move...

...and it is this peculiar move which will specifically affect the birds (body as mind)...

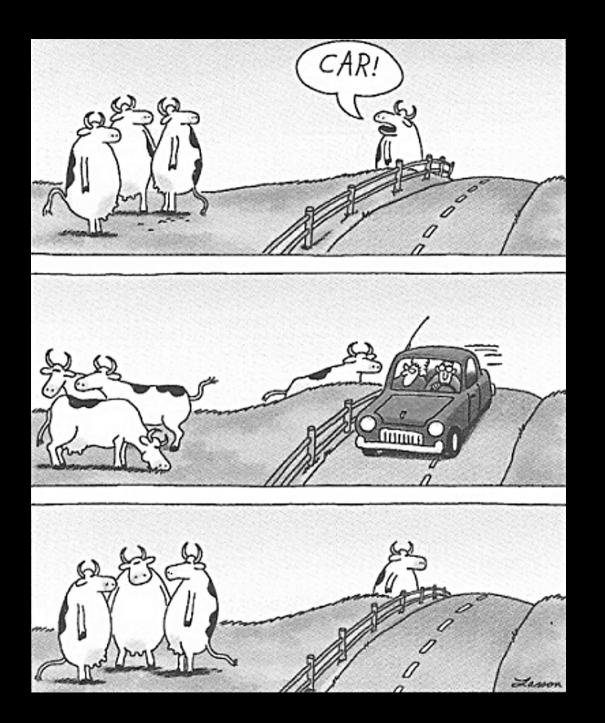
...and gives them a key – a lure - for their own move.

Such a move which is in the same time:

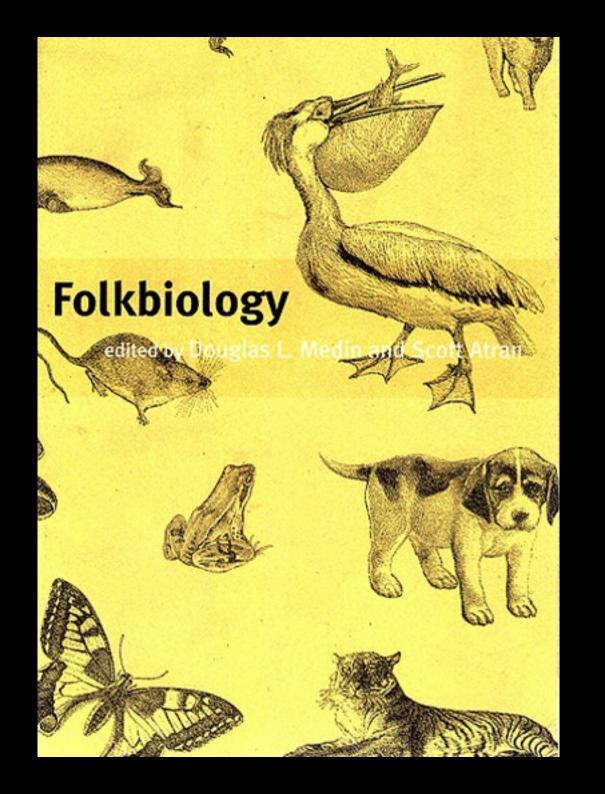
...perception, affect and action!



And now, closing those glimpses on possible "More-Than-Human Earths"...



...how to explain that since the sixties, Western anthropologists have been led...



...to admit that the fundamental taxa recognized in "folk systematics"...



...correspond fairly closely with scientifically known species?

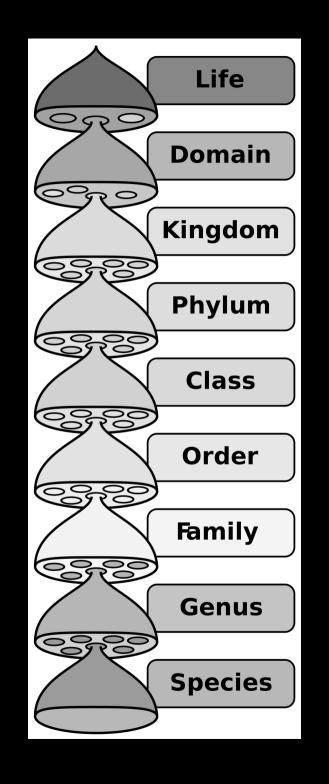


How can people who have quite diverging conceptions about the relations...

...between humans, living beings, and "things"...



...nevertheless agree in identifying similar entities - what we, in the West, call species?



Moreover: if human cultures surprisingly agree to discriminate surrounding beings...

...into analogue unities, the ways they do it are nevertheless largely distinct!

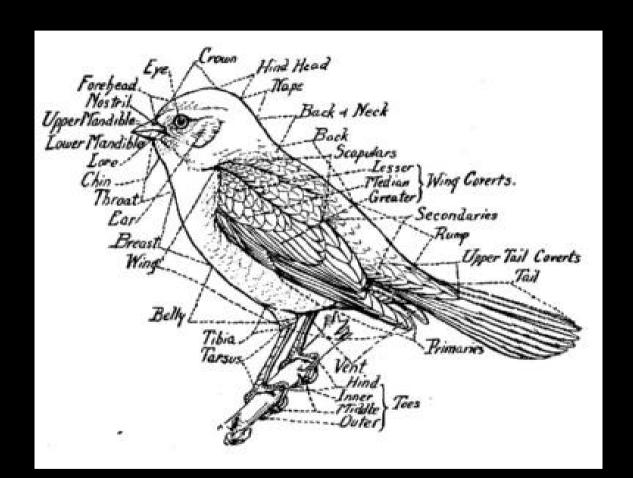


For Western scientists, identifying this Goldfinch basically implies... to catch a glimpse of it...



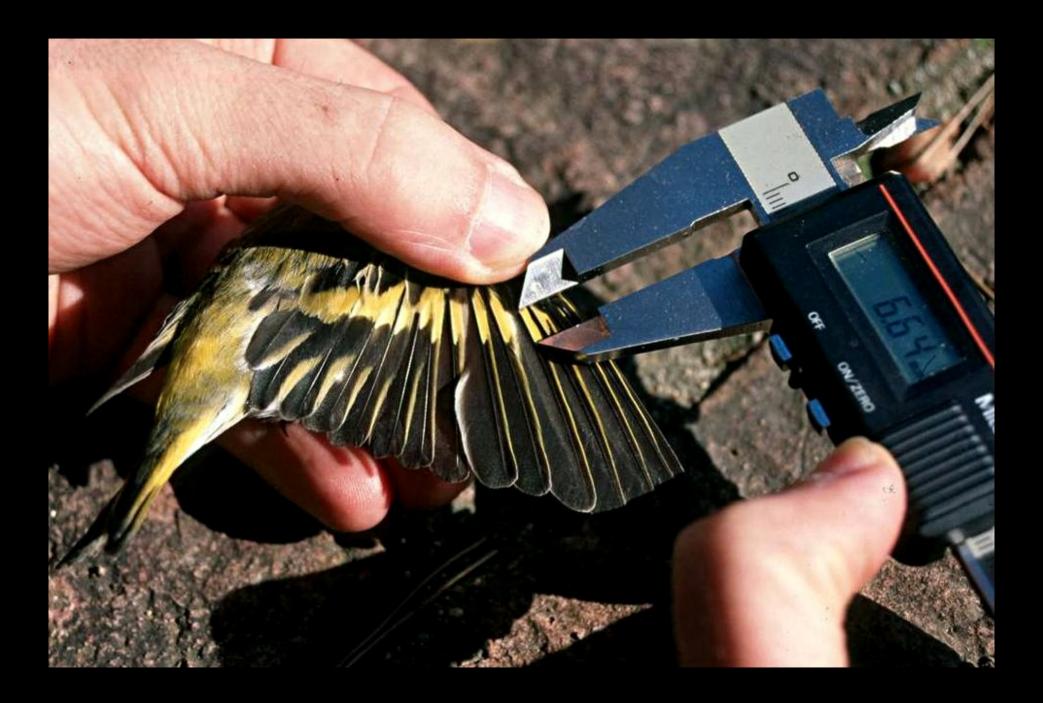
...focusing on it with binoculars, comparing tiny details...





...consulting books or colleagues.

And for the most difficult cases: catch and measure it!



## Non-literate people will identify a bird by linking a specific sound...

...to a certain moment of the day, and to a silhouette located in an appropriated place.



And this "situated silhouette" with a proper way to eat, to interact, to move... to be!







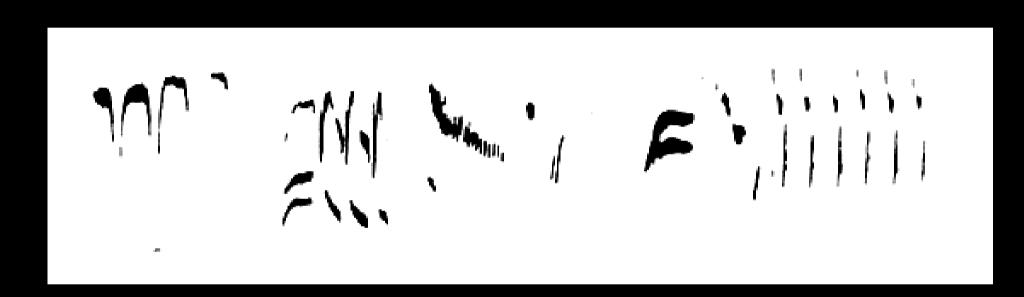
So in the end, particular birds are equally identified...

...but are they the "same"?



And even if some Western naturalistic skills seem issued from the same kind of apprenticeship...

...learning mainly by seeing or mainly by hearing may give access to quite distinct worlds!



## Anyway in non-literate native cultures, songs, calls, chirps, shouts...

## ...all the voices of the place's inhabitants are known since childhood!

Often the names given to birds capture a specific aspect of those peculiar voices...

## For example:

"Tsiterwitch... tsiterwitch"

one of Goldfinch's names in Walloon...

...the formerly vernacular oral language of my village (East Belgium)



And those ones – typically resonating my place, which are named: "Bèyoles"...

...how did you name them, you?

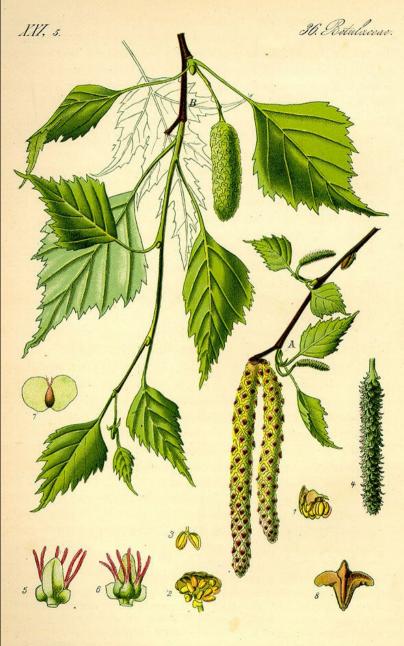
Trees...



Or... Birch?

Birken - Bouleau - Berk – Abedul Brzoza - Bedolls – Bétula - Björk

Or even the scientific: Betula?



104. Betula verrucosa Chrhart. Weiße Birke.

## And also... what do you know about what could be specifically done with it?

In my place, where "beyôles" are at home, they were commonly used for...







They are also known for giving asylum and protection to other renowned beings...





Today a Swedish company has countless ways to get worldwide profit from the birch's fine texture...



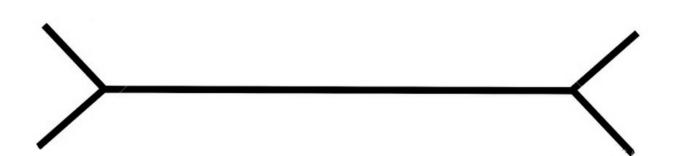
So: knowledges do also inhabit the relations and usages that people stitch with surrounding beings...

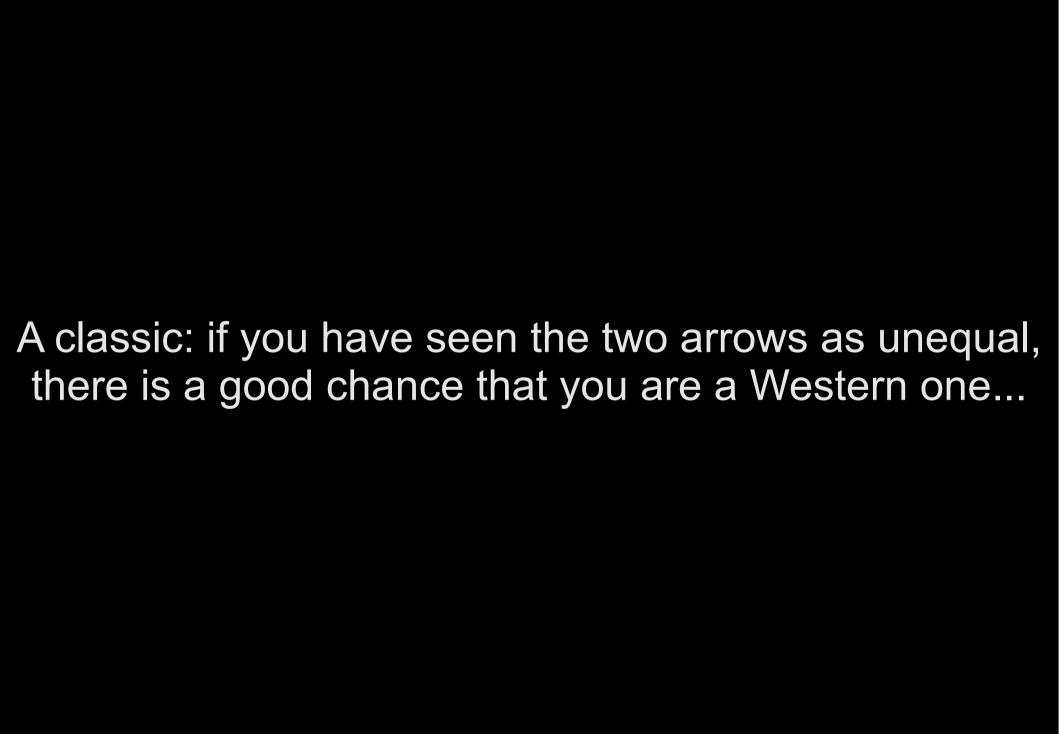


And all this creates differences so important in perceptions between human cultures...

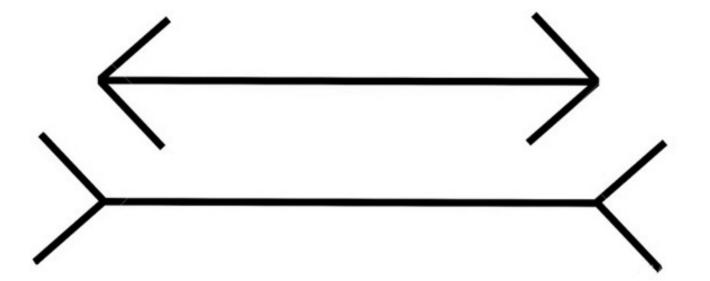
## ...that even Western psychologists have learned to notice them!







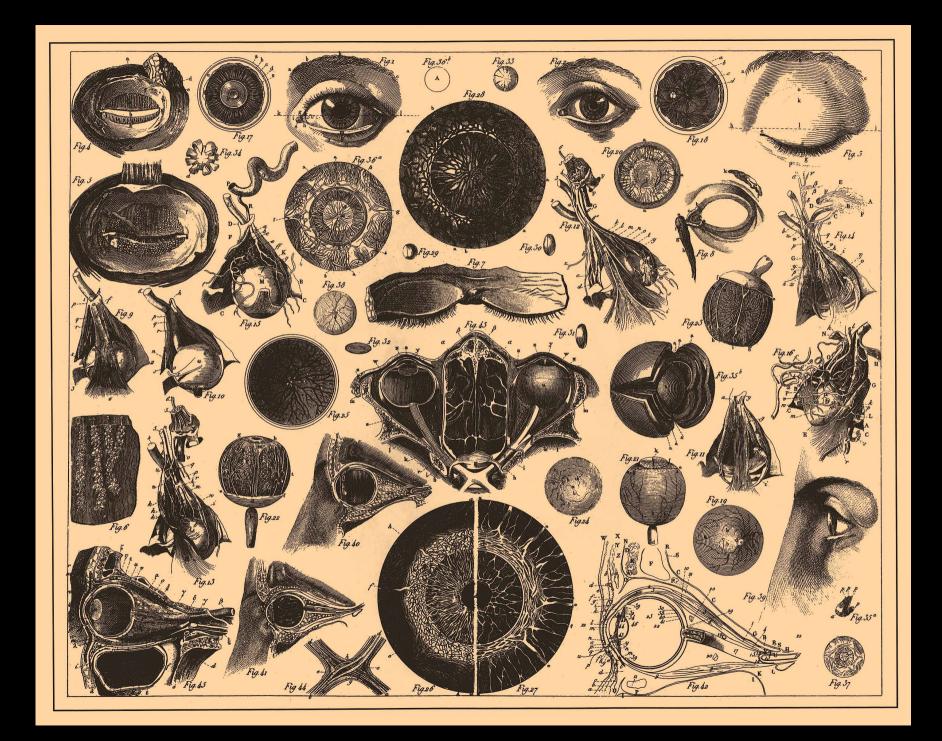
...but if you have seen them as equal, there is a good chance that you belong to a native culture!

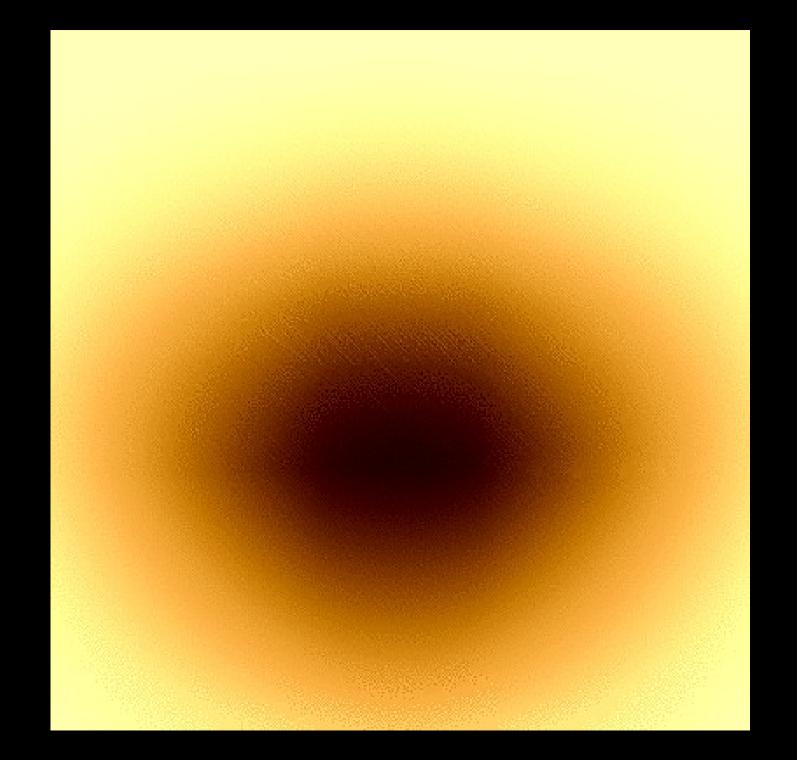


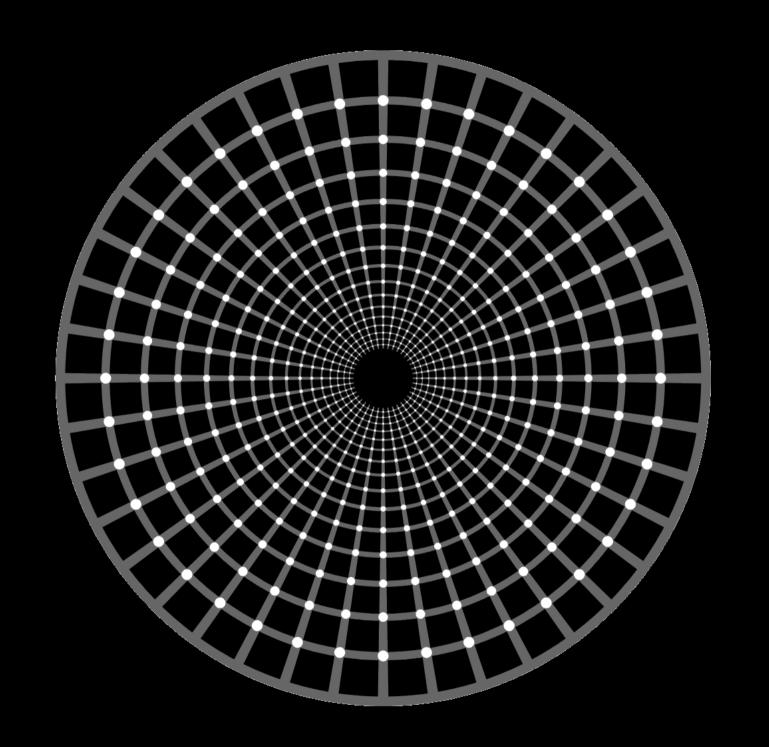
"If even a process as apparently basic as visual perception can show substantial variation...

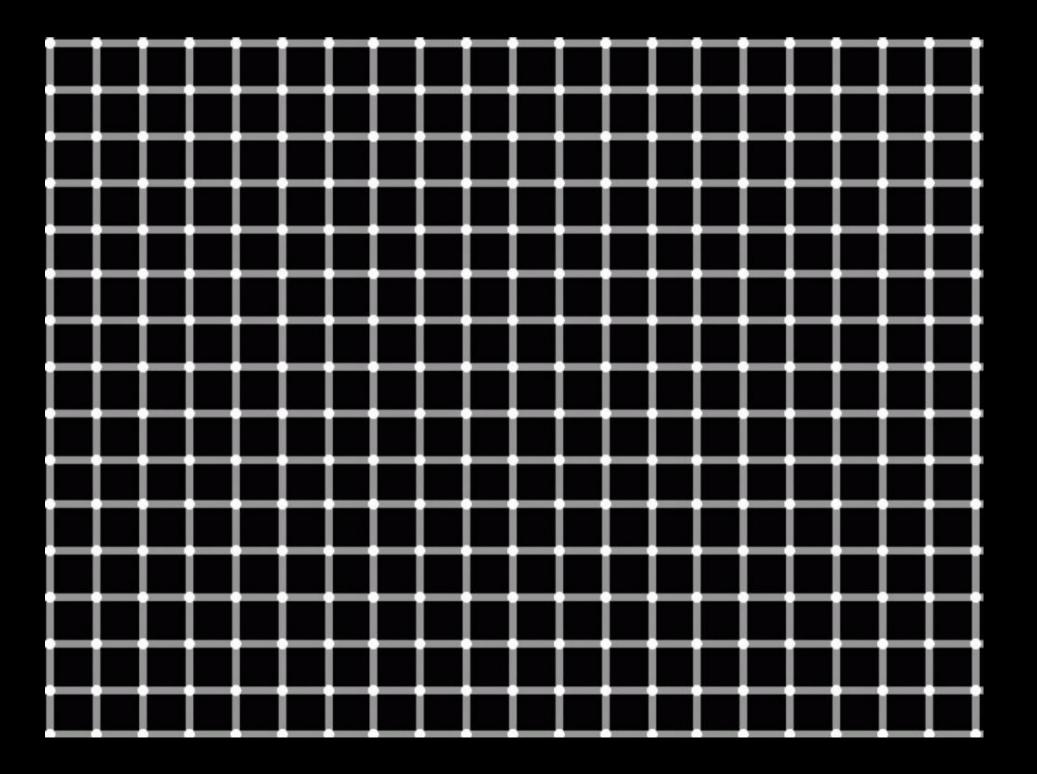
...across populations (...) what kind of psychological processes can we be sure will not vary?

"The Weirdest People in the World", J. Henrich, S. J. Heine and A. Norenzayan, 2009













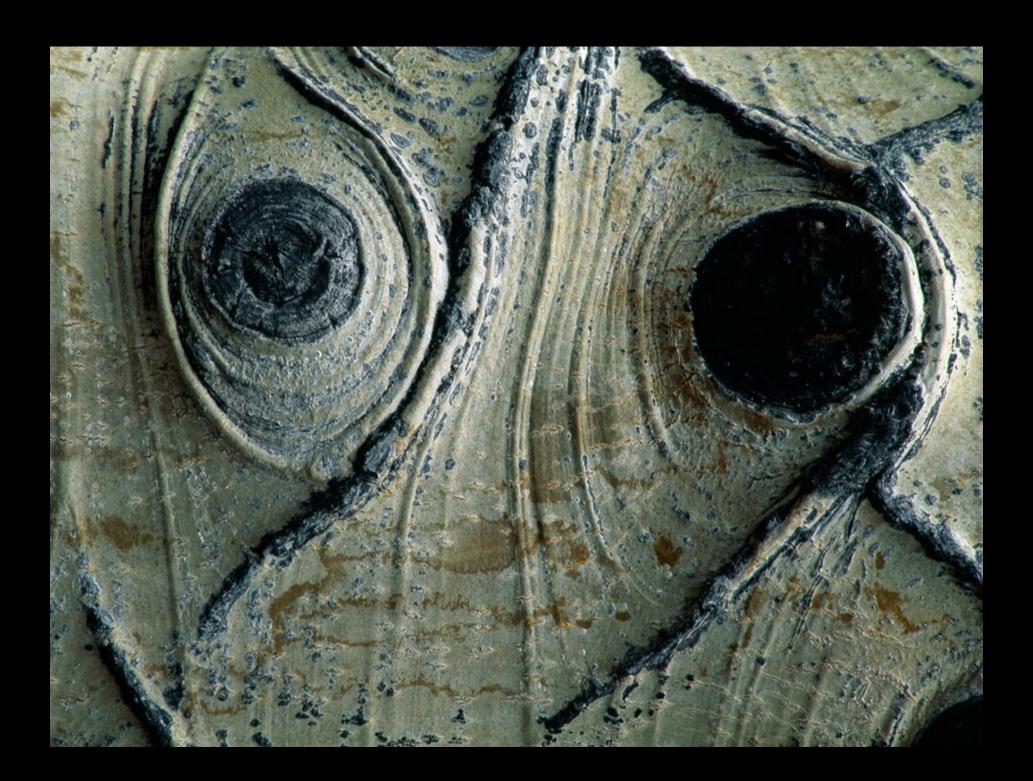


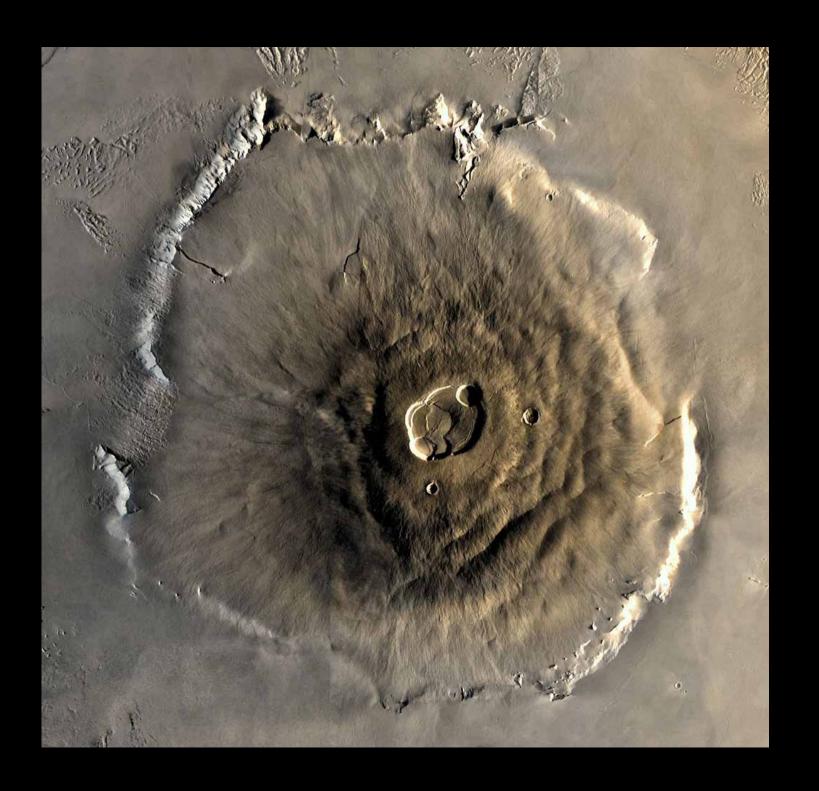




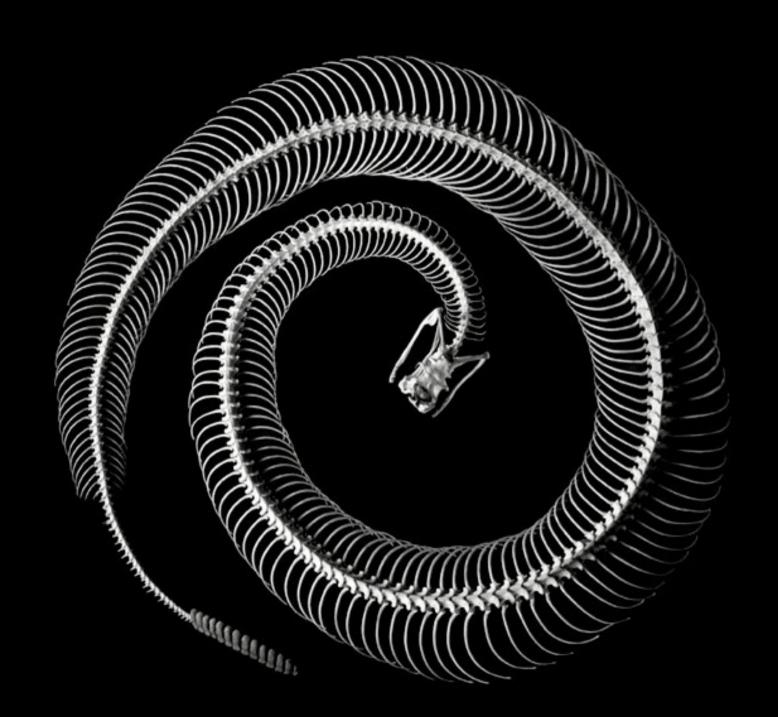




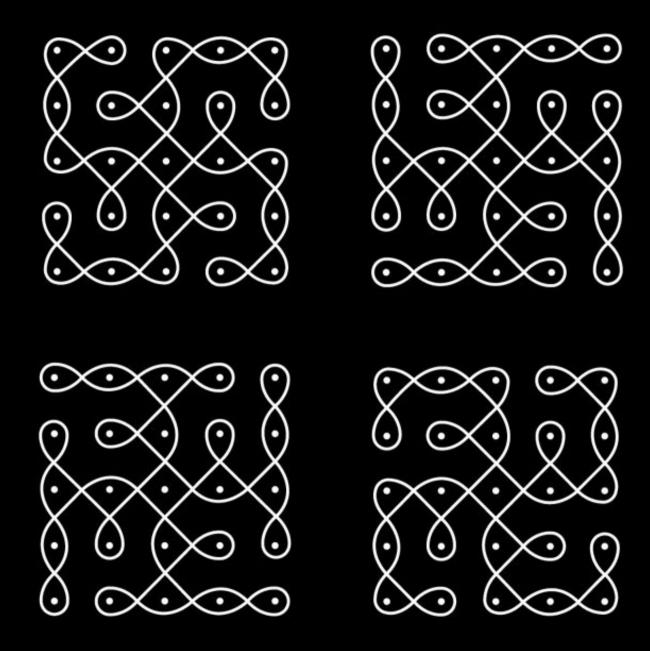






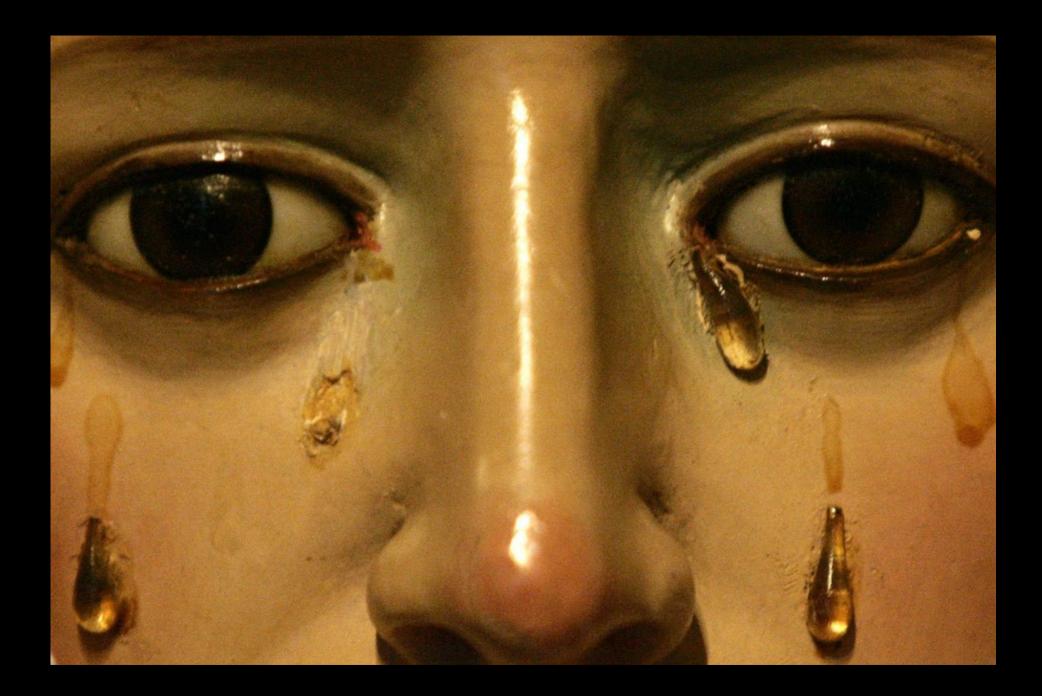












Eventually: how can... shells be defined as belonging to the same group of animals...

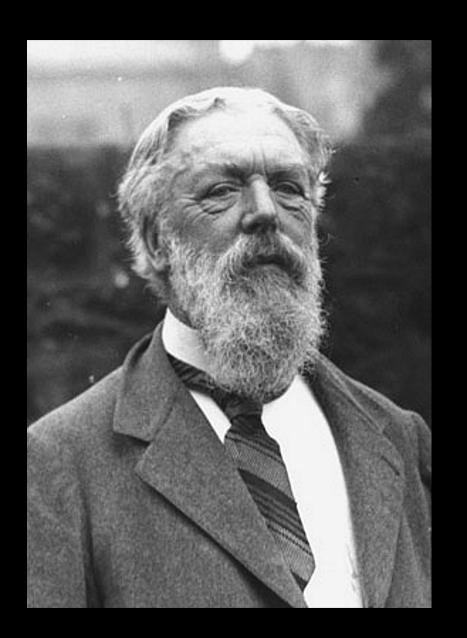
...if for some populations, they are mostly known as delicious...



...and for others, the most beautiful ones are used to "buy the jaw" of a future "fiancé"?



## May it be that a clue can be located in D'Arcy Wentworth Thompson's work? (1860 -1948)



## ON GROWTH AND FORM

The Complete Revised Edition

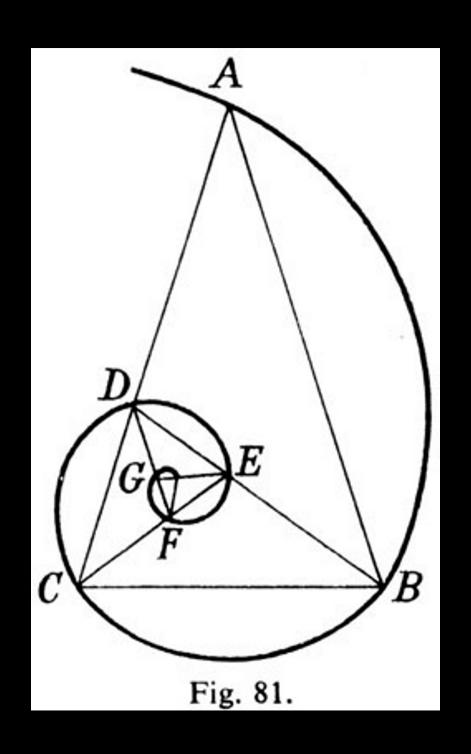


D'Arcy Wentworth Thompson

Thompson tried to demonstrate that the many differences of forms in Nature...



...may be explained by applying simple physical forces upon a same primordial "ancestor".



In the following example: the second circle is a transformation of the first...

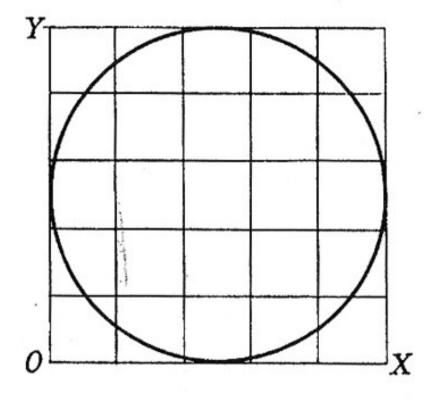


Fig. 120.

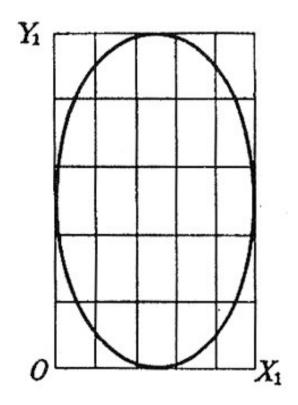


Fig. 121.

...when a compressive force is applied along an horizontal axis.

This transformation of an oval is not a uniform one, but a logarithmic one:

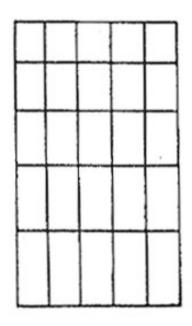


Fig. 123.

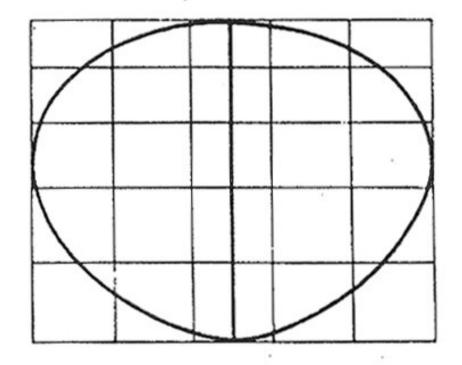


Fig. 124.

A radial one, this time...

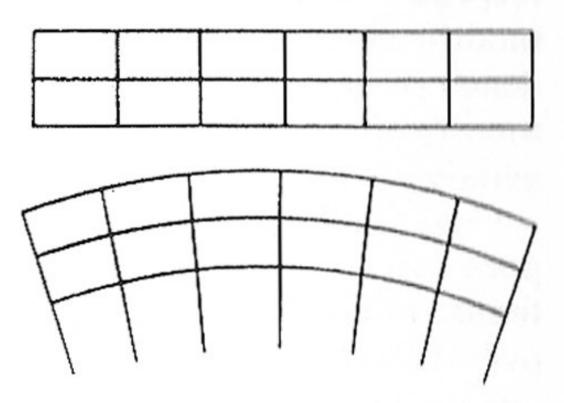


Fig. 126.

For living species, here are some results...

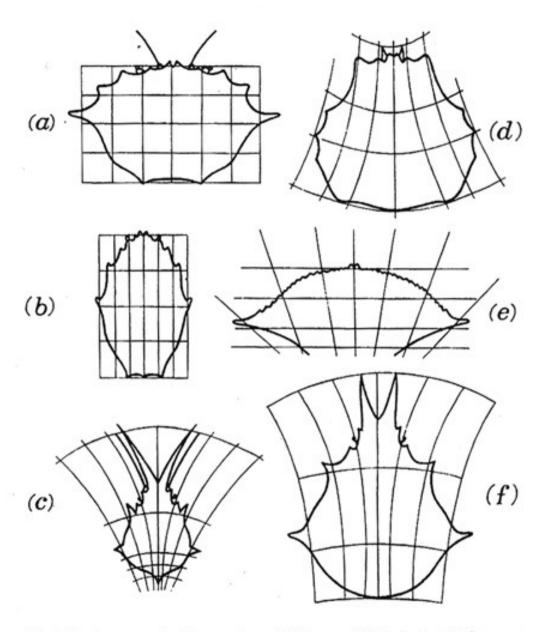


Fig. 142. Carapaces de divers crabes : (a) Geryon; (b) Corystes; (c) Scyramathia; (d) Paralomis; (e) Lupa; (f) Chorinus.

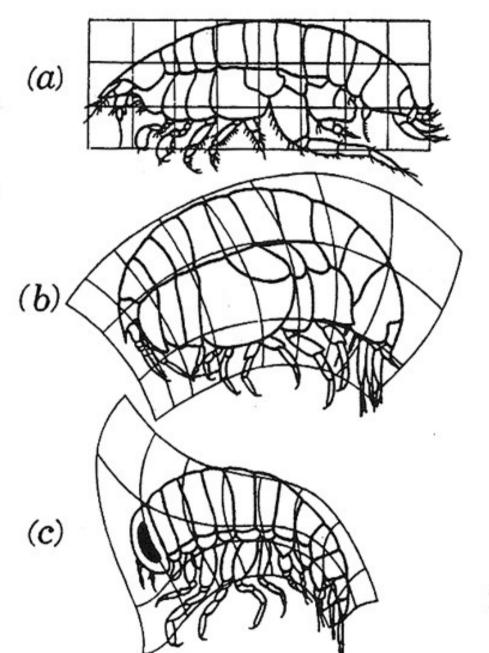


Fig. 143. (a) Harpinia plumosa Kr.; (b) Stegocephalus inflatus Kr.; (c) Hyperia galba.

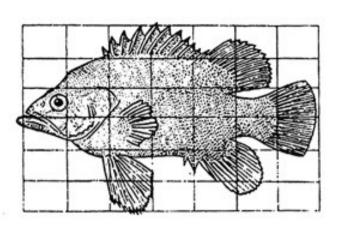


Fig. 150. Polyprion.

Fig. 151. Pseudopriacanthus altus.

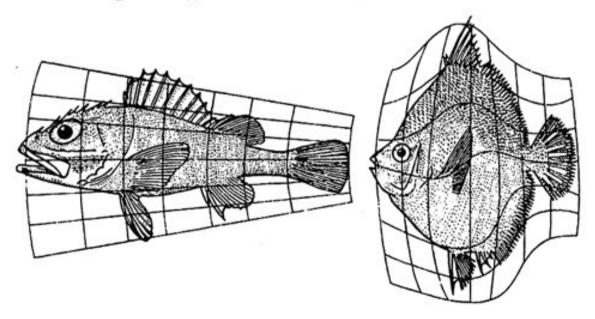
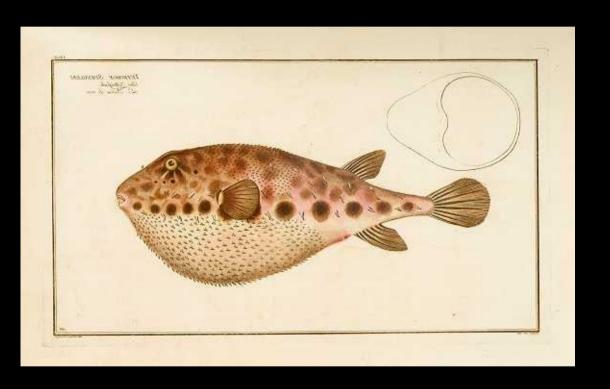
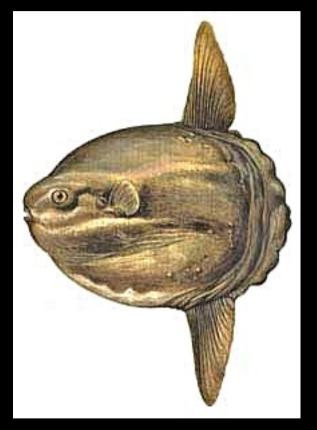


Fig. 152. Scorpaena sp.

Fig. 153. Antigonia capros.





Those two are parents...

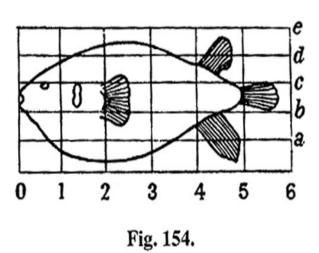


Fig. 155.
Orthagoriscus.

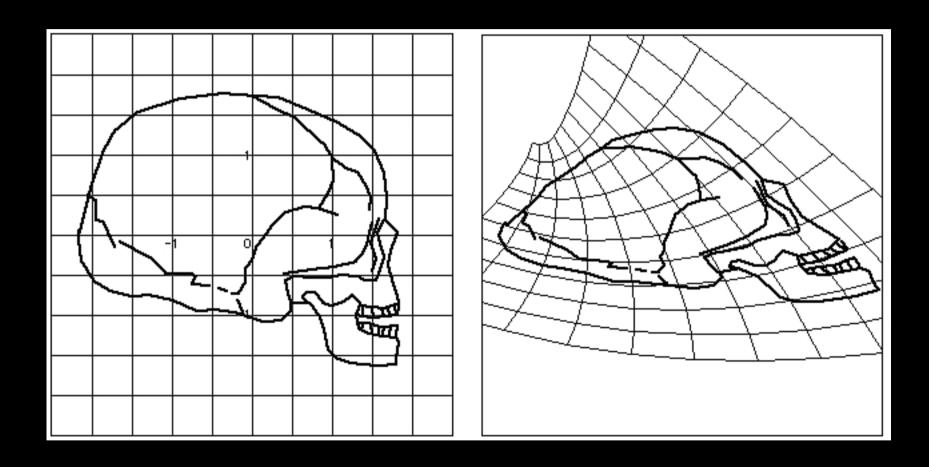
## And so, to summarize my proposal about the capacity...

...of all cultural groups to exhibit a common ability of identification:



...simple physical mechanisms of transformation are at work...

...the human brain is able to follow those subtle twists and turns of forms.



Those "morphological courses" guide brain and body perceptions through the diversity...

...and finally it would enable human beings to match the kins.

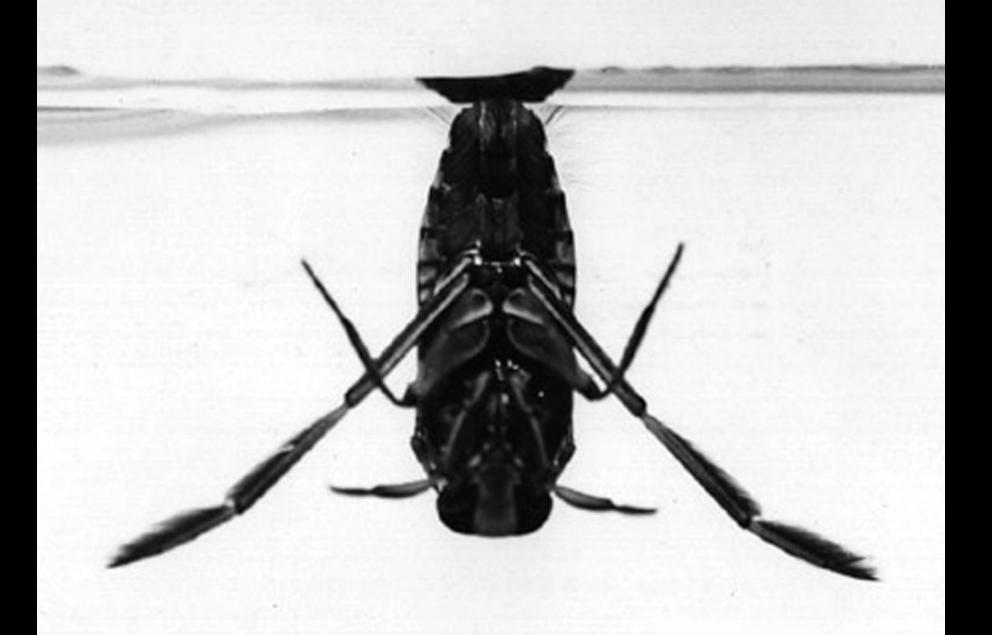


However, let us remember that even for brains and bodies as incredibly gifted as ours,

...there remain true "terrae incognitae" on Earth!



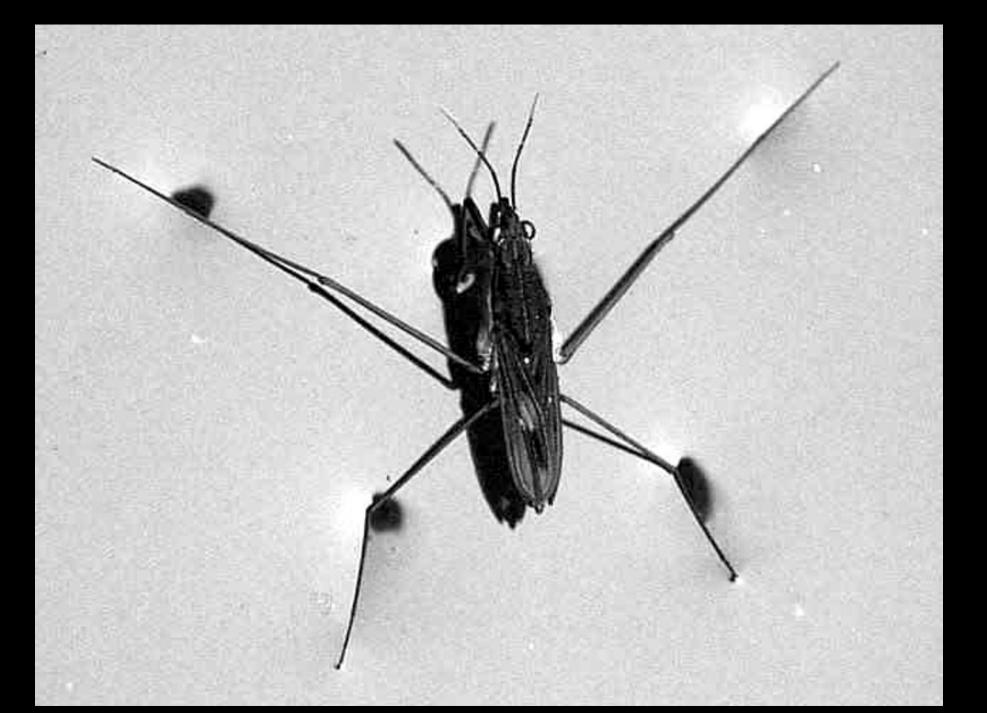
From our perspective scale, the world is ruled by gravitational forces...



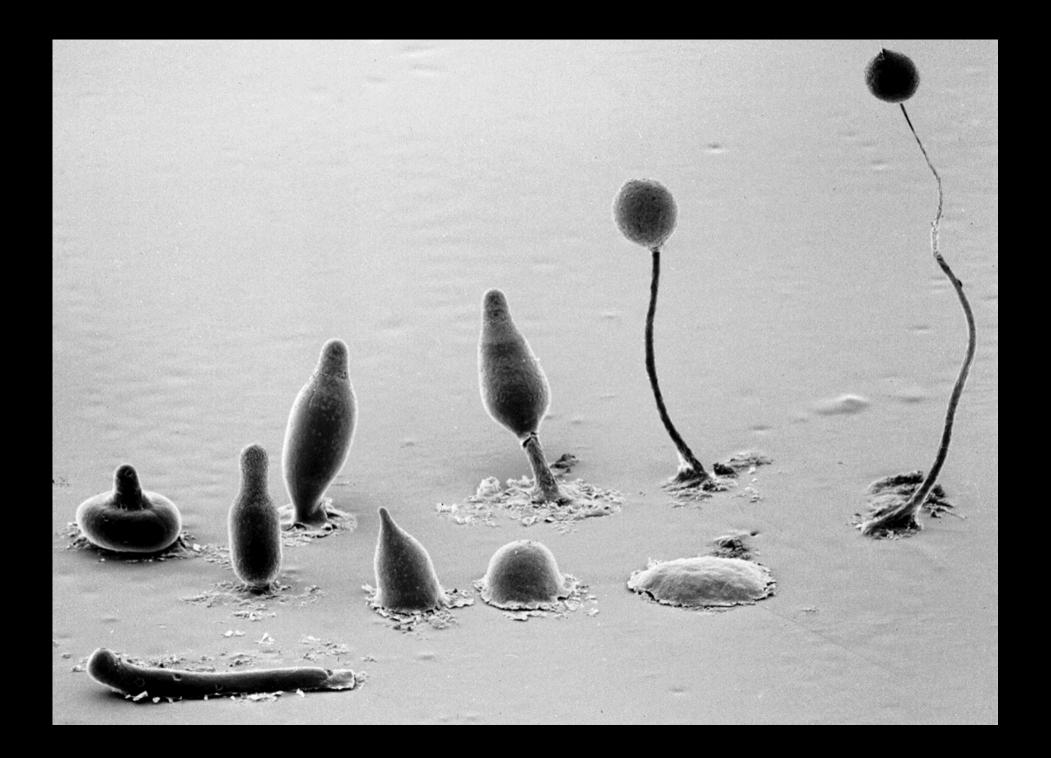
# ...but other physico-biological worlds exist!

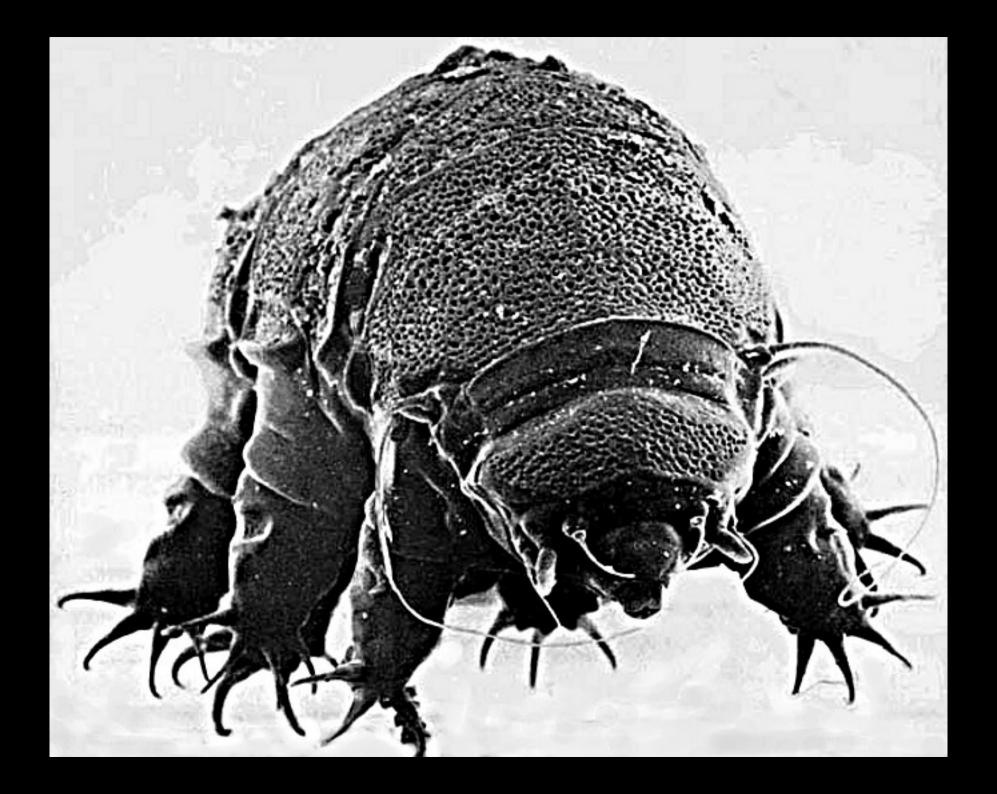


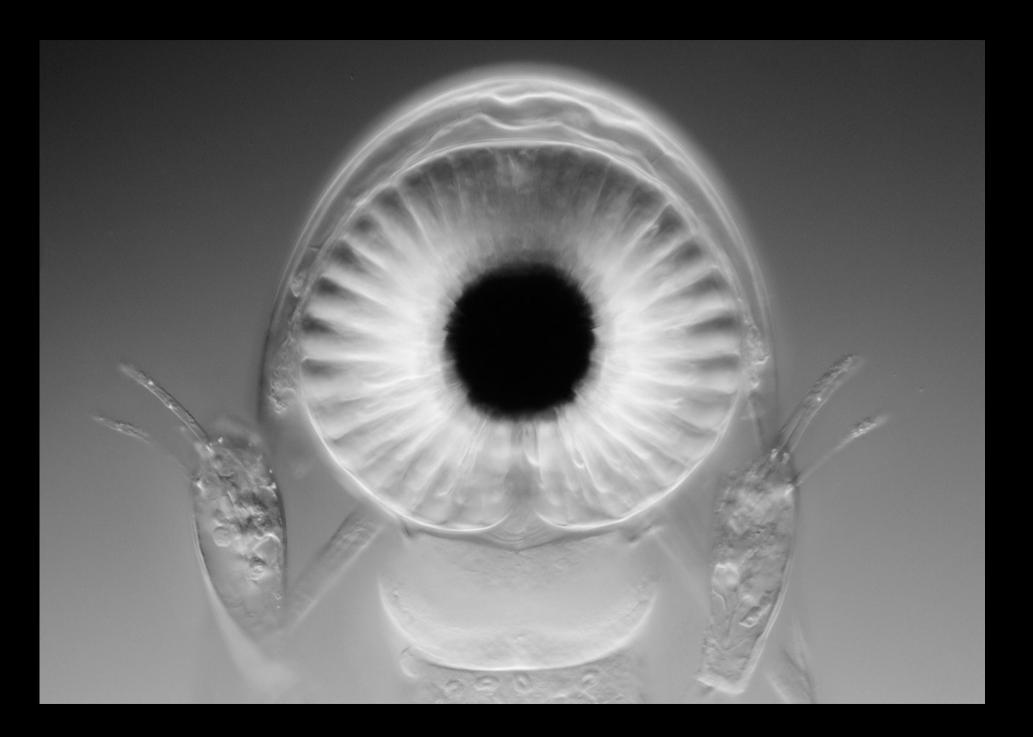
# Insects worlds essentially associate with superficial tension.



## Not to speak about the different Earths hidden in the underground...







And now...

...reaching the end, maybe the most surprising:



...young mammals, whatever their morphology or habitat,







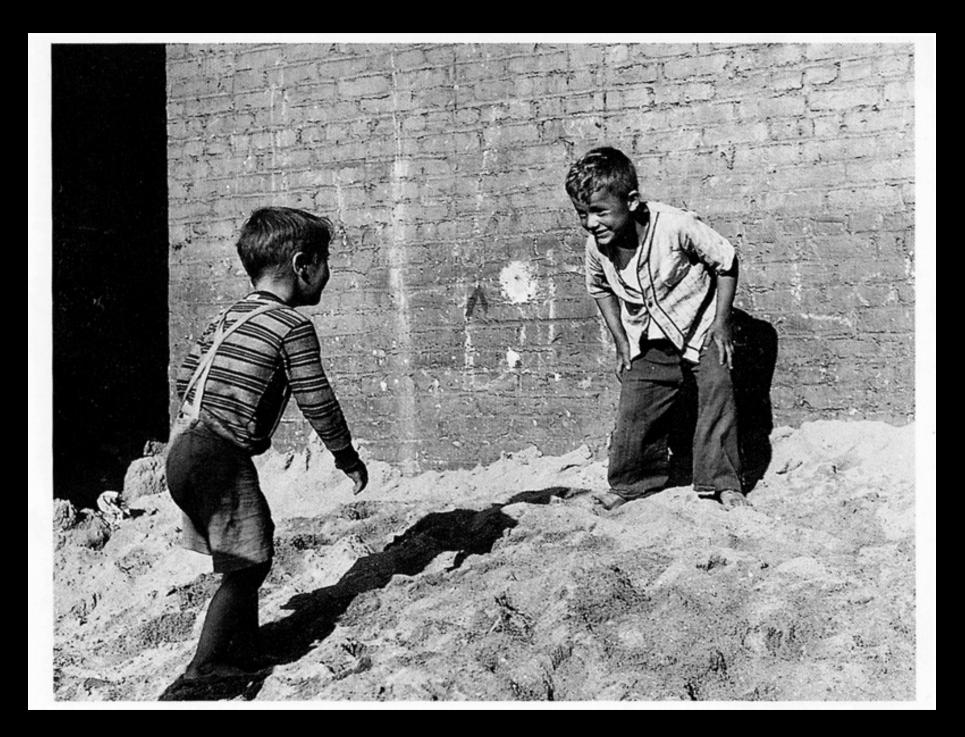
...have at least something in common...







and that's... play!



Those were examples of the "King of the Castle" game...

#### D' F. BUYTENDIJK

PROFESSEUR DE PHYSIOLOGIE A L'UNIVERSITÉ DE GRONINGUE

### PSYCHOLOGIE DES ANIMAUX

PRÉFACE DE M. ED. CLAPARÈDE, PROFESSEUR DE PSYCHOLOGIE EXPÉRIMENTALE A LA FACULTÉ DES SCIENCES DE L'UNIVERSITÉ DE GENÈVE, AVEC UNE NOTE DU D' L. LÉPINAY, PROFESSEUR A L'ÉCOLE DE PSYCHOLOGIE DE PARIS

TRADUCTION FRANÇAISE DU D' R. BREDO MEDECIN VETERINAIRE DU GOUVERNEMENT À MALINES

Acec 56 illustrations



PAYOT, PARIS



"To the cat playing, the paper or the rubber ball... ...isn't a dead object but something alive (...) Thanks to its "Vital Phantasy" the animal sees...

...all sorts of hidden properties and potentialities...

...inviting it to movements of investigation...

...and perhaps leading to play"!

Frederik J. J. Buytendijk (1887 – 1974), 1928



"Vital phantasy" as an inherent property of...

...every animated being.

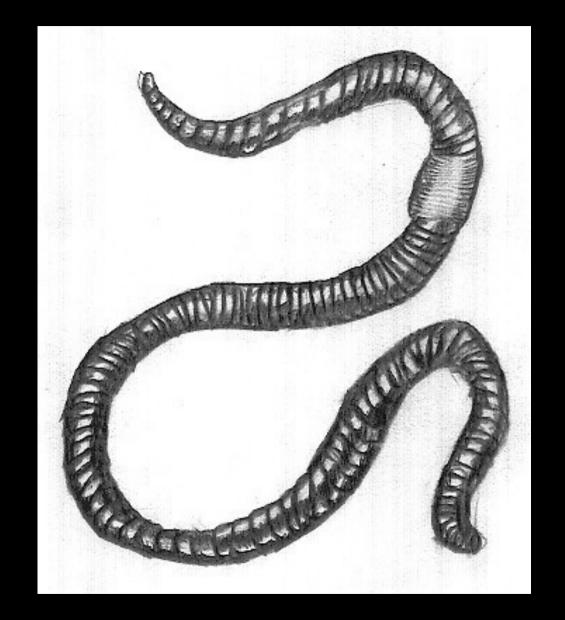
A possible ongoing relation...

### ...within a sensuous More-Than-Human Earth?



Oh yes... this is the forest which is gaining ground!

Thanks to gardener's best friend...



#### Thanks to

Luis Ansa, Jaqueline Bureau, Mai Abu El Dahab, Mariana Castillo Debal, Jean-Bernard Demorcy, Simona Denicolai, Frédérique Dolphijn, Alexandre Finck, Anselm Franke, Anne Frézard, Lucien Hounkpatin, Serge Gutwirth, Gérard Jadoul, Irene Kopelman, Bruno Latour, Marianne Lejeune, Kobe Matthys, Tobie Nathan, Maria Puig, Laïa Sadurni

## Special thanks to Isabelle Stengers

And also to all the persons who are contributing to the Wikipedia project

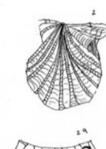
#### Without forgetting

all the inhabitants of enchanted forest and heathland that I have been fortunate to visit again and again since childhood... 'Lógicas Desviadas' is compiled by Argentinean artist Irene Kopelman, following an exhaustive period of research at the library of the *Teylers Museum*, in Haarlem, The Netherlands.

In the 19th century the museum was a centre of scientific research and part of the display has been preserved in its original state. As one of the oldest museums in the Netherlands it contains in its archives important and reputed collections, publications and scientific artefacts.

In the second half of 2004 the artist immersed herself in the labyrinths of the Museum's library. Her research focused upon the material connected to the 18th and 19th century's scientific expeditions to 'exotic countries' that were documented in great detail by the travellers of the time.

Specific to her research are systems of comprehension and representations of nature that were used by travellers and explorers to record the data they callected, such as shells, eggs, fossils as well as geographic formations that were unique a particular area as well as the flora and fauna that might not survive the long and uncertain journey back to Europe.







# Irene Kopelman

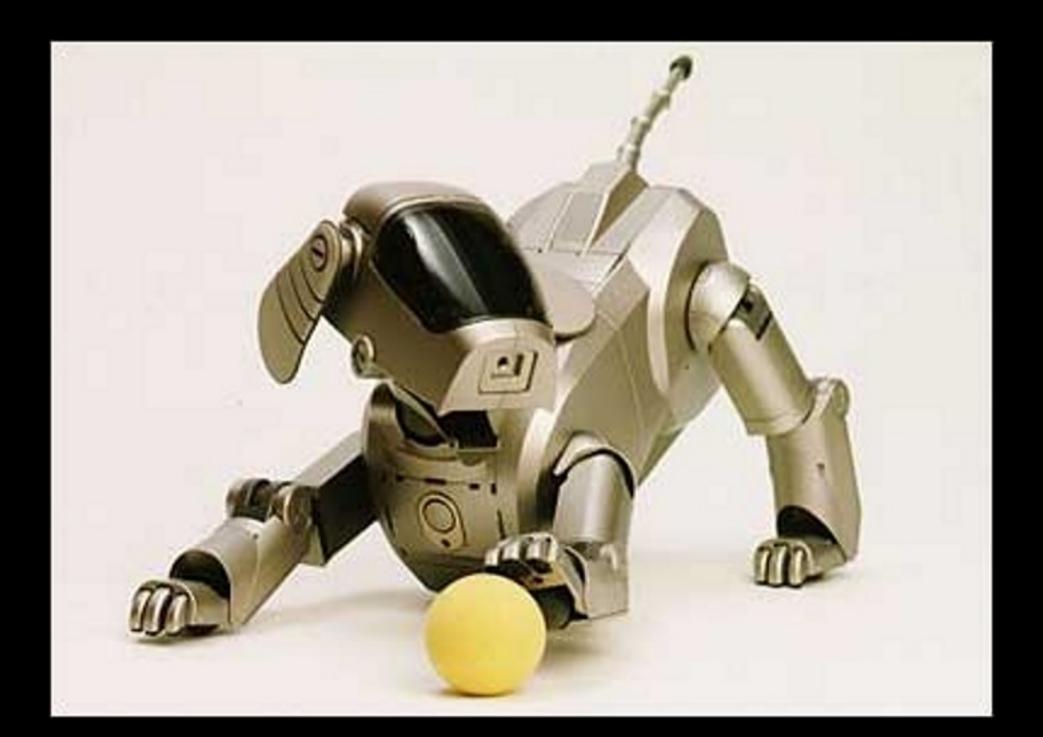
#### Lógicas Desviadas

ILLUSTRATIONS CONGLYLIOLG : QUES 4. 5. Pugilis. Line . us succili Mebrica cipro 4. Pugilis line us 2. 5 Pugilis line . Lane . us succili Mebrica ciprolle c - Tagilis pase au 2. 5 Pugilis line le mellosto sons to coprolle c - Tagilis pase au 60000 corre Chemnitz 6-7 - Pugilis pase 4. Puglis line us stomis -

Irene Kopelman

Lógicas Desviadas

To be continued...



#### Warning!

The process of collecting images was a long one: it's quite possible that in the course of this research, I mislay some of the constraints attached to one or the other images. If you have any claims to make, please contact me! d.demorcy@swing.be

YELLOW BLUE YELLOW

BLACK RED GREEN

BLUE YELLOW RED

YELLOW GREEN BLACK