

# LES FLUX, LES CYCLES, ET LA TRANSMISSION

## promenade archi-auto-bio-graphique

Mireille Roddier  
University of Michigan

Observatoire de Paris, 6.VI.2025



*Le pain, le levain et les gènes:  
Un essai sur l'évolution*  
(2009)

*Thermodynamique de l'évolution:  
Un essai de thermo-bio-sociologie*  
(2012)

*De la thermodynamique à  
l'économie: Le tourbillon de la vie*  
(2018)

François Roddier

le pain, le levain  
et les gènes

un essai sur l'évolution



François Roddier

Thermodynamique  
de l'évolution

Un essai de thermo-bio-sociologie



François Roddier

De la  
thermodynamique  
à l'économie

Le tourbillon de la vie



# 1. De la promenade

"La marche a quelque chose qui anime et avive mes idées; je ne puis presque penser quand je reste en place. Il faut que mon corps soit en branle pour y mettre mon esprit."

- J.J. Rousseau

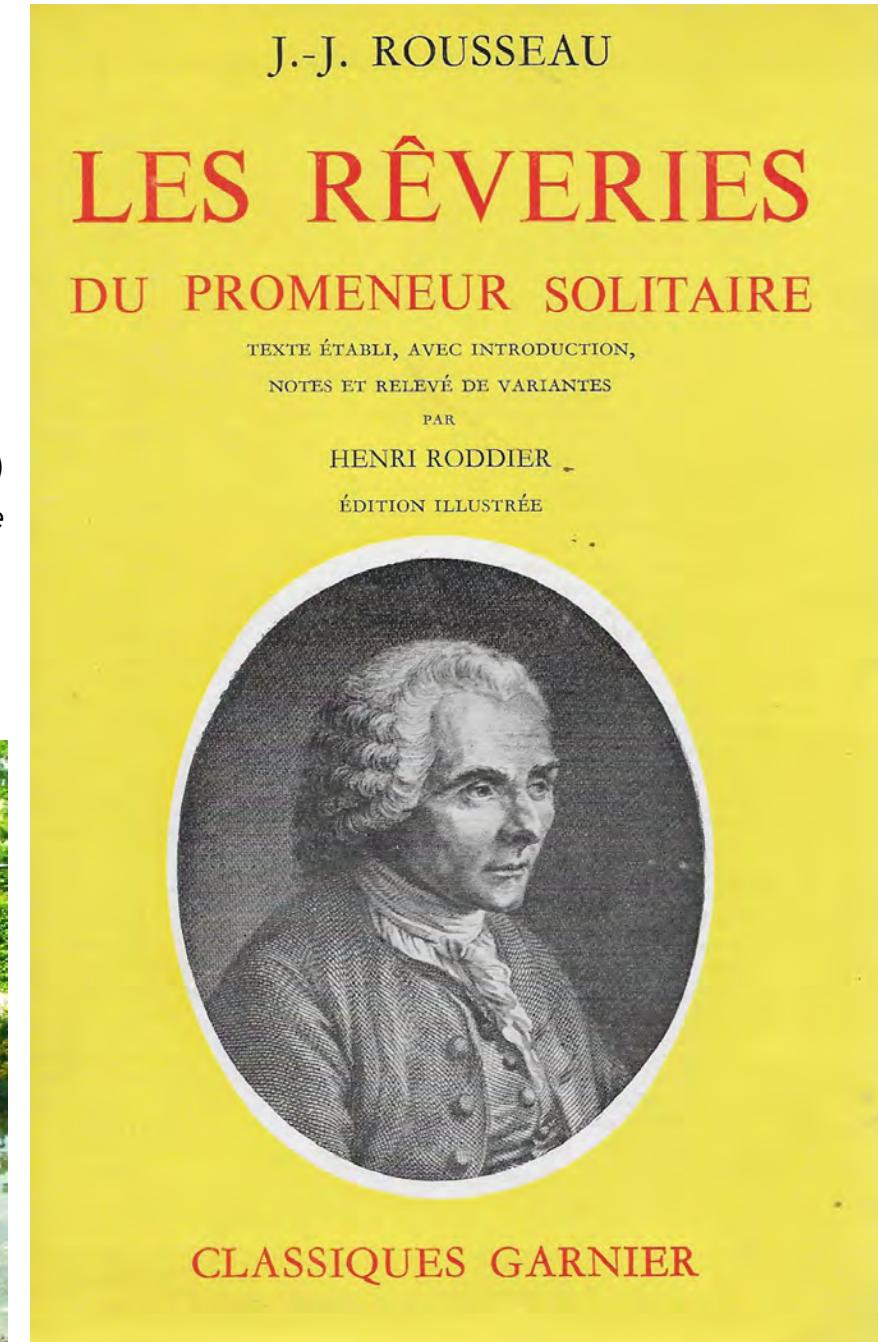


"La rêverie féconde, la rêverie géniale qui transforme la vie, sont rarement l'apanage de la jeunesse. Rousseau ne commença de rêver utilement à certains grands problèmes qu'en faisant lui-même son éducation. (...)

L'étude et la méditation favorise le rêve. Le bonheur est complet lorsqu'un être aimé partage vos joies."

- Henri Roddier, préface (1959)  
*Les rêveries du promeneur solitaire*

Mitnick-Roddier, *Étant donné... un jardin*  
Festival International des Jardins  
Chaumont-sur-Loire, 2007



## 2. De l'importance du soleil

Charles GARNIER & Gustave EIFFEL

Grand Equatorial

Mont Gros, Nice (1887)

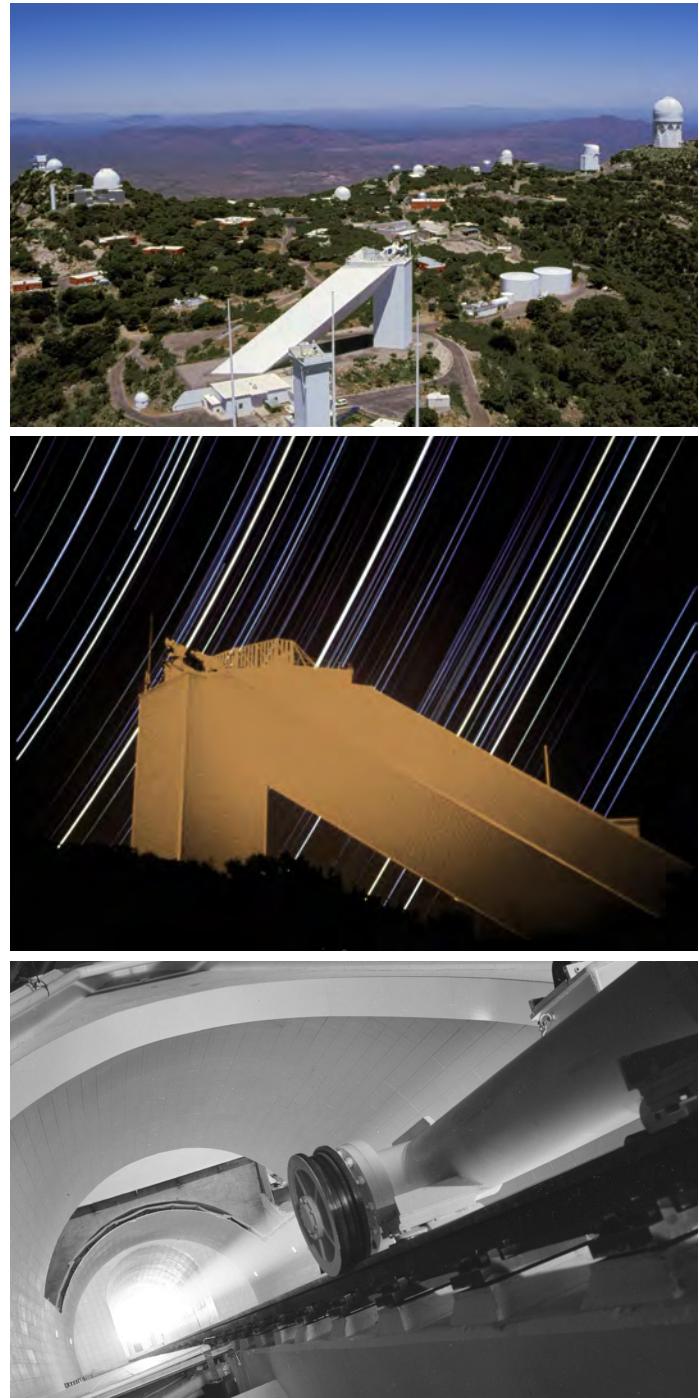
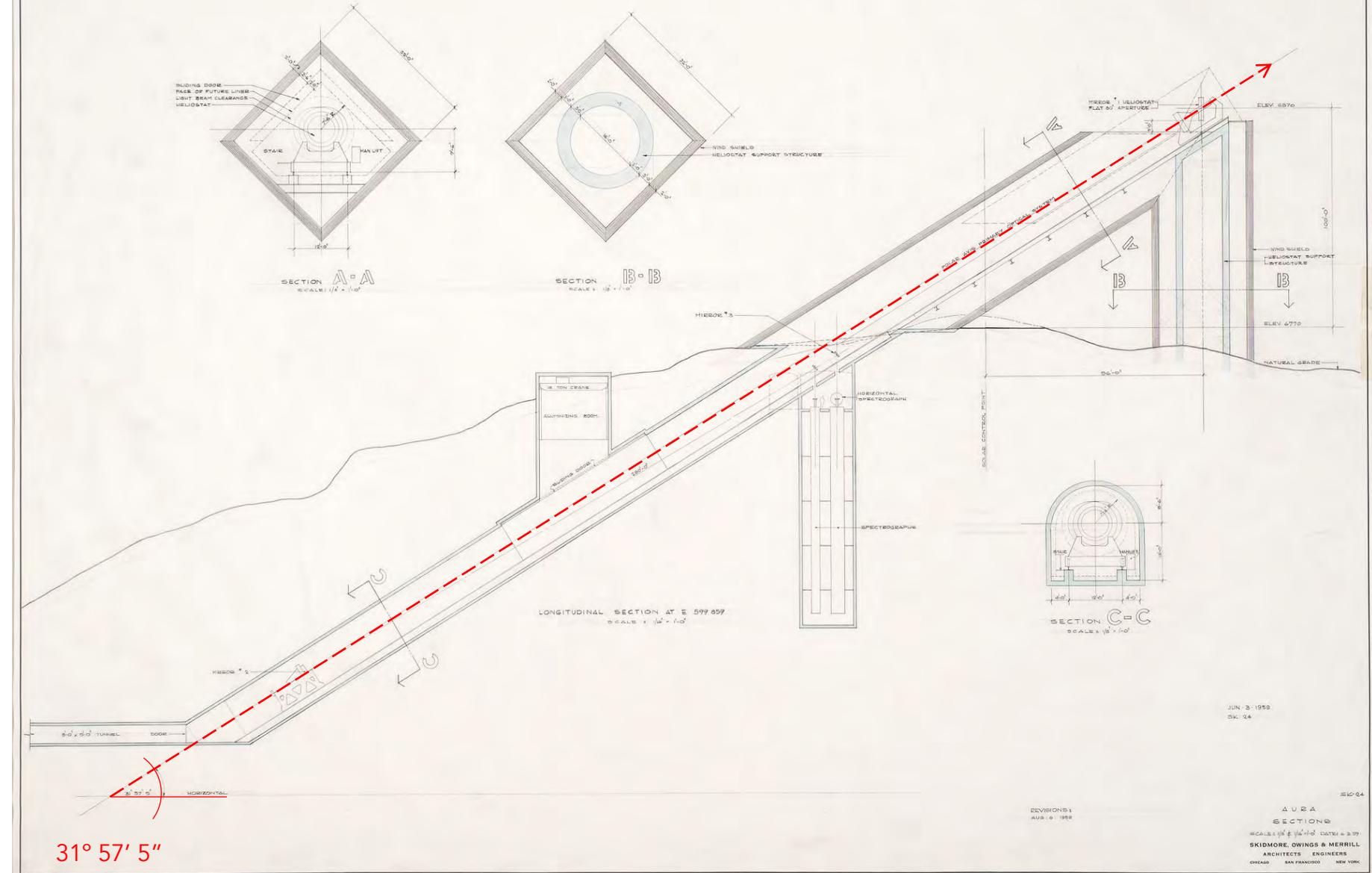


SKIDMORE, OWINGS & MERRILL (SOM)

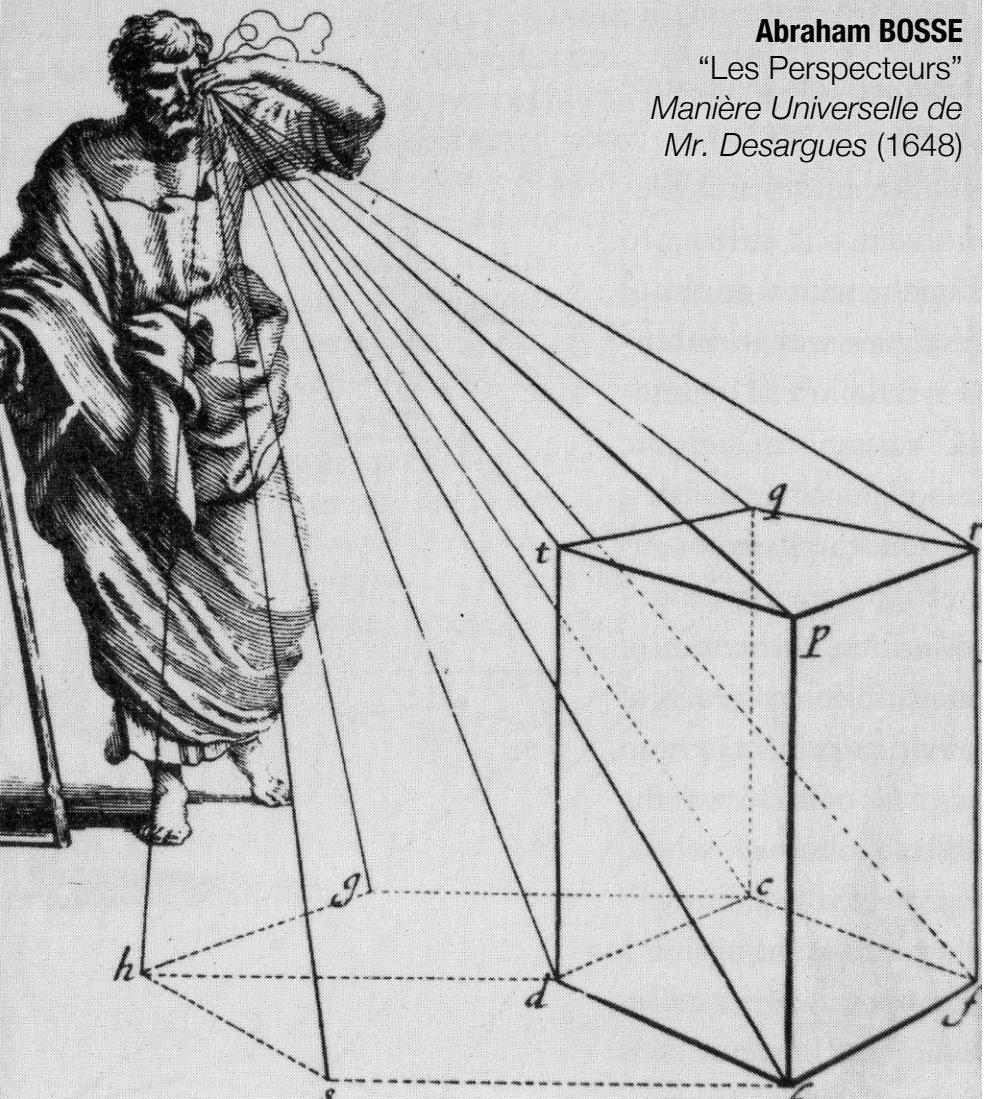
McMath-Pierce Solar Telescope

Kitt Peak, Tucson (1962)

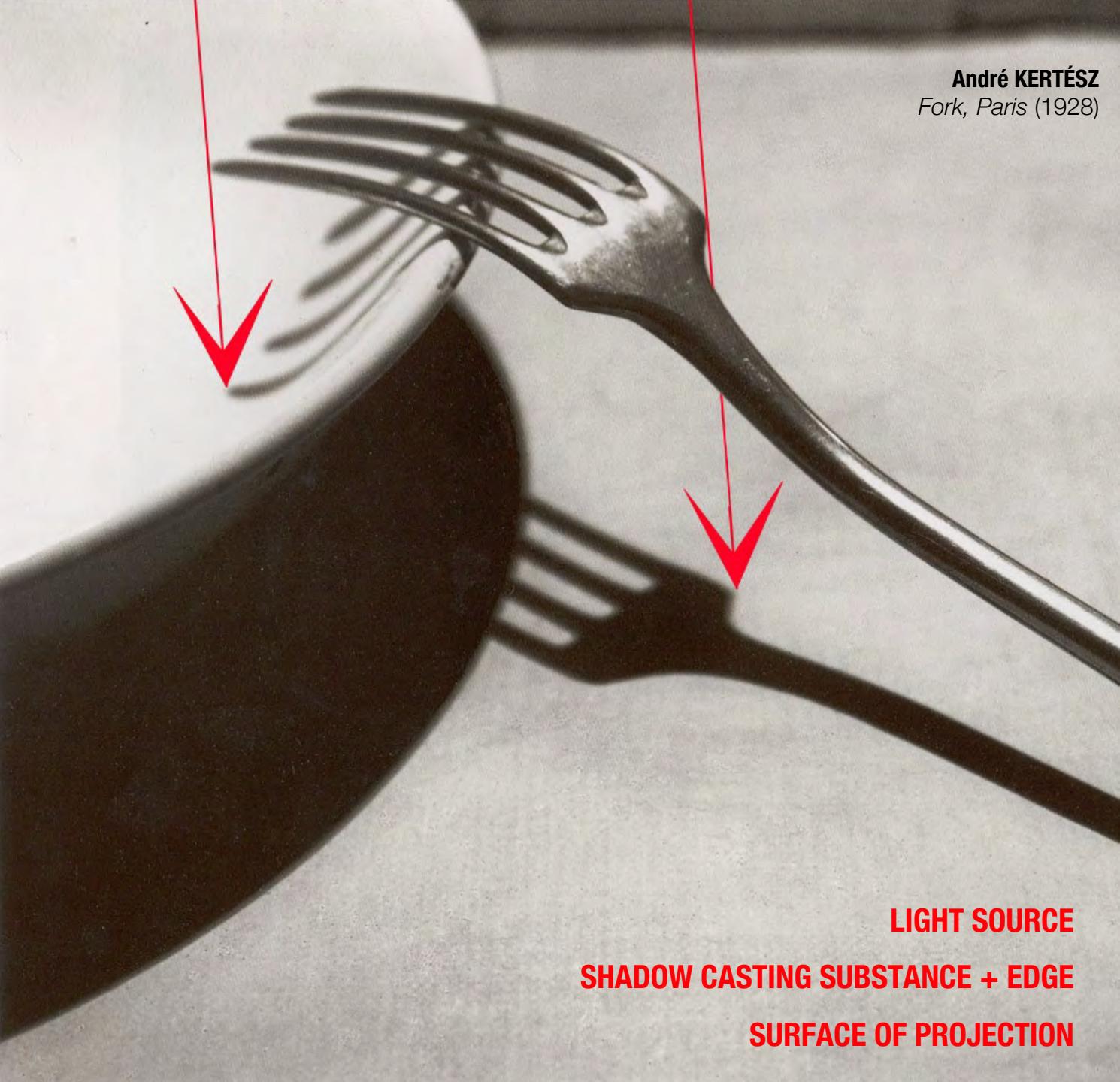




### 3. Du passage d'un flux



**Abraham BOSSE**  
"Les Perspecteurs"  
Manière Universelle de  
Mr. Desargues (1648)



**André KERTÉSZ**  
Fork, Paris (1928)

LIGHT SOURCE

SHADOW CASTING SUBSTANCE + EDGE

SURFACE OF PROJECTION

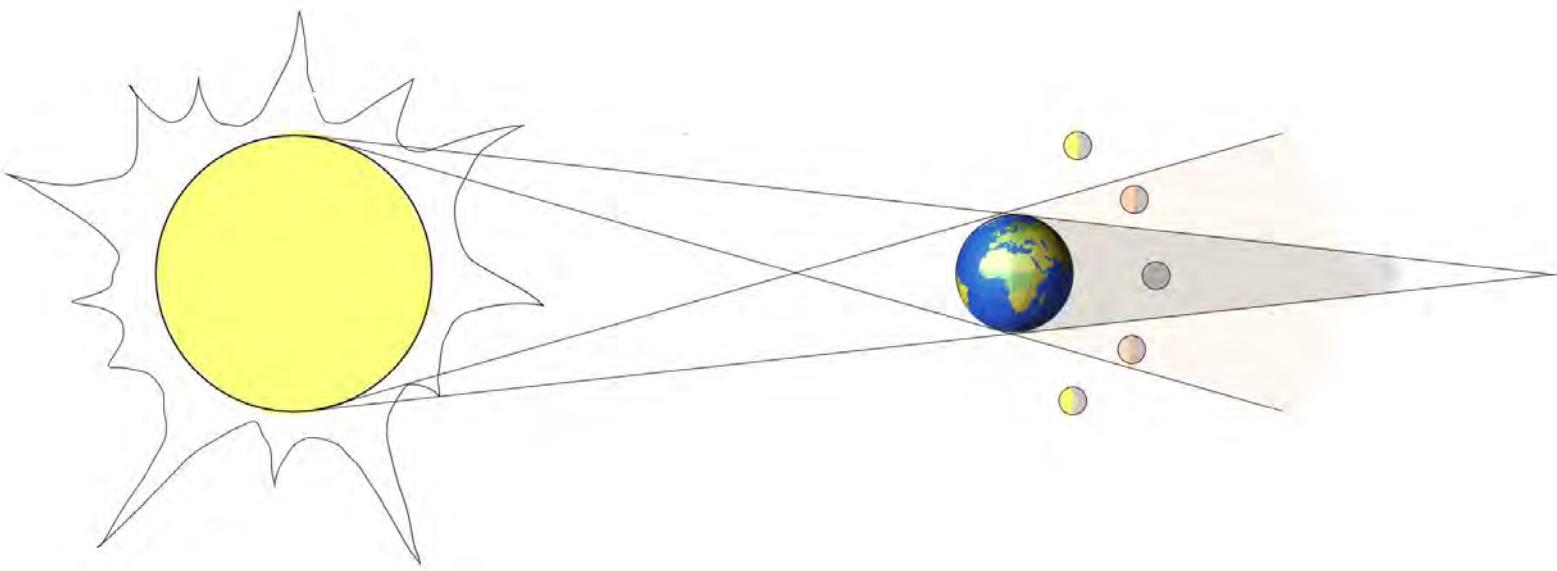
**Tim NOBLE & Sue WEBSTER**  
*Dirty White Trash (With Gulls)*  
1998



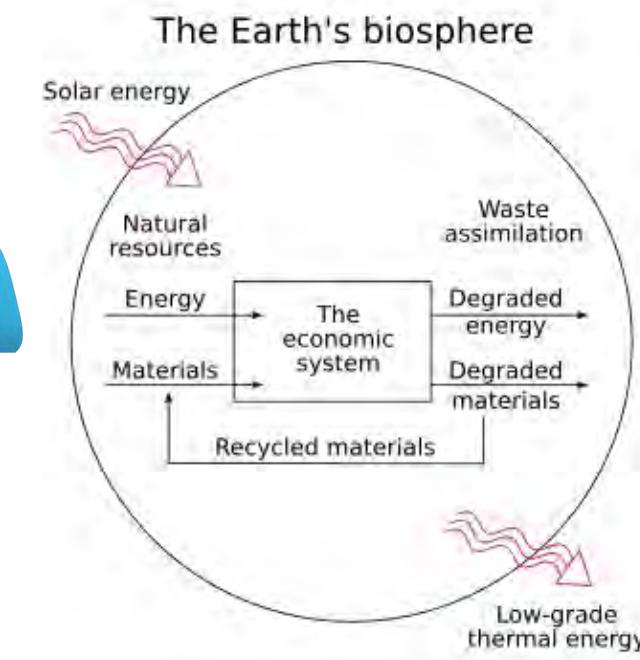
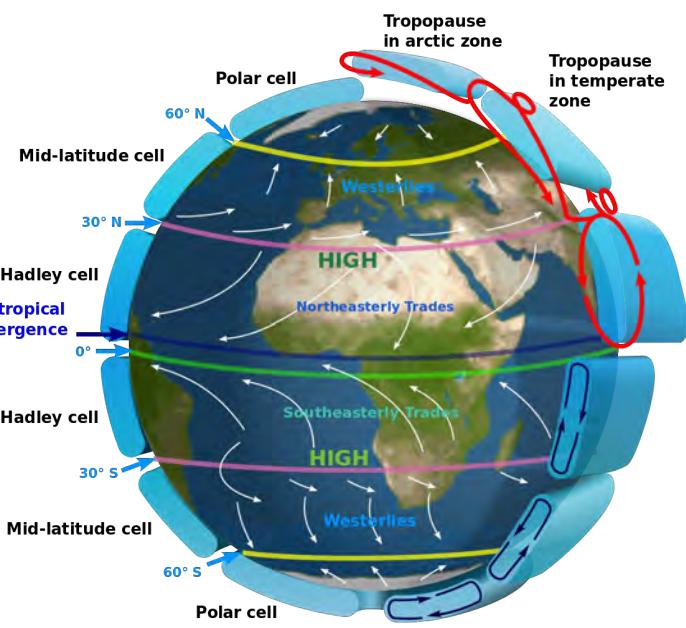
**Yann ARTHUS-BERTRAND**  
*Dromedary near Nouakchott, Mauritania (1999)*



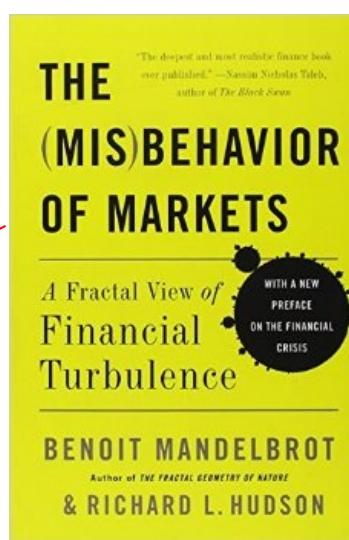
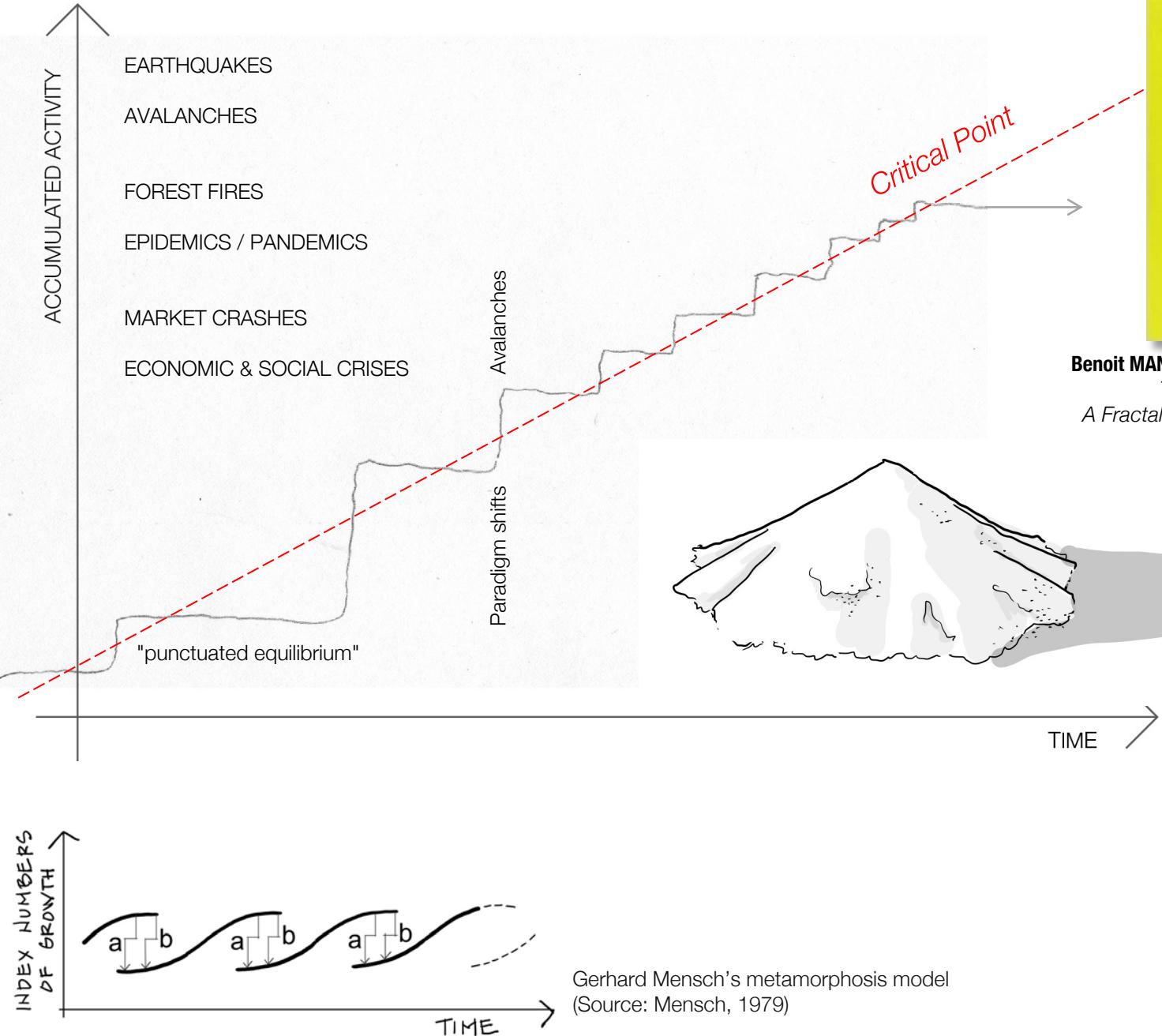
*Lunar Eclipse*



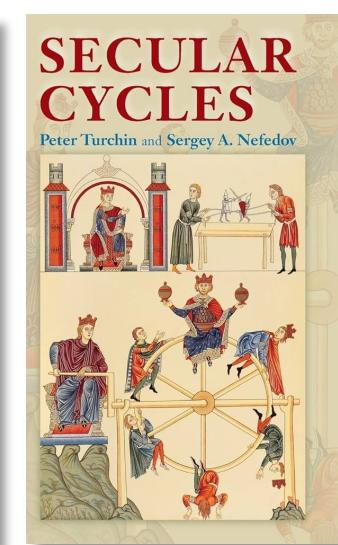
3K



# 4. Des l'enchaînement de cycles



Benoit MANDELBROT & Richard L. HUDSON  
*The (mis)behavior of Markets:  
A Fractal View of Financial Turbulence*  
(Basic Books, 2006)

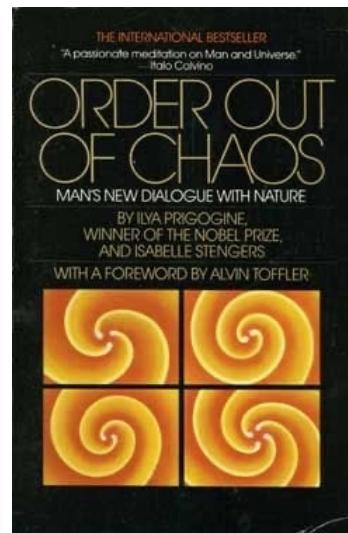


Peter TURCHIN & Sergey NEFEDOV  
*Secular Cycles*  
(Princeton University Press, 2009)

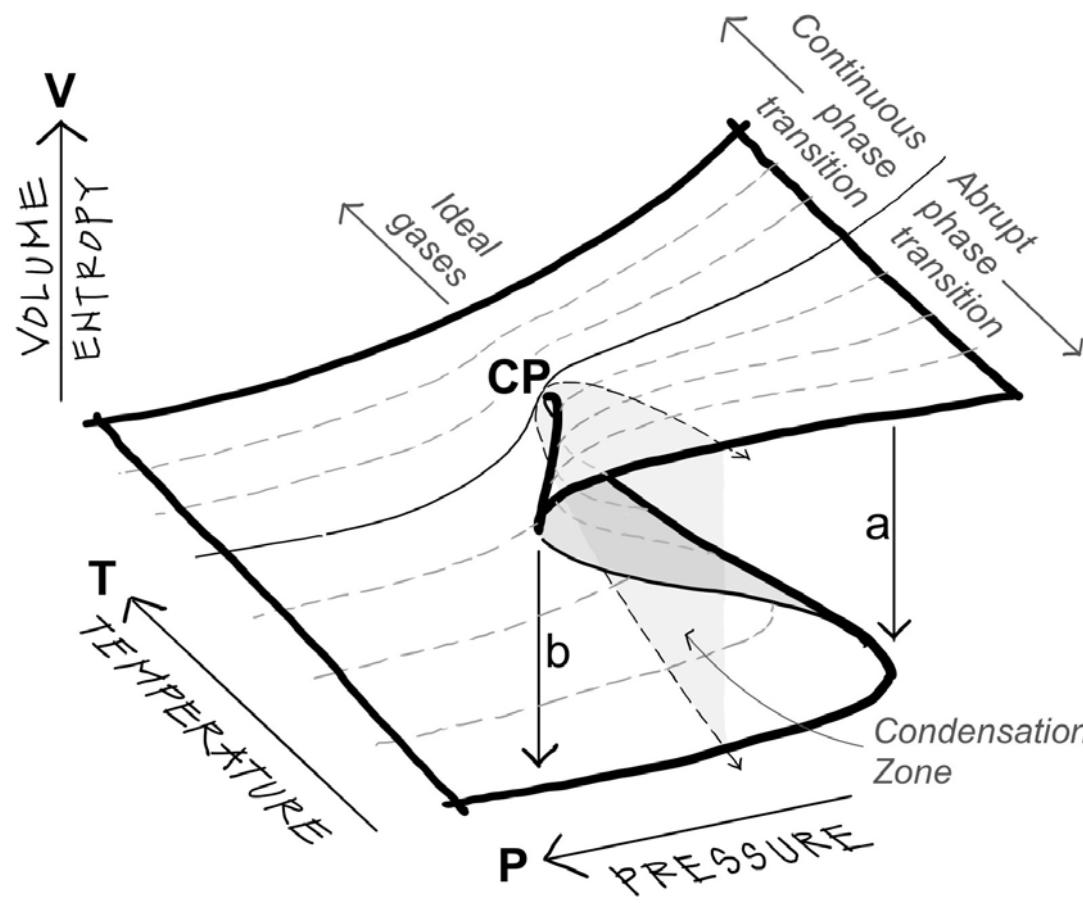
Peter TURCHIN  
*Historical Dynamics:  
Why States Rise and Fall*  
(Princeton University Press,  
2003)



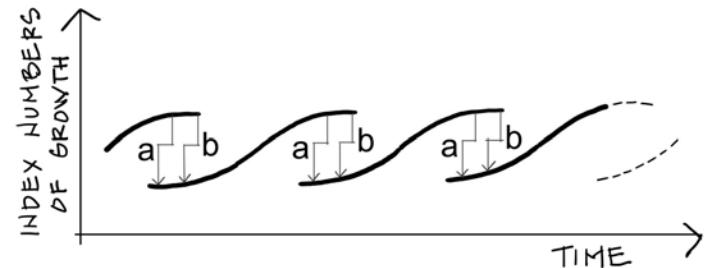
Per BAK, *How Nature Works: the Science of Self-Organized Criticality* (1996)



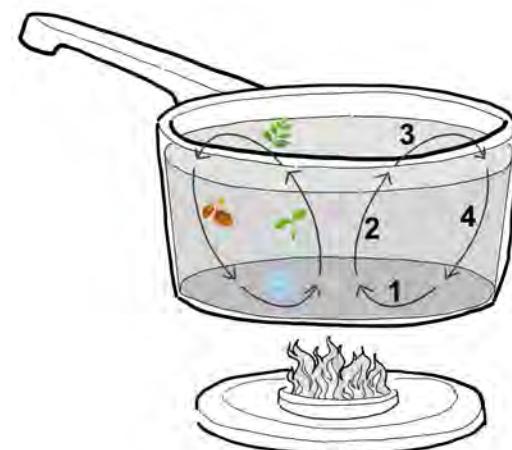
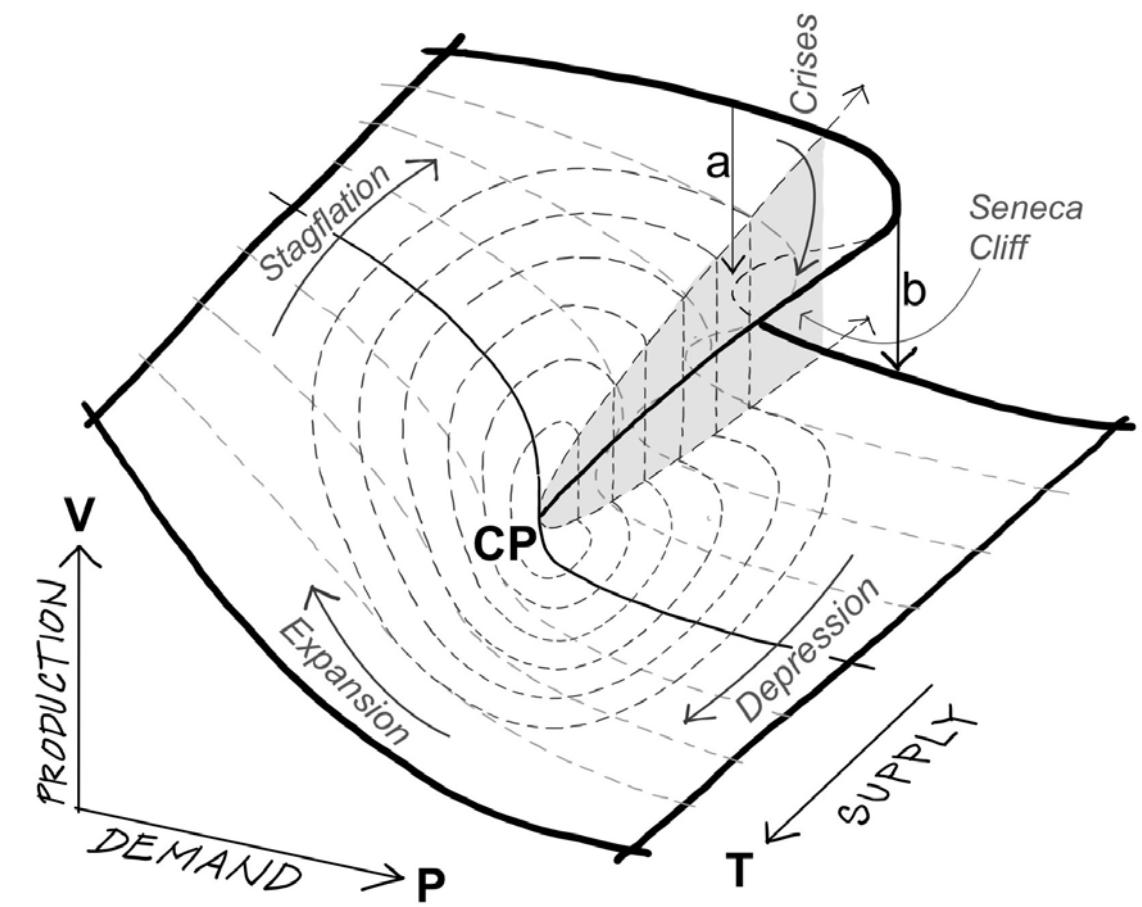
Ilya PRIGOGINE & Isabelle STENGERS, *Order out of Chaos* (1984)



Van der Waals isotherms modeling phase transition behavior of particles close to a critical temperature



Gerhard Mensch's metamorphosis model  
(Source: Mensch, 1979)



	Carnot cycle	Convection cycle	Seasonal cycle	Economic cycle
1	Isothermal expansion	Temperature rises	Winter (germination)	Depression
2	Adiabatic expansion	Ascension (expansion)	Spring (growth)	Expansion
3	Isothermal compression	Temperature drops	Summer (climax)	Stagflation
4	Adiabatic compression	Descent (compression)	Fall (regression)	Crisis

### The Avant-Gardes

Academia (*Cultural Producers vs. Institutions of Practice*)

Peer-Reviewed Publications

Architectural Biennales

NY Architecture League

Van Allen Institute

Cultural Journals

MoMA

### The Safeguards

AIA

NCARB

ACSA

NBBJ

HOK

Gensler

(Apollonians)

Cultural Power

**VANGUARDISTAS**

Institutionalized  
Resistance

R E S I S T

**OLD-GUARD**

Institutional  
Control

Economic Power

**GUERILLAS**

Institutional  
Critique

P  
Σ  
Ω  
C  
T

Creative Power

Paradigm Shifts

### The Social Conscience

Cultural Resistance

Underground Collaboratives

Alternative Movements

DIY movements

Counterculture

Interventionists

(Dionysians)



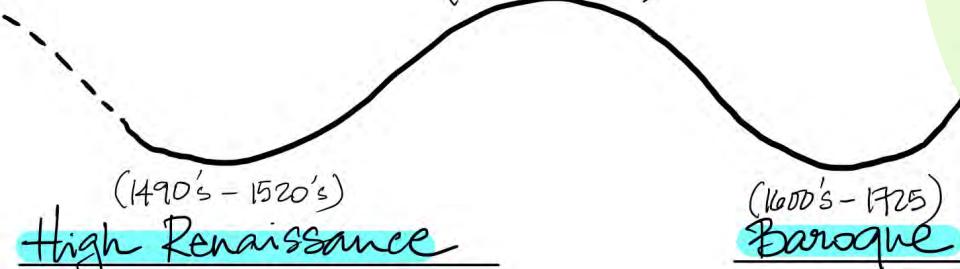


MEDIATION

intellectual pleasures /  
artificial

Mannerism

(1520's - 1580's)



High Renaissance

Ideal proportions / beauty  
harmony

IMMEDIACY



Age of Reason

Order / reason  
references to antiquity

Neo-Classicism

(1760's - 1910's)

Modernism

(1790's - 1850's)  
Romanticism

individual feelings  
nature / emotions  
aesthetic experience



# Traité du beau

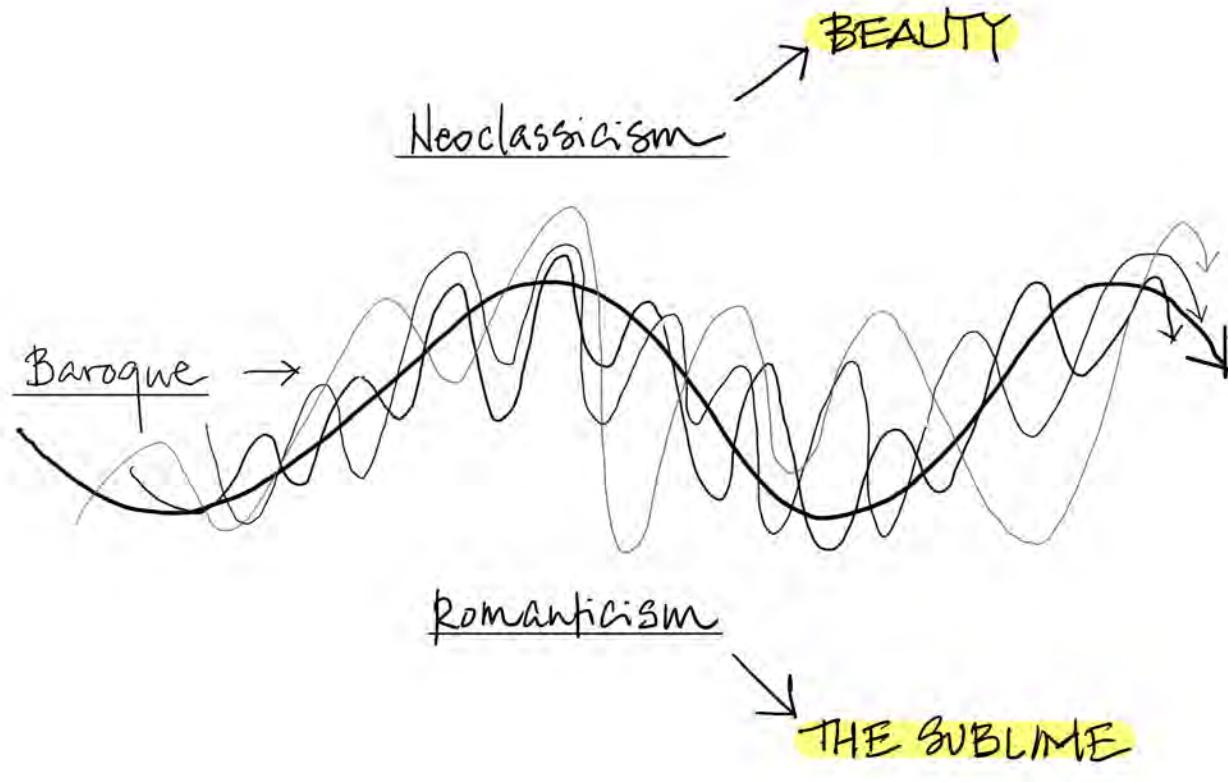
Denis Diderot



 Editions  
La Bibliothèque Digitale

Denis DIDEROT

Treatise on Beauty [1752] (1772)

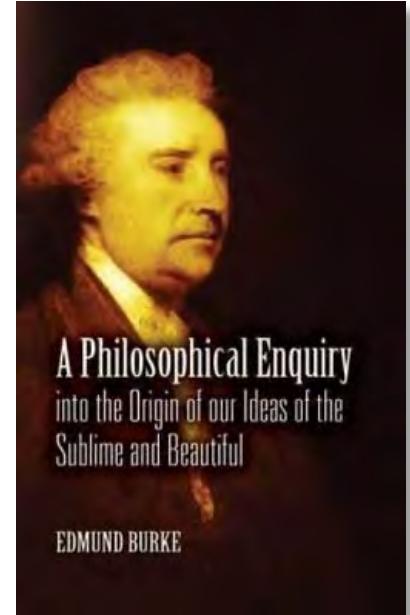


## NEO-CLASSICISM

- Plan driven
- Image driven / pictorial
- Order, continuity
- Known conclusion to linear narrative
- Static optical view (image production)
- Paternal
- Centered
- Knowable*
- Whole to parts**

## ROMANTICISM

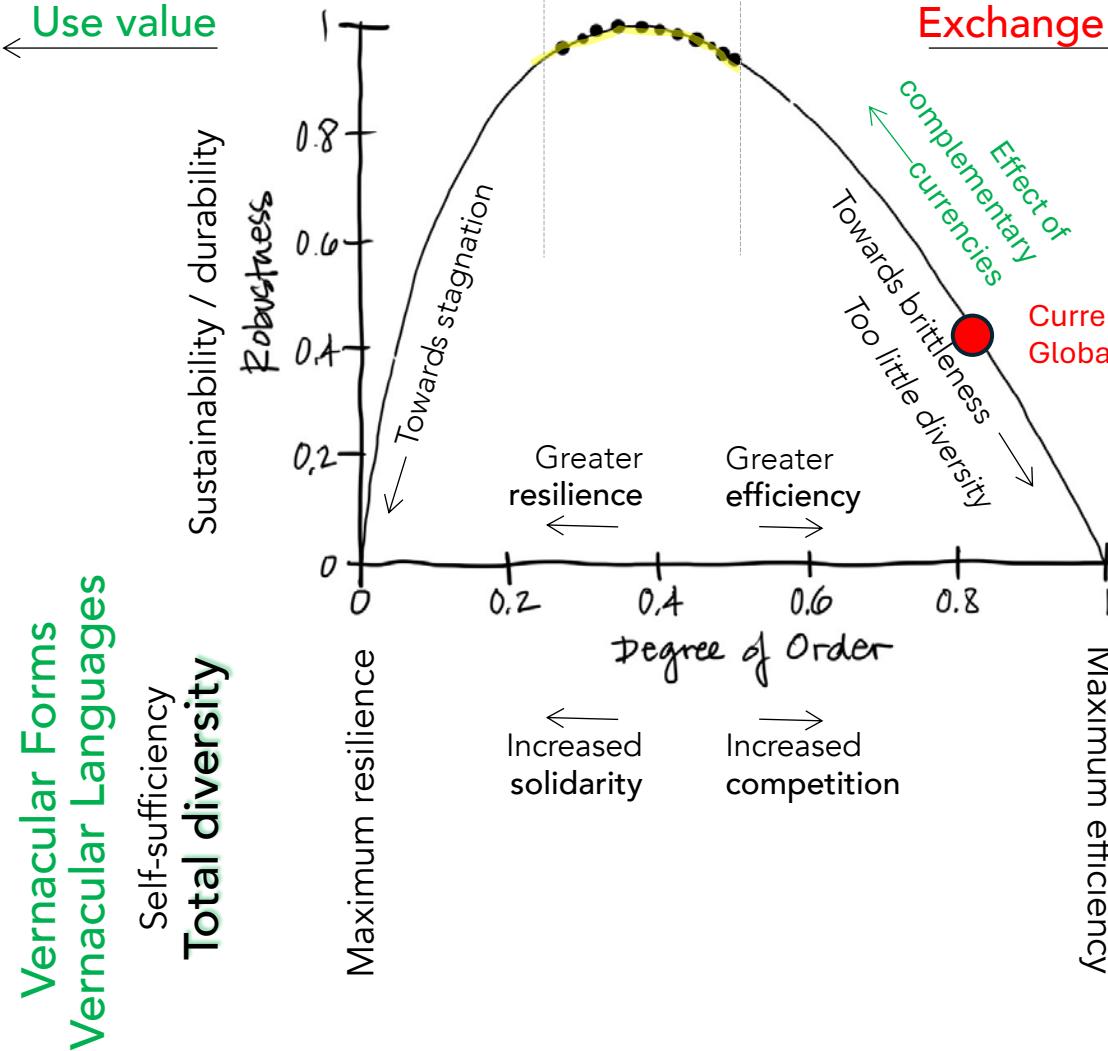
- Elevation / Plan disjunction
- Experience driven / cinematic
- Discontinuity, montage
- Pluralistic experience
- Peripatetic wandering
- Not oriented
- Multiplicity of centers
- Unknowable*
- Parts to whole**



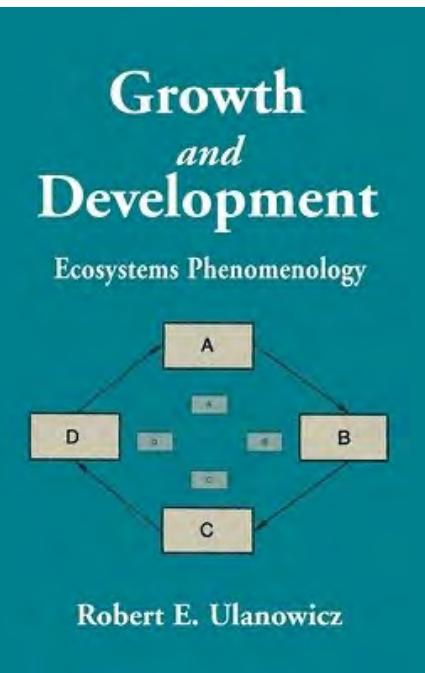
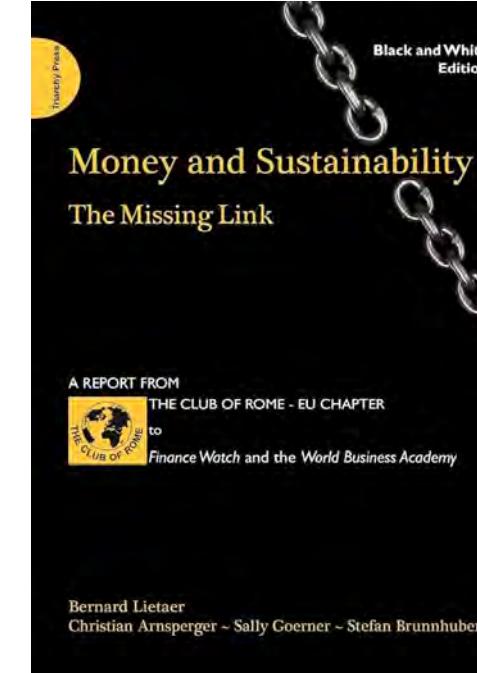
Edmund BURKE

A Philosophical Enquiry  
into the Origin of our Ideas of the  
Sublime and Beautiful  
**EDMUND BURKE**

# 5. Des fenêtres et des seuils

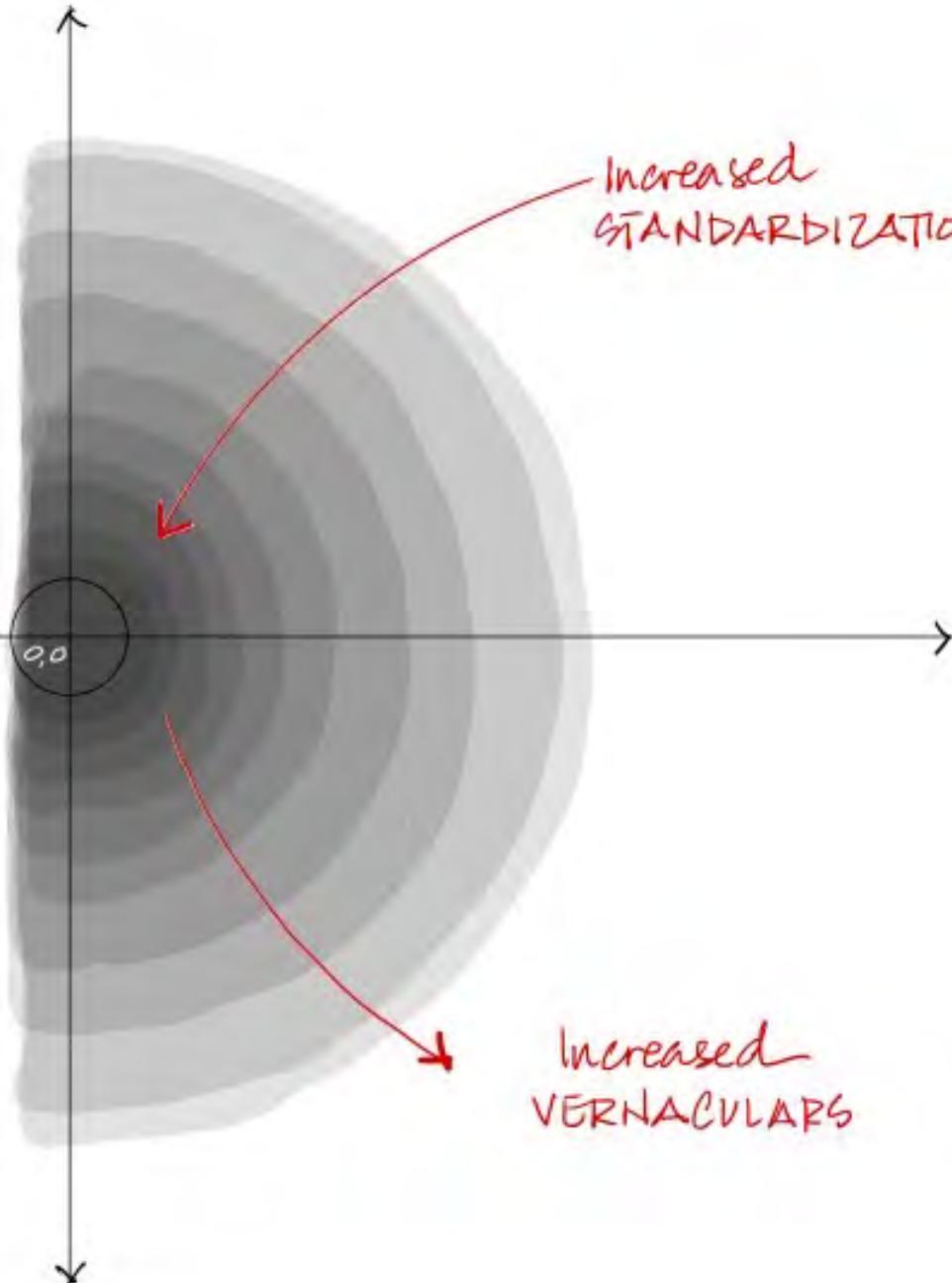


**Mass Standardization  
Vehicular Languages  
Total homogeneity**  
Interconnectivity



**Robert ULANOWICZ**  
Growth and Development:  
Ecosystems Phenomenology  
(Excel Press, 1986)

The degree of order and corresponding magnitudes of robustness for networks of trophic exchanges in a subset of ecological communities.



### Towards point 0:

Center  
Standardized environments  
Model / template

#### **Fungibility**

Rules  
Density of network  
Global  
High Tech

#### **Placeless**

Frictionless  
Non-adaptable  
Efficiency  
**Speed**  
Homogeneous

High energy production & consumption  
High metabolism

**Dominant** discourse  
"Universal" p.o.v.

**Scripted**  
Allographic

### Away from point 0:

Margins (bell hooks)  
Vernacular environments

Idiosyncratic

#### **Singularity**

Exceptions  
Strength of Identity  
Local  
Adhocism

#### **Situated**

Negotiated  
Resilient  
Translation  
**Slowness**  
Diverse

Sustainable energy production & consumption  
Low metabolism

**Alternative** discourses  
"Pluriversal" p.o.v.

**Improvised**  
Autographic

# 6. De la standardisation

English  
Dollars  
Fahrenheit  
US Customary Units  
Acres  
MPH  
Pounds  
 $8.5'' \times 11''$   
110v  
Gallons  
5:30pm  
3<sup>rd</sup> floor  
qwerty

Italian  
Euros  
Celsius  
Metric  
Hectares  
K/H  
Kilos  
A4  
220v  
Liters  
17h30  
2<sup>nd</sup> floor  
azerty

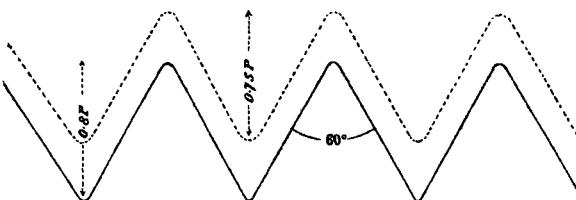


Fig. II. Usual Form of Threads best Workshop practice.

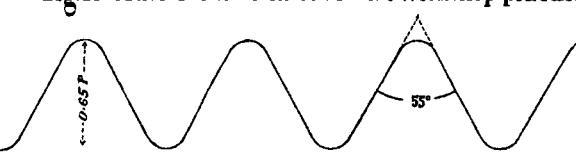
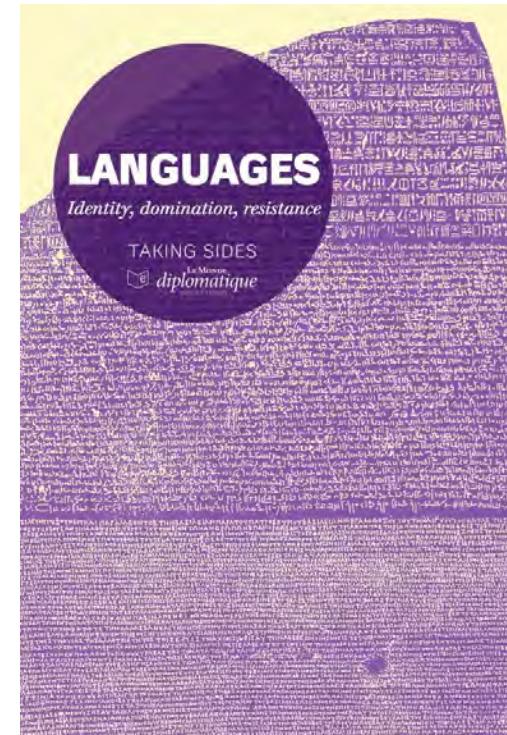


Fig. III. Form of Thread introduced Mr. Whitworth.



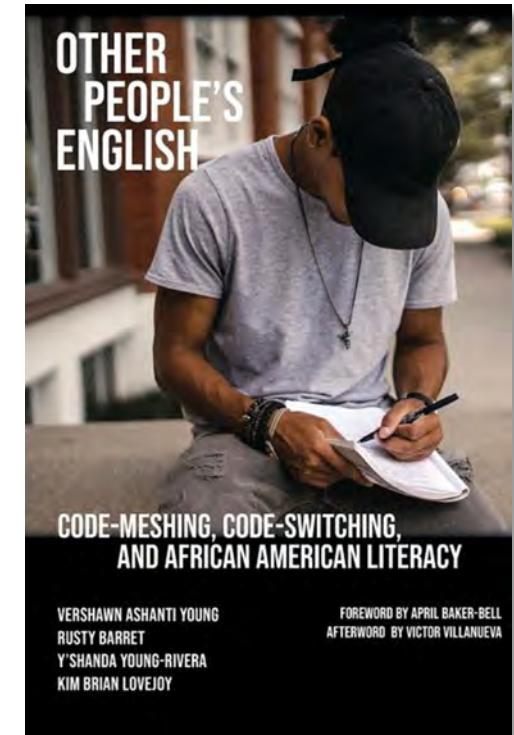
Fig. IV. Form of Thread proposed by Mr. Sellers.

From Robert BRIGGS, "A Uniform System of Screw Threads," *Journal of the Franklin Institute*, LXXIX (February 1865), 124.



## Taking Sides

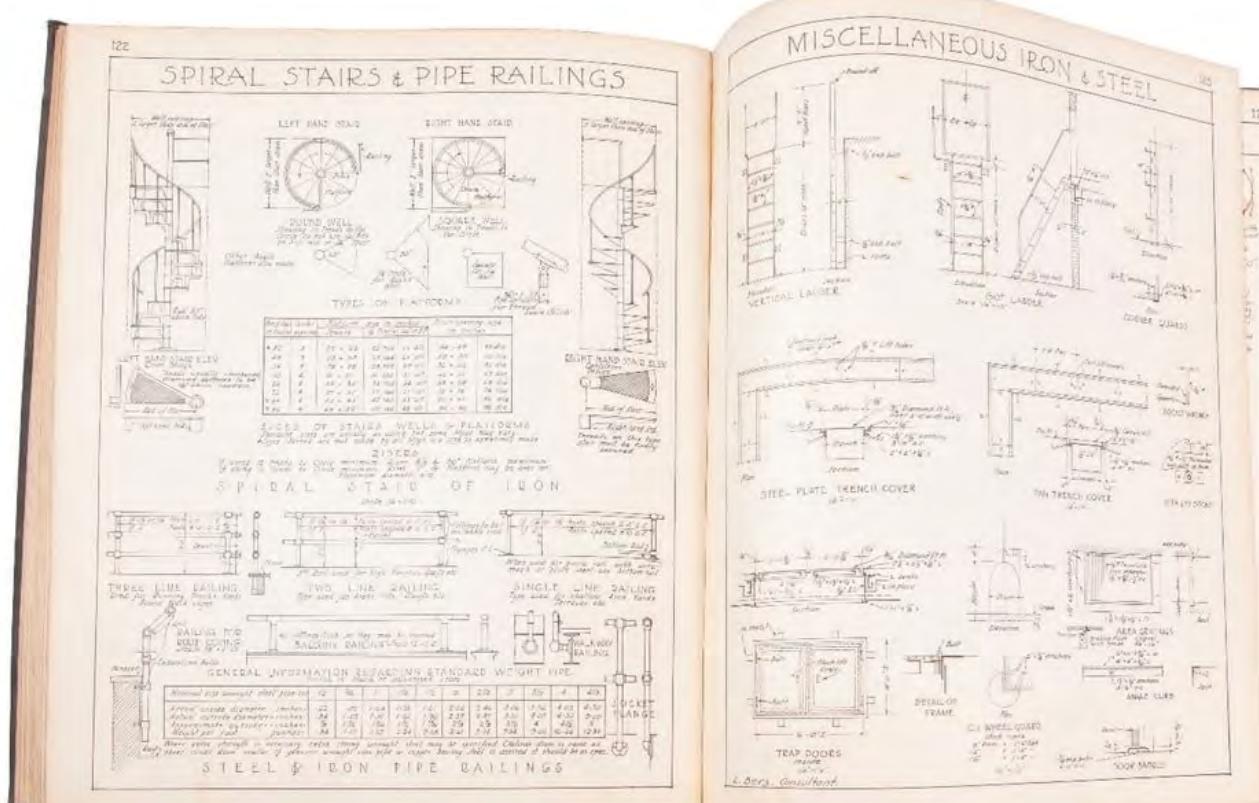
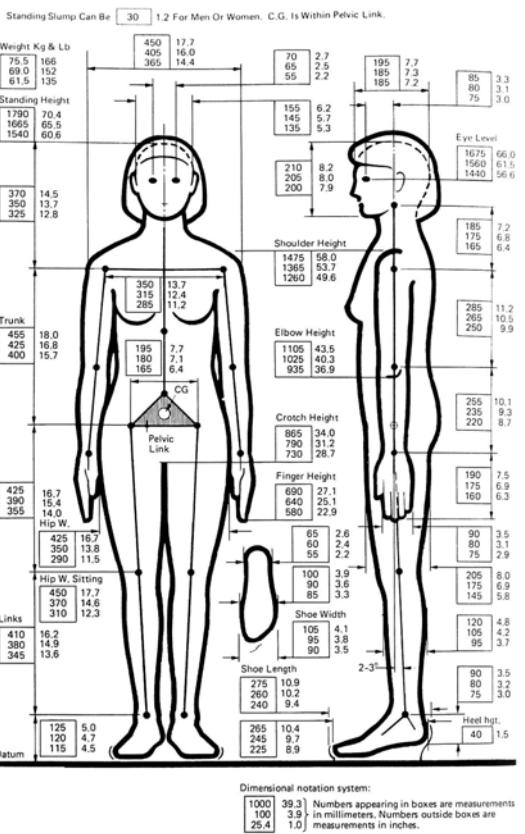
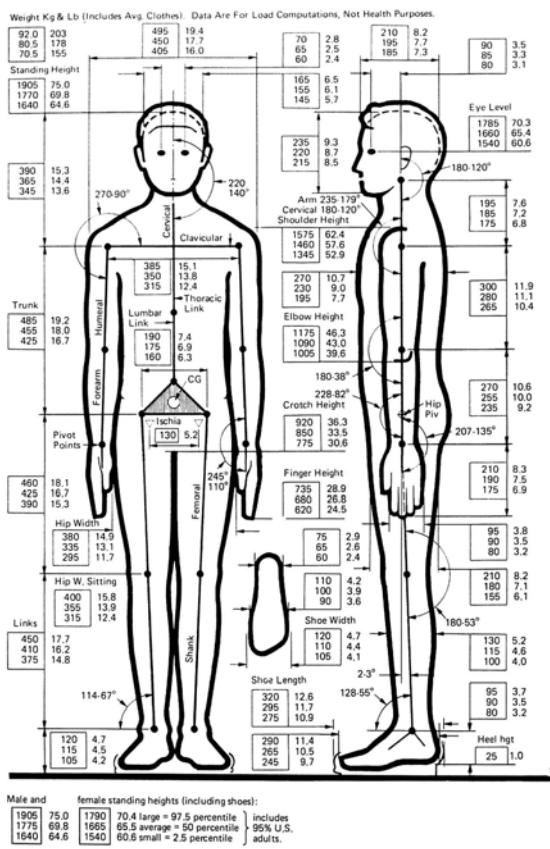
*Languages: Identity, Domination, Resistance* (Le Monde Diplomatique, 2022)



Vershawn ASHANTI YOUNG, Rusty BARRETT, Y'shanda YOUNG-RIVERA

*Other People's English: Code-Meshing, Code-Switching, and African American Literacy* (2014)

FOREWORD BY APRIL BAKER-BELL  
AFTERWORD BY VICTOR VILLANUEVA



Male and female standing heights (including shoes):

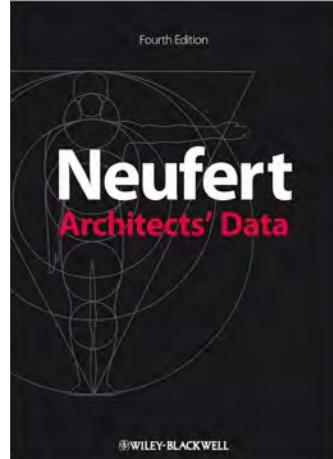
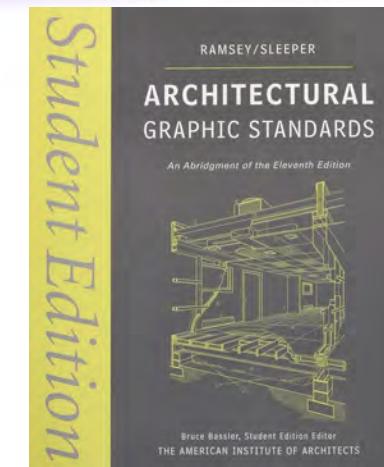
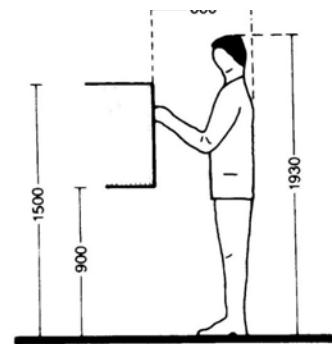
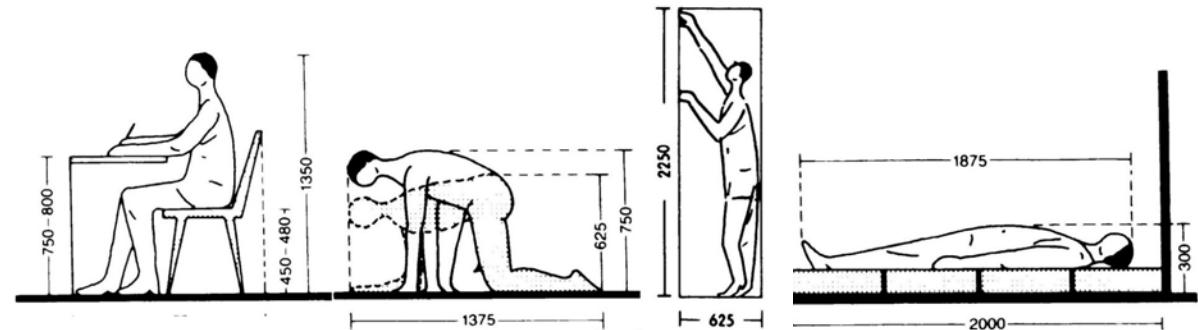
1905 75.0 1790 70.4 large = 97.5 percentile includes adults.

1770 69.8 1665 65.5 average = 50 percentile 95% U.S.

1755 64.6 1540 60.6 small = 2.5 percentile

Niels Diffrint, Alvin R. Tilley, Henry Dreyfuss Associates; New York, New York

# 1 ANTHROPOMETRIC





Claude PERRAULT  
Salle Cassini  
Observatoire de Paris  
(1667 – 1672)





<b>Paris</b>	<b>London</b>	<b>Washington (British)</b>
<b>Buenos Aires</b> (Spanish)	<b>Santiago</b> (Spanish)	<b>Havana</b> (Spanish)
<b>Cape Town</b> (Dutch/British)	<b>Port-au- Prince</b> (Spanish/French)	<b>Singapore</b> (British)



Singapore



Abu Dhabi



Panama City



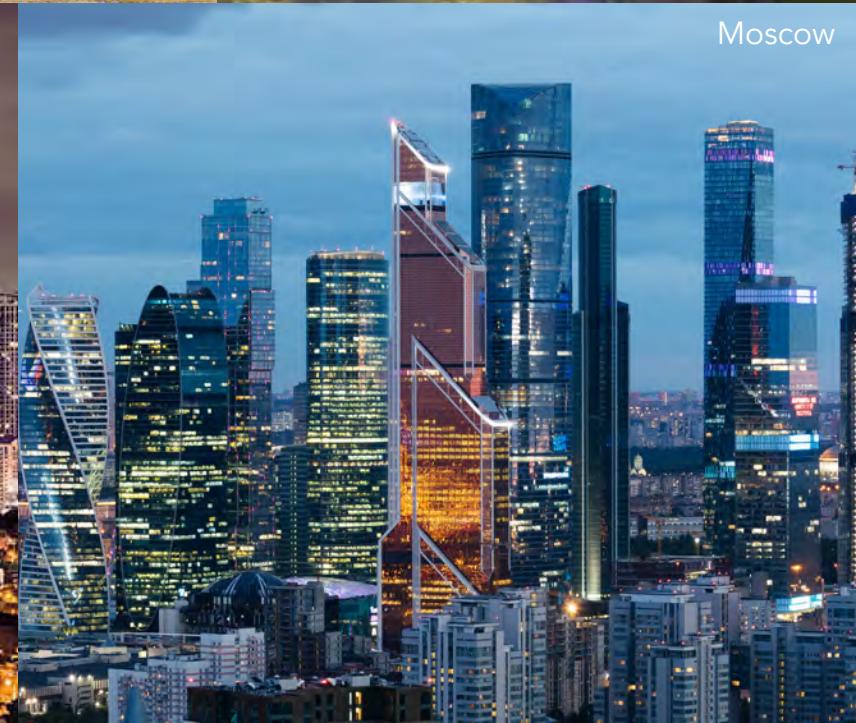
Sydney



Bangkok



Taguig



Moscow



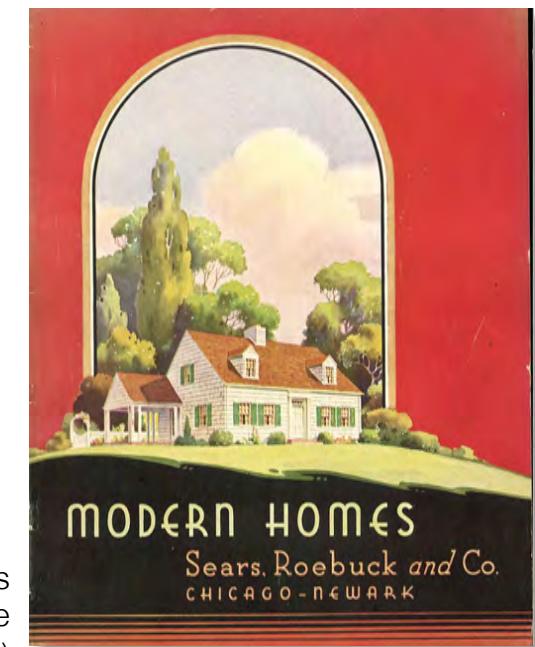


**Jenji KOHAN**  
*Weeds (8 Seasons)*  
(2005 – 2012)

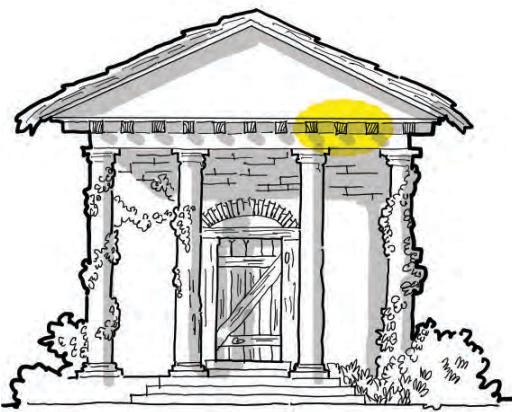
**Tim BURTON**  
*Edward Scissorhands*  
(1990)

**Peter WEIR**  
*Truman Show*  
(1998)

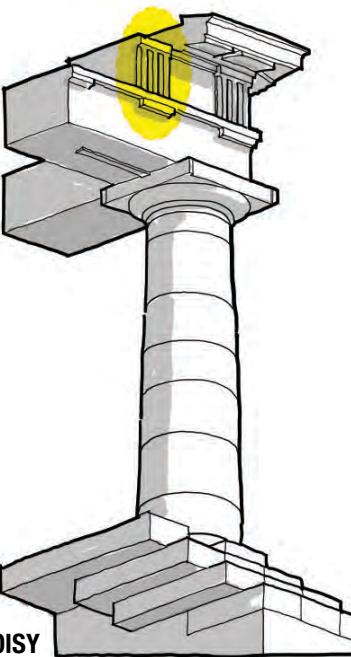
Sears Modern Homes  
Catalogue  
(1908 - 1940)



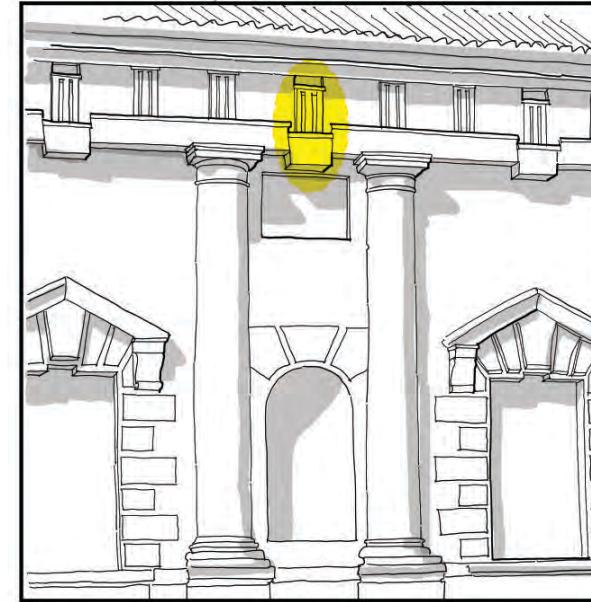
# 7. De la décompression de l'information



Williams CHAMBERS  
*Primitive Hut*  
(c. 1759)



Auguste CHOISY  
*L'Art de Bâtir Chez Les Romains*  
(1873)



Giulio ROMANO  
*Palazzo del Tè*  
Mantua (1525-1532)

## REAL RELATION

proximity /  
immediacy

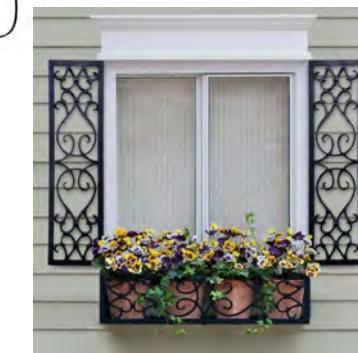
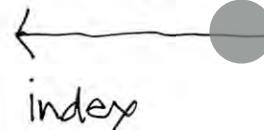
## RESEMBLANCE

## CODED RELATION

distance /  
abstraction

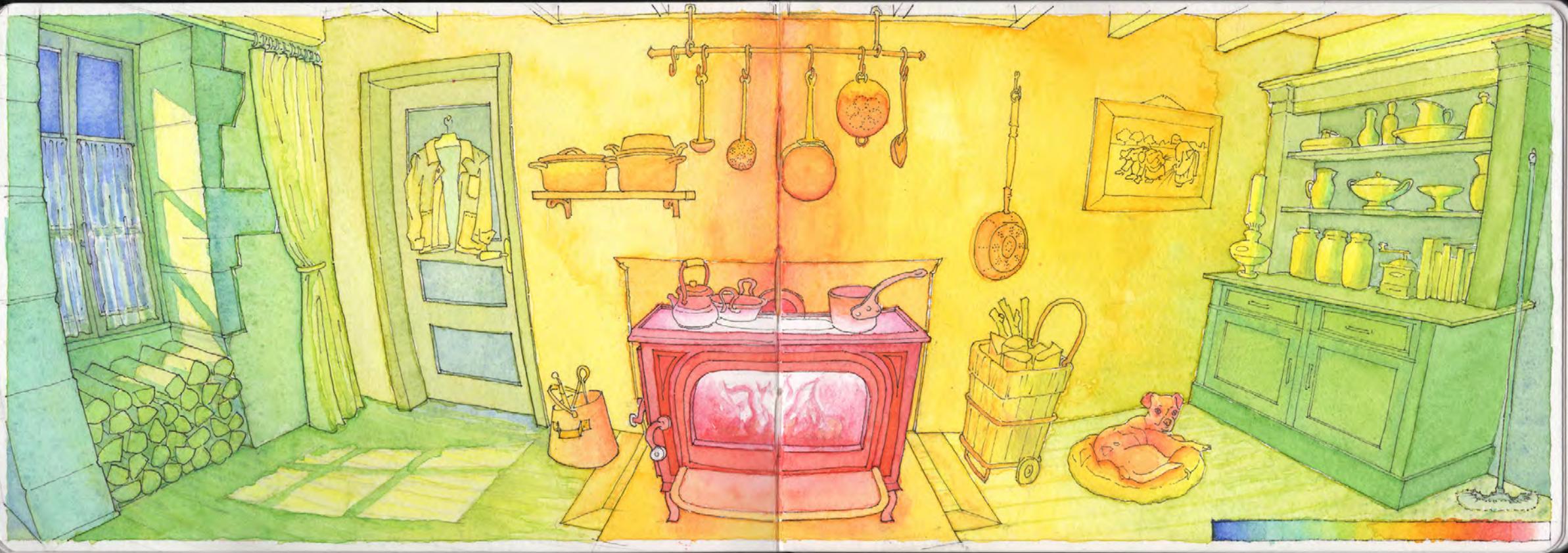
Unconsciously read  
Bottom-up authored

NATURE



CULTURE

Consciously read  
Top-down designed



"Dwelling is an Action Verb: Lessons on Energy Sobriety"  
*E-Flux / After Comfort: A User's Guide* (2025)

## 8. De la lenteur

Gaïa 🐌🌿🌍

