Homo Sapiens Sapiens versus Homo Artiflex

The human factors in the global change

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Summary

1. The mistaken views about environmental destruction
2. The mistaken views about humans
3. The global/local change and human behavior
4. Conclusions (?)
THE MISTAKEN VIEWS ABOUT ENVIRONMENTAL DESTRUCTION

Hunter /Gatherers
Neolithic green revolution

Wrong idea about the driving force

Daniel Hillel
The relation between Humans and Environment

• “the wrong idea about a primitive unity” between human beings and nature
  – (hunters / collectors changed dramatically)
• Middle East
• Roman Era /
• Northern forests
• Greece /
• “Serra da Estrela” /
“environmentalism” and drives to change “avant la lettre”

• Always when it is felt a rupture in the system
  – Greek philosophers (Plato)
  – Alfonse Laws (XIV, Portugal)
  – burning of low quality coal (after XV, London)
  – destruction of land by erosion in ancient Greece and Portugal
  – health conditions in medieval cities

John Evelyn - 1661, "Fumifugium; or the Inconvenience of the Aer and Smoke of London Dissapated; Some Remedies Humbly Proposed"
Functional relation between animals and nature that is disrupted when certain factors* occurs and technology is introduced (and lack of internal checks)

*human growth*, namely intrusion from outsiders, specialization of production, contradiction between needs in the same ecosystem, etc.

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**The vicious circle principle**

Humankind’s development consists in an acceleration movement from situations of scarcity, to technological innovation, to increase resource availability, to increased consumption, to population growth, to resource depletion, to scarcity once again and so on ....

Craig Dilworth (2010)
THE MISTAKEN VIEWS ABOUT HUMANS

Two contradictory (lay) theories

• human as rational (the information is the key)
• humans as egoistic and irrational (the vigilance and punishment are the key)

– Both wrong and prescriptive views
Those theories cannot answer to simple questions.

**World, 90**

**Europe, 95**

Soils 62.9%
Water 73.8%
Air 61.7%

92% sees global change as a severe or very severe problem.

92% sees global change as a severe problem.

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Those theories can not answer to simple questions

Portugal, 2010

(Ireland, Germany, Italy, Spain, Poland, Portugal, Greece, 2010)
**Homo Artiflex:**
A descriptive view

Bounded rationality with use of heuristics
caring for short time gains (but)
caring for values and beliefs
social animals with altruistic behaviors being a part
of the evolution
strong social identities and local adaptations
Strong search for easiness (obtain the most with
the minimum of effort)
Multiple factors that influence a behavior

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**Social dilemmas:**

The contradiction between individual and collective rationality

Properties:

\[ D(m) > C(m+1) \]

\[ D(m1) < C(m2) \]

when \( m1 = 0 \) e \( m2 = N \)

\[ D(m) > D(m+1) \]

\( D = \) gain of the participant that acts competitively
\( C = \) gain of the participant that acts cooperatively
\( m = \) Number of participants that either cooperate or compete
\( N = \) Total
Transportation

- Public Transport > Car
- Higher Use of Car
- Higher Traffic Flow
- Higher Use of Car
- Traffic Congestion
- Higher Travel Time (PT > C)
- Higher Use of Car
- Restriction of (social class) PT Commuters
- Higher Use of Car

Land use

More Rational to Use Car (few cars)

High Levels of Stress (PT > C)

Perceived Travel Times

\[ PT = CX2 \]

- Comfort + Fast
- Cheap

\[ > \text{Road Offer} \]
\[ < \text{CT Offer} \]

High Perceived Insecurity For PT

Higher Levels of Stress (CT > C)

- Higher Use of Car
- Restriction of CT Commuters
- Higher Use of Car

\[ > \text{Road Offer} \]
\[ < \text{PT Offer} \]
Transportation

Higher Stress; Higher Travel Time; Insecurity; Desire for Comfort and Speed

= 

PT Commuters’ Higher Switching Desire

Local (and global) Adaptation

FACT 1
The current mismanagement of certain problems is evaluated as negative and have higher risk. But risk perception of the new solutions can be higher.

(Love in to your death syndrome)

FACT 2
People seems to evaluate much more negatively the global ecosystem/country when compared with the local / regional one
The results show no differentiation between polluted or non-polluted zones.

Local study
(four Lisbon counties)

74% of the representative sample considers that Portugal is currently a polluted or very polluted country.

80% evaluates their one county as being in very "good" condition.

$$F(1,737)=777.25; \quad p<0.000$$

Women are always more negative than men.

Positive relation between local social identity and the local environmental evaluation (.334; p<0.000)
Regions of Europe represented in the study

- Map showing regions of Europe: West Eu, Central and North Eu, East Eu and Russia.
- Estimated path of the Chernobyl radioactive cloud from 26 of April to 8 of May 1986.
- Selective numbers of respondents.

Estimation of Contamination

- Graph showing contamination levels for different regions:
  - West Eu and North Am
  - Central and North Eu
  - East Eu and Rus
- Contamination types: Radioactive cont, Heavy metal cont, Organic pollutants.
Perception of the personal danger from the consumption of wild products

Risk perception (1 - not dangerous to 5 - very dangerous)

Contamination of the environment “local - global”

Risk perception (1 - very clean to 5 - sign. contaminated)
Local (and global) Adaptation

**FACT 3**
Disaster is easily forgotten as time goes by and is object of different and mostly wrong theories.

Example: The ones that need the most are somewhat the ones that do the least about it.

**FACT 4**
People are risk averse and have a difficult time in dealing with low probability and high consequence events.

The more fearful is the alternative the higher can be the denial…. Framing is essential (prospect theory).

Conclusions

1. Change the way you see the world and yourself ....

2. Use a descriptive (explanatory) vision of HOMO not a prescriptive

3. Be specific not global and choose well the best behavior to influence of trying to change

4. Information versus individual and community processing (Influence versus self Influence)
Local (and global) Adaptation

there is a bigger impact of losses than of gains

Framing is essential