

PARADISO =
PARADIGms + SOcietal issues.

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1. About PARADIGms

- ‘The Digital Agenda for Europe 2020’ emphasizes the “digital” paradigm, rather than the “information” or the “knowledge” paradigms.
- The “pillars” of the ‘Digital Agenda’ give credit to technology-driven solutions and investments in order to solve fundamentally societal, economic and political issues, which have other dimensions than technological ones.

The “Digital Agenda” paradigm:

- “Developing fast and ultra-fast Internet access”.
- “Trust and security”
- “Interoperability and standards”.

Sounds good, obvious, “technical”, but...

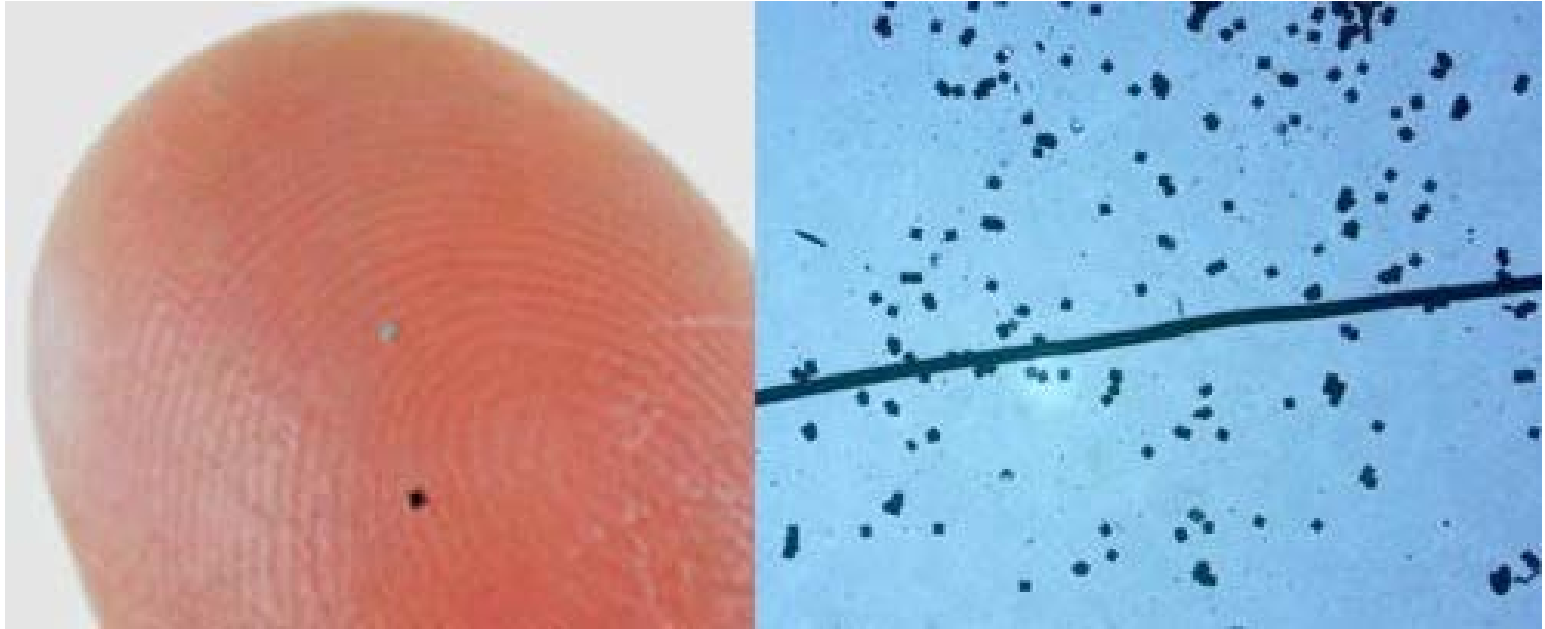
“Ultra-fast networks”

- Metaphor of “Highway of Information” (as opposed to fine grain, ubiquitous networks)
- Certain type of “contents” will take best advantage off ultra-fast networks. Are these contents a priority?
- Issues: Network neutrality? Risks of monopolies? Guarantee of increased competition? Better access to diversified contents and resources?
- Networks do shape the socio-economic landscape (Remember railways)
- What Is the European Geo-strategy of information and networks, and what does it tell on its socio-economic vision?

“Trust and Security”

- No one can object to “trust and security”, but...
- What if cyber-surveillance increases by several orders of magnitude?
- What if every ICT tool is tracked in permanence? Will “Digital IDs” be constantly monitored over each transaction or navigation on the Net? Will every Internet “Objects” reveal the context of their use, the identities of the users, their location?
- What societal and political costs will “cyber-trust” inflict on the social fabric ?

Social control: surveillance, tracking, nano RFID



Hitachi's Mu Chip, an RFID "powder" small enough to put in paper currency.

“Interoperability and Standards”

- Crucial issues, full of policy implications
- Will interoperability encourage decentralized network structures, diversification of operators, or will it accelerate the concentration of oligopolies into monopolies?
- Interoperability issues and standards are not neutral: they may have implicit biases, and create *de facto* distortions.

Paradigms

imbed *implicit* visions and
help shape *implicit* political priorities

Need to *explicit* the underlying assumptions of
different paradigms:

- The “Digital paradigm”
 - *instrumental* (technological impact)
- The “Information paradigm”
 - *environmental* (wide societal impact)
- The “Knowledge paradigm”
 - *mental* (deep impact on civilization)

The « Convergence Paradigms »

- The “Digital Paradigm” is 40 years old. It refers to the technological “convergence” of telecommunication, audiovisual, information processing,...
- The new “BANG Paradigm” (Bits, Atoms, Neurons, Genes) introduces the “convergence” of ICTs with of nanotechnologies, genetic engineering and neuro-technologies.
- Not just a technological convergence, but a systemic one.
- What policy implications of the wider “BANG Paradigm” on the “Digital Paradigm” itself?

Paradigms and Reality

- What levels of reality are respectively captured by the Digital, the Information, the Knowledge or the BANG paradigms?
- What links between these paradigms and whole fields like Computer science, Economics, Sociology, Anthropology, Political Sciences or Philosophy?

Choosing a paradigm...

Is the « Digital Paradigm » too narrow?

2. About SOcietal Issues

- In order to explore a wide spectrum of meaningful paradigms, anthropology, history, political sciences, philosophy should be put to contribution.
- Need to focus on the concepts of “information” and “knowledge”, in relation to the nature of the society itself.

An anthropological analysis of “knowledge”

- 4000 years ago, the Veda society was already a “knowledge” society (the word ‘*veda*’ means “knowledge” in Sanskrit)
- In all shamanist traditions, all around the world, for millenaries, the “shaman” has been designated as “*the one who knows*”.
- Various forms of “Gnosticism” (from the Greek *gnosis*, “knowledge”) dominated millenaries of philosophical or religious developments, in Europe and Asia...

« Knowledge »

- “Knowledge” constitutes a fundamental trait of human societies, and has always been at the centre of the development of any given civilization.
- Different types of “knowledge” were considered important at different moments of history.
- What “knowledge” is really relevant in our times? How to organize the society in such a way that free and open access to this relevant knowledge is guaranteed to all?
What are the structural gaps and dividing issues (economical, societal, political) in the “knowledge societies” of today?

Are all problems solved by “knowledge”?

- How does the tension between common good and private interest translate in terms of “knowledge” in a given society?
- How do the metaphors of “communism”, “socialism”, “liberalism” or “capitalism” translate in the context of “knowledge societies”?
- Do certain types of “knowledge” typically flourish in a given societal environment? What types of knowledge are sidelined?

Knowledge, Freedom of Expression and Free Access to Information

- These concepts, structurally knitted together
- In the name of “information security”, structural changes in the use of ICTs may deeply affect values such as “freedom of expression” or “right to access to public information”.
- For instance, impact of future info-wars?

Info-wars and Cyber-wars

- Intrusion, degradation or destruction of sensitive facilities operated by groups, backed up by powerful states. The *Stuxnet* virus reveals the next level of threat that could affect whole nations, such as the cutting off of the electricity grid, or of entire portions of the global information system.
- The danger of cyber wars has to be recognized as a systemic threat attached to the “Digital paradigm”. Need for a global understanding of the structural weaknesses of the “information society”. A systemic answer to these weaknesses must be found at the global level, for instance by the G20 nations. Role of Europe?

Eminence and Cyber-supremacy

- War, as a control of strategic, « eminent positions »
- Cyber-war: need to gain supremacy on key “global commons” (natural, physical, structural, systemic, normative, legal,...)
- « *The command of the commons* is the key military enabler of a global power position ».
- « Command means getting vastly more military use out of the sea, space and air than do others, that it can credibly threaten to deny their use to others, and that others would lose a military contest for the commons if they attempted to deny them. »

What role for Europe in preventing future cyber-wars?

- Europe has everything to lose in an all-out cyber war, and everything to gain in initiating new steps in a global, systemic governance of the “global commons” of the “world knowledge society”.
- It is strategic for Europe to develop public policies at the international level in favour of “Collective Intelligence”, or cooperative competition (“coopetition”).

ICTs and Global Governance

- What role can ICTs play in enforcing global taxation schemes, such as the “Tobin tax”, or in fighting money laundering, organised crime, tax havens, fiscal evasion?
- In what measure ICTs and “knowledge” can help repair the global financial system? Deal with global warming and “climate neutral” energy and transportation? Avert new wars? Guarantee fair elections? Reduce poverty? Put an end to human rights abuses?

The Future Internet

- “Everyware”.
- Tagging objects, words, patterns of conduct, patterns of associations...
- Tagging of concepts: from data mining to idea mining.
- Cyber-Brother?
- Or information pollution? “You’ll get more information, but much of it will be contradictory ».

Conclusion

- If we do not shape the technologies to our own ends, they will quietly structure the whole society according to their own, abstract, and possibly teratogenic logic.
- Need to explicit the implicit assumptions.
- Need for systemic thinking, world wide.