

# **A brief Political Economy of ICT Innovation**

**A repertoire of « good » resource-questions**

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# Questions, still questions

**In what follows, I will devote my time to raising questions. Over and over again. Frankly, I think that's exactly what we need right now. Especially when innovations are at stake.**

**We don't just need good answers (meant to good solutions) but more importantly, we need good questions (supposedly opening unexpected perspectives and horizons).**

**Here, “good” questions are our ultimate challenges**

# In short ...

- Think technology and at the same time
  - 1 —> think economy
  - 2 —> think consequences
  - 3 —> think your responsibility
  - 4 —> think by and for yourselves

# **1. The background**

**Where we are?**

**The background challenge  
no matter what you do, no matter what  
you dream of, no matter who you are**

**How to live 10 times better by using  
10 times lesser resources?**

**How to get 10 times more meaning  
with 10 times less things?**

# More meaning?

- More meaning = more reasons to be with and to live with
- More meaning = more reasons to feel that you are part of something bigger than your own self
- More meaning = more reasons to feel that you are really contributing to something common and good for all and everyone, good for sustainable and ever-evolving human societies.
- More meaning = ... ? ... (it is up to you to get your answer)

# The degrowth era, the unavoidable happy sobriety

- All of our innovations, all our new craze, must respond to this fundamental challenge, whatever the field
- This is the challenge we need to stay abreast of: **more and more satisfaction with lesser and lesser things and needs**
- Drastically reduce material and immaterial consumption —> lesser and lesser energy-intensive, lesser and lesser raw material-intensive, lesser and lesser resource-intensive

# And then?

- Drastically reduce material- and energy- intensive resources when increasing our satisfaction, why? Because we live in a world where the population is growing (10 billions in less than 20 years)
- This issue opens the door to other crucial challenges, notably the following ones:
  - How to share more equitably the diminishing wealth produced? —> the challenge of fair wealth redistribution
  - How can we really guarantee a world with a high degree of freedom? —> the challenge of peace and livelihood empowerment
  - How to better make common and shared decisions —> the challenge of a renewed human-centered democracy



- **This context of degrowth delineates the circle in which our creativity and the resulting innovations are expected to expand and produce sustainable and future-oriented alternatives.**
- **It's anything but easy**
- **This is the reason why we are here**
- **This is the reason I am here with you**

## **2. Think economy**

**The ultimate key word**

**INVISIBLE**

# **Are our technology and innovative breakthroughs at the service of which economy?**

- Innovating, whatever the field of innovation, is to take part in the construction of a new state of the world**
- So the question is: when we innovate, what kind of world or society are we helping to build?**
- This leads immediately to another question: when we innovate, what kind of economy are we implicitly validating and celebrating?**

## First invisible rule of the economic game

- **Whatever we do, we do it within the framework of a specific economy at the service of certain powers located somewhere**
- **We are still playing a certain role in the great global economy, no matter what we do, even if we do not realize it —> Which part are we playing with our innovations?**

# The pitfall for any innovative initiative: We may generate derisory alternatives

- A derisory innovation aggravates the harm or the problem it is supposed to solve or eradicate
- The major part of our innovations just helps the current global system survive and keep up its toxic and deleterious running.  
**New dress, same rules. New forms, same disasters**
- With regards to our innovations, two crucial questions are to be raised:
  - To what extent does my innovation reinforce the system (its logic, its mechanisms) that I claim to want to change?
  - To what extent does my innovation target the root of the harm or the problem I claim to eradicate?

## Second invisible rule of the economic game

- My “new” solutions generate new problems. More serious? More deleterious? More unmanageable?
- My solutions (= my innovations) can become part of the problem I want to solve. The (new) major part?
- It is all the more true that you see your solutions here but not the generated problems there (quite often far away, at the other side of the planet)
- You win here, they lose there

# **Think economy?**

## **What's the current situation?**

- **Our current financial and economic system is bankrupt. Physically, intellectually, morally, and politically.**
- **The self-evident climate change, the growing economic and financial crisis and the emerging democratic deadlock inform this coming global failure.**
- **Our economic concepts, conceptions, and theories cannot meet the challenges that our societies must overcome.**
- **We urgently need a new cognitive frame to think economy. This is a major current challenge.**
- **We need new goals, new words, new rationale, ... and new enthusiasm and craze.**



# Think economy?

A few orientations just to begin to properly think

- 1) Think economy implies that three basic concerns should be addressed at the same time:
  - How and what to produce, for what purpose, for what use designed for what users? What sort of riches? Riches for whom? What sort of uses desired by whom?
  - How, where and what to accumulate? Under which forms? What for? For the benefit of whom?
  - How to redistribute the generated riches? Equitably?

# Think economy?

A second guideline again to start reasoning straight

2) Think economy implies to take into consideration the basic zero sum principle:

- When we win here, others lose elsewhere, precisely where our eyes never travel
- Our successes are (heavily) paid by others elsewhere far away (out of our sight)
- So the question is: when we innovate, who wins what and where, who loses what and where? For how long?
- Who will pay the bill of our successes here, who will pay the bill of our innovations here?

# Third invisible rule of the game

- No technological innovation without winners and losers
- Impossible to escape the following basic question: who will actually pay my earnings?
- Invisible long-term costs are quite often (much) larger than visible short-term costs and benefits

# Think economy?

One more guideline to start thinking things through

- 3) Thinking economy means we don't just calculate financial costs (with ultimately the famous profitability and profit margins in the line of fire). This means that we take into consideration other types of costs  
There are many other costs, often forgotten. These are generally referred to as externalities (i.e. what is paid by "others" out of our sight, far away from where I live).

# What other (invisible) costs?

## The real cost of « things » we invent

### 1) Environmental costs

- Key questions —> What are we spoiling or depleting? But also what are we creating? What balance between creating and destroying?)
- Key challenge —> The **challenge of energy**: how to increase human power with no additional energy? How does my innovation help overcome this challenge?

### 2) Social and psychosocial costs

- Key questions: Who are we hurting? What social links or institutions are we destroying? But also what social added-value? What new social opportunities? What balance between doing harm and healing?
- Key challenge —> The **challenge of use**: Do we really need the new thing, the new service? —> What do we mean by "need"? —> What are the new needs generated by my solution or innovation? —> Never forget: a new need can generate and become a new (awful) social cost. A new cost for what new benefit, for whom? —> What balance? To whose benefit?

# What other (invisible) costs?

## The real cost of « things » we invent

### 3) Political costs

- Key questions —> Who is increasing or losing one's power on what? What new domination, exploitation, submission, surveillance,... at the expenses of whom, at the benefit of whom? **But also** what new agency, what new room of manoeuvre, what new social action potential have been created?
- Key challenge: —> The **challenge of agency**. Thanks to my innovation, who will be empowered, or enabled, **but also** who will be weakened, or more deeply exploited, or more crudely dominated, or more systematically excluded? Here is the issue of a better distributed social agency, that is the power -and the means- to act and take initiative

# What other (invisible) costs?

## The real cost of « things » we invent

4) **Opportunity costs** are everything that your innovation helps to hinder (others, elsewhere). Every innovation enables but at the same time hinders. Every innovation helps some people here and hinders others there.

As far as costs are concerned, the **basic questions** are the following:

- Who will pay the actual costs?
- What are you actually paying for, what part of the work, what part of the resources incorporated in your innovation? In other words, what are you **not** paying that is being paid elsewhere, by others elsewhere, quite often far away?
- And so, who pays for you? Which **invisible little hands** do the dirty work for the comfort and success of your creation work?

## Fourth **invisible** rule of the game

- **We only pay a small part of the real cost: the work and suffering of many invisible people is not incorporated, nor the material resources that we have incorporated into our innovation.**
- **This is why our inventions are feasible and ultimately profitable: simply, we don't pay the real cost.**



# How to measure the real cost? Which unit of measurement?

- **Not in money ! Money just doesn't take into account all the real costs —> financial added value is not sufficient**
- **We need some other units, notably:**
  - **How many Kw/h (kilowatt per hour)? Where do these KW/h come from?**
  - **What social or societal use-added? What social or societal added utility?**

**Some other indispensable  
economic questions**

# The life cycle of our innovations

- How long will the « novelty » last? Or, how many times can the « novelty » be used? —> the **challenge of duration, the « long-livedness »**
- To what extent, at which cost, how easily will the new « thing », the new machine, or system be repaired?  
**The « reparability » is a crucial requirement**
  - Be attentive: the challenge here is not how to recycle but to what extent and how easily the user can repair and re-use the same (possibly otherwise, as far as possible at no cost —> no social, no environmental, no political costs, ... no new human or societal costs)

# The challenge of the limits

- What limits do I contribute to build? Innovating must also mean elaborating new barriers, new boundaries: « *beyond that point, it is not allowed anymore* ». My inventions will be all the more promising that they are double-sided: they open new exciting horizons at the same time they connected to new reasonable and shared limits.
- **Our creativity needs to be curbed.** How to deliberately tame our **individual and collective ubris**?
- In practice, this means that we must absolutely invent –and reinvent– collective accepted norms and rules capable of containing our ubris. We need to reload our institutional capacity and become creative on two inseparable levels: technology and institution.
  - > **At the same time that I am innovating technologically, to what extent am I innovating institutionnally?**
  - > **New tools, new machines —> new rules, new limits, new institutions to organize debates and controls**

- **Economy for technological innovation needs new normative frame**
- **That means that innovation economy is above all a matter of how to deal between limits and possible, that is, how to decide what should be definitively impossible**

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