

Liberating energy analysis

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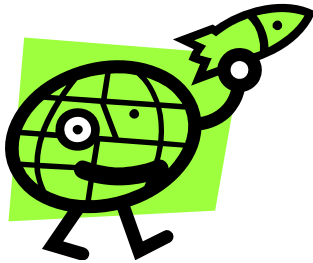


What if ...we

- **were more critical/direct about our researches, data, actions, conclusions?**
- **Could go beyond traditional speakability constraints (topic, assumptions, concl)?**
- **Could transcend the research agenda we defend?**
- **Could share our tacit knowledge on “unpublishable” results, contrasting opinions, failures?**



Objectives



- **An anthropological analysis of the energy analysts/policy makers tribe(s)**
- **A therapy session of the energy-analysis field**

Objectives



- Institutional constraints → methods → problematisation → theories (Boudon, 1971)
- Social construction of the scientific dignity of a discipline in a changing configuration of competing disciplines (Lannoy, 2003)
- “The truth is already showing up through the care it takes in escaping observation” (Lévi-Strauss)

Approach



- **Our experience in the field, conversations (observation by participation)**
- **A few of most controversial topics → threats to our esteem & assumptions**
- **Constraints also protect ourselves & may be loosened**

Outline



- **The energy field, its traditions, its critics**
- **6 interrelated types of constraints**
- **Consequences**
- **Reorientation (?)**

The field of energy: its traditions



- **More formal traditions on assumptions**

- Energy efficiency is good
- Trust in measurability
- Faith in one's own discipline as best to save energy

- **More informal traditions**

- within subgroups (architects, weatherization specialists, marketing people, forecasters, government standards analysts, etc.)
- Stories on non-smart controls, unpublished results

The field of energy: its critics



- A number of papers have already addressed the conventionalization of energy analysis (Stern, Shove & Moezzi, Nørgård, Wilhite, Herring, ...) about some key themes of the field
 - market barriers, cost-effectiveness, models of decision-making, assumed relationships between efficiency and reduced consumption and between efficiency and reduced carbon emissions
- But not enough critique and critique is not enough!

A few observations about the field



- **Elements of war against**
 - what “others” do or think (others = consumers as worse polluters and/or scientists less scientifically equipped to tackle energy issue)
 - the world tendency to use or waste more energy
 - Climate change without threatening the economy
- **moving constellation of potentially contradictory interests and logics**
 - regulators, academe of different disciplines, technologists, implementers, industry, policy analysts, marketers, environmentalists, ...

Frameworks and constraints



- **Political framework**
- **Intellectual & institutional framework**
- **Economic framework**
- **Emotional framework**
- **Scientific framework**
- **Funding framework**

Political framework and the nature of evaluation



- tendency to rosy evaluation (no more ‘lessons learned’): everyone has pressures to report good outcomes to the funders. Faults are hidden – which makes them harder to fix – and theoretical estimates of savings reign
- Compare official presentation with post-presentation conversation, ex. with traders

Political framework and the nature of evaluation (2)



- In a context of competition for symbolic and financial domination in the field, the roots of (self) censure are entangled with **strategic lack of self-reflectivity**, social hierarchy, and a reluctance to suggest shortcomings about what is tacitly defined as good, such as smart controls or environmental labelling.
- The evaluation problem is really just a subset of a more overarching sort of restriction, governing what can be not questioned: **we produce the best work**, or the best-looking work, **we can**, that meets a structure determined elsewhere.

Intellectual & institutional framework: Technocentrism



- Since the 18th century, **science and technology have aimed at replacing religion and tradition** by a faith in Reason in humanity's technical dealings with matter (Szerszynski, 2005)
- technological activity became displaced from its lowly **social location** in the artisan sector and increasingly taken up by the emerging scientific elite → hypothesis: continuing to frame energy analysis in technological terms = a way of keeping up engineers social status?

Intellectual & institutional framework: Numbers



Microsoft Excel - Classeur4

Echier Edition Affichage Insertion Format Outils Données Fenêtre 2

Tapez une question

Repondre en incluant des modifications... Terminer la révision...

Gegevens & analyse van woningen

	A	B	C	D	E	F	G	H	I	J	K	L
		Schil	Verwarming	SWW	Um	Energie- bshoeft	Rendement	Elek ?	Energie- verbruik (theor)	SWW- verbruik	# personen	Elek ?
4												
5												
6												
7	7 D	A	C		1,38	197482	77,4%	45%	254981	4358		45%
8	28 D	B	B		1,57	186831	72,5%		257422	2841	5	
9	16 D	B	D		1,4	150410	66,7%		225569	5502	3	
10	14 E	C	C		2,37	142572	62,2%		229011	4660	1	ja
11	31 D	A	B		1,6	188305	75,9%		221649	3839	4	
12	36 C	B	C		0,87	151278	72,2%		209451	5321	3	
13	2 C	B	B		1,04	141338	71,1%		198793	2705	6	
14	30 B	E	B		0,7	85681	35,1%	ja	74743	2702	4	ja
15	24 D	C	B		1,46	93105	58,2%		160106	2604	5	ja
16	27 C	C	C		0,82	93768	56,1%		167186	4726	4	
17	8 C	B	B		0,98	114641	65,4%		175422	2781	3	
18	11 C	C	B		0,82	89038	58,7%		151704	2719	5	ja
19	6 B	E	B		0,6	64435	34,2%	ja	75363	2870	2	ja
20	9 C	B	C		1,14	107036	66,9%		160059	4958	4	
21	40 C	B	B		1,01	121768	73,9%		164775	3290	2	ja
22	10 D	B	C		1,29	102028	65,7%		155366	4156	2	ja
23	23 D	B	C		1,51	103365	70,4%		146756	4416	4	
24	29 C	A	C		1,01	114665	78,5%		146157	4128	4	
25	19 C	B	B		1,12	106907	74,5%		143435	3626	4	
26	38 C	C	C		0,94	87539	61,4%		142487	4467	2	
27	4 B	A+	B		0,59	117987	88,3%		133690	3644	5	
28	3 C	B	B		0,96	93518	72,5%		128914	3118	4	
29	34 C	A	B		1,06	102426	78,1%		131122	3067	2	
30	17 A	C	B		0,5	74451	62,0%		120111	2870	2	ja
31	37 C	A	C		0,93	84867	76,3%		111362	4134	2	
32												
33												
34												

Prêt

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Intellectual & institutional framework: Numbers & Excel



- standards of defensibility

● conditions cannot practically be

- carried along with the number energy savings are necessarily measured relative to a fictitious baseline

	Ech	Verwarmng	SWW	Lm	Masse	Rendement	Elek T	verbruik (kwh)	verbruik (MWh)	# personen	Elek T (%)
7	2010	A	C	3,18	197482	77,4%	45%	208451	5724	1	ja
8	2010	B	C	0,07	12230	72,2%		208451	5724	1	ja
9	2010	B	C	1,04	12230	71,1%		195728	5409	1	ja
10	2010	B	C	0,02	88035	55,7%		151704	2719	5	ja
11	2010	B	C	0,6	84435	34,3%	ja	75263	2090	2	ja
12	2010	B	C	1,14	107035	69,6%		180089	4959	4	ja
13	2010	B	C	1,01	121680	73,9%		189778	2760	2	ja
14	2010	B	C	1,20	102029	55,7%		155355	4125	2	ja
15	2010	B	C	1,61	103365	70,4%		149746	4116	4	ja
16	2010	B	C	1,03	114665	70,6%		148157	4128	4	ja
17	2010	B	C	1,12	100907	74,6%		144826	3920	4	ja
18	2010	B	C	0,94	87339	61,4%		142407	4407	2	ja
19	2010	B	C	0,60	84435	34,3%		132060	3644	2	ja
20	2010	B	C	0,90	87339	61,4%		142407	4407	2	ja
21	2010	B	C	0,90	87339	61,4%		142407	4407	2	ja
22	2010	B	C	0,90	87339	61,4%		142407	4407	2	ja

- How to handle paradoxes, vicious or virtuous circles with Excel?

- but it gives fast and clear results...

Intellectual & institutional framework: Multiple realities



- there might be something useful for liberating energy analysis about the **irony in real-world situations** of energy people having "inconsistent" practices at work and at home

Economic framework and the type of research



- **Economic “lens”** in energy policies & their preparatory research
 - Assumption: the market will solve energy scarcity thanks to better-informed “consumers” (Tariffs of Use labels, ...)
 - Assumption rarely questioned or evaluated
 - No alternative model (ex: in sociology)

Economic framework and the type of research (2)



- The vast majority of environmentally significant consumption is **not a matter of individual choice**, green or otherwise. It is instead bound up with, and constitutive of, irredeemably social practices governed by norms like respectability, appropriateness, competence and excellence (Shove et al.)

Emotional framework and the assumed



- Fascination for the power of **technology**
- **Strong moral basis:** "you can do anything you want as long as you do it efficiently" ... But less so if you live in a developing country
- **Non studied topics (threats to our way of life?)**
 - limits to the value of "simple things you can do" lists
 - relationships between efficiency, conservation, and productivity on micro- and macro-economic scales
 - ...

Scientific framework and the type of solution



- the main **assumption:** an ultimately technological solution
- **universality of rationality**
 - → conceals the issues of conflicting rationalities and of struggling for socially imposing own rationality
 - → no point in evaluating technology-based policies (are expert recommendations implemented?)

Funding framework and the need to make a living



- **the most familiar kind of constraint**
 - Markets need buyers
 - researchers and policy professionals need funding
- We are likely sitting on thousands of studies with problematic results edited, key sentences deleted, abstracts rejected, papers unpublished...

Funding framework and the need to make a living



- But... We have mouths to feed and *curricula vitae* to populate
- People who are too critical are attacked, lose the chance for another contract, or lose their jobs

Consequences



- Frustration despite good work
- Awareness that we are not up to the challenge or that the challenge that we are up to is rather too limited
- Maybe it does not have to be like this?

Reorientation



- **Constraints hold up because** they are functional or at least because they are believed to be so
- Let's remember that **climate change** is not just a funding opportunity
- Let's try to make a **discipline** that is more exemplary in **combining** engineering sciences, social sciences, epistemology, and policy



Thank you for your attention!