

Dealing with power relations in a pragmatic approach of controversies

**Critique, participatory procedures
and forms of hegemony**

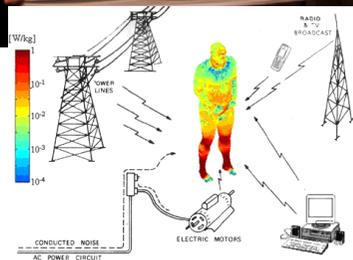
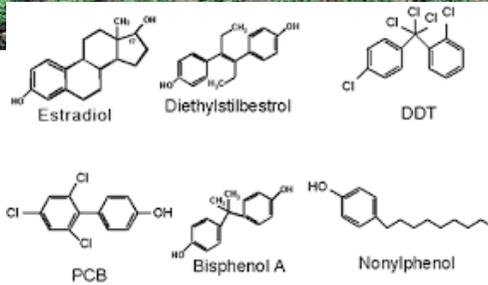
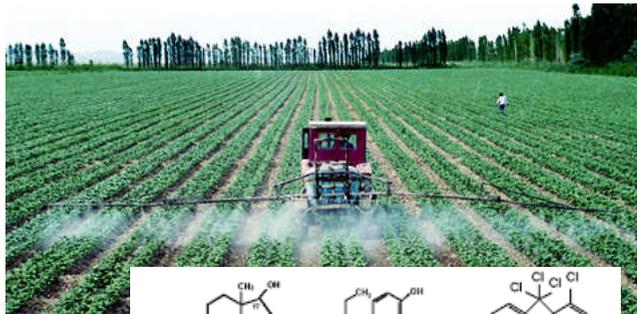
Francis Chateauraynaud
(GSPR – EHESS, Paris)

Centre for Urban Research on Austerity Inaugural Conference Programme
De Montfort University, Leicester, 18th November 2015

1.

Pragmatism, Sociology and the Dynamics of social processes

Modelling Action and Argumentation
in public Controversies and ordinary Practices



EBOLA

WORDS SURROUNDING EBOLA: DISEASE, QUARANTINE, VIRAL DEATH, FATIGUE, OUTBREAK, PAIN, FEVER, BLEEDING, VACCINE, MEDICAL, CONTAGIOUS, VIRUS, PEOPLE, INFECTION, DANGER, AFRICA.



Theoretical background	Main domain of validity
<i>Fields, habitus and social theory</i> (Bourdieu)	<i>Social careers, activities and tastes in groups, symbolic imposition of cultural norms, modes of legitimation in fields of power</i>
<i>Discursive Democracy</i> (Habermas)	<i>Public debate on public debate and rules of democracy</i>
<i>Gouvernementality and Technology of the Self</i> (Foucault)	<i>Genealogy, Biopolitics and Power-Knowledge. Governing through TechnoScience</i>
<i>Ethnomethodology</i> (Garfinkel & French version of situated action: Quéré)	<i>Cognitive procedures in context, practical reasoning, production of accounts in front of troubles and the routines of everyday life</i>
Sociology of justification (Boltanski and Thévenot)	Sense of justice and opposite definitions of public good from ordinary interactions to public affairs
Actor Network Theory: re-assembling the Social (Latour and/or Callon)	Science in action, controversies, innovations and public assessment of research programs
Argumentative Sociology and Pragmatics of transformation (GSPR and friends)	Emergence and trajectory of new sets of actors and arguments through a wide range of arenas; shifting process between controversy and conflict

An argumentative sociology deals with three levels of analysis:

1. Contexts, situations and arenas in which actors deal with an argumentative constraint with different strategies to escape (Goffman,

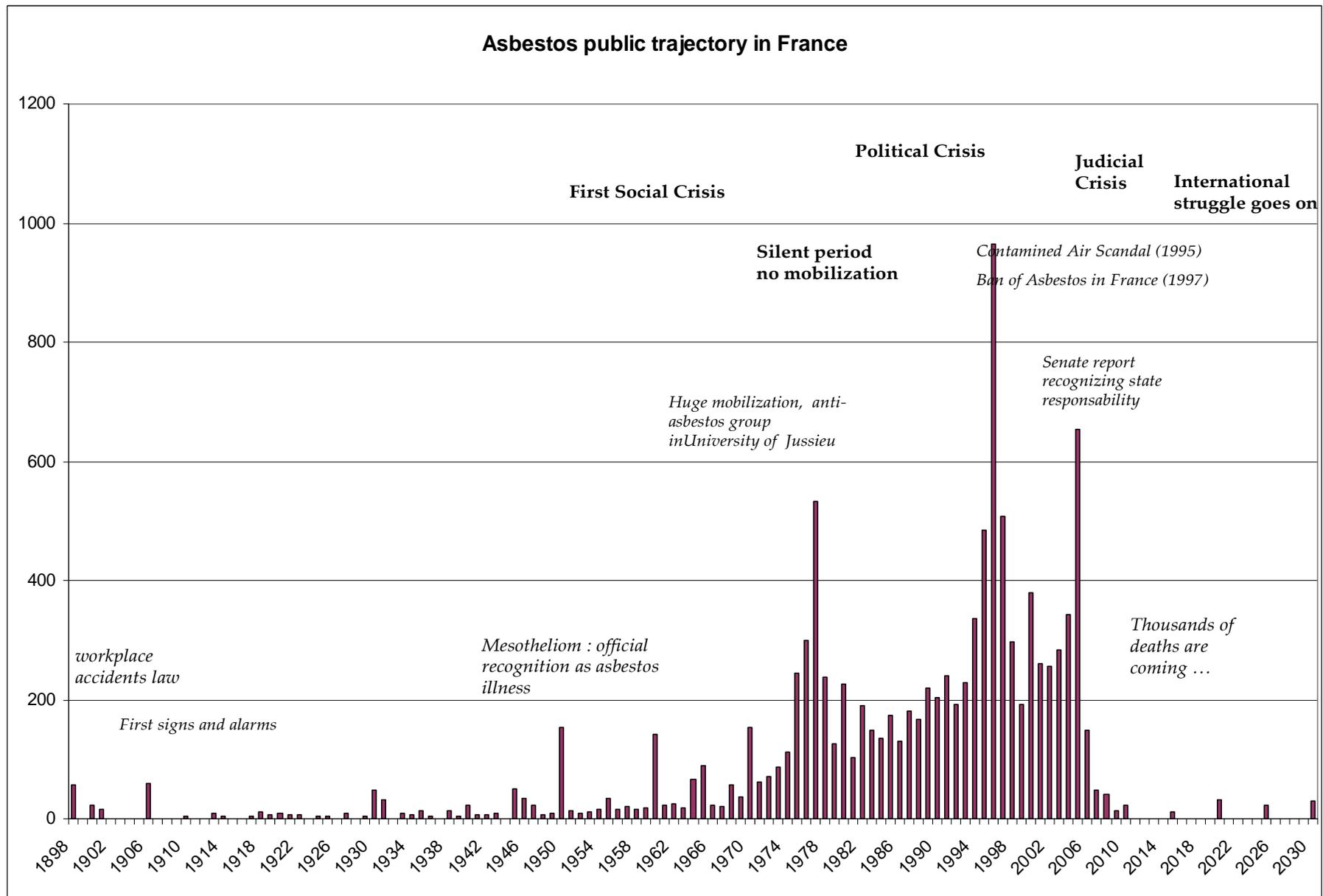
"[...] Discourse does not just consist in an abstract cognitive system of beliefs and words, but is a constitutive dimension of social relations that does not merely describe or make known a preexisting or underlying reality, but instead helps to bring that reality into being"

(Howarth & Griggs, 2012 ; following Gottweis, 2003)

3. The transformation of arguments and actor coalitions (Hajer) over time through a long series of redefinitions generated by disputes and controversies and by which some arguments are selected and become strengthened enough to join common representations and ordinary discourses (that is the specific stuff of Sociological Ballistics ...).

2.

A ballistics of complex processes



This graph is based on statistical distribution of the years cited in discourses and texts that compose the French corpus concerning asbestos analysed with Prospéro.

To protest against the authorities failure to clear workplaces of asbestos which may lead to fatal respiratory system diseases, thousands staged a die-in in Paris.



Unique 'Die-in' Protest Against Asbestos in Paris

by Dr.Enozia Vakil on October 13, 2013 at 9:58 PM

The protesters from all over France lay down in the street outside Sorbonne University in Paris's Latin Quarter. Asbestos exposure claims 3,000 lives per year, according to organisers.

They had kicked off the march at the Tour Montparnasse, one of the city's few tall buildings, where inspectors found amounts of asbestos dust exceeding allowable levels.

"Ten deaths each day, with no one held responsible or found guilty," one poster read; "For criminal proceedings, another in the march that ended at Paris's main courthouse.



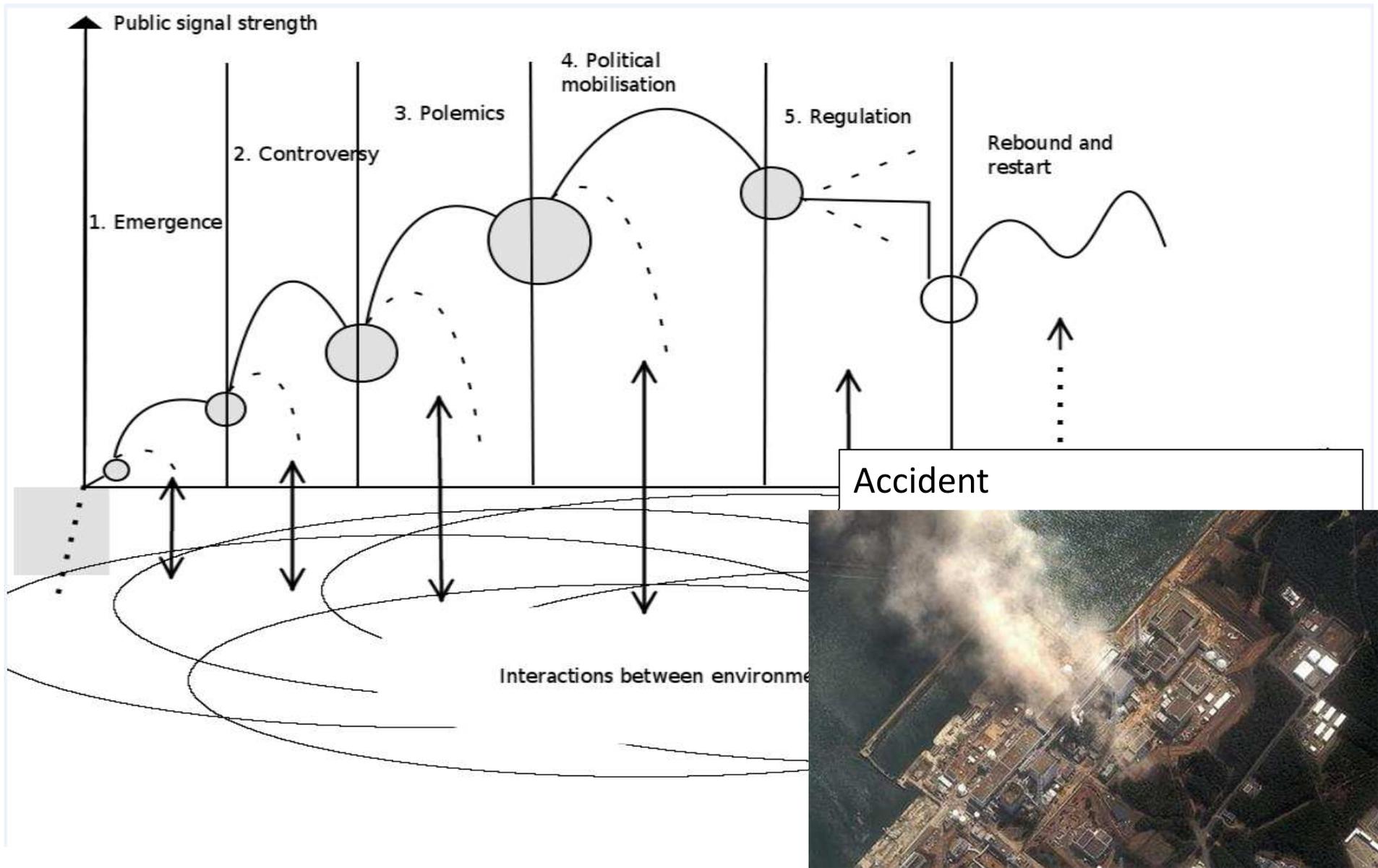
"It has been 17 years since we submitted the first complaints, and there has still not been a criminal trial," ANDEVA vice president Francois Desriaux told AFP.

"The asbestos risk is not ancient history, it still exists today," he said.

"The Tour Montparnasse should have been ridden of its asbestos years ago, but between owners going round the rules and lax police who have looked the other way and allowed the work to be postponed, they are continuing to play with people's lives," ANDEVA said.

In August, Paris police threatened to evacuate the building, where some 5,000 people work.

"Mobilisation is the only way to dent the authorities' passivity," said a woman who works for Amundi, a subsidiary of the bank Credit Agricole, which evacuated its employees from the building in June because of the danger of asbestos exposure.



General Model of Transformation for Warnings and Controversies

Andrew Abbott, “On the concept of turning point”
in *Time matters. On theory and Methods*
The University of Chicago Press, 2001.

“The concept of turning point is a « **narrative concept** ». That is, the concept has reference to two points in time, not one. What makes a turning point a turning point rather than a minor ripple is the passage of sufficient time ‘**on the new course**’ **such that** it becomes clear that direction has indeed changed.” (p. 245)

“What makes the trajectories trajectories is their **inertial quality**, their quality of enduring **large amounts of minor variation without any appreciable change** in overall direction or regime.” (p. 248)

Shifting from narratives to argumentation

How do actors discuss the reversibility or irreversibility of a turning point, try to avoid it upstream – as they do in risk assessment – or to interpret the causality and consequences afterwards or downstream, after a marking event has occurred.

3.

**New forms of protest
and regimes of critique**

In public debates concerning public policy and project, accepting to enter into a genuine dialogic process quickly leads players to seek a compromise if they are **oriented towards consensus and cooperation** - which generates multiple tactics to close as soon as possible the discussion (*"we will not argue on this point," "it would lead us too far"*)

In the case of a **dissensus orientation**, the figure that Lyotard describes as the concept of « **differend** » (**deep disagreement**), it leads to a defense crystallization in order to reduce the views of others and to literally bomb his opponent's arguments so that he could not respond, in the aim to reduce his scope of intervention.

In both cases, arguing involves both faculties of action and emotions whose mode and intensity depend on **resistance to the revision process** (see Gärdenfors and Livet on that point).



Conflict at Notre-Dame-des-Landes /
New Airport project
near Nantes



A gradient of critique: 6 regimes of critique

0. Blissful indifference (nothing to discuss)

- 1. Technical critique:** counter-expertise, metrologic or epistemic controversy;
- 2. Procedural Critique:** Modes of consultation, deliberation and dispute resolution;
- 3. Accusation towards a specific entity:** claiming against an injustice or discrimination produced by a named entity (naming, claiming, blaming)
- 4. Critique of injustice** created by a “system”: struggles against inequalities, environmental justice;
- 5. Radical criticism against the “system” based on an alternative “system” :** deep disagreement, conflicting values and opposing worldviews ; alternative visions of the futures;
- 6. Radical criticism without alternative vision:** catastrophism and prophecy of doom.

7. Cynism ...

The convergent move of critiques in the case of shale gas protest

1. Technical critique:

1. Technical Fracking and Water pollution
2. Used Water and difficulties of recycling
3. Earthquakes Risk

2. Procedural Critique:

1. Lack of consultation
2. Denying local institutions and representatives

3. Accusation towards a specific entity:

1. Air Pollution (number of trucks)
2. Water

4. Critique of injustice

1. Health Consequences
2. Quality of landscape
3. Tourism Consequences

5. Radical criticism against the “system” based on an alternative “system” :

1. US in France
2. No utility for energy
3. Global Warming

6. Radical criticism without alternative vision:

1. Destruction of Earth

4.

**A post-pragmatic view on evidence and truth:
expertise between inquiry and struggle**

Expertise is at stake in all the processes observed

- The classical model of expertise has been under huge critique: asymmetry, lack of transparency, conflict of interest, late knowledge, old fashioned verificationism and epistemology, monodisciplinary reasoning etc
- New forms of expertise dealing with more complex issues: contradictory expertise, collective, distributed, participatory ...

Paris pollution hits life-threatening level

Jumps in use of car-sharing and bike-sharing services

Thomson Reuters | Posted: Mar 14, 2014 3:07 PM ET | Last Updated: Mar 14, 2014 3:07 PM ET



A pigeon is perched at the Saint Vincent de Paul church as smog cloaks Paris. (Christophe Ena/Associated Press)

Air pollution in Paris has hit health-threatening levels over 80 per cent higher than in London and Berlin as a sunny spell reaches western Europe, prompting the city to curb road speeds and offer free public transport.

Charges were also waived for the city's pioneering cycle and electric car-sharing schemes this week as a visible haze hung over the streets of the French capital.

- [Pollution causes lung cancer, WHO decides](#)
- [China's pollution problem](#)

European Environment Agency (EEA) figures for Thursday showed there was 147 microgrammes of particulate matter (PM) per cubic metre of air in Paris compared with 114 in Brussels, 104 in Amsterdam, 81 in Berlin and 79.7 in London.

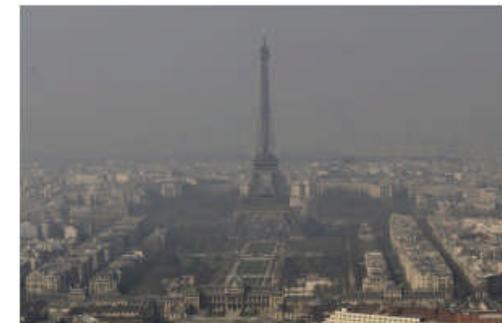
Background pollution — the outdoor air quality experienced by the average citizen — topped the 100 maximum measurable index level in Paris on Thursday, data from pollution watchdog [airqualitynow.eu](#) showed, making the French capital the only European capital in the "very high" level zone. The index stood at 81 in London, 76 in Berlin and 61 in Madrid.

Paris is traditionally more susceptible to poor air quality than other main western European capitals, with only Athens scoring worse according to World Health Organization (WHO) annual averages collected in 2008.

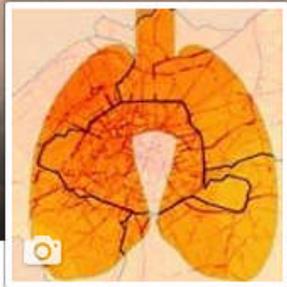
Fiscal support for diesel over gasoline in motor vehicles and heavy private vehicle traffic have been cited as causes.

The near-absence of wind and temperatures about 10 degrees Celsius above seasonal averages were also a factor this time, according to Meteo France data.

'Pollution causes deaths'



Bike-sharing services, buses, underground trains and other forms of transport will remain free over the weekend. (Jacques Brinon/Associated Press)



Collectif
Poumons
de Paris
Communauté

Créer un bouton d'appel

Journal À propos Photos Me

198 mentions J'aime +1 cette semaine
Stéphanie Taveneau et 5 autres amis

53 portée(s) de publications cette semaine

Afficher le fil des Pages
Consultez les publications d'autres Pages

Inviter des amis à aimer cette Page

Atteignez les personnes qui
aimeront votre Page.



Promouvoir la Page

À PROPOS

Lutte contre la pollution de l'air parisien et
d'ailleurs.

Ajoutez votre site Mettre le site web en avant

Statut Photo

Écrivez quel

Collectif Po
Publié par Pier



Collectif Poumons de Paris a partagé l'évènement de
Andréas Pilartz

Publié par Pierre Garnier [?] · 2 novembre, 21:28 ·

Débat avec BERNARD JOMIER, Adjoint à la Maire de Paris chargé de la
santé, MICHÈLE RIVASI, Député européenne membre de la commission
Environnement, santé publique et sécurité alimentaire et MARIE-ODILE
BERTELLA-GEOFFROY ancienne Juge d'instruction au pôle santé
publique du TGI de Paris



10 NOV
Débat Santé et Pollution
mar 7 PM · Péniche Antipode · Paris
18 invités

★ Intéressé(e)

125 personnes atteintes Mise en avant indisponible

J'aime Commenter Partager

Aurélie Solans et Yann Solans aiment ça.

Écrire un commentaire...

Collectif Poumons de Paris
Publié par Pierre Garnier [?] · 14 octobre ·

Un article très éclairant sur la puissance de feu des lobbys

LA SUR LA QUALITE DE L'AIR

Wanted! An army of citizen scientists to tackle air pollution

A Europe-wide project asks iPhone users to help monitor levels of pollution in major cities



A man jogs on Parliament Hill on Hampstead Heath, London, as smog can be seen in the distance
Photograph: Matt Dunham/AP

Turn off Tinder and exit Instagram - scientists want you to turn your iPhones to research. Launching on Tuesday, the [iSpex-EU project](#) aims to recruit people from major cities across Europe, including Manchester and London, to take part in an initiative to monitor levels of air pollution.

Run during the [International Year of Light](#), a worldwide celebration of light and light-based technologies this year, the project aims to raise awareness of air pollution and contribute to scientific research by encouraging people to use their mobile phones to record levels of airborne particles and droplets known as

The rise of diesel in Europe: the impact on health and pollution

In a bid to reduce CO2 emissions in the 90s, Europe backed a major switch from petrol to diesel cars but the result was a rise in deadly air pollution



The switch to diesel in Europe was to be a trade off between reducing climate change and increasing health problems. Photograph: Alamy

Volkswagen's rigging of emissions tests for diesel cars comes after nearly 20 years of the technology being incentivised in Europe in the knowledge that its adoption would reduce global warming emissions but lead to thousands of extra deaths from increased levels of toxic gases.

Diesel was a niche market in Europe until the mid-1990s, making up less than 10% of the car fleet. Diesels produce 15% less CO2 than petrol, but emit four times more nitrogen dioxide pollution (NO2) and 22 times more particulates - the tiny particles that penetrate the lungs, brain and heart.

Following the signing of the [Kyoto protocol climate change agreement](#) in 1997,

John Vidal

Tuesday 22 September 2015 16.57 BST

Nicola Davis

Sunday 30 August 2015 07.00 BST

theguardian

Expertise / Counter-Expertise	Dissensus and conflict on facts and matter of facts	Legal suits on courts Political debates	Resolving the conflict with a decision	<i>Greenpeace</i> <i>CRII-RAD / ACRO</i> <i>CRII-GEN</i> <i>Robins des Toits</i>
Collective Expertise	Plurality of viewpoints and multidisciplinary approach oriented to a consensus-based assessment	The procedure is conducted by a national or international agency, generally after new scientific publication or marking events creating a shift in assessment	Making a strong consensus	<i>Comité Dormont ESB</i> <i>IPCC</i> <i>INSERM amiante 1997</i> <i>WHO 2012</i> <i>INSERM pesticides 2013</i> <i>IPBES</i>
Distributed Expertise	A diversity of actors with different skills and tools, interests and knowledge, agencies, private labs, NGOs, contribute to a trend in balancing certainties and uncertainties, knowledge and ignorance, standard evaluations and specific experimentations or experiences	Flux of studies, reports, research and reviewing, which define, without a central organizer, the common knowledge and the collective norms - e.g. good practices	Convergence and divergence which produce a space of relevant scenarios	<i>Nanos</i> <i>Endocrine disruptors</i> <i>Energy scenarios</i> <i>(IEA, Ademe, NegaWatt...)</i>
Dialogic or participatory Expertise	Direct interactions between scientists, engineers, stakeholders and the public	Open consequentialism by which lay experiences and the plurality of life forms are taken into account for collective assessment	Reframing trust in public expertise and decision	<i>Danish Board of Technology</i> <i>Citizen panels</i> <i>Digital democracy</i> <i>Participatory research</i>

Cumulative impacts, risk assessment and environmental Justice

California Environmental Protection Agency

Cumulative Impacts: Building a Scientific Foundation

Public Review Draft

August 19, 2010



Linda S. Adams, Secretary
California Environmental Protection Agency



Joan E. Denton, Ph.D., Director
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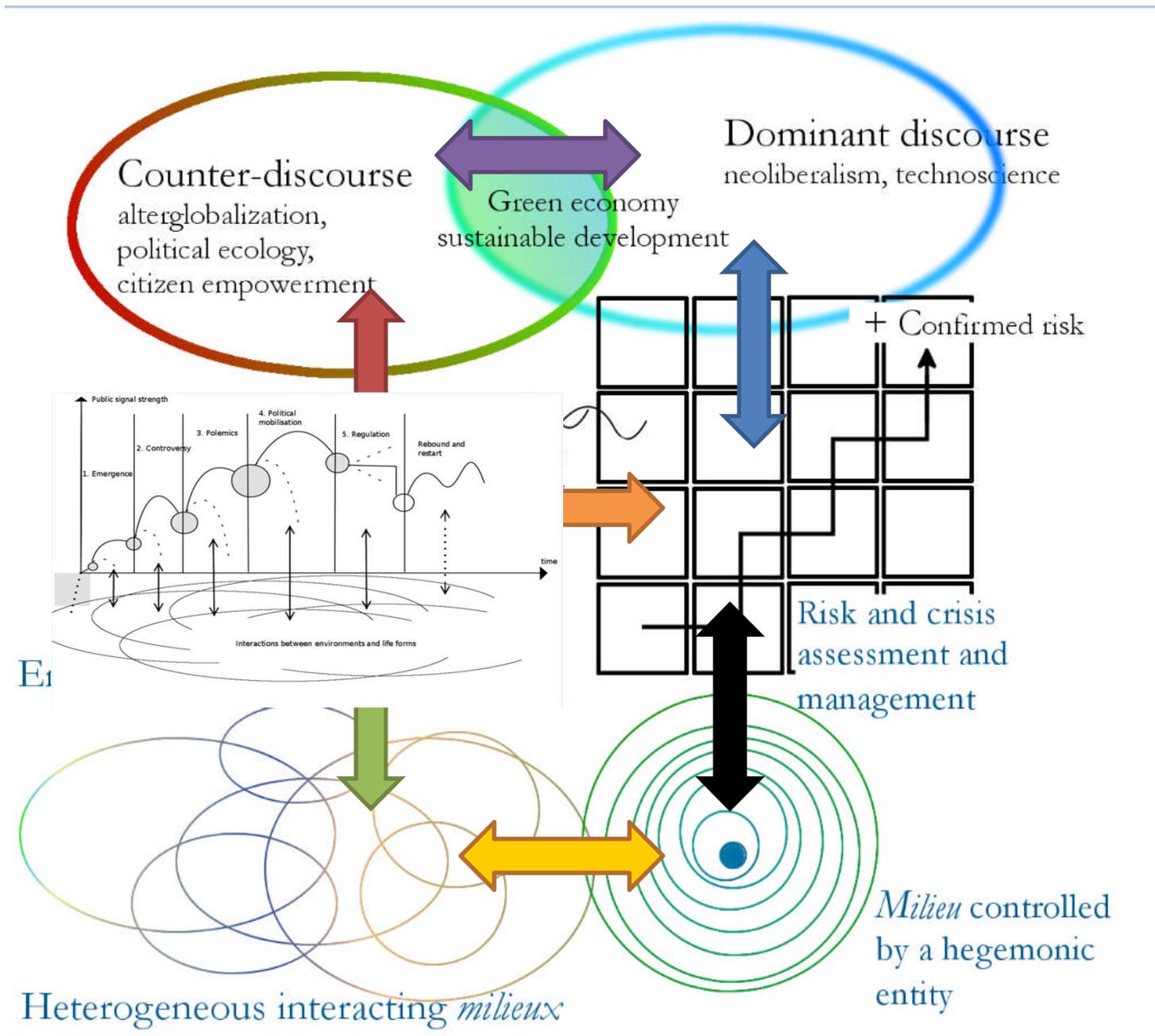
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5.

Towards a pragmatics of transformation



Pragmatics of transformations: 6 spheres/6 sociologies
Chateauraynaud & Debaz, to be published in 2016



June 25 2012

J'aime 9



The Future we want: final document

La Via Campesina at the Rio+20

The people of the world said NO to the Green Economy and strengthened their resistance and struggles.

By United Nations Conference on Sustainable Development

Also available in [Français](#), [Español](#)

I. Our common vision

1. We, the Heads of State and Government of Brazil, from 20 to 22 June 2012, with a view to achieving sustainable development and to ensuring an environmentally sustainable future for our planet,

2. Eradicating poverty is the greatest requirement for sustainable development, and poverty and hunger as a matter of urgent concern,

3. We therefore acknowledge the need to integrate economic, social and environmental development to achieve sustainable development in all its dimensions,

4. We recognize that poverty eradication, sustainable consumption and production and protection of the environment and social development are the overarching pillars of sustainable development. We also reaffirm the need for

inclusive and equitable economic growth, creating greater opportunities for all, reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion, and promoting integrated and sustainable management of natural resources and ecosystems that supports, inter alia, economic, social and human development while facilitating ecosystem conservation, regeneration and restoration and resilience in the face of new and emerging challenges.

For a week throughout the People's Summit, la Via Campesina mobilized in Rio de Janeiro to say NO to the Green Economy and to continue the process of building new alliances, focused on the central themes coming out of the Peoples Summit's plenaries, assemblies and mobilizations on the streets, to show the real needs and aspirations of our people.

We can return to our homes and our daily struggles content, with the feeling of a job well done. We made a commitment to strengthen the spaces built during these days and are faced with the challenge of taking the reflections and action agendas proposed in the social movement plenaries and assemblies and applying them to our local realities.

The days spent together with the hundreds of brothers and sisters of la Via Campesina who arrived from all over Latin America and the world,

But since we the people have our own proposals, we also shared them and enriched them with others who arrived with the same goal in mind. Because of this, our solutions and the proposal of a common future to build upon in the future, occupied the second part of our plenary debates.

From the Food Sovereignty plenary, the calls against the capitalist, patriarchal, discriminatory and racist system resonated with echoes that multiplied with the voices from the other plenary sessions, and the real causes of the problems that today have pushed humanity to the edge of the abyss were left very clear. From there we also conclusively denounced agribusiness as responsible for the destruction of nature, social exclusion, the commodification of life and as the main cause of the climate crisis and the loss of biodiversity.

INTERACTING *MILIEUX* AND GREEN ECONOMY ON THE GROUND...





Montreal, May 2014, prise de vue FC



11/02/2015 20h40 - Atualizado em 11/02/2015 21h19

Sem acordo, índios mantêm bloqueio de via em Belo Monte, no PA

Força Nacional tentou negociação com manifestantes, sem sucesso. Índios bloqueiam acesso à principal canteiro de obras de hidrelétrica.

Do G1 PA



Não foi bem sucedida a tentativa de negociação da Força Nacional, nesta quarta-feira (11), junto a índios de oito aldeias que mantiveram o bloqueio da estrada que dá acesso ao sítio Pimental, um dos canteiros de obras da Usina Hidrelétrica Belo Monte, em Vitória do Xingu, no sudeste do Pará.

O protesto é para pressionar a empresa em relação às obras nas comunidades indígenas. A Norte Energia, empresa que constrói o empreendimento, disse que

repudia o protesto e que cumpre integralmente as demandas dos indígenas.

ACTUALITÉS URGENC

BELO MONTE : construit au m

Le barrage de Belo Monte fait suite à la construction du fleuve Madeira. Belo Monte de forêt primaire en territoire vont être déplacées et a changement de mode d ressources vivrières.

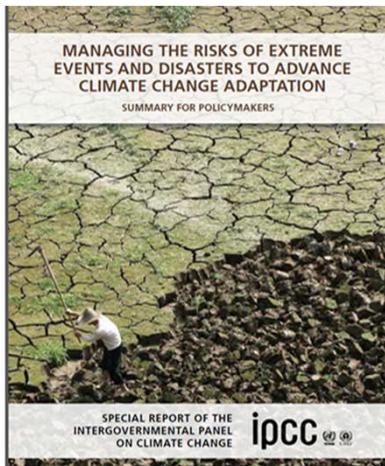
Belo Monte ouvre la poumon vert de notre Brésil non seulement u mais aussi une source mines, par exemple la mi son ouverture fin 2012.

Sa construction a fait condamnée à maintes re

6.

From global space of calculation to local experiences

Vigilance, adaptation and invention in interacting milieux



Blayais, estuaire de la Gironde



Gravelines, côte d'Opale



Hinkley point, estuaire de la Severn



Dungeness, Kent



Planned Hinkley Point nuclear power station under fire from energy industry

The Hinkley Point C boondoggle: a dangerous waste of money

October 26, 2015 by Alex Russell and Peter Strachan — 10 Comments



Hinkley Point C artist's impression

The UK Government's pursuit of a new nuclear plant at Hinkley Point C represents not just a colossal waste of money, but could also be real danger to the UK's national security, write Professors Alex Russell and Peter Strachan of Robert Gordon University. "Let us hope that the Prime Minister and Chancellor's actions do not lead to the radicalisation of unemployed steel workers who are now being joined by unemployed renewable industry personnel."



The Conservative government, arguably, has completely lost the plot in continuing to pursue its so called [energy policy that depends so heavily on building a new fleet of nuclear power stations](#) to keep the lights on in Britain. The government want to have 16 GW of new nuclear power stations built in the UK all using EDF's troubled Generation-III design, of which Hinkley Point C (3.2 GW) is only the first installment.

With this project is George Osborne seeking an entry in the Guinness Book of Records as the first Chancellor of the Exchequer to commission the world's most expensive nuclear power station? The Chancellor says the project represents good value for money. But the facts suggest otherwise. Further, and with the recent [signing](#) of a new nuclear accord as part of the State Visit of the President of China, not enough attention appears to have been given to national security issues.

Economic madness

Energy analyst says that for same price as Hinkley Point C, providing 3,200MW of capacity, almost 50,000MW of gas-fired power capacity could be built



Artist's impression of Hinkley Point C, which it is predicted will cost as much as the combined bill for the London 2012 Olympics and the revamped Terminal 2 at Heathrow. Photograph: EDF Energy/PA

Hinkley Point, the planned £24.5bn nuclear power station in Somerset, is under increasing criticism from the energy industry and the City, even as the government prepares to give the final go-ahead for the [heavily subsidised project](#).



UK nuclear sites at risk of flooding, report shows

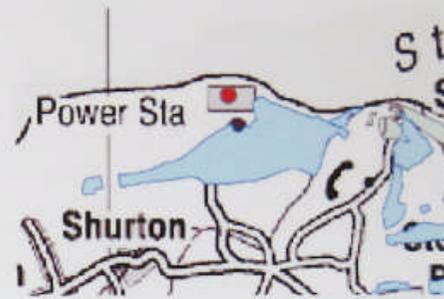
Rising sea levels because of climate change put 12 of 19 sites at risk, unpublished government analysis shows

● [Map: sites at risk of flooding](#)



📍 Sizewell nuclear power plant, seen from across the sea at Southwold, Suffolk. Unpublished government analysis shows sites are at risk from flooding due to climate change. Photograph: Graham Turner for the Guardian Graham Turner/Guardian

As many as 12 of Britain's 19 civil nuclear sites are at risk of flooding and coastal erosion because of climate change, according to an [unpublished government analysis](#) obtained by the Guardian.



KEY

- Approximate Location of Hinkley Point
- Tidal Storm Surge (Holford) Approximate Flooded Area
- Tidal Storm Surge (Chalcoff) Approximate Flooded Area



Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationery Office © Crown Copyright (2011). All rights reserved. NAD 49/OSGB 36. Environment Agency 2009. 100005080. All rights reserved.

Drawn : R.C

Date : Sept 11



Hinkley Point C
Flood Risk Assessment (FRA)
Main Site

1981 Flood Extent Outline
and Photograph

Figure 12

Rev 01

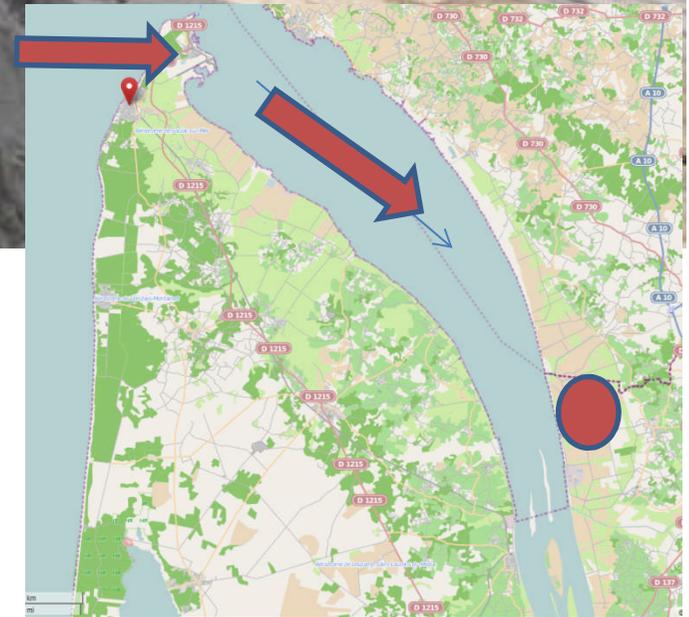


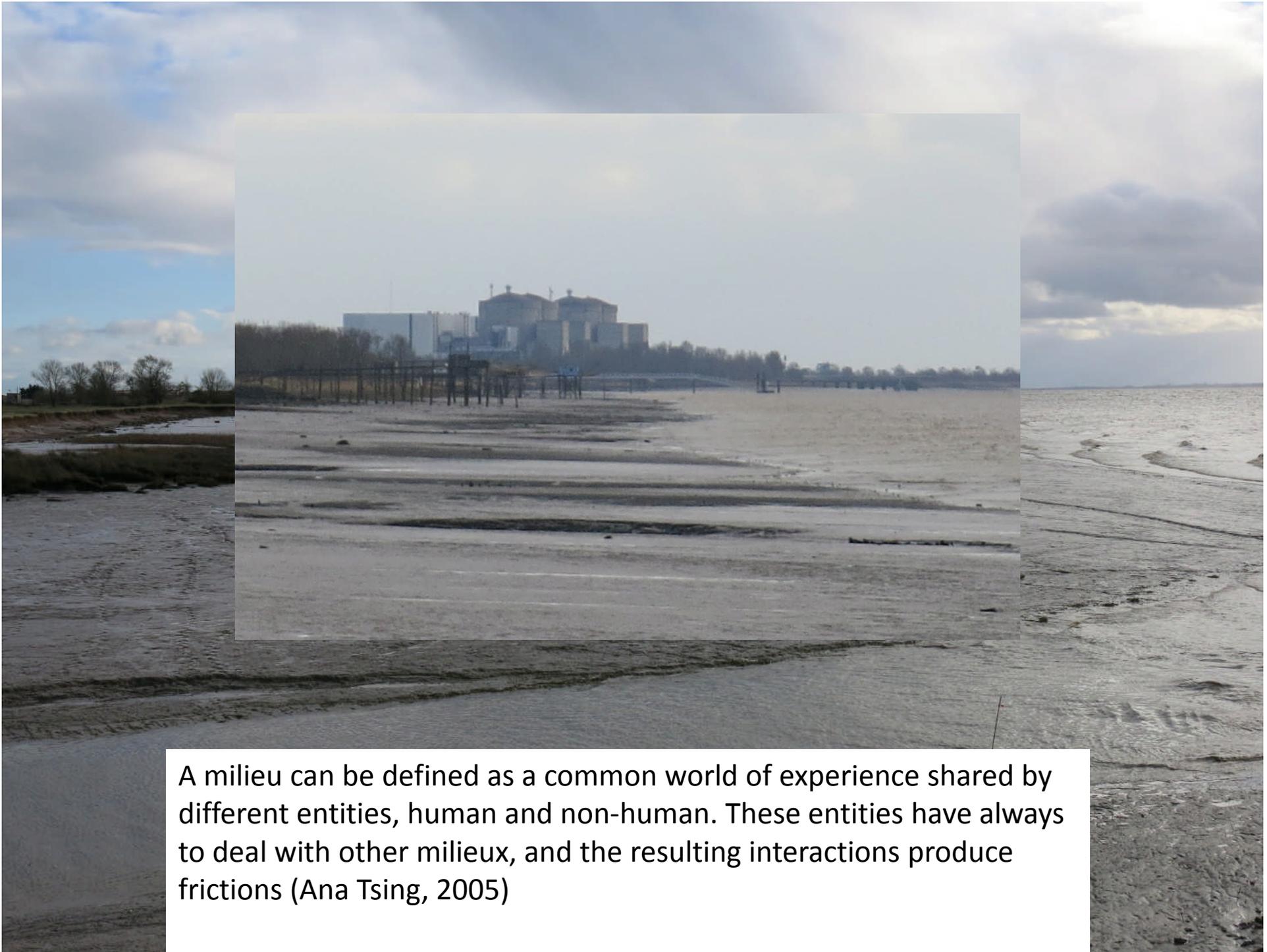
La centrale du Blayais inondée, 28/12/1999



A building on the South-West French coast ,threatened by erosion, which is growing fast. Climate change will increase the threat and will produce transformation of the estuary ecosystem including artificial facilities and devices.

© Photo Julien Lestage. Sud Ouest 3 janvier 2014





A milieu can be defined as a common world of experience shared by different entities, human and non-human. These entities have always to deal with other milieux, and the resulting interactions produce frictions (Ana Tsing, 2005)



IMPACTS SOCIO-ÉCONOMIQUES

Château Lafitte, Château Margaux, Saint Estèphe, Saint Julien... dans un rayon de 10 km

La centrale se trouve au milieu des grands domaines viticoles du Bordelais | Des activités viticoles de grands crus ne sont pas « transférables » | Chiffre de près de 4 milliards d'euros annuel | Région très touristique avec plus de 100 millions de visiteurs



RISQUES ET CONSÉQUENCES

SÛRETÉ

Parois simples des enceintes de confinement | Générateurs de vapeur en incoel non traités thermiquement sensibles au risque de rupture de tube | piscines non confinées, fragiles en cas de vidange et d'échauffement du combustible

SÉISME

Incertitudes fortes sur la prise en compte de l'aléa sismique | Normalement, sismicité faible dans la région mais centrale dimensionnée pour un séisme de 6,5 (Richter) | La question est posée à EDF |

SÉCURITÉ, CHUTE D'AVION

Proximité de l'aéroport de Bordeaux | Topographie plane, réacteurs très accessibles | Piscines accessibles, non confinées et situées en hauteur | Réacteurs avec paroi simple |

POPULATION

Environ 1,5 millions de personnes à moins de 70 km | L'agglomération Bordelaise avec son million d'habitants se trouve à 45 km |

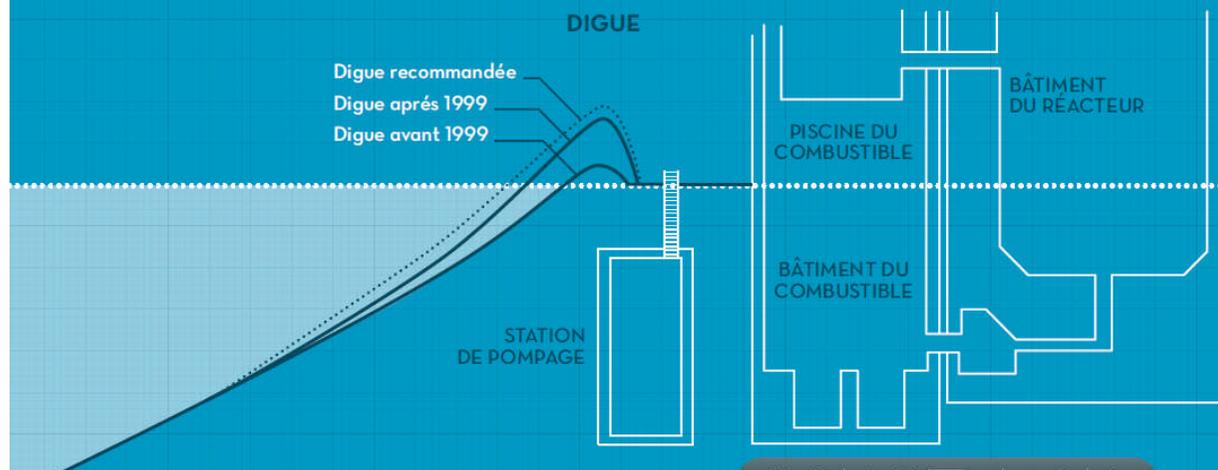
CONTAMINATION

Les vents dominants montrent que la contamination irait plus vers Bordeaux et les terres agricoles et viticoles alentours que vers l'océan |

INONDATION

La tempête de 1999, le scénario du pire est toujours possible

Lors de la tempête de 1999, une des situations les plus critiques jamais vues sur le parc nucléaire français : rupture de l'alimentation électrique, systèmes de secours des réacteurs n°1 et 2 inondés, centrale isolée et inaccessible | La digue est encore sous dimensionnée : de 5,2 m en 1999, elle a été rehaussée à 8,5 m mais sa hauteur devrait être à 9 m |



A photograph of a long, low building with a tiled roof and a vineyard in the foreground. The text "Thank you for your attention!" is overlaid on the image. The building has a weathered, light-colored facade and a dark, tiled roof. The foreground is filled with rows of grapevines with green and reddish leaves. The background shows a clear blue sky and some distant trees and structures.

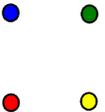
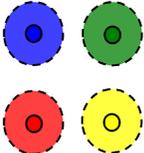
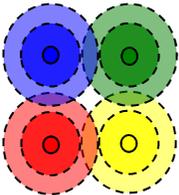
Thank you for your attention!

Annex

From monotonic to non-monotonic reasoning

1	Classical mode of reasoning: Modus Ponens / Modus Tollens	Monotonic Logics
2	<i>P implies Q; P is asserted to be true, so therefore Q must be true.</i>	<i>Foundation of classical rationality</i>
3	Pragmatics of Justification (Pragmatics according to Boltanski & Thévenot, 1991)	Putting Rationality in context and connecting social situations to universal principles of foundation
4	<i>S (situation) congruent to R (Regime of Justification), then S implies R – if not true, then S implies D (Dispute)</i>	<i>The plurality of Principles or Regimes of action and/or justification explains the numerous disputes in social life</i>
5	Pragmatist sociology of transformation: Events, actions and argumentations are transformed through interpretive activities, producing a new series of actions, argumentations and decisions, with a huge uncertainty on practical consequences	The plurality of interpretations creates both constant reevaluations of norms and rules, and a creative/collective activity with emerging actors, new ways of arguing and innovative devices or tools.
6	<i>In a situation S, E (event) or A (action) seized by I (interpretative activity) produces A (argumentation) from which proceeds the evaluation or valuation (V) of available rules (R0... Rn) but, at the same time, of known and unknown consequences (C) which evaluation or valuation (V) retroacts not only on the situation S but on a series of future situations (F)</i>	<i>Non-monotonic or complex logics with emerging and retroactive consequences (non-linear process and feedback)</i>

Evolving environmental challenges: from specific to systemic

Characterisation of key challenges	Key features	In the spotlight in	Policy approaches (examples)
Specific 	linear cause-effect, large(point) sources, often local level	1970s / 1980s (continuing today)	targeted policies and single-issue instruments
Diffuse 	cumulative causes, multiple sources, often regional level	1980s / 1990s (continuing today)	policy integration and raising public awareness
Systemic 	complex causes, interlinked sources, often global level	1990s / 2000s (continuing today)	policy coherence and systemic approaches (long- term transitions)