



# ANTICIPATORY GOVERNANCE THROUGH SCENARIOS

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GLOBAL ENVIRONMENTAL FUTURES

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# ANTICIPATORY GOVERNANCE THROUGH SCENARIOS

- I. Future Consciousness
- II. Scenaric Diversity
- III. Dilemmas of Methodological Design
- IV. Politics of the Future

# STUDYING THE FUTURE?

There are no past possibilities, or future facts.

Amiable to social science as images of the future, expectations as statements, as imaginations in the present.

# BARBARA ADAM'S FUTURESAPES

- **Past Futures:** historical records of hopes and fears (memories of the future)
- **Future Pasts/ Future Futures:** imaginative visions, speculations of potential worlds (sci-fi & fantasy)
- **Present Futures:** expectations, strategies, predictions (amiable to social science)
- **Future Presents:** 'not yet', invisible, latent world of the futures in our making (tricky)

# THE FUTURE & TECHNOLOGY

- Hype and expectations rhetorically produce futures
- Practices of technology produce futures actually
- Time-distantiated effect: unbounded capacity vs. ability/willingness to know

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# CLASSIFICATION OF SCENARIOS

- Forecasting --- Backcasting
- Descriptive --- Normative
- Quantitative --- Qualitative
- Participatory --- Expert

# USES FOR SCENARIOS

- Decision Making
- Generating Creativity
- Learning
- Framing Debate
- Focusing Vision
- Building Identities
- Manufacturing Consensus
- Formulating Strategic Plans



# SCENARIO DIVERSITY

Implies:

- Scenarios mean different things for different people
- Audiences have different experiences and expectations
- Scenarios have a flexibility
- Disclosure and transparency important.

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# TIME HORIZONS

Social groups or ‘epistemic cultures’ (Knorr Cetina) have different relationship to time and the future- with implications for what are considered viable options.

# TIME MATTERS: TEMPORALITY & NANOTECHNOLOGY

Timescape	Temporal Coding	Governance
<i>Trajectories</i>	Time as exponential	Inevitable following of patterns
<i>Disruptive/ Discontinuous</i>	Time as anarchic	Quick reactivity; 'crossing the chasm'
<i>Path Dependence</i>	Time as linear, intimately bound with past	Identify path and follow
<i>Emerging</i>	Time as now	Action, not forethought; speed
<i>Indeterminate</i>	Time as unpredictable	Assert desires and create meaningful futures

# ROLE OF DATA

What counts as valid, relevant, 'good' anticipatory knowledge?

- dependent on community norms

# PARTICIPATION

Who are the carriers of expertise of the future?

Who is involved in the process and at what stage?

# COMMUNICATION STRATEGIES

Words and numbers and ???

How to engage policy makers and other stakeholders, publics in thinking about the longer term? Persuade to act?

Alternative medias? Gaming, interactivity, immersive experiences

Keep the user in mind in advance



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INSTITUTE FOR THE FUTURE

23 4:09PM



# Nano Futures



"If present trends in nanoscience and nanotechnology continue, most aspects of everyday life are subject to change."  
- National Science and Technology Council

**Who** controls your Nano Futures? Here are ten scenarios exploring possible futures of nanotechnology. Will they come true? Should they? Why or why not? Who gets to decide? Will it be you?

This site is your opportunity to interactively construct the future.

Click below to READ the scenarios and MODIFY them- DISCUSS them- and if you don't like ours, WRITE your own!

**Tattoo Remorse?**

**Tomorrow's Sponge?**

**Attack of the Autonomous Window Cleaners**

**Brain Drain**

**My Gulag**

**Surviving Brain Enhancement**

**DNA Sewer**

**Shake it Like a Can of Soup**

**Is Someone Tracking Your Every Step?**

**PanOpticon**

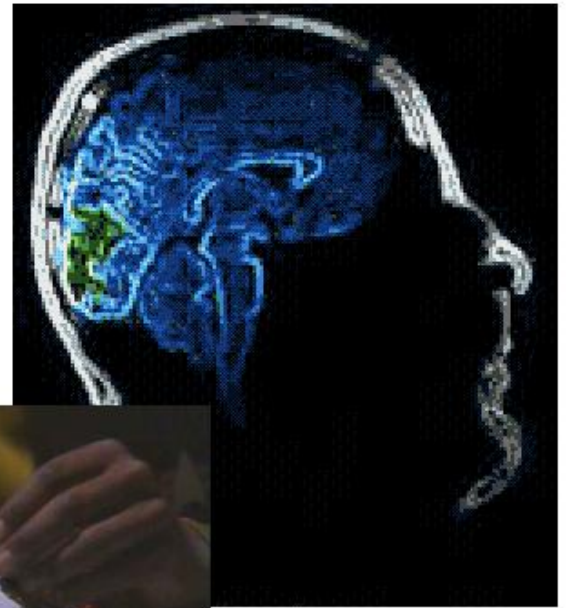
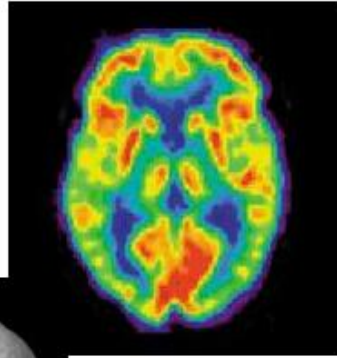
"Now nanotechnology had made nearly anything possible, and so the cultural role in deciding what should be done with it had become far more important than imagining what could be done with it."  
Neal Stephenson

"Every time I see an adult on a bicycle, I no longer despair for the future of the human race."  
H.G. Wells



Naïve product scenarios  
Web-based wiki & forum  
Focus on plausibility

# Nano Futures



Implantable chips to relay information directly into the brain.

# 'Sleep'

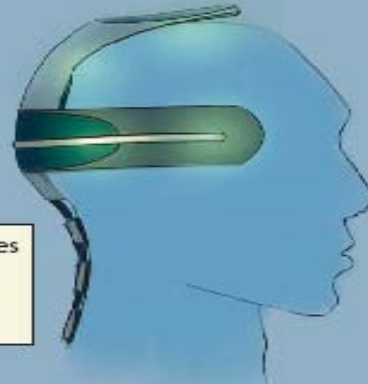
Cranial chip disruptors allows data transmission directly to the implantee's brain during resting time. The data feed does not disrupt or alter the way of 'sleep' for the implantee.



The 4.0 chips are a sandwich of carbon nanotubes and gate molecules that are covered in neural growth promoters.

The use of rare earth magnets in a wide net around the cranium makes for a thorough disruption of the chip.

The new disruptor cages only need to lock onto the head and upper vertebrae of the neck.



This data feed feature dramatically decreases the amount of time needed to assimilate data each day.



# VETTING OF CNS SCENARIOS

Scientists involved in vetting the scenarios

- Technical feasibility
- Potential for realization
- Internal consistency
- Logic of development

How to validate scenarios of the future?

What does plausibility mean for scenarios?

# TRUST IN:

- Sources
- Context
- Method
- Narrative
- Dissemination

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# TENSIONS IN THE FUTURE TENSE

The future is always already colonized- not an empty slate, but contested and active and highly politicized.

- Be sensitive to existing plans, agendas and strategies & other futures in the making

# TENSIONS IN THE FUTURE TENSE

Can the issue/problem be more meaningful framed in the present?

- Is the future tense harmonizing or sedating?
- What enables action?

Balancing accountability and imagination

- Hope and prudence
- Innovation and legitimacy
- Novelty and proof