

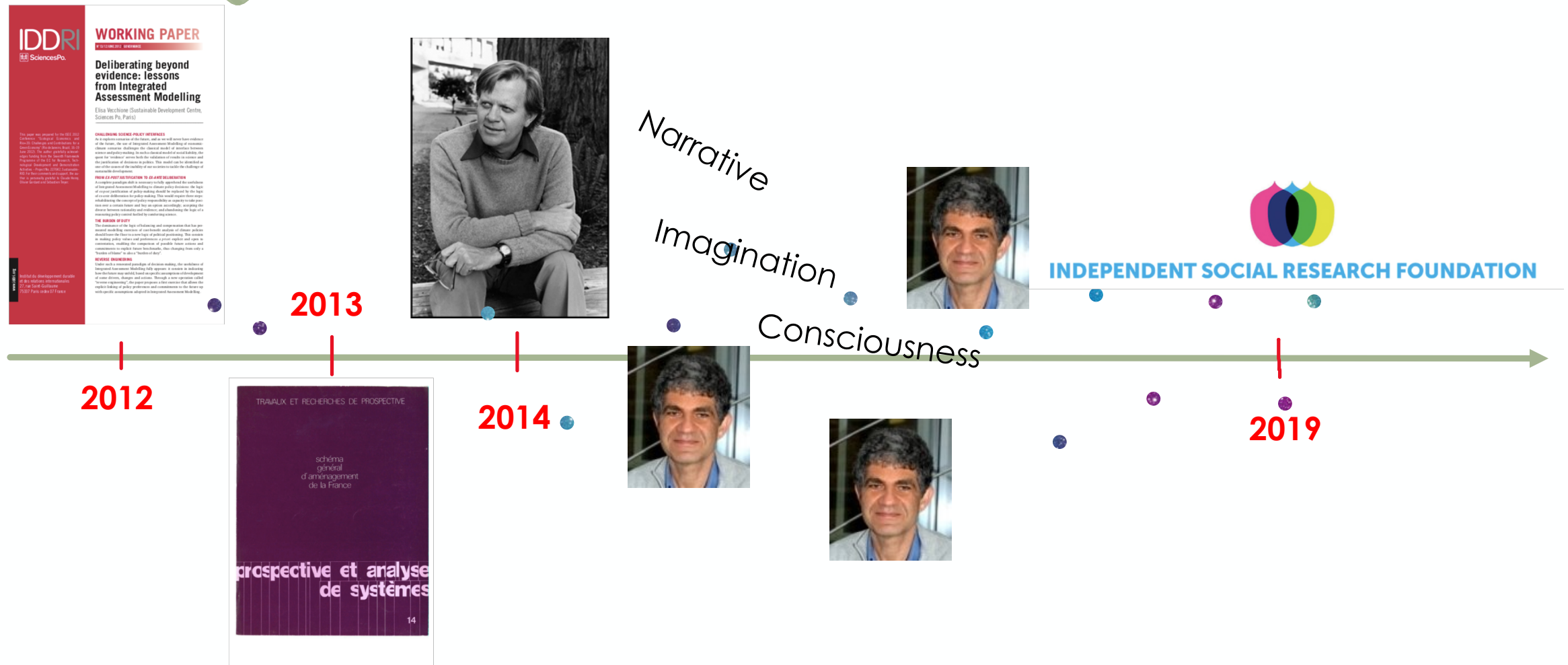
Narratives for co-production: Taking storylines in climate change seriously

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Citizen science: new epistemological, ethical and political challenges
International workshop, Université Lyon 3, Lyon, 6-7 June, 2019

Some historical background

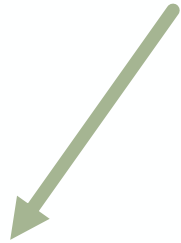


Narratives everywhere...

- Public discourses (public policy and STS)
- Communication strategy (cultural theory and science communication)
- Epistemic organization tool (in progress...)
 - IPCC
 - narrative-science.org (ERC project led by Prof. Mary Morgan, LSE, London)
 - Ted Shepherd's idea of using storytelling in climate science modeling (University of Stirling, UK)

Context

Epistemology of IA Modeling (IPCC)



Better decision-making

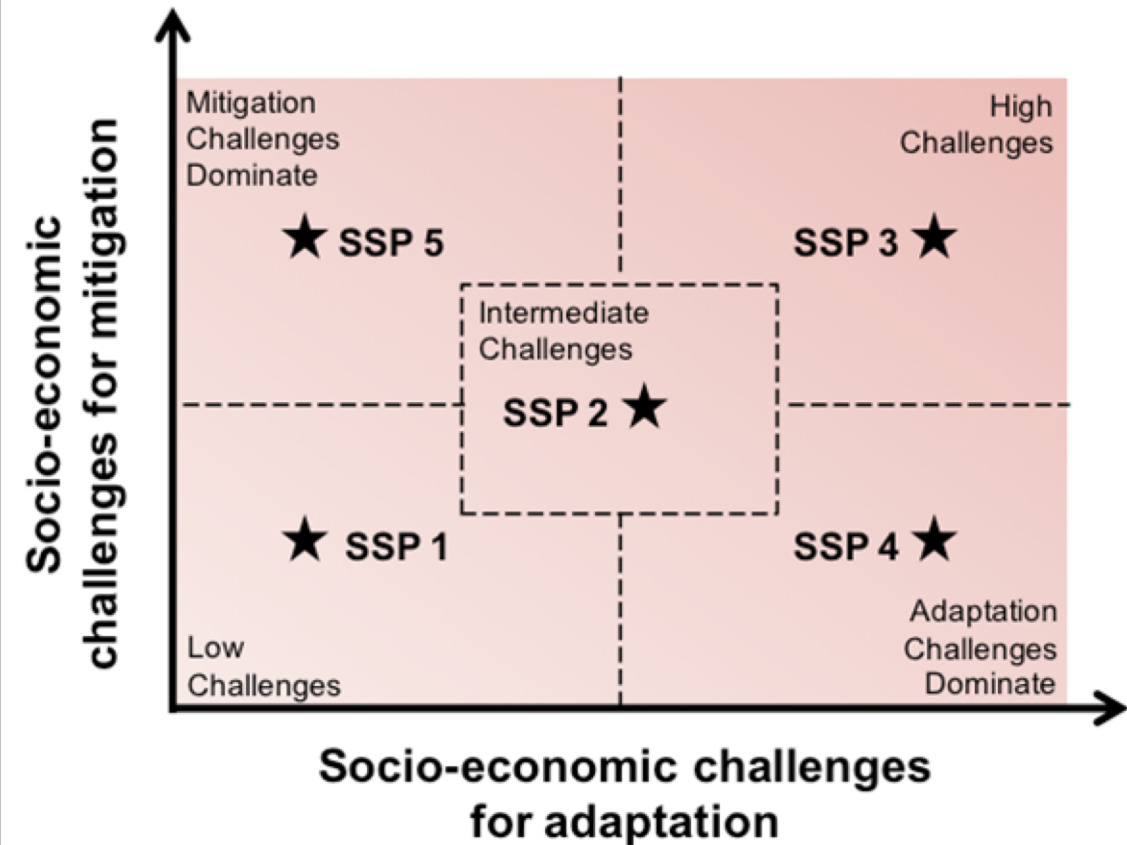


Credibility of science

Climate change

The 'story and simulation' approach at the IPCC

- Storyline: a narrative description of a scenario [...] describing alternative pathways for future society
- Driving forces: demographic, politico-societal, economic and technological factors



Climate modelling and objective science

- The epistemology of Integrated Assessment Modeling
 - Power of interrelating many factors at the same time and in a coherent and consistent way
 - *Subjective values* and assumptions about key drivers of anthropogenic climate change
 - Focus on *uncertainty* → structural uncertainty and model inter-comparison projects

The performative character of model-based science

○ Function of models (e.g.: Frigg and Hartmann, 2018)

- Representation
- Explanation
- Exploration



IMAGINATION

○ The approach to the future as an object of study

- French school on prospective studies
(e.g.: Gaston Berger, Pierre Masse')

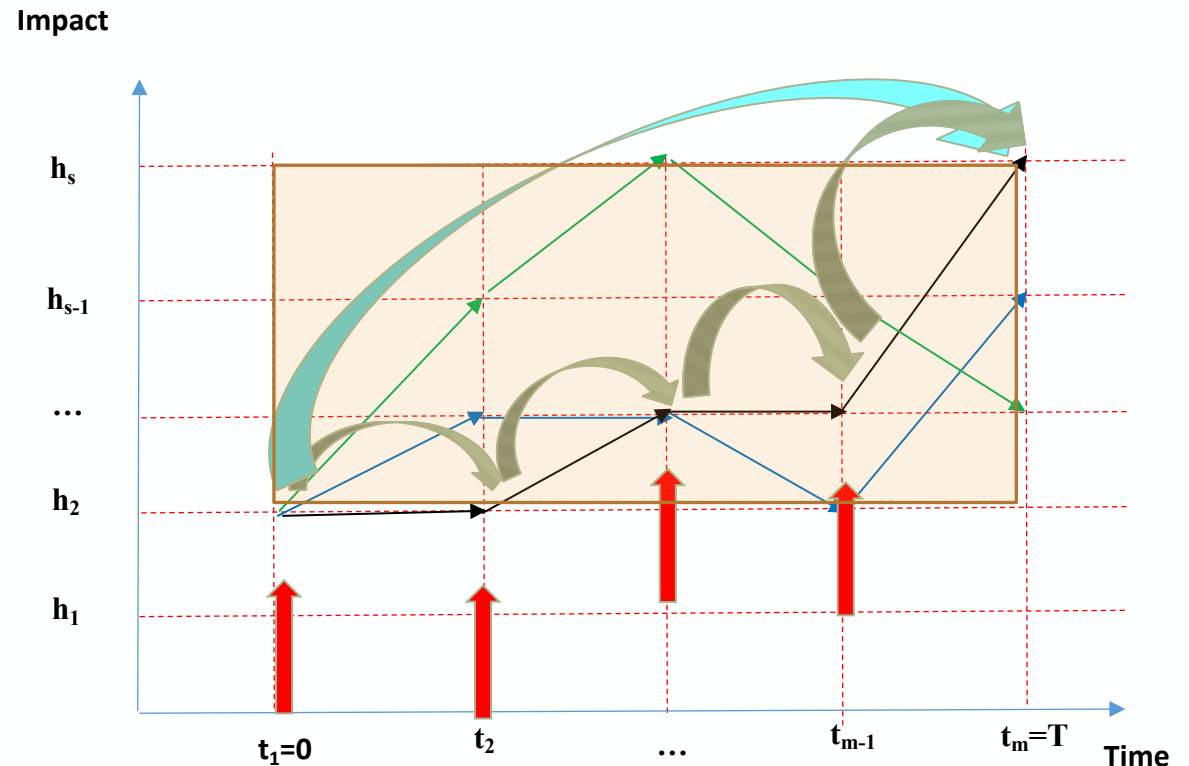


PRESENT

- Frigg, R., & Hartmann, S. (2018). Models in Science. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy*
- Durance, P. (Ed.) (2014). *La Prospective strategique en action*. Paris: Odile Jacob.

Uncertainty and values in modeling

- Scenarios forge the *known* patterns with the *unknown* ones
- In a way that is plausible and internally consistent
- This process heavily depends on the way *uncertainty* is treated
 - Space of calculation
 - The sequence of events
 - Drivers of events



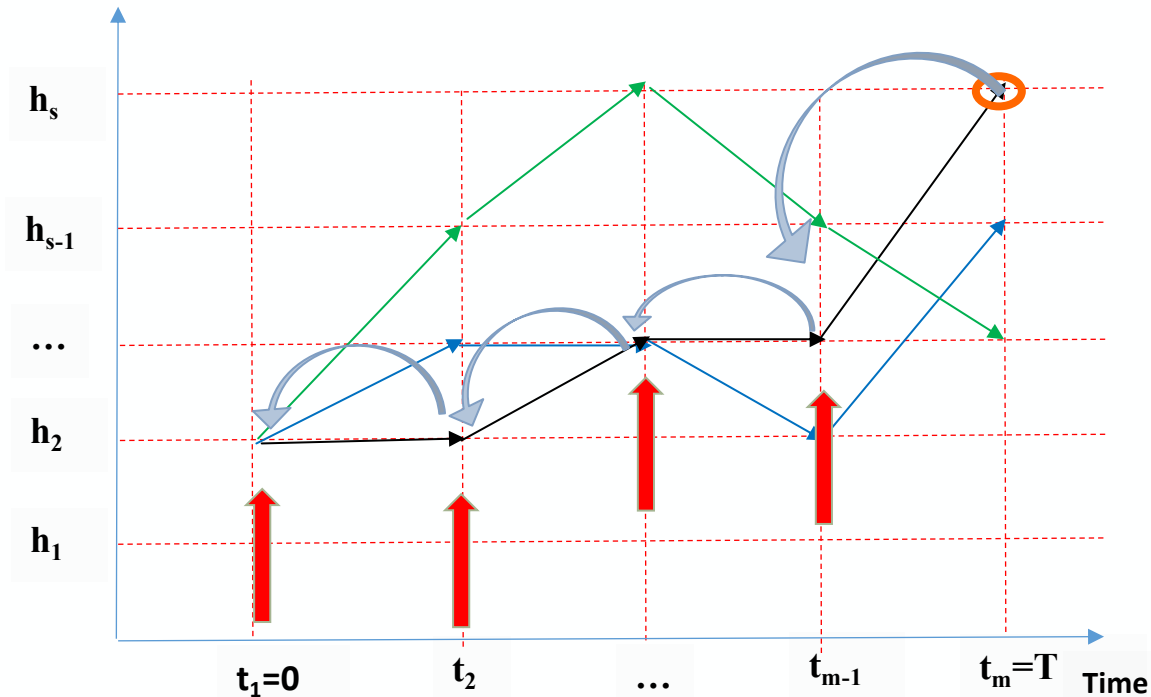
Based on a diagram by Zaid Chalabi

Scenario defined as a plausible description of how the future might develop, based on a **coherent** and **internally consistent** set of assumptions about the key relationships and driving forces under analysis (IPCC SRES Report, 2000)

Retrodication and historical explanations in IAM

Impact

- In complex systems, events are *not predictable* (Turner 1997)
- However, events are *retrodictable*: the logic of events can be retraced and as for history, it is possible to find *a posteriori* an explanatory sequence.
- Complexity science as an 'historical science' (Buchanan, 2000)



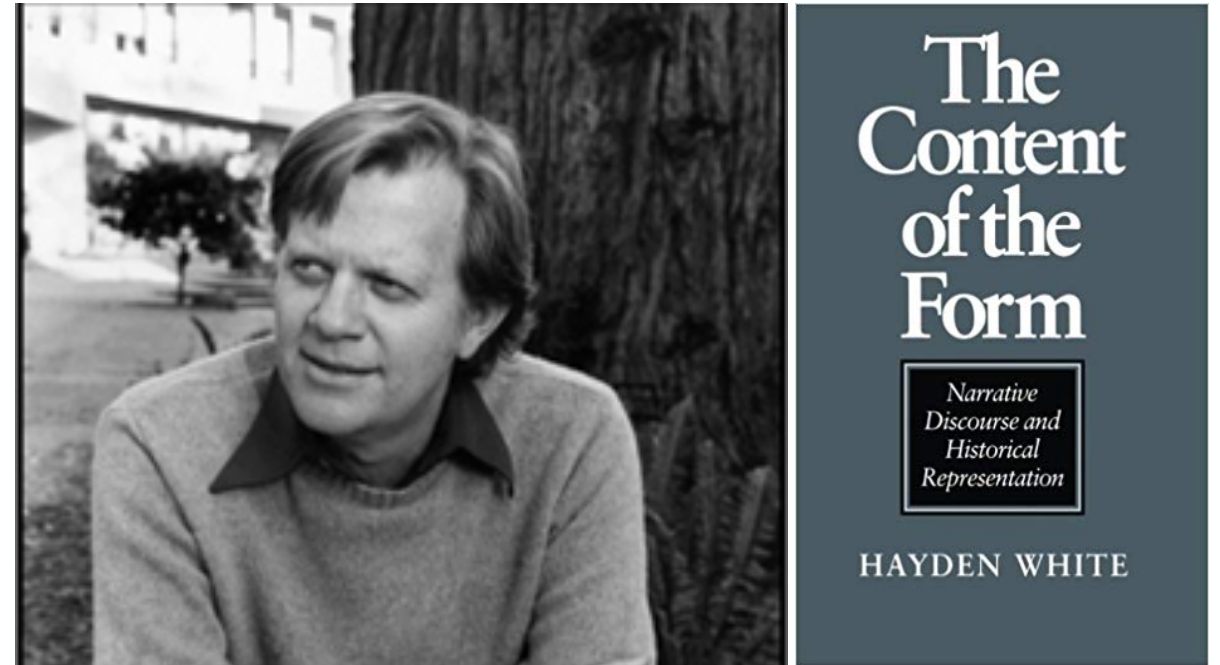
Based on a diagram by Zaid Chalabi

Buchanan, M. (2000). *Ubiquity: The Science of History . . . or Why the World Is Simpler Than We Think*. London, UK

Turner, F. (1997). Chaos and Social Science. In R. A. Eve, S. Horsfall, & M. E. Lee (Eds.), *Chaos, complexity, and sociology. Myths, models, and theories* (pp. xi-xxv). Unites States of America: SAGE Publications, Inc.

Hayden White (July 12, 1928 – March 5, 2018)

- Professor of History of Consciousness, Emeritus, University of California, Santa Cruz.
- He worked in the history of historical thought, discourse theory, and philosophy of history.
- Imagination, consciousness, narrativity



H. White: narratives in historical representation

- Narrative: plot, beginning, sequence of events, characters, conclusion
- White criticizes the idea that narrative is the most objective form of discourse for representing historical facts
- The historian puts events into sequence, endowing facts with a *sense*
- The historian brings events to conclusion, hence confer them a *moral*
- The way the story ends derives from the *consciousness* of the historian/storyteller about the *present* moment
- **ALL HISTORIES ARE STORIES**

H. White: the truth is in the (metaphorical) sense

- There exists no objective or true story
- The 'truthfulness' of a story can only be judged in its figural form, that is, in its structure/form, in what makes sense for the moment in which the story is told
- The figural interpretation of the storyteller captures her *will* to see a later event *as if* it were intrinsically related to an earlier event → reverse causation (Doran, 2010)
- The historian constructs stories based on facts and imagination, with imagination capturing her will and her consciousness about the present moment
- **ALL STORIES ARE FICTIONS**

H. White: consciousness, reality and the social system

- “A wish is enacted, a desire is gratified, by the *fantasy* that real event are properly represented into a coherent story”
- “The more historically self-conscious the writer of any form of historiography, the more the question of the social system and the law which sustains it, the authority of this law and its justification, and threats to the law occupy his attention. “ (White, 1987)

Can narrative provide a new interface between science and policy?

« To raise the question of the nature of narrative is to invite reflection on the very nature of culture and, possibly, even on the nature of humanity itself. So natural is the impulse to narrate, so inevitable is the form of narrative for any report of the way things really happened, that narrativity could appear problematical only in a culture in which it was absent – absent or, as in some domains of contemporary Western intellectual and artistic culture, programmatically refused » (Hayden White, 1987).

Conclusions: a new epistemology for a new 'public' science?

- Self-reflexivity and introspection
- Enlarged cognitive coordination among modes of reasoning and for the construction of a common and collective knowledge
- Change science communication
 - Focus on values (activated by uncertainty)
 - Focus on uncomfortable doubts (activated by uncertainty)

The way forward (otherwise said, my future interviews)

- Hayden Whites uses narrative as a tool of analysis in order to uncover the *latent* content of historical writing
- Is it possible to use the same tool for locating uncertainty and extracting connected values in IAM?
- Can a narrative approach improve at the same time the quality of science and the quality of democracy?

Thank you!

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