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project
ANTICIPATION

Pragmatic Utopias

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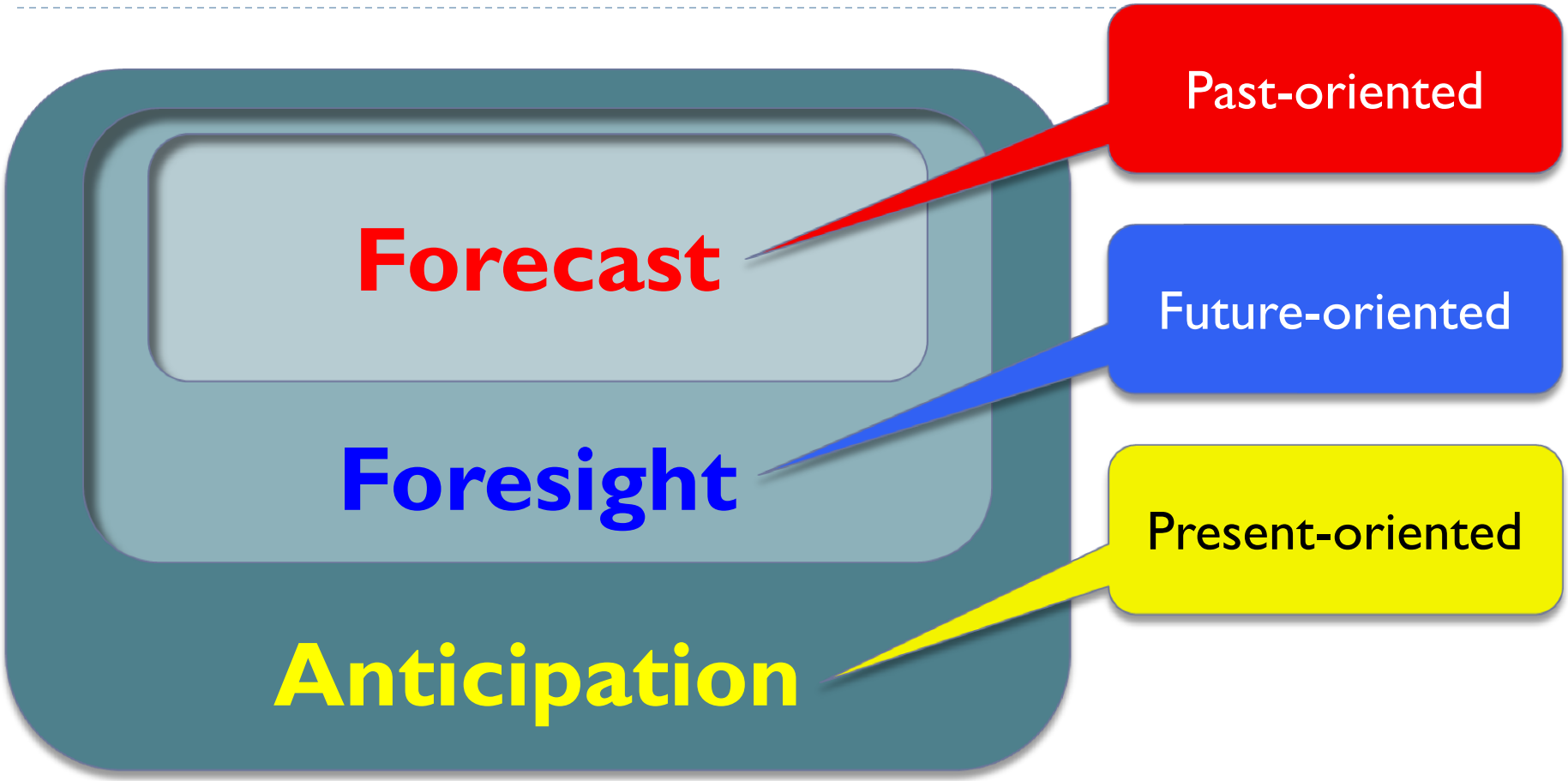
The Three Levels of Futures Studies



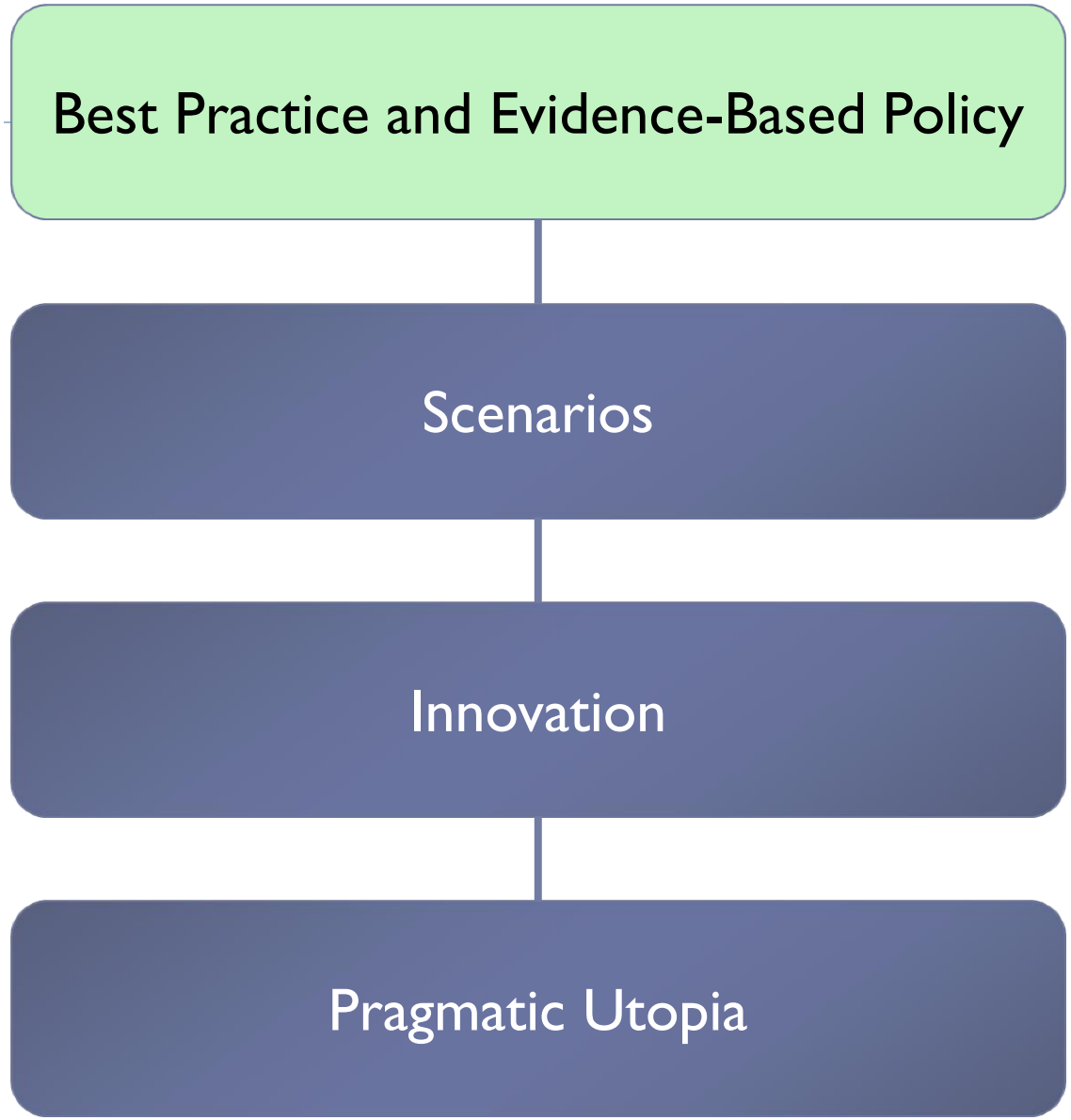
- The basic pattern: PAST—FUTURE—PRESENT
  forecast—foresight—anticipation

The Futures Studies field

Forecast		Macrotrends (e.g. Kondratieff waves)
Foresight	may then become	Scenarios (exploration of possible futures)
Anticipation		Strategic decision making

- Questions:
  - How to **explore** / **understand** / **prepare for** novelties?
  - How to **choose** one's course of action?
- Interplay between the explorative and the normative stance (between foresight and anticipation)
- I shall frame this interplay by discussing four issues


Best Practice and Evidence-Based Policy
Scenarios
Innovation
Pragmatic Utopia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Best Practice

- Best practices are always **past** practices
- The best one can do given already known conditions
- As needed as they can be, best practices also constrain and may become dysfunctional towards new challenges
- Within highly uncertain situations, best practices can become a form of **socially constructed ignorance**
  - (kind of business as usual)

Evidence-based policy (EBP)

- As with best practices, also EBP may induce a form of socially constructed ignorance, i.e. a dramatic over-simplification of the relevant problems (Rayner 2012)
  - For an extensive analysis of the limits of EBP see Saltelli and Giampietro 2017
  - EBP began in the field of medicine (Pearce et al. 2014) – (randomised) control trials and review of their outcomes
  - Problems related to how math is used to tame uncertainty in relation to the production of evidence for policy (Saltelli and Funtowicz 2014)

What is Evidence-based policy?

- Evidence-based policy exercises:

- often include **quantification**
  - E.g. through risk assessments and cost-benefit analyses
- aimed at **optimizing** one among a set of options
- corresponding to a **single** framing
- of the **issue** under consideration

EBP: the other way round

Issue under consideration

Single framing of the issue

Set of possible options

Optimization through quantitative analysis (risk assessment, cost-benefit)

EBP: the other way round

Issue under consideration

Single framing of the issue

Set of possible options

Optimization through quantitative analysis
(risk assessment, cost-benefit)

Evidence-based policy

- The single view of the problem forbids alternative views
- These alternative visions become "uncomfortable knowledge" (Rayner) and are **removed** from policy consideration
- Evidence-based policy may then result in a dramatic simplification of available perceptions
  - E.g. it may neglect the world views of legitimate stakeholders
  - This way of using the "scientific" method **generates controversies and erodes trust**

Evidence-based policy

- The simplification of the space of possible frames may remove viable options from the analysis, ending up in a decreased adaptativity of the system
- Instead: Use **simultaneous non-equivalent** frames working at different (temporal and spatial) scales from different viewpoints
  - Develop different frames of analysis **before** quantification
  - Analyse **how** frames are constructed and data **selected**
  - Do not be scared by clumsy solutions: Try to accomodate "unshared epistemological or ethical principles" in a way that is "**satisfying** rather than **optimizing**" (Rayner 2012)

Set of frames

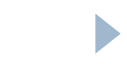
- **Generate** a wide set of frames exploring
  - Different viewpoints – Use different lenses through which to perceive **what** the problem is and **who** is involved
  - At different temporal and spatial scales
  - Develop a socially robust universe of possible frames – be sure that all stakeholders have their take
- **Filter** frames if they are not
  - **Achievable** – capable of being established in practice
  - **Viable** – capable of withstanding the test of time
  - **Desirable** – compatible with normative considerations relevant to the system's actors (e.g., by mitigating adverse consequences) (Wright, 2010, pp. 13-14, Saltelli and Giampietro 2017)
- Then proceed with the subsequent steps

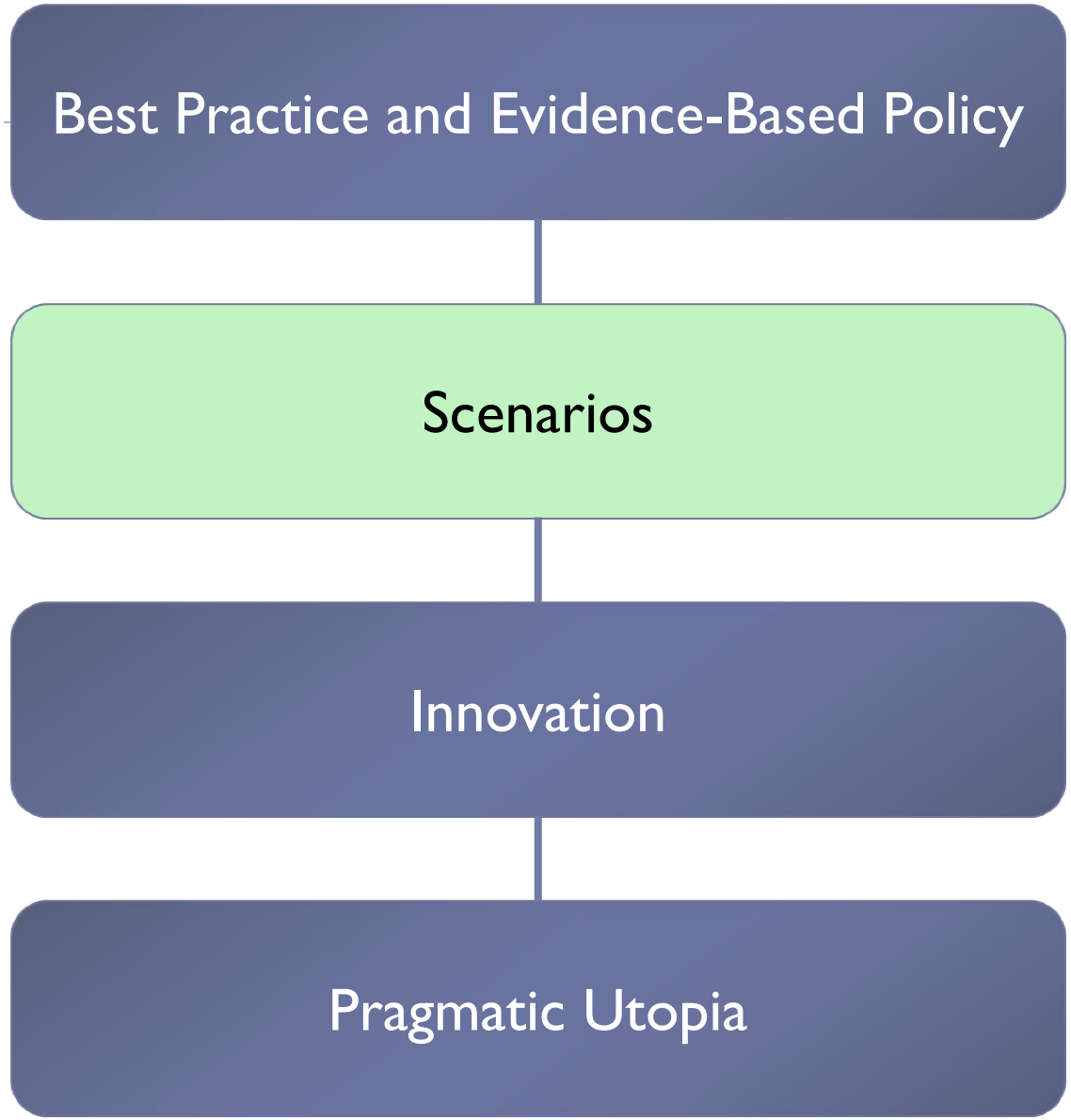
A needed pre-requirement

- The plurality of frames makes visible otherwise silenced sources of conflict
- This "conflict of frames" is best understood as different models of belief that can interact either destructively or constructively
- Which way it goes depends on how the actors conceive power (Poli, 2016)
  - Power as a zero-sum game (if you win I lose, and viceversa)
  - Power as a positive-sum game (we win/lose together)

Power

- If one views power as zero-sum, she will adopt strategies associated with **imposing her's will**, which are appropriate in certain contexts, but not a path to an actual conversation
- Conversely, actors can conceive power as a dynamic resource available to both to enable cooperative and productive relations
  - Develop a win-win strategy
- **Only strategies associated with this latter form of power are likely to be productive <u>in shaping others' narratives</u>**
- To develop anticipation in asymmetric conflicts one must understand not just what the narratives are, but also how they interact—constructively or destructively—to form new ones

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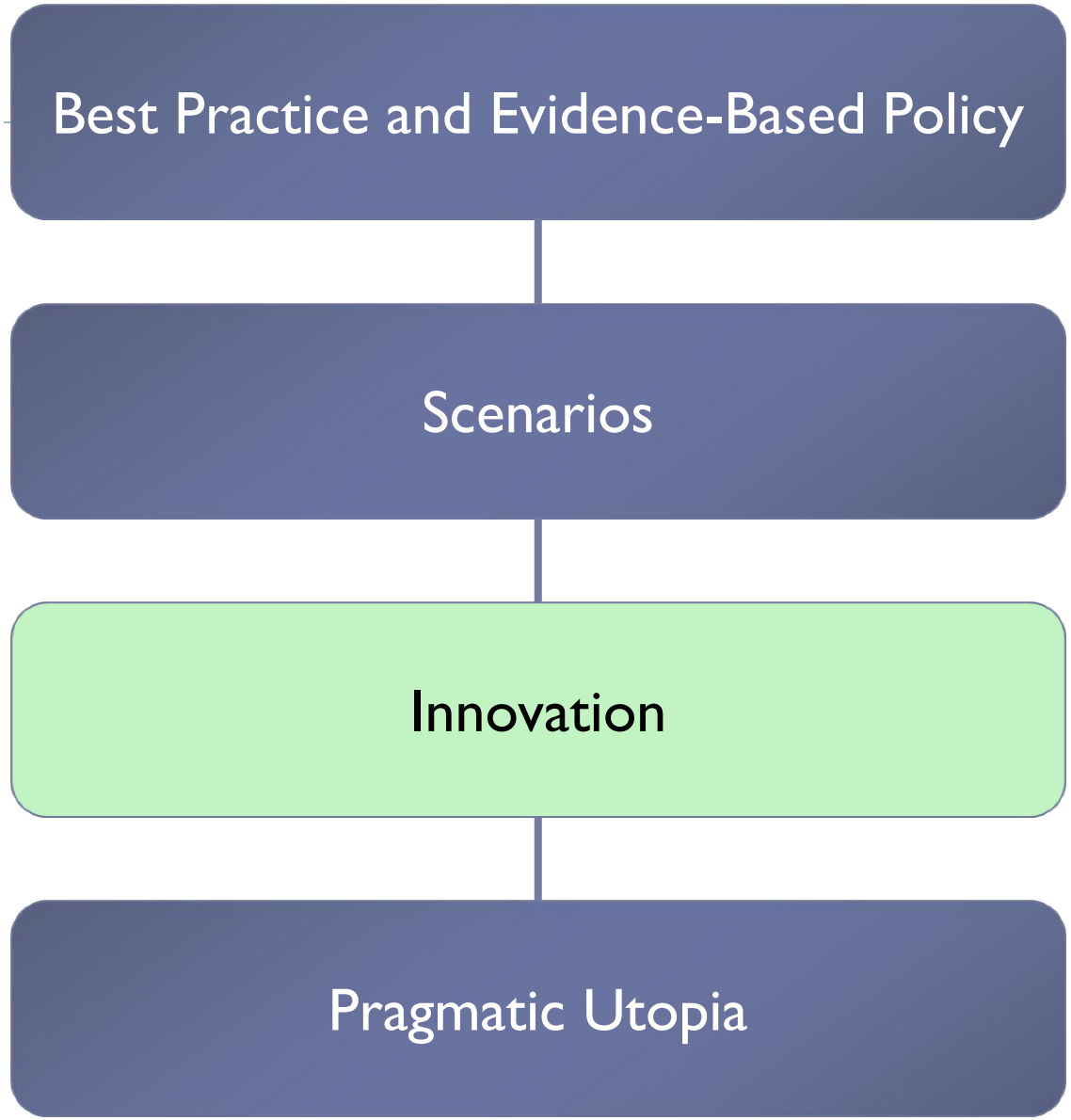
From one frame to different frames

- Scenarios – possibly the most well-known foresight method
- Scenarios as explorations of possible futures
- Scenarios too, can de used dogmatically – a when one picks up any scenario and follows it uncritically
- Very few scenarios are: now or never, irreversible, not divisible, ending and stand-alone (de Ruijter and Janssen 2008)
- One can often delay, modify or split up scenarios in strategic components that can generate learning effects
- Use scenarios to see, crete, evaluate, and time options

Scenarios

Scenarios	A	B	C
Decision 1	+	+	+
Decision 2	-	-	+
Decision 3	-	+	+

- Decision 1 is robust; it performs well in all scenarios
- Decision 2 is not robust; it performs well only in scenario C; one can decompose Decision 2 and find the minimal part that allow to implement the full strategy eventually
- Decision 3 is not robust; one may create the ability to get rid of the decision if and when needed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Innovation and value creation

- **Again, why developing multiple frames?**
- Apart from
  - Giving voice to all the involved stakeholders
  - Developing win-win strategies
  - Building up scenarios
- the underlying so-far unaddressed issue is that **new patterns of innovation and value creation are emerging**
  - From the industrial to a service economy model
  - Technological developments (IoT, autonomous car, etc)
  - Social transformations (ageing, family patterns, etc)
  - Climate change
  - Interdependences among patterns of change (e.g. water-energy-food)

Innovation and value creation

- Many if not most of these new forms of innovation and value production are **badly detectable** or even **invisible** to existing economic indicators and policy instruments

What is innovation?

- Innovation → the realization of latent and emergent value

- This is an unconventional definition. It claims that

innovation expands the space of valuable ways of doing and being

- Much of this expansion is presently **invisible** because we use indicators optimized for industrial forms of value production

Anticipation and innovation

- Innovation is better understandable in the context of the theory of **anticipation**
- Innovative actors operate in the context of shared ideas of the future (including preferred futures)
- Innovation is about creating (anticipating) changes – not only a reaction to already happened changes
- From a reactive stance to an anticipatory stance
  - Not only for action-based situations but in science as well (Poli, *Introduction to Anticipation Study*, 2017; *Handbook of Anticipation*, 2018)

Anticipation

- The future is far from being a problem of either extrapolation from trends (forecasts) or exploration of possible futures (foresights)
- From a static understanding of the future as something that is there, to a dynamic/processualistic understanding of the future as something that can be generated or consumed by our deeds
- **The future becomes a problem of modifying and eventually expand our capacity to act**
- The future as a problem of **designing, implementing and testing new futures**

Innovation and social practice

- Most technologies enter the market with pre-established modes of use
- The social practices that arise around them may however change their meaning by adding new unexpected uses or not exploiting some of their capacities
  - Phone, sms (Tuomi 2002)
- Unintended uses may channel the evolution of the product in new, very different directions
- New, creative uses may articulate needs that did not exist before their emergence

Who is the innovator?

- Technologies come into the world **only half-made**; they are completed by social practice
- The same product can be used in different ways, and the same functional use may be based on different products
- When **social practices change**, new aspects of the same product may emerge, new potentialities arise, and innovation occurs
- Any given product may be "used in unanticipated ways, and perhaps no one uses it the way its designers expected it to be used". In other words, "In a very fundamental sense, it is the user who invents the product" (Tuomi 2002, 10)

Social innovation

- Most social innovations are emergent ephemeral and rapidly vanish (weak signals)
- Others are stabilized and in time they may even become institutionalized
- The problem arises of what may eventually stabilize emergents; that is,

- **which are the catalysts able to stabilize new, ephemeral social innovations?**

Emergents and Values

- For interacting agents, these activities of accepting and stabilizing emergents are based on **values**

- 'Value' here is used in a broad sense to include **any kind** of value – ethical, aesthetic, economic, etc. – whatever for any reasons is deemed 'good', 'right', 'cool', 'ok'
- Therefore, values are the stabilizers for emerging new behaviors/processes
- The role performed by values as stabilizers of emergents explains why the violation of behavioral patterns tends to be perceived as a normative violation, and not just as a breach of abstract or conventional patterns

Innovative landscapes

- Innovative landscapes include values shared by the community sustaining that landscape
- These values do usually compete with the values of other landscapes/communities
- Even within functional subsystems (say the economy, or the technology) dominant values may change – such as the leading patterns of value of an industrial-based economy as opposed to the patterns of a service-based economy
  - This is precisely the situation we started from

Components of Innovation Ecosystems

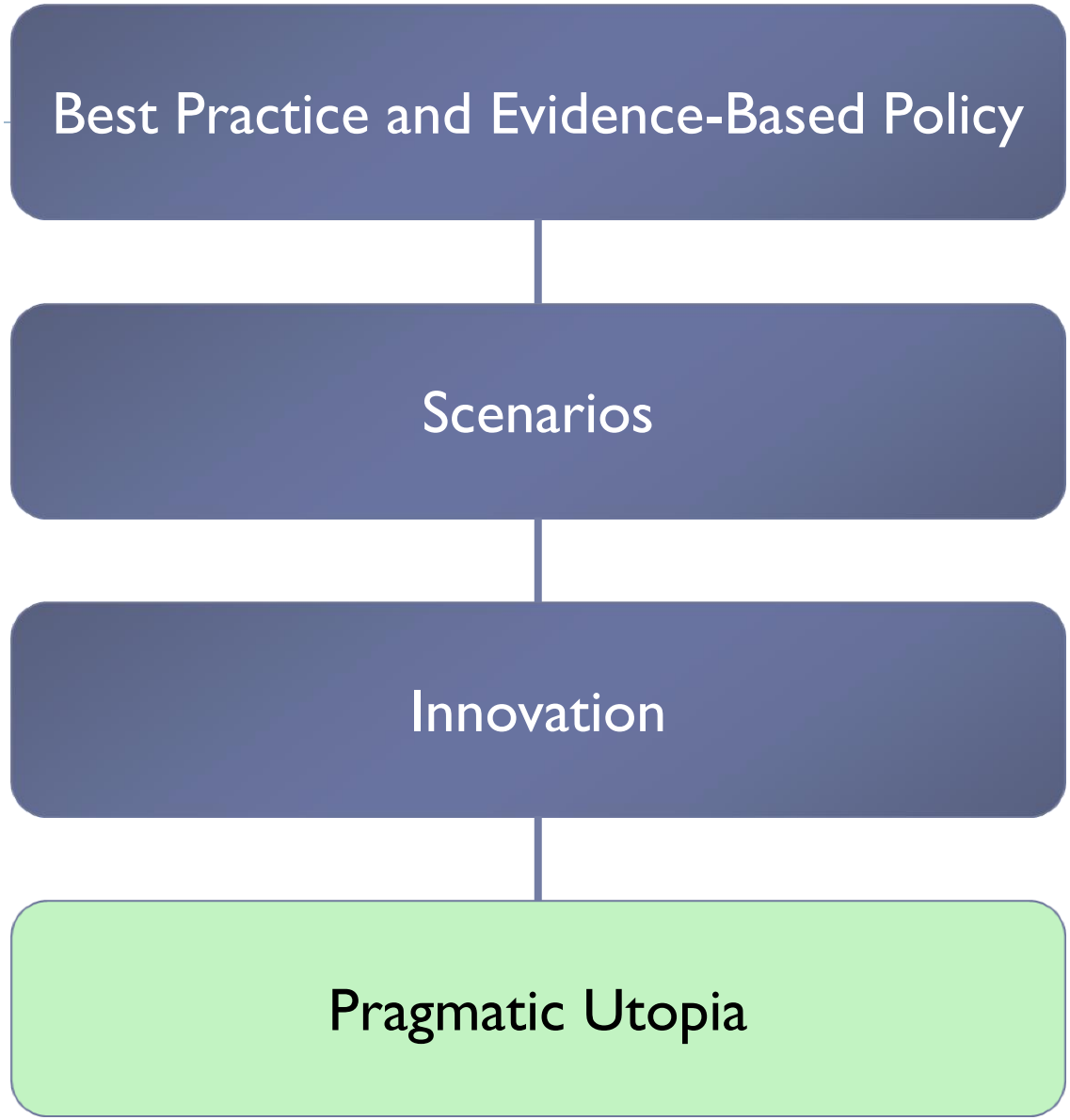
- Linkages between actors are produced in a process of mutual co-evolution forming communities of practice
- Communities have a **history** and are stabilized by shared **values**
- The resulting ecosystem creates (momentary) stability, reduces uncertainty, and shapes anticipation about what to expect (what next?)
- However, Interactions among actors generate **variations** of previous behaviors, and even utterly **new** behaviors
- As a result, new emergents continuously arise
- Some of them are appropriated by the community of users (eventually by other communities), grow and become new, stable behavioral patterns

Finally

- Innovation → the realization of latent and emergent value
- The definition highlights the point that

innovation expands the space of valuable ways of doing and being

- But not necessarily in the same way for everybody
- Different communities may and usually do have different ideas about what is a valuable way of doing and being
- However, this makes sense only if we recognize and accept that **being different** is **a valuable way of doing and being**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Framing Utopia

- Little connections between FS and utopia studies
- Utopia as an intrinsically dysfunctional effort is a narrative born in the 1940s for obvious historical reasons (Popper, Berlin, von Hayek, Mannheim etc)
- The idea of utopia underlying their works is very different from the idea of utopia one finds in modern/contemporary utopian literature
- Today, nobody would claim that
  - Utopias aim at the perfect society
  - Utopian thinkers do not have a sense of human limitations
  - Utopian societies are prone to develop authoritarian policies

What is utopia, then?

- Utopias are **not** blueprints – and therefore the concretization of any one utopia is not the objective
- It is the **static** idea of utopia that has convened the sense of perfection and thus the end of history
- Utopias are **processes** not end-points
- Not perfection – but **difference**: the aim of utopia is not reaching a state of human perfection – but an ability to arrange society differently (Vieira)
- Utopias as innovations

A hyper-compressed vision of utopia

- Utopia is an horizon, something that by definition is never achievable, but something that gives sense to what we do
- Utopia as a making sense, a **motivating** process
- Consider the idea of justice – it is unlikely that human societies will ever realise perfect justice
- Nevertheless, the idea of justice works as a motivating force: A situation characterized by a higher level of justice is **preferable** to a situation with a lower level of justice
- The same for many other value-bound terms: happiness, fairness, respect, care, etc.

Utopias?

- Utopia as **the anticipation of a different story**
- The place of utopia is the **horizon**, something that by definition cannot be reached
- "to open up the mind to … new ways of interacting with others, of allowing ourselves to be surprised by a world that is still to come, one that does not promise 'more of the same'"
- NOTE: Learning to see the future as different from the present – that is, as not following the logic of 'more of the same' – is the first step for becoming a futurist
- Therefore FS has a natural connection with utopia studies
- By the way: the "more of the same" attitude becomes the anti-utopian stance par excellence

Utopia and desire

- The aim of utopia is to to educate to desire, to learn to desire differently
- However, it is not only the offering of different scenarios, it generates new habits of vision and new patterns of desire … **based not in common sense** but in something else (a "sixth sense": Abensour)
- Common sense is a set of recipes for smoothly dealing with what keeps repeating
- Within the three layers model of futures studies, this means that **utopia is closer to anticipation than to foresight**
- **Utopia as a component of decision-making**

Innovation and Utopia

- Innovation and utopia share the same basis
  - Interaction and communities of practice
  - Frame desire
  - Value-laden
- Both work in the present and hint at new future possibilities
- Utopia works as the **internal** engine of innovations

- NOTE: Innovations are not always positive. What distinguishes a positive from a negative innovation?
- HYP. More often than not, win-win strategies should be preferred to win-lose strategies

Summary: Step 1

- Best practices and Evidence-based policy
  - Issue under consideration
  - **Single framing of the issue**
  - Set of possible options
  - Optimization through quantitative analysis
- Multiple frames
  - Work in a way that is "**satisfying** rather than **optimizing**"
  - Develop **win-win** solutions
  - Avoid using science in whays that **generates controversies and erodes trust**
- **Generate** a wide set of frames and **filter** them out if they are not
  - **Achievable** – capable of being established in practice
  - **Viable** – capable of withstanding the test of time
  - **Desirable** – compatible with normative considerations relevant to the system's actors

Summary: Step 2

- **Developing multiple frames (scenarios)**
- Again, be careful in avoiding to use them dogmatically
- Use scenarios to generate learning effects, to see, create, evaluate, and time options

Summary: Step 3

- **Why developing multiple frames?**
- Apart from giving voice to all stakeholders and developing win-win strategies, the issue is that **new patterns of innovation and value creation are emerging**
- Many forms of innovation and value production are **invisible** to our indicators
- What can be done?
  - Understand innovation and value creation

    innovation expands the space of valuable ways of doing and being
  - Focus on social practice
  - Most are ephemeral; some become stable
  - Understand the catalysts stabilizing them = values

Summary: Step 4

- Utopia as process
- Helping us to learn **to desire differently**
- That is, to avoid wishing "more of the same"
- i.e. to explore other possibilities
- Utopia as a **making sense** process, internal to decision-making, able to keep it open

References

- Archer, M.S. (1995) Realist Social Theory: The Morphogenetic approach, Cambridge, Cambridge University Press.
- Archer, M., Bhaskar, R., Collier, A., Lawson, T., Norrie, A. (1998) Critical Realism. Essential Readings, London, Routledge.
- Bhaskar, R. (1998) The Possibility of Naturalism, London, Routledge (3rd edition).
- De Ruijter, P. and N. Janssen (2008), "Real option thinking and scenarios" (unpublished)
- Elder-Vass, D. (2012) "Top Down Causation and Social Structures", Interface focus.
- Fuller, T. and P. Moran (2000) "Moving beyond Metaphor: Towards a Methodology for Grounding Complexity in Small Business and Entrepreneurship Research", Emergence; A Journal of Complexity Issues in Organizations and Management, 2(1), 50–71.
- Fuller, T. and P. Moran (2001) "Small Enter- prises as Complex Adaptive Systems: A Methodo- logical Question?", Entrepreneurship and Regional Development, 13(1), pp. 47–6.3
- Berger, P. L. and T. Luckmann (1966) The Social Construction of Reality: A Treatise in the Sociology of Knowledge, Garden City, Anchor Books.
- Fuller, T., P. Moran and P. Argyle (2004) "Entrepreneurial foresight; a case study in reflexivity, experiments, sensitivity and reorganisation", in H. Tsoukas and J. Shepherd, eds., Managing The Fu- ture: Foresight in the Knowledge Economy, Oxford, Blackwell Publishing, pp. 171–178.
- Fuller, T. and L. Warren (2006) "Entrepreneurship as Foresight: A Complex Social Network Perspective on Organisational Foresight", Futures, Journal of Policy, Planning and Futures Studies, 38(7), pp. 956–971.
- Fuller, T., F. Welter and L. Warren (2006), "The Contribution of Emergence to Entrepreneurship Theory: A Review", Research in Entrepreneurship (RENT) Brussels, EIASM.

References

- Gurvitch, G. (1964) The Spectrum of Social Time. Dordrecht, Reidel.
- Luhmann, N. (1985) Social Systems. Stanford, Stanford University Press.
- Poli, R. (2001) "The Basic Problem of the Theory of Levels of Reality", Axiomathes, 12(3/4), pp. 261–83.
- Poli, R. (2007) "Three Obstructions: Forms of Causation, Chronotopoids, and Levels of Reality", Axiomathes, 17(1), pp. 1–18.
- Poli, R. (2010) "The Complexity of Self-reference – A Critical Evaluation of Luhmann's Theory of Social Systems", Journal of Sociocybernetics, 8(1/2), pp. 1–23.
- Poli, R. (2011) "Steps Toward an Explicit Ontology of the Future, Journal of Futures Studies, 16(1), pp. 67–77.
- Poli, R. (2012) "Nicolai Hartmann", in E. Zalta (ed.), The Stanford Encyclopedia of Philosophy.
- Poli, R. (2017) *Introduction to Anticipation Study*, Dordrecht, Springer.
- Poli, R. ed. (2018) *Handbook of Anticipation*, Dordrecht, Springer.
- Popper, K. R. 1990. A World of Propensities, Bristol, Thoemmes.
- Rayner, S. (2012) Uncomfortable knowledge: the social construction of ignorance in science and environmental policy discourses, Economy and society, 41:1, pp. 107-125
- Saltelli, A. and S. Funtowicz 2014, When all models are wrong: More stringent quality criteria are needed for models used at the science-policy interface, Issues in Science and Technology, vol. winter, pp. 79-85.
- Saltelli, A. and M. Giampietro, What is wrong with evidence-based policy, and how can it be improved?, *Futures*, 2017
- Tuomi, I. (2002) Networks of Innovation, Oxford, Oxford University Press.