Performative narratives in European scientific policy-making

Insights from key European science policy documents and exploration of the policy-makers’ visions

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Performative narratives about science and society

• In every collective system, there are shared ideas, visions, narratives that express wider imaginations about the society, how it functions and what are the relations with the others:
  • these imaginaries acquire the power to regulate, to shape the behaviour of the system: they define the horizon of possible and acceptable actions, impose classifications, legitimate actors and distinguish issues from non-issues;
  • they are routinely reproduced but not explained, they are taken for granted and thus position out of the debate;
  • they usually foreclose alternatives.

• Not a new concept in social and political studies (imaginaries, master narratives), and in STS (co-production, socio-technical complexes, imperial structures in S&T governance) but systematically studied recently:
  • Socio-technical imaginaries: “collectively held, institutionally stabilised, and publicly performed visions of desirable futures, animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology”

Performative narratives about science and society

Performative narratives are often exposed in:
- political discourses ("imagining the future is political, but political action is also profoundly imaginative", *ibidem*);
- laws and legal disputes, often requiring judges to choose among dominant competing socio-technical imaginaries;
- popular culture, communication and media products, advertising.

In these contexts socio-technical imaginaries, that may still be unfocused in the debate, are "forced" to crystallize in a permanent shape, and therefore can be identified and studied.

Intro: H2020 through the eyes of the European Commission

“in today’s global economy knowledge is more like a currency: the trick is to make it work for you”

Utilitarian argument

“that’s why we want to turn European Union in an Innovation Union, the plan to get good ideas to market faster”

Acceleration, urgency

“deliver innovation from the lab to the market much faster than anyone dreamed in Europe”

(Strong) economic orientation

“to boost the economy, create jobs and improve life”

Linear path from economic growth to quality of life

“Horizon 2020 will also be more in tune with science’s role in society, so it focuses on challenges we urgently need to address, like clean energy, recycling, caring for the elderly, health care, food safety and our oceans: real things!”

Challenge-based approach

Frame of urgency

Pragmatism/anti-intellectualism

“Getting close to real every day needs like these doesn’t mean basic research is out in the cold. That’s the beauty of coupling science and innovation: it covers a much wider range, from research to retail and all forms of blue-sky thinking and innovative approach that make this possible”

Role of basic research: free but innovation (=market) oriented

Current vision of the European Commission regarding the EU Framework Programme for research funding.
The Framework Programmes aim: tension in the research agenda?

Whereas the Single European Act incorporated a Title VI (Articles 130f to 130k) into the EEC Treaty, whereas that Title constitutes a new legal basis for Community activities in the field of research and technological development; whereas, in particular, Article 130f lays down that the Community’s aim is to strengthen the scientific and technological bases of European industry and to encourage it to become more competitive at international level;

Horizon 2020 focuses on three priorities, namely generating excellent science in order to strengthen the Union’s world-class excellence in science, fostering industrial leadership to support business, including micro, small and medium-sized enterprises (SMEs) and innovation, and tackling societal challenges, in order to respond directly to the challenges identified in the Europe 2020 strategy by supporting activities covering the entire spectrum from research to market.

FP5 establishing act, 1998

The Community has the objective, set out in the Treaty, of strengthening the scientific and technological bases of Community industry, thereby ensuring a high level of competitiveness at international level. To this end, the Community is to promote all the research activities deemed necessary, in particular by encouraging undertakings, including small and medium-sized enterprises (SMEs), research centres and universities in their research and technological development activities. In this context, priority should be given to those areas and projects where European funding and cooperation is of particular importance and provides added value. Through its support for research at the frontiers of knowledge, applied research and innovation, the Community seeks to promote synergies in European research and thus provide a more stable foundation for the European Research Area. This will make a positive contribution to the social, cultural and economic progress of all Member States.
S&T in Europe has not always been framed like nowadays

• '80s: research grounded to competitiveness;
• Begin of '90s: the academic community rethinks the concept of innovation: from linear to systemic;
• 1992: with Maastricht Treaty Europe becomes a political union: social objectives pair with the economic ones;
• 1995: EC green paper on innovation;
• '90s: protests in Europe on S&T related topics: citizens "enter the scene";
• 2001: White Paper on Governance argues for a more open, transparent and citizens engaging governance;
• 2000: launch of Lisbon strategy: Europe as a "Knowledge Society";
• 2014: Europe as an "Innovation Union".

From knowledge to innovation: High Profile Experts Groups reports which have led the way

"The Union has today set itself a new strategic goal for the next decade: to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion."

(Lisbon European Council, 2000)

"The Group views Europe's unsatisfactory growth performance during the last decades as a symptom of its failure to transform into an innovation-based economy." (Sapir report, 2003)

"Europe has built a distinctive economic and social model that has combined productivity, social cohesion and a growing commitment to environmental sustainability. The Lisbon strategy, refocused on growth and employment in the way this report suggests, offers Europe a new frontier for that economic and social model." (Kok Report, 2004)

"This report presents a strategy to create an Innovative Europe. Achieving this requires a combination of a market for innovative goods and services, focussed resources, new financial structures and mobility of people, money and organisations. Together these constitute a paradigm shift going well beyond the narrow domain of R&D and innovation policy." (Aho Report, 2006)
A “cultural shift”, “before it’s too late”

“The problem is, however, that the Lisbon strategy has become too broad to be understood as an interconnected narrative. Lisbon is about everything and thus about nothing. (...) An ambitious and broad reform agenda needs a clear narrative, in order to be able to communicate effectively about the need for it.”

“The need for reform has to be explained especially to citizens who are not always aware of the urgency and scale of the situation. ‘Competitiveness’ is not just some dry economic indicator that is often unintelligible to the man in the street; rather, it provides a diagnosis of the state of economic health of a country or a region. In the present circumstances, the clear message must be: if we want to preserve and improve our social model we have to adapt: it is not too late to change. In any event the status quo is not an option.

(Kok Report, 2004)

“Foster a cultural shift which celebrates innovation and a desire to possess innovative goods and experience innovative services, such that Europe develops as a natural home for innovators”

“A cultural shift which celebrates innovation, using the media and other means to encourage citizens to embrace innovative goods and services.”

(Aho Report, 2006)

A “cultural shift”, “before it’s too late”

“The Lisbon strategy is even more urgent today as the growth gap with North America and Asia has widened, while Europe must meet the combined challenges of low population growth and ageing. Time is running out and there can be no room for complacency. Better implementation is needed now to make up for lost time.”

(Kok Report, 2004)

“Europe and its citizens should realise that their way of life is under threat but also that the path to prosperity through research and innovation is open if large scale action is taken now by their leaders before it is too late.”

(Aho Report, 2006)
Building on reports as sources of political legitimation


All reports are equal, but some reports are more equal than others...

"Innovation is indeed a vital policy issue for Europe. However, it should not just be about the more and the faster the better. Directions of innovation also matter. Normative questions about directions of innovation should be on today’s democratic and innovation policy agendas."

"In the science and governance domain, these narratives and the imaginaries they support urgently need to be subjected to more critical, open reflection, especially in the light of the global economic, scientific and political changes besetting early 21st century Europe."

"The Aho Report (2006) calls for a “new pact for research and innovation”, and correctly observes that “the 3% target [for R&D expenditure should be seen] as an indicator of an innovative Europe, not as an end in itself.” We have gone a step further. It is an irrelevant and misleading indicator. The real challenge is what Europe is going to do with such money."

The knowledge future

“The acts of learning, discovering and innovating all go together, like three pistons in an economic engine. Education, research and innovation; universities, laboratories and companies; academics, researchers and entrepreneurs – all are part of an engine that, if well managed, creates wealth, jobs, growth and, if one is an optimist, social progress.”

“...many policy makers share an overriding concern that they aren’t enough: that competition from the US, China, India and elsewhere risks leaving Europe behind – and that the difficulties coordinating and managing a European response are enormous.”

“To crystallise the challenges and opportunities, it created two possible views of the future: one positive, one negative. These are not forecasts or formal scenarios. These are plausible sketches of the future with one purpose: To dramatise the importance of making wise policy choices, and to suggest what those choices might be.”

Hudson et al. (2015). The knowledge future - Intelligent policy choices for Europe 2050 report by an expert group on foresight on key long-term transformations of European systems - research, innovation and higher education (KT2050)

The knowledge future

Option A: European Success

It is 2050, and Europe and its knowledge economy are competitive. Clusters of well-funded, internationally renowned universities are thriving in many of Europe’s important and growing cities, in strong partnerships with regional institutions. Education is fine – never before have so many wanted so much from teachers: new skills, new jobs, new capacity to cope with rapid change, new perspectives for leading fulfilled lives – from cradle to grave. This growing demand for continued education has prompted new efficiencies: course modules shared within university clusters, online and artificial intelligence-based teaching, specialisation within institutions public and private. Educational games, at which European designers excel, are a vast market segment. In business, open innovation is now the dominant mode for multinationals, SMEs, universities and many new actors – foundations, NGOs, individuals (many retired) – work together in fast changing global networks, to solve global problems. Europe’s mega-cities, with their unique sense of community identity and involvement, are a focus for innovation: Paris original – or Warsaw or Athens – has become a new kind of global brand. Meanwhile, automation and data-intensive science have changed the nature of doing research. We have moved from open science to radical open access: all kinds of new actors are rushing into the research game, especially in astronomy, ecology, climate and other fields that attract strong public interest. Europe’s research infrastructures are the new cathedrals of this science. Open to all, supported by the European Research Council, while regional disparities in innovation capacities are countered through separately administered regional development funds. Indeed, EU institutions generally are strengthened as the regions and cities have gained in importance – Europe’s growing laboratories of democracy – so the coordinating role of EU institutions has risen. Multinational tax avoidance is tamed, strengthening public treasuries everywhere. Where Europe once produced 30% of the world’s ideas, it has more than held its own as Asia rose; it is moving towards 40%. Many of its industries are competitive, building on healthy SMEs. Its universities are strong, its citizens fulfilled – and its core values, such as equality, openness, social inclusion and environmental responsibility, are upheld.
The knowledge future

Option B: Europe misses out

It is 2050, and Europe is a victim of megatrends beyond its control. Automation and globalisation have triggered mass unemployment, social exclusion, discontent. Service bots, machine learning, ubiquitous sensing – what’s left for the humans to do? Inequality is higher than ever; new creative jobs are constantly evolving from new technologies, but they are only for the skilled few. Politically, Europe has fragmented into a coalition of rich and poor regions with minimal coordination. A Northern Arc has maintained free movement of goods, services, and people; other parts of Europe are isolated. MNCs dominate; many weaker, regional universities have closed or merged. Automation has also swept across the educational system, with online certifications normal and augmented cognition technologies starting to appear – and finding favour with big companies wanting fast, cheap graduates. In research, the top-tier scientists are in high demand – often hired by multinationals in a kind of perpetual consultancy without borders. These companies, on which public labs and universities rely for major funding, get early access to the real discoveries and use their influence to steer the remaining public funds towards their projects. That’s what makes for jobs and growth. They argue that Asian research is stronger now, and an embattled US has thrown up new trade barriers to Europe. Mobility is diminished. A few European companies are rich and smart enough to stay global champions, but generally Europe’s economic base has hollowed out, and the few innovators its universities produce quickly move abroad. Innovation is without borders; supply chains, form and dissemble rapidly – making long-term regional development more difficult than ever. Europe looks inward, fears the future, and sees its values gradually discredited.

Policy-design actors’ views (ongoing research)

- Role in policy-design process:
  - Development of technical/scientific content
  - Lobbying (wide sense)
  - Support to Universities and Companies

- Evaluation of the process:
  - Complex, very few have clear ideas of how it works
  - Many groups, many people
  - Strong influences

- Who shapes the policies, who takes the decisions?
  - “Everything is justified by a previous strategy”
  - “It happens somewhere in the Commission”
  - “When we are asked for feedback, the cake is already there”
  - “If you discover it, let us know...”
Performative narratives in European S&T policy

- Overarching narrative: linear chain from scientific development to economic growth to improving the quality of life
- Tension in the research agenda leaning towards solution in favour of a strong focus on market-oriented research: economism;
- Technoscientific fix of social issues, emerging from the linear transfer from technological development to quality of life.
- Innovation as an undisputable value per se;
- Acceleration, Urgency, need to act immediately, and postpone, or better remove, discussions: short-termism as well as pragmatism, utilitarianism and anti-intellectualism;
- Portrait of the citizens as (passive) consumers, mostly innovation-resistant, who must be educated to comply to the innovators’ demands.
- The policy-design actors’ try to fit in the views developed elsewhere, not always sharing them completely; somebody else decides.
Bibliography


References

Framework Programmes establishing acts:


References

Reports:


• Hudson, R. et al. (2015). *The knowledge future - Intelligent policy choices for Europe 2050: report by an expert group on foresight on key long-term transformations of European systems - research, innovation and higher education (K2050)*
Intermezzo: the contradictory portrait of the citizens

(9) In addition, the dialogue between science and society in Europe should be intensified in order to develop a science and research agenda that meets citizens’ concerns, including by fostering critical reflection, and is aimed at reinforcing public confidence in science.

FP7 establishing act

(22) With the aim of deepening the relationship between science and society and reinforcing public confidence in science, Horizon 2020 should foster the informed engagement of citizens and civil society in research and innovation matters by promoting science education, by making scientific knowledge more accessible, by developing responsible research and innovation agendas that meet citizens’ and civil society’s concerns and expectations and by facilitating their participation in Horizon 2020 activities. The engagement of citizens and civil society should be coupled with public outreach activities to generate and sustain public support for Horizon 2020.

H2020 establishing act

Periods in the history of EU S&T policy
Who sets the agenda?

The evolution in Framework Programmes broad themes:

**FP6 (2002-2006)**
1. Focusing and integrating Community research
2. Structuring the European Research Area
3. Strengthening the foundations of the European Research Area

**H2020 (2014-2020)**
1. Excellent science
2. Industrial leadership
3. Societal Challenges
4. Spreading excellence and widening participation
5. Science with and for society

The evolution of S&T aims in the Framework Programmes establishing documents

First pages of the Framework Programmes establishing acts - general objectives:

<table>
<thead>
<tr>
<th>Economic growth / industrial competitiveness</th>
<th>Improvement of the quality of life / strengthening social and economic cohesion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion of research / education (triangle of knowledge)</td>
<td>Organization, coordination and structuring of the Community / Political support and prestige</td>
</tr>
</tbody>
</table>
The evolution of S&T aims in the Framework Programmes establishing documents

**Economic growth**

Aims / Framework Programme
- FP1 (1984-1987)
- FP3 (1990-1994)
- FP6 (2002-2006)
- FP7 (2007-2013)

1. Horizon 2020 focuses on three priorities, namely generating excellent science in order to strengthen the Union's world-class excellence in science, fostering industrial leadership to support business, including micro, small and medium-sized enterprises (SMEs) and innovation, and tackling societal challenges, in order to respond directly to the challenges identified in the Europe 2020 strategy by supporting activities covering the entire spectrum from research to market. Horizon 2020 should support all stages in the research and innovation chain, including non-technological and social innovation and activities that are closer to the market, with innovation and research actions having a different funding rate based on the principle that the closer to the market the supported activity is, the larger the additional funding from other sources should be. Activities (closer to the market) include innovative financial instruments, and they aim to satisfy the needs of a broad spectrum of Union policies by placing emphasis on the wider possible use of knowledge generated by the supported activities up to the commercial exploitation of that knowledge. The priorities of Horizon 2020 should also be supported through a programme on nuclear research and training established by Council Regulation (Euratom) No 1314/2013.

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**Improvement of the quality of life / strengthening social and economic cohesion**

Aims / Framework Programme
- FP7 establishing act
- H2020 establishing act

2. In addition, the dialogue between science and society in Europe should be intensified in order to develop a science and research agenda that meets citizens' concerns, including by fostering critical reflection, and is aimed at reinforcing public confidence in science. FP7 establishing act

3. With the aim of deepening the relationship between science and society and reinforcing public confidence in science, Horizon 2020 should foster the informed engagement of citizens and civil society in research and innovation matters by promoting science education, by making scientific knowledge more accessible, by developing responsible research and innovation agendas that meet citizens' and civil society's concerns and expectations and by facilitating their participation in Horizon 2020 activities. The engagement of citizens and civil society should be coupled with public outreach activities to generate and sustain public support for Horizon 2020. H2020 establishing act
EU decisions on Science, Research and Innovation are taken through the "Ordinary Legislative procedure"
EU scientific policy making - the process

EU decisions on Science, Research and Innovation are taken through the "Ordinary Legislative procedure"
Evolution of the research topics and budgets in the FPs

FP1

FP2

FP3

FP4

Evolution of the research topics and budgets in the FPs
Evolution of the research topics and budgets in the FPs

### FP5

<table>
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<tr>
<th>Sector</th>
<th>Amount (in millions of €)</th>
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<tr>
<td>Health</td>
<td>49.821</td>
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<tr>
<td>Food</td>
<td>30.1</td>
</tr>
<tr>
<td>Aeronautics</td>
<td>1.899</td>
</tr>
<tr>
<td>Defence</td>
<td>5.8</td>
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<tr>
<td>Total</td>
<td>88.721</td>
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### Evolution of research topics and budgets in the FPs

#### FP6

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<tr>
<td>Health</td>
<td>3.649</td>
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<tr>
<td>Food</td>
<td>1.058</td>
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<tr>
<td>Aeronautics</td>
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<tr>
<td>Defence</td>
<td>0.649</td>
</tr>
<tr>
<td>Total</td>
<td>6.049</td>
</tr>
</tbody>
</table>

These tables summarize the evolution of research topics and budgets in the Framework Programs (FPs). The amounts are in millions of euros (€).
Evolution of the research topics and budgets in the FPs

**Evolution of the research topics and budgets in the FPs**
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The Knowledge Future:

Intelligent policy choices for Europe 2050

Report by an expert group on
Foresight on Key Long-term Transformations of European systems: Research, Innovation and Higher Education (KT2050)

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