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How to balance quality and societal needs in R&D in a globalised world

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How to balance quality and societal needs ...

The dawn of a new global economy

- "The world is flat"
- globalisation of RDI
- Moving towards globalisation policies?

How to balance quality and societal needs ...

A balance between quality and societal needs

- assumption that such a balance is possible
- shift from Bohr's quadrant to Pasteur's quadrant

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A balance ...

- shift from Mode 1 to Mode 2 knowledge production

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Transformation of the research system

- changes in university-industry-state relationship
- industry: access to globally distributed knowledge production

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Transformation ...

- changes in university-industry-state
- industry: access to globally distributed knowledge

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Transformation ...

- the value of university graduates for industry
- universities: autonomy also means multiple funding sources

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"Society speaks back to Science"

- science and technology as motor of economic growth, well being and competitiveness

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"Society speaks back to Science"

- new societal demands for participation and democratization of scientific expertise
- the cloud on the horizon: faith-based movements

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The return of basic research

- not a return of Mode 1, but emergence of exciting, new research fields
- a reaction to short-termism

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The return of basic research

- the linear model has outlived its usefulness

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Levelling the playing field of the research system

- all research and innovation sub-processes are interlinked
- a dynamic research landscape: mountain peaks and valleys, urban and rural areas

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Levelling the playing field ...

- interconnected through people, ideas, institutions, infrastructures

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The new research landscape needs careful management

- self-management
- other forms of change management

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Innovation processes today

What would Schumpeter say today?

- radical innovations are largely science-based and unpredictable

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Innovation processes today

- individual entrepreneurs need institutional support and other framing conditions
- Institutions also innovated: the case for institutional creativity

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A newcomer in the global research landscape: the ERC

- frontier research of highest quality in European-wide competitive basis
- how to shape robust links between frontier and hinterland

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Societal needs

- partly expressed in/through markets
- manifest and latent needs
- "the capacity to aspire": societal imaginations of the future

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**From societal `problems´ to
scientific-technological-societal
`solutions´**

- **no direct** correspondence
- **no automatic** guarantee between more R&D investment, economic growth and innovation

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From societal `problems´ ...

- **but without investment in RDI**
Europe will loose out

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Balancing societal needs and highest quality research

- the dilemma between the unpredictable and controlling it
- creativity needs autonomous space
- co-evolution between science and society also means co-production

How to balance quality and societal needs ...

Seven short recommendations

- the balance is possible, but needs to be explained
- unpredictability/uncertainty is inherent in research and innovation

How to balance quality and societal needs ...

Seven short recommendations

- chance favours only the prepared mind: be prepared
- Invest in the young generation for translating societal needs into quality research and vice versa

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Seven short recommendations

- listen and involve users, patients, citizens, and other partners
- managing uncertainty needs not only scientific-technological but also social knowledge

How to balance quality and societal needs ...

Seven short recommendations

- keep your own research landscape sufficiently diverse in a world that is becoming more flat