

Technologiegespräche – Technology Forum

Construction and Reality in Research and Technology

Working Group 2:
**INNOVATION FOR SOCIAL CHANGES
EQUAL OPPORTUNITIES IN A DIGITAL ERA**

Alpbach, August 27, 2010

**Advanced comprehension of innovation
and cyclic learning in the knowledge triangle**



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**DIFFERENT PERCEPTIONS OF SOCIAL CHANGE,
or: Not anything new is an innovation ...**

THE FRUITS OF GLOBALISATION HAVE TRICKLED
DOWN TO US ... LOOK AT MY NEW BEGGING BOWL!



All innovations are socially relevant

Any innovation has impact on particular social groupings and – more or less – individuals in their respective capacities, e.g. as consumers, entrepreneurs, administrators, family members

What is considered customary „**innovation**“ mostly originates from technology, yet it also bears **social components** – concerning its development as well as impact.

...

Social aspects of innovations in business and technology need to be highlighted, yet even more important is to pay equal attention to **particular social innovations**.

Traditional comprehension, measuring and benchmarking of innovation fall short of the social relevance of innovations in general and of social innovations as such.

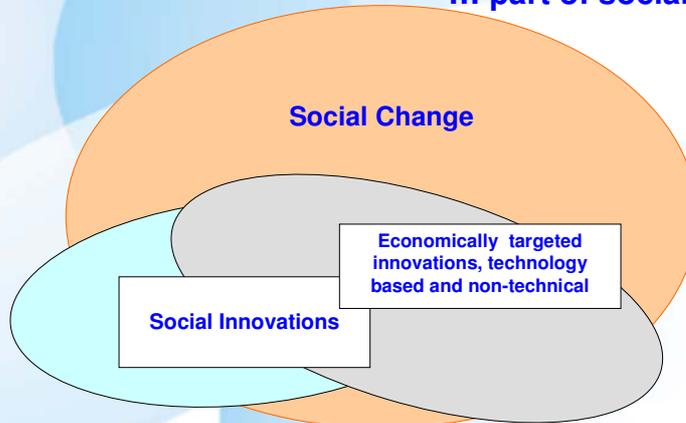


Innovations are increasingly needed in the wake of social change



INNOVATIONS, INCLUDING SOCIAL INNOVATIONS

... part of social change



Social change: ... processes of change pertaining to social structure, affecting societal institutions, cultural patterns, social action, behaviour and consciousness
(my shortened translation from Zapf, W. 2003: Sozialer Wandel, in: Schäfers, B. (Hg.): Grundbegriffe der Soziologie, Opladen, S. 427-433)



INCLUSIVE TYPOLOGY OF INNOVATION

The surface („first notion“) of innovations
More ↔ less, faster ↔ slower, growth ↔ decline

Innovation systems (sectors, regional, national, international)
confined ↔ open

Typology of innovations, including social aspects

Technological business innovations		Non-technological business innovations		Social innovations in business sectors, politics/public admin., state, civic society, social „milieus“		
Product *)	Process *)	Organi-sation*)	Marke-ting*)	Stakeholder involvement ^{o]}	Procedures in decision making ^{o]}	Behaviour, Life styles ^{o]}

Topical objectives („patterns“) of innovations
economic objectives ↔ social objectives

Socio-cultural foundations of innovations:
Value systems, equity/disparities, inclusion/exclusion



*) Innovation as defined by the „Oslo-Manual“: OECD/EUROSTAT, 2005. - ^{o]} Indicative forms of social innov.

COMPARING SOCIAL AND TECHNOLOGICAL INNOVATIONS RE. IMPLEMENTATION AND SUCCESS

- The key to measure success of „Oslo-type“ innovations clearly is **market penetration**, revenues, return on investment ...
- In case of social innovations **acceptance and utilisation** is crucial, yet less clearly captured in quantifiable terms. Urgent need to develop appropriate indicators – possible approach: Quality of Life / Well-being
- Implementation, diffusion and adoption of innovations are not merely the result of decisions of certain numbers of individuals alone. Such decisions are subject to **social processes** as every individual person is embedded in social structures, organisations and networks of many kinds („*figurations*“, according to N. Elias, 1972).
- Any innovation has a **life cycle**: the more innovations are disseminated successfully, the less their degree of novelty. In case of full market diffusion (of new products) or „institutionalisation“ (of social innovations) the product, measure, procedure etc. ceases to be considered an innovation. Examples of such institutionalised social innovations: works councils, traffic regulation, obligatory schooling, ...



Definition of „Social Innovation“ *)

**Social innovations
are
new concepts and measures
to resolve societal challenges,
adopted and utilised by social
groups concerned.**

*) Zentrum für Soziale Innovation (Centre for Social Innovation) 2008:
„Stimulating Social Development“ (p. 2), for download available at
<http://www.zsi.at/de/publikationen/346/5056.html>



Social change towards the emerging knowledge society

„Social change“ depicts the transformation of structures in one or more social system(s). [+/-]

„Progress“ denotes a directed and perceptible impact of acknowledged positive social change. [+]

Drivers of social change

- Demographic development
- Culture, arts, science
- Socio-technical systems
- Politics & social movements
- Environment (conditions of living, climate change ...)

Levels of social systems

- Macro level: State, national and international regulations ...
- Meso level: corporations, enterprises, NGOs ...
- Micro level: Life styles, patterns of behaviour ...

All drivers (“agents”) of social change, and all levels of social systems **require and create** innovations, and are **affected** by innovations



Features of the Knowledge Society

The new notion of „hands“ and of „brains“ in the KS

- „Hands“ became part of technological (socio-technical) systems
- „Brains“ become part of science systems „Mode 2“

The main indicator of the Knowledge Society is not sheer lots of knowledge

- The knowledge society applies **principles of scientific knowledge creation and its implementation** to wider walks of life
- Extended use of scientific principles at the same time **increases scrutiny concerning perception, cognition and knowledge**
- **Such scrutiny breeds uncertainty** even though usually higher certainty is expected by augmented knowledge:
 - ▶ a new „knowledge paradox“ *)

The Knowledge Society extends capacities to modify ways and scales of using resources and innovations

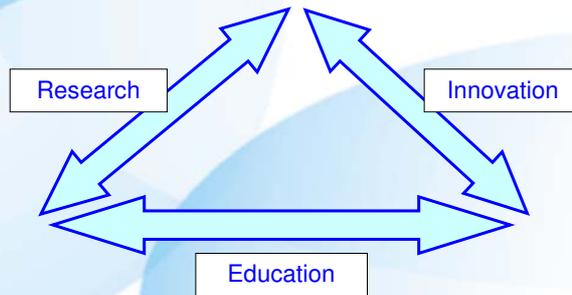
Amplification of knowledge also creates knowledge gaps and impact on cognition and perception of reality, learning and working



*) Martin Heidenreich, 2003: Die Debatte um die Wissensgesellschaft; in: Stefan Bösch und Ingo Schulz-Schaeffer (Hg.), Wissenschaft in der Wissensgesellschaft. Opladen: Westdt. Verlag

INNOVATION-, EDUCATION-, RESEARCH PROCESSES

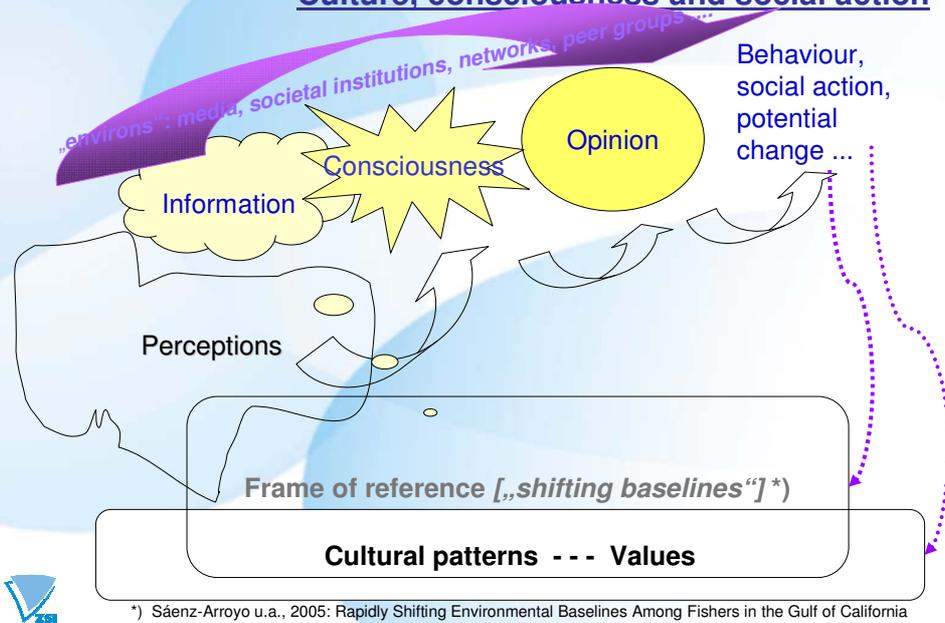
The „Knowledge Triangle“



Three legs rather than three nodes



LEARNING CYCLE IN INNOVATION Culture, consciousness and social action



*) Sáenz-Arroyo u.a., 2005: Rapidly Shifting Environmental Baselines Among Fishers in the Gulf of California

Turning perceptions and knowledge to action

How to stimulate and implement innovations, creating impact on social change towards a socially just and more equal „knowledge society“?

Concepts	Competencies	Capabilities	► Innovation resources
Data	abstraction	processing, segregation	facts & figures
Information	pattern recognition	attribution, conflict	forecasts, scenarios
Knowledge	linear thinking	cognition, empathy	strategies, conventions
Wisdom	lateral th.	creation, balancing	joint action: cooperation



INNOVATIONS IN EDUCATION

Social Innovation:

A new, targeted and successful intervention, capable to resolve a social issue

„Success“: It works, is met with acceptance, implementation and dissemination progress.

		Idea and intervention concerning issues	
		Old	New
Social issues e.g. in education	Old „Selection“	Improve individual support; adopt tested school organisation	Change criteria – from deficiency to potency approach
	New „Internet, video games“	Application of control measures, restrictions	Innovation Facilitate social competencies and inter-generational learning



INNOVATIONS IN RESEARCH

The role of science in society shifts from transfer to co-production of knowledge

Organisations of education and science need to become learning organisations, aiming to institutionalise social networking research, to **produce socially robust knowledge.**

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Presentation delivered at the conference

„The most needed social innovations of the 21st century, Vienna, Nov. 2009.



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