Sustainability-related Knowledge Communication between Strategic Staging, Information, and Understanding

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Innovation

Innovation
is the first global policy craze
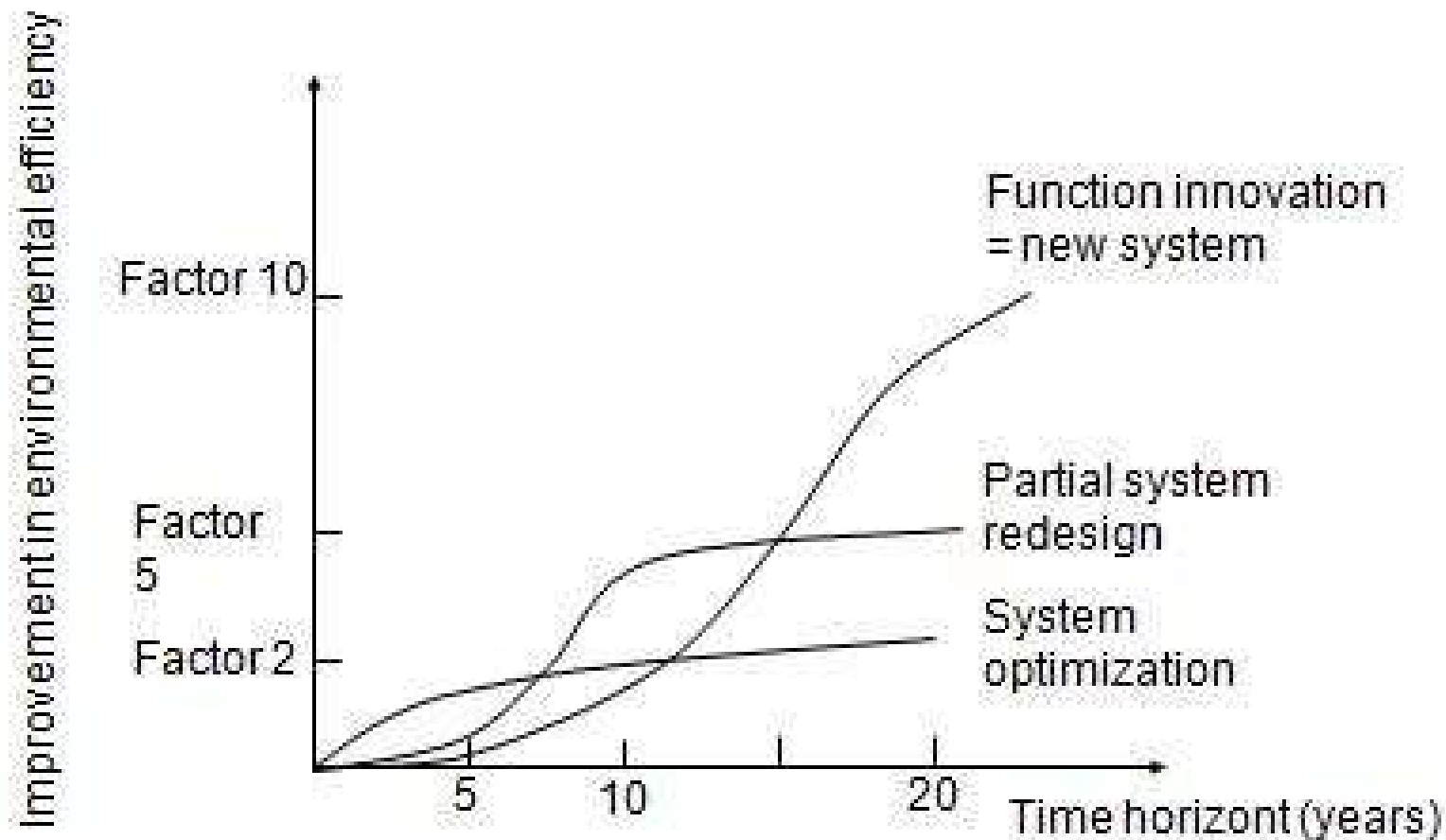of the twenty-first century.

Steve Fuller (2007)

Innovation – a term with multiple meanings

- **invention**: the „act" of creating something new
- **innovation**: first introduction of new products, processes, organisational forms etc.
- **adoption**: taking over something new
- **diffusion**: process of spreading something new and make it acceptable

System optimization versus system innovation

Improvement in environmental efficiency

Factor 10

Factor 5

Factor 2

Function innovation = new system

Partial system redesign

System optimization

5   10   20   Time horizont (years)

Source: Weterings et al. 1997

Innovation in theory

Older theories of innovation =

■ **based on control** – of ideas, of knowledge, of date and most importantly, of the intellectual property rights

Newer theories of innovation

■ **open innovation** in a networked environment: ability to use the world outside as an institution to generate internally useful knowledge

■ **user driven innovation**: innovation comes from being close to the problem; the knowledge required to innovate is "sticky" and doesn't move far from the user

■ **distributed innovation**: collaborative communities have inherent advantages

Knowledge for transformation

- Knowledge has always been a crucial dimension for the transformation of human society.

- **What is new**, however, is the notion that within contemporary societies, **knowledge acts on knowledge**.

- "Knowledge is now being applied systematically and purposefully to define what new knowledge is needed, whether it is feasible and what has to be done to make knowledge effective.

- It is in other words applied to **systematic innovation**."

Knowledge: epistemological features
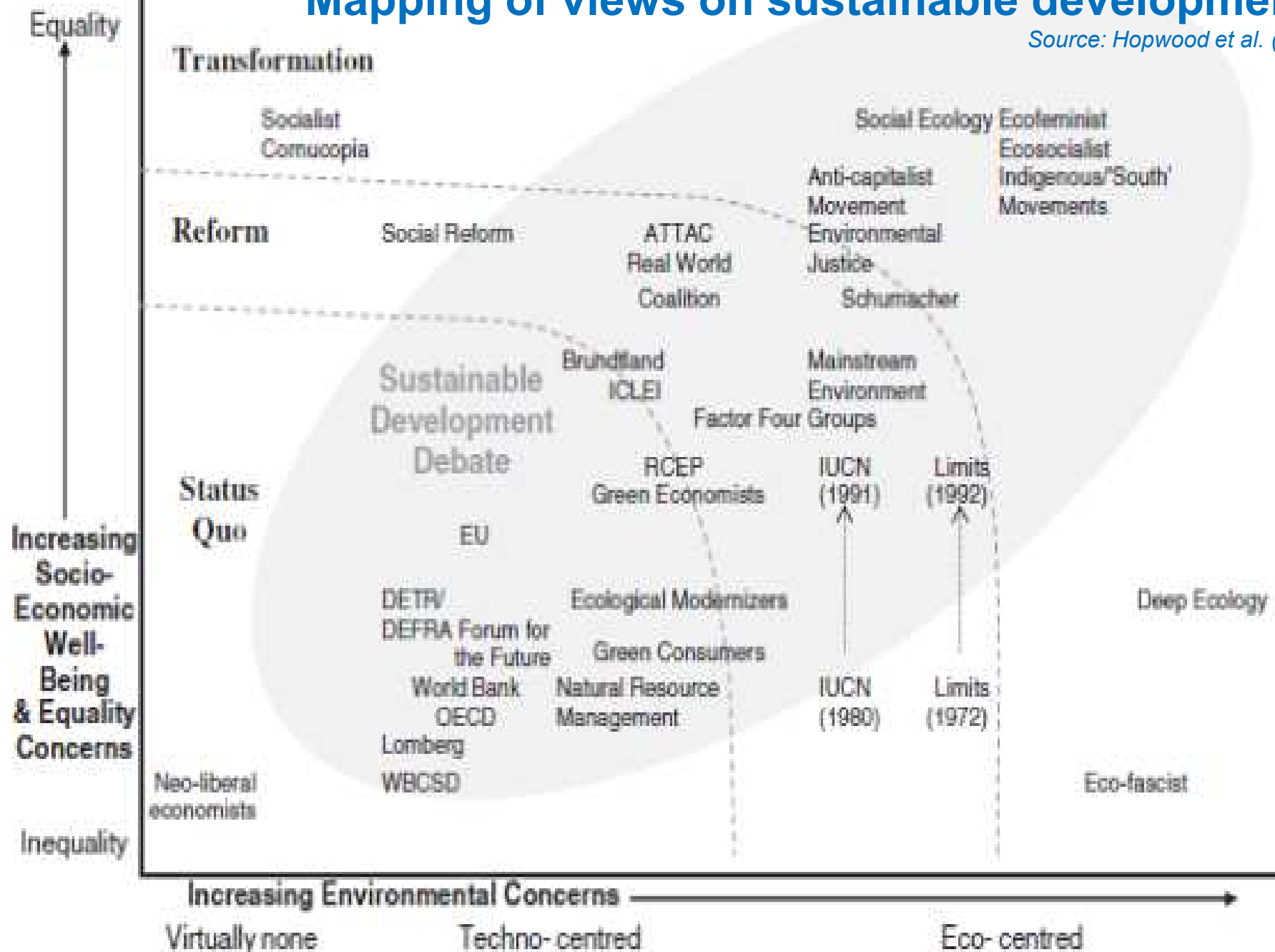
Knowledge has

- cognitive component and also
- social functions

→ distinction between conceptual and instrumental use

知識
knowledge

Mapping of views on sustainable development
Source: Hopwood et al. (2005)

Two Sides of Education for Sustainable Development

ESD 1

ESD 2

✓ Promoting / facilitating changes in what we do

✓ promoting (informed, skilled) behaviours and ways of thinking, where the need for this is clearly identified and agreed

➲ Learning *for* sustainable development

✓ Building capacity to think critically about (and beyond) what experts say and to test sustainable development ideas

✓ Exploring the contradictions inherent in sustainable living

➲ Learning *as* sustainable development

Vare/Scott (2007)

Developing the learning citizen at three levels

1. **Individual level**

   new knowledge, new skills

2. **Institutional level**

   new priorities, new procedures, and new practices

3. **Social / political level**

   creating new agendas, new partnerships

(Goldstein 2005, p.7)

Triple helix development model*

universities play an innovative role in society, active in:

- translational research,
- entrepreneurial training and
- community development,
- as well as traditional tasks

triple helix → university – industry – government
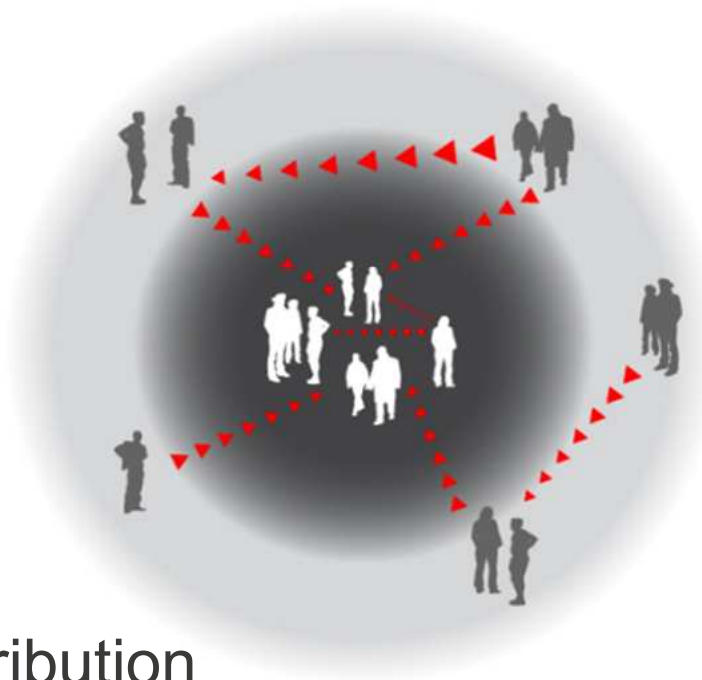
Decisive triple helix elements

Critical elements of triple helix circulation are

- persons,
- ideas and
- innovations

➲ seamless web
  ➲ reciprocity
    ➲ equality of contribution

In terms of geographical scale ...

… regions have an **optimal size** for successfully implementing sustainable development:

■ small enough to be of direct interest to residents and

■ large enough to possess critical mass for creative solutions

Regional approaches inherit two main **advantages:**

➲ increased feasibility of utilizing "**systems thinking**" at the regional level

➲ involve **key stakeholders** in the planning and decision-making processes toward sustainable development

Roles of academia in regional sustainability

Four main ways universities can contribute to regional SD:

- with own **institutional management practice** (improvement of energy efficiency, introduction of environmental management systems etc.)

- as **sources of technical expertise** (technical and cross-disciplinary issues such as global climate change),

- **cultural mission** – reaching beyond skills development toward employability → should promote ideals and critical thinking skills for a well-functioning democracy.

- act as **leaders** during their work with local authorities and other societal stakeholders when setting up and implementing regional sustainability plans
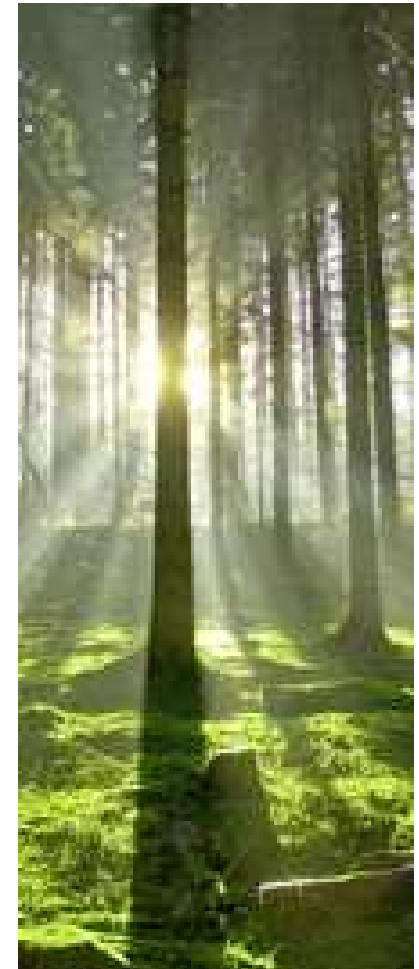
Roles of HEIs in networks

- prime movers
- gatekeepers
- spokespersons
- bridging institutions or intermediaries
- independent monitor

- promoting "**conscientization**" of local problems
- ⊃ engage in a reflexive self-assessment of their own knowledge production practices, also in relation of those of the other participants

Goals of the 3-Lensus project

- **networking** universities with diverse actors in regional, multi-stakeholder learning networks by

  - Developing a prototype of a **virtual European Learning Space** for Sustainable Development; consisting of a technological, organisational and educational component

  - Supporting the re-launch of the **COPERNICUS Alliance** and creating opportunities for exchange between higher education institutions, regional learning networks and Regional Centres of Expertise

  - Developing an **Open Database** containing examples of innovative practice for Education for Sustainable Development (ESD) as a source of inspiration, networking and support

Goals and activities of the 3-Lensus project

■ **capacity building** for the support of existing and development of further regional, multi-stakeholder **learning networks for sustainable development** by

➲ Developing and implementing a **seminar program** for academic and non-academic participants interested in regional networking and the Regional Centres of Expertise approach

➲ Creating a **Best Practice Handbook** on innovative practices for regional multi-stakeholder learning for sustainable development with a particular analysis on the role of universities in this process.

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⬡
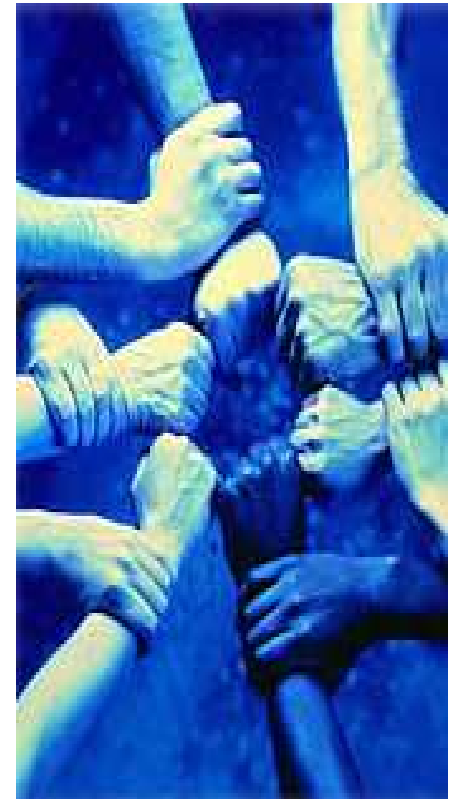
Communication and knowledge

Processes, relationships and fields of knowledge are intimately tied to the

■ **powerful role of communication**, which acts as the

➲ main catalyst for reflexive creativity,

➲ through training and diffusion,

➲ exchange,

➲ recombination,

➲ integration of knowledge and innovation.

Transferring knowledge …

… is a fundamental challenge for sustainability

Thank you for your attention!

further information:

www.3-lensus.eu

www.copernicus-alliance.net