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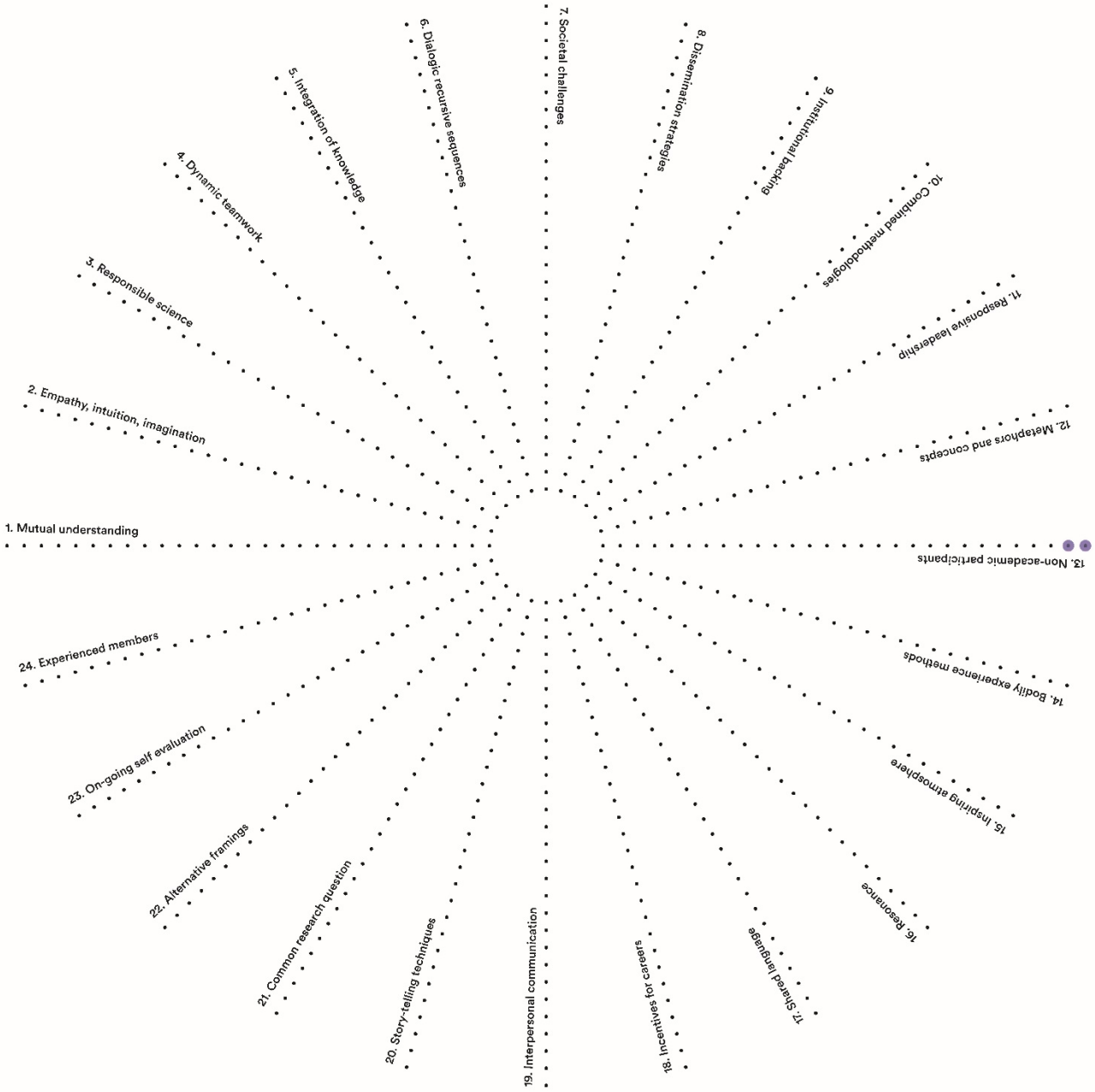
Eco-Social Transformations: Leading Principles and Generative Forces

Andreas Metzner-Szigeth

https://www.oekom.de/nc/buecher/vorschau/buch/zukunftsfaehige-entwicklung-und-generative-organisationskulturen.html

International Conference about Relating Systems Thinking and Design 7 (RSD7),
organized from the Systemic Design Research Network (SDRN),
hosted by the Politecnico di Torino,
under the title Challenging Complexity by Systemic Design towards Sustainability,
Turin, Italy, 24-26 October 2018



SPASS
Open Space on Interdisciplinary Research

.. \1\ Introduction
Structure

.. \1\ Introduction

.. \2\ Eco-Social Transformations

.. \3\ Leading Principles

.. \4\ Generative Forces

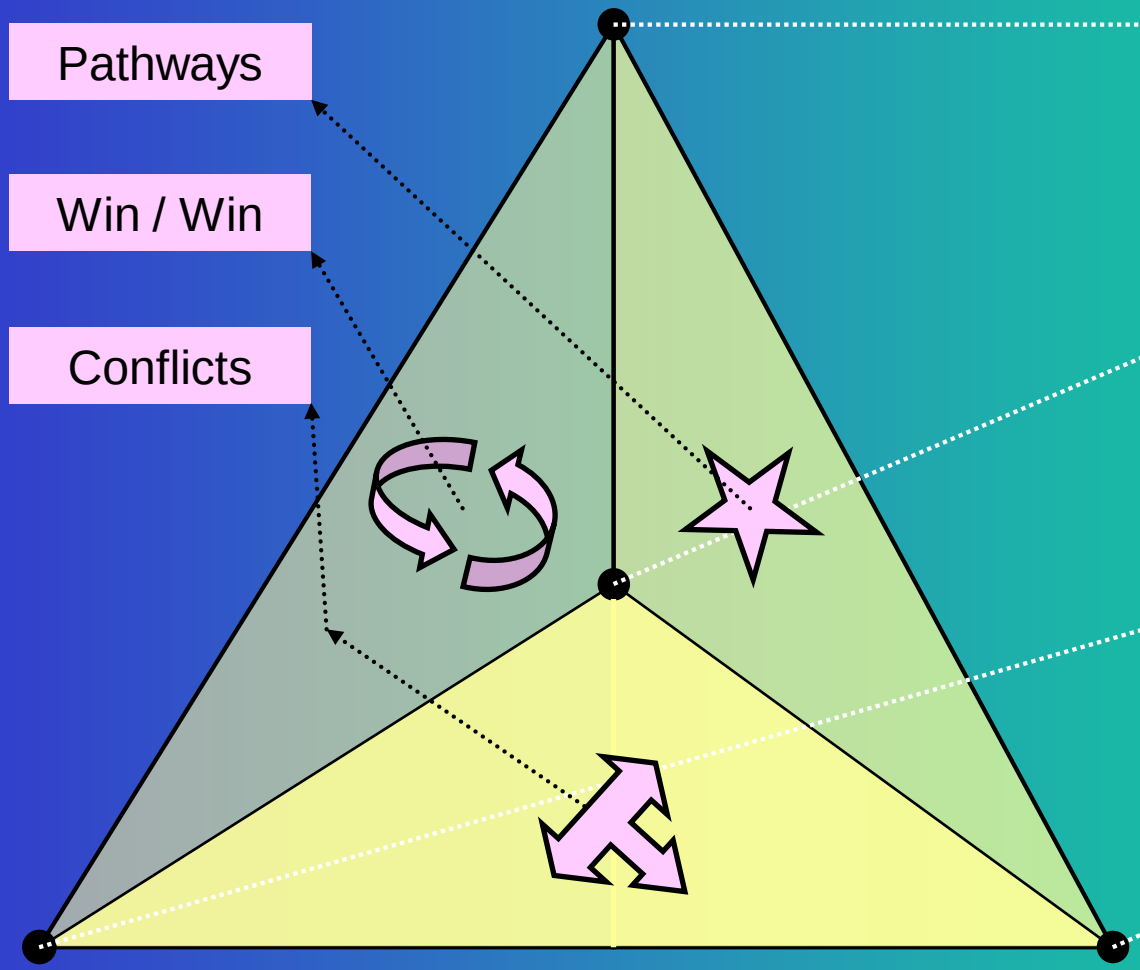
.. \5\ Conclusion

Mushrooming

Nowadays, the need to control what we eat becomes essential. "Mushrooming" is a new experience in the edible mushroom growing, adapted to home environment and recycling household waste. Household waste such as paper, newspapers, cardboards, paper towels, coffee grounds, textile, bread ...

https://pro2.unibz.it/projects/blogs/essen/author/glaboratoreunibz-it/

.. \2\ Eco-Social Transformations
Modelling Sustainable Development



Pathways

Win / Win

Conflicts

Liberal Self-Determination

Economic Performance

Ecological Integrity

Social Cohesion

„4-D“ – Integrative – Systemic

(Andreas Metzner-Szigeth 2011)

https://bia.unibz.it/bitstream/handle/10863/2890/Metzner-Szigeth2011_KeyIssues.pdf?sequence=3

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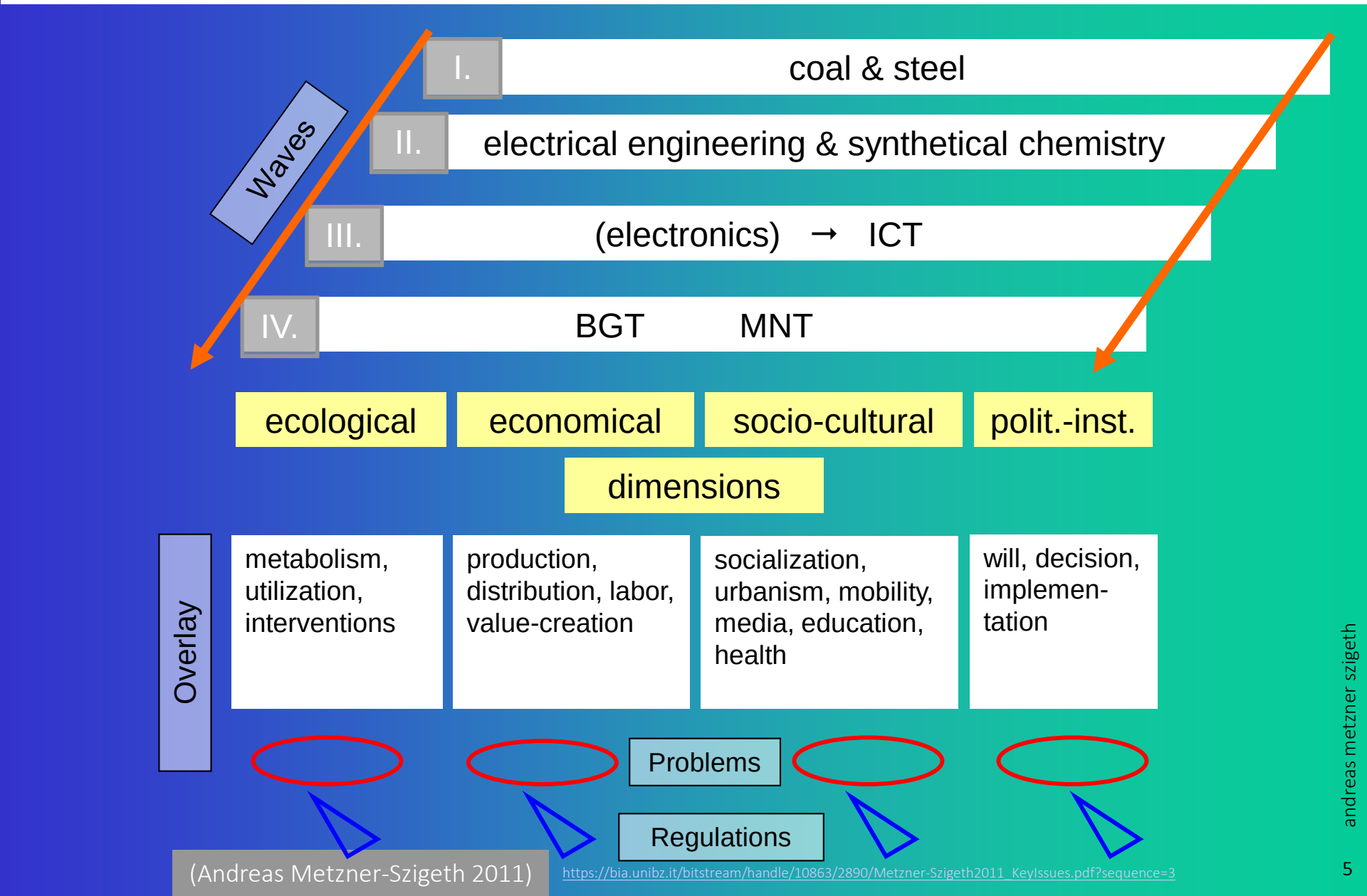
.. \2\ Eco-Social Transformations
Industrial Innovation Cycles



(Andreas Metzner-Szigeth 2011)

https://bia.unibz.it/bitstream/handle/10863/2890/Metzner-Szigeth2011_KeyIssues.pdf?sequence=3

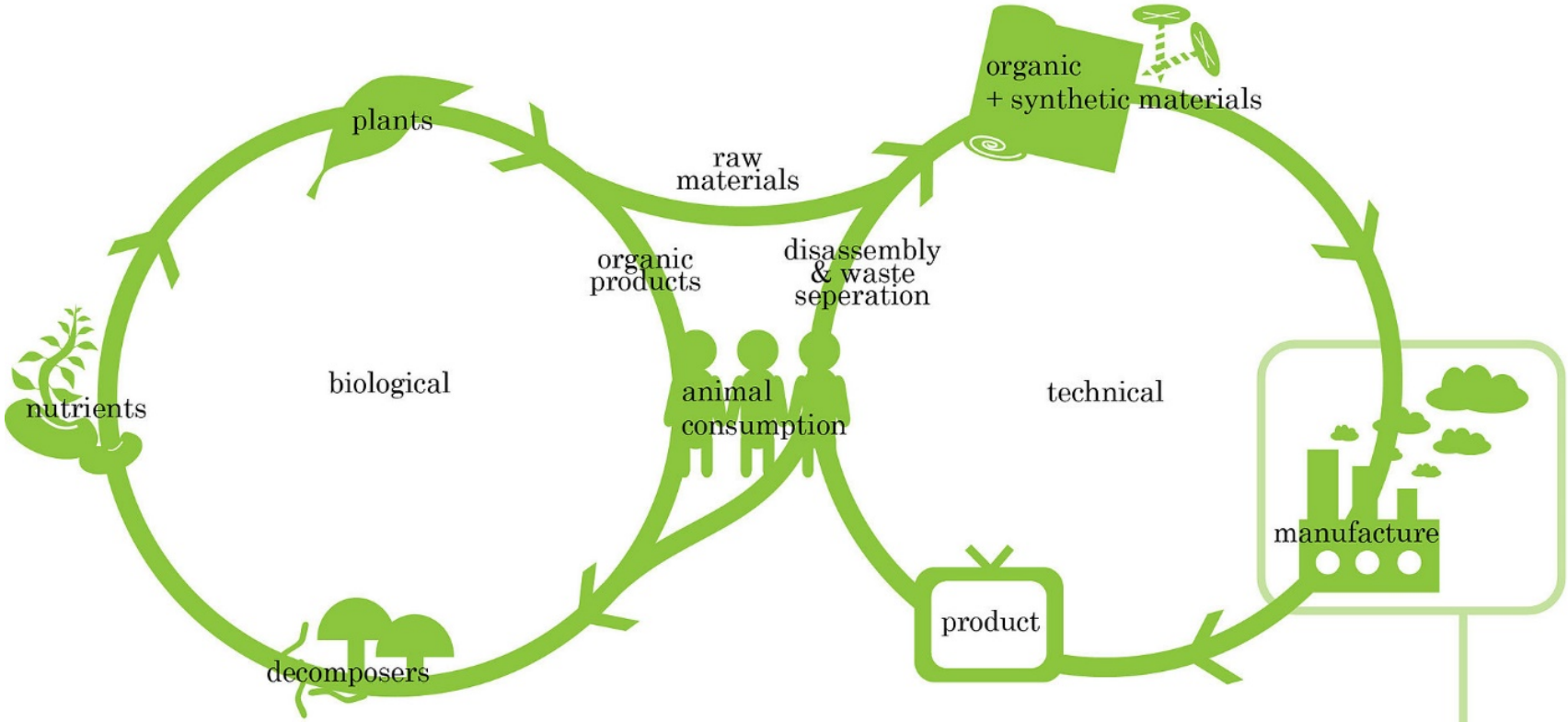
.. \3\ Leading Principles
Efficiency / Sufficiency / Consistency

strategy	dimension	focus	goal	examples	design	problem
efficiency	technology	resources	reduce energy and material intensities per good/service	drip irrigation LEDs	passive buildings	rebound effects
sufficiency	culture	needs	limit consumtion of goods/services	car sharing no meat	self-sufficient communities	inertia of habits
consistency	ecology	qualities	close cycles of material flows / energy streams out of renewable sources	compostable plastics solar + hydrogen	cradle to cradle	missing options

(Andreas Metzner-Szigeth 2016)

.. \3\ Leading Principles Consistency

CradletoCradle



1 100% Renewable Energy Use
2 Water Stewardship clean water output
3 Social Responsibility positive impact on community
4 Material Reutilization recyclability / compostability
5 Material Health impact on human & environmental

5 criteria

(Wikipedia 2016)

.. \3\ Leading Principles
Efficiency / Sufficiency / Consistency

efficiency

or ?

sufficiency

or ?

consistency

Mushrooming

Nowadays, the need to control what we eat becomes essential. "Mushrooming" is a new experience in the edible mushroom growing, adapted to home environment and recycling household waste. Household waste such as paper, newspapers, cardboards, paper towels, coffee grounds, textile, bread ...

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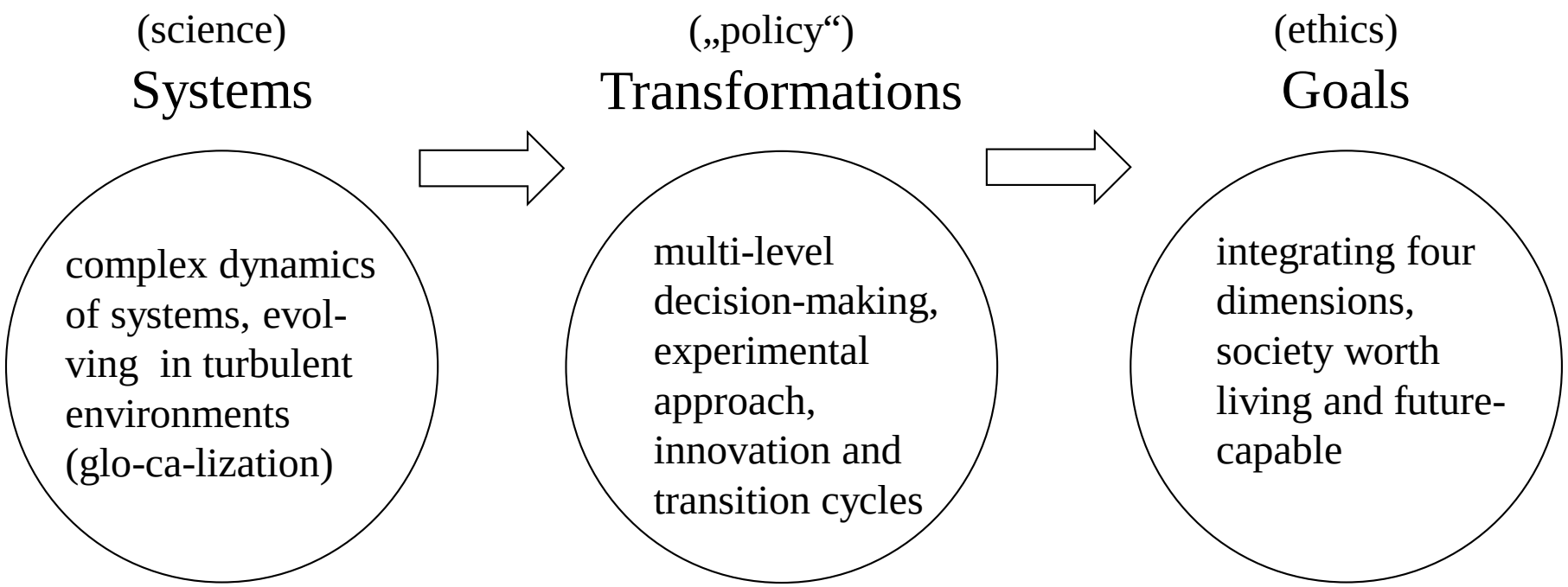
.. \4\ Generative Forces Sustainability Science



<u>Interdependencies</u>
- socio-cultural
- political-economic
- psycho-social
- techno-ecological

<u>Strategies</u>
- effici- / suffici- / consist-ency
- prevention - resilience
- shapeability - governance
- internalisation extern. „effects“

<u>Values</u>
- peace, safety
- wealth
- happiness
- justice

(Andreas Metzner-Szigeth 2016)

.. \4\ Generative Forces
Actors / Cultures / Systems

social sciences three frameworks:

actors	origin of generative forces
cultures	patterns in motion
systems	evolution of structures

drivers / conditions for eco-social transformations?

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.. \4\ Generative Forces
Actors / Cultures / Systems

actors — generative self
productive personality

cultures — innovative & creative organizational cultures
("medici effect")

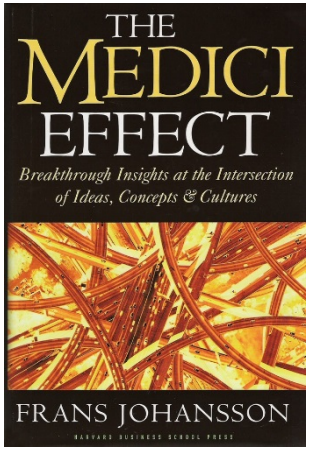
https://it.wikipedia.org/wiki/File:Map_of_Italy_(1494)-en.svg

(Italy, 1494)

systems — self-realization of the human being ..

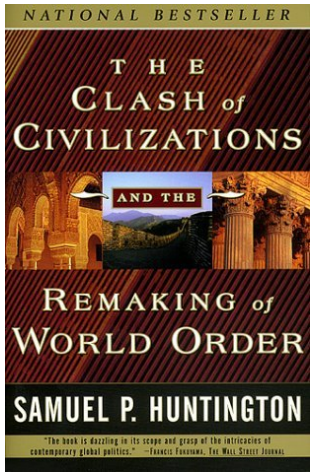
.. \4\ Generative Forces
Cultural Diversity +/-

encounter of cultures



„covivencia“, progress, welfare

„**clash** of civilizations“



„coexistence“, terrorism, wars

.. \4\ Generative Forces
Organizational Cultures

„A **pattern of shared basic assumptions** that a group has learned

as it solved its problems of external adaptation and internal integration,

that has worked well enough to be considered valid and therefore,

to be taught to new members as **the correct way to perceive, think, and feel** in relation to those problems.“

(Edgar Schein 1985)

.. \4\ Generative Forces
Organizational Cultures

Artefacts	visible & audible patterns / structures (easy to observe, difficult to decode, recognize)
Values	strategies, goals, philosophies (articulated, documented legitimations, rationalizations)
Basic Assumptions	unconscious beliefs, assessments, attitudes, emotions that are taken for granted, as natural (primary sources of values and actions)

(according to Schein 1985)

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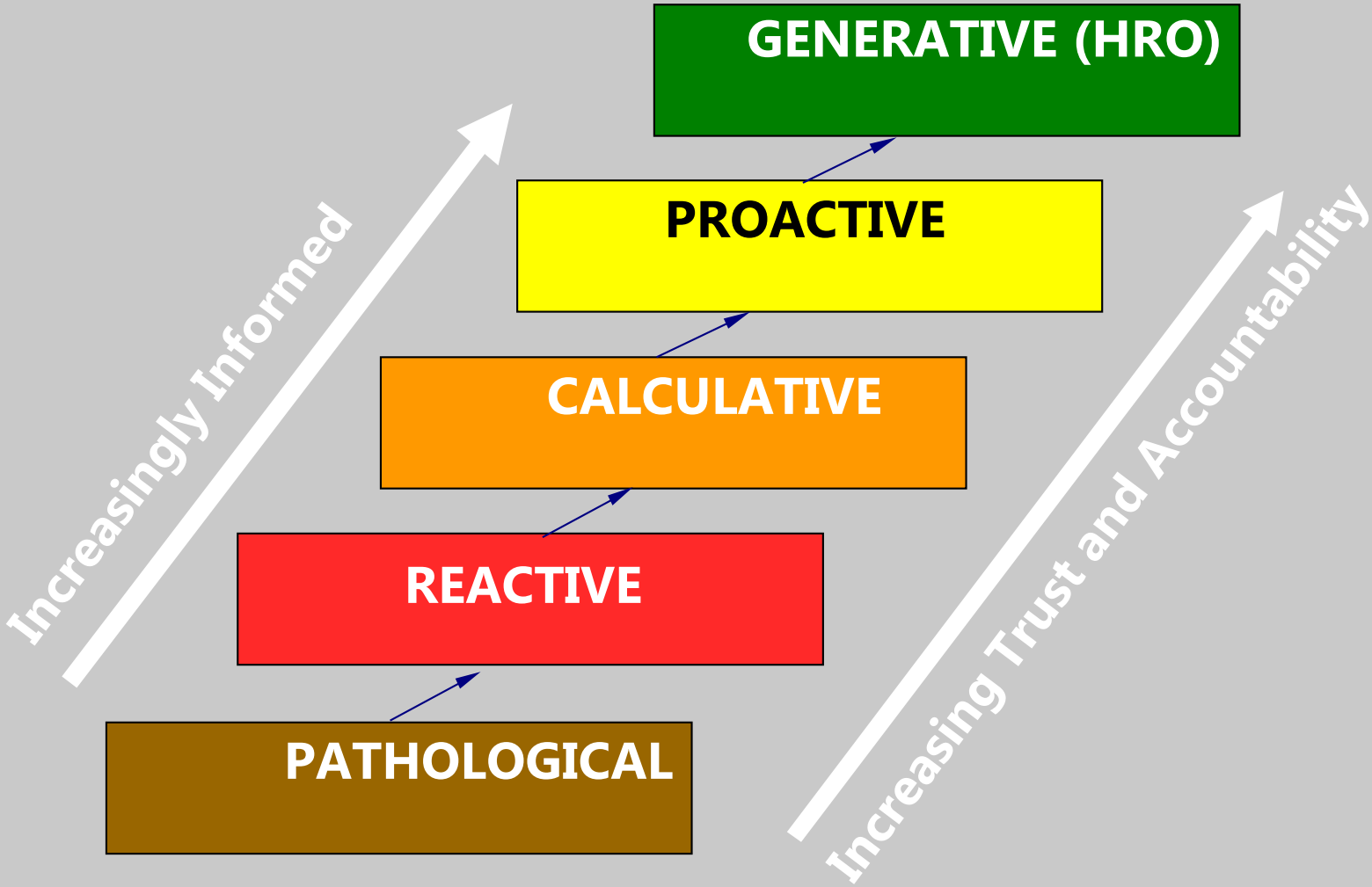
.. \4\ Generative Forces
Organizational Cultures / HSE Ladder



(Patrick Hudson 2007)

.. \5\ Conclusion
How to become fit for the future?

»We can think towards the future and, more important still, think backwards from the future.

And by the way we perceive or even do not perceive what has not yet become reality, we take part in shaping it.

Being fit for the future [future-capable] therefore means to obtain orientation not only from what actually already exists, but to be sensitive to the generative forces of the world that need suchlike awareness.«

(Hildegard Kurt: Wachsen! 2010)