

Intelligence, Artificial Intelligence and Wisdom in the Global Sustainable Information Society

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1 A complex systems view

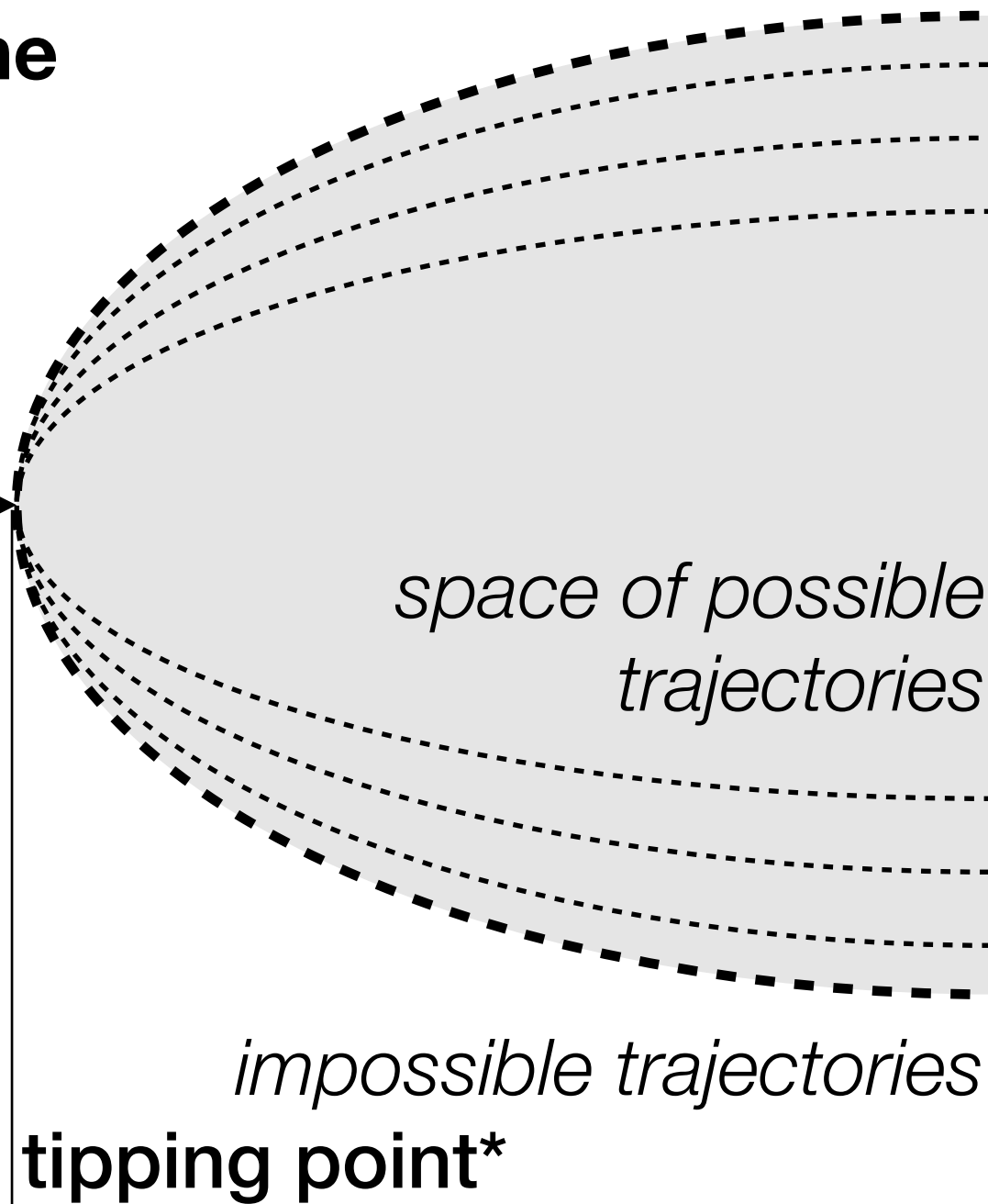
Seen from a complex systems view, the evolution of mankind faces a **Great Bifurcation**. Global challenges might cause the extermination of mankind.

At the same time, global challenges can be mastered through a **transformation into a global sustainable information society**.

1.1 The Great Bifurcation

Civilisation at the crossroads

global challenges
(multicrisis in all techno-, eco-, social subsystems)

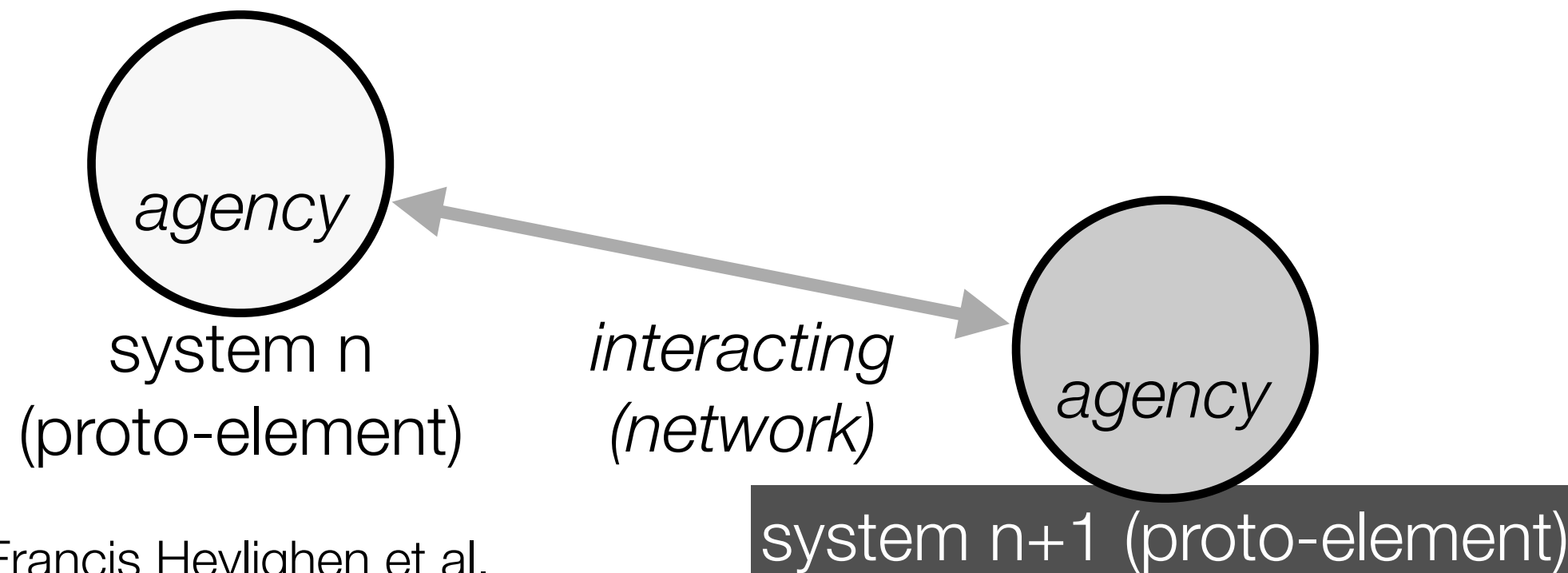


breakthrough to a higher level
(rise of complexity):
integration of differentiated, interdependent social systems into a single meta-/suprasystem –
Global Sustainable Information Society

breakdown (decline of complexity):
disintegration and
falling apart of civilisation

1.2 Transformation

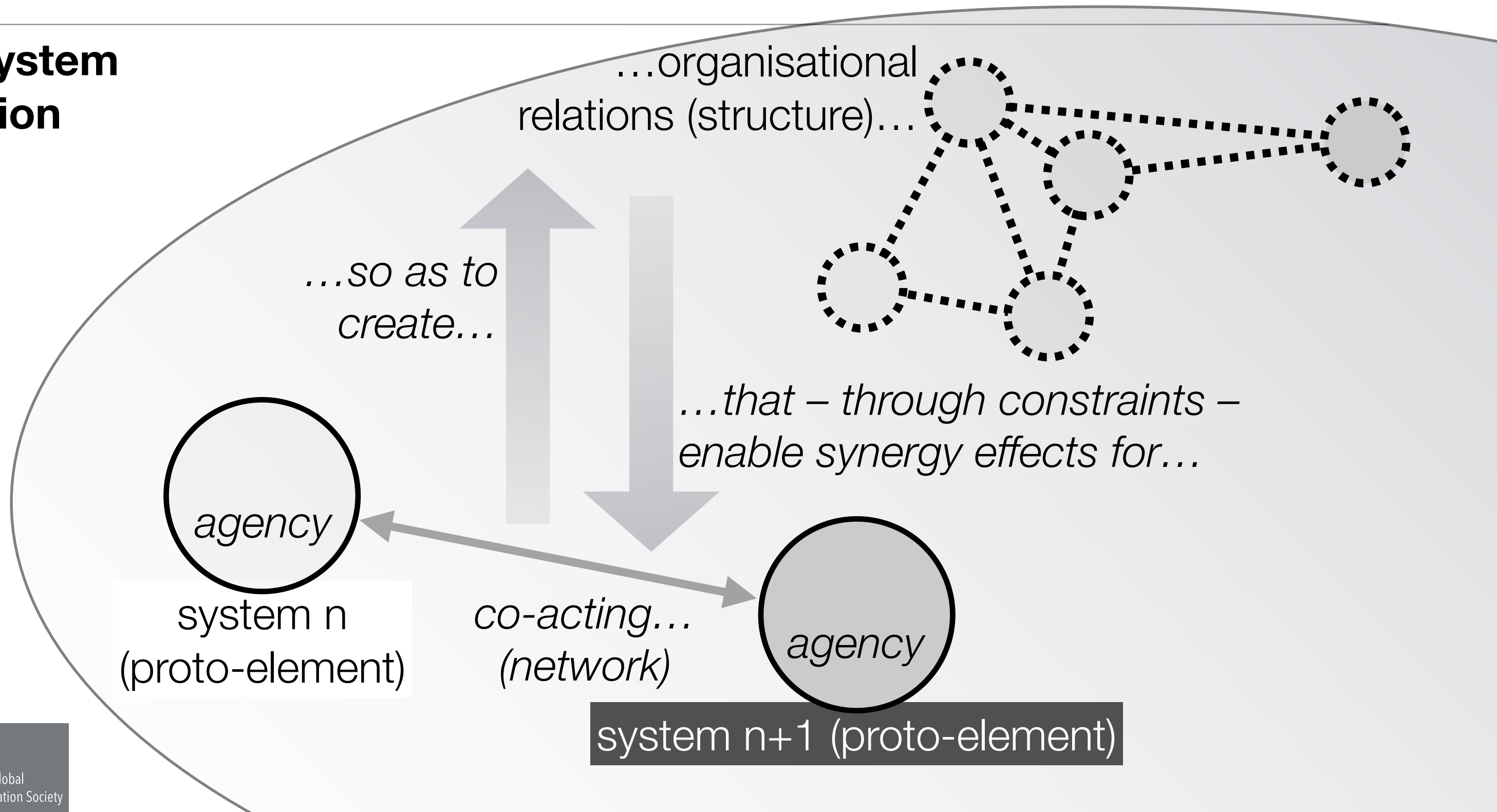
Metasystem transition*



* Francis Heylighen et al.

1.2 Transformation

Metasystem transition



1.2 Transformation

(Supra)system hierarchy

macro-level

micro-level

...organisational relations (structure)...

...so as to create...

...that – through constraints – enable synergy effects for...

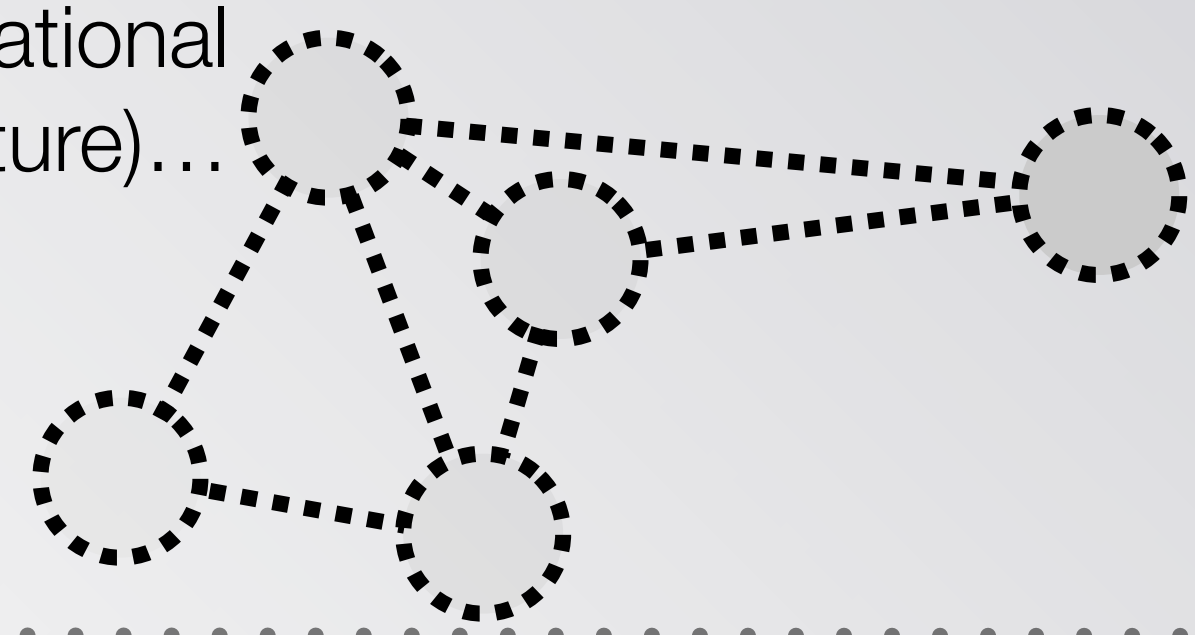


element n

...co-acting...
(networking)



element n+1



1.2 Transformation

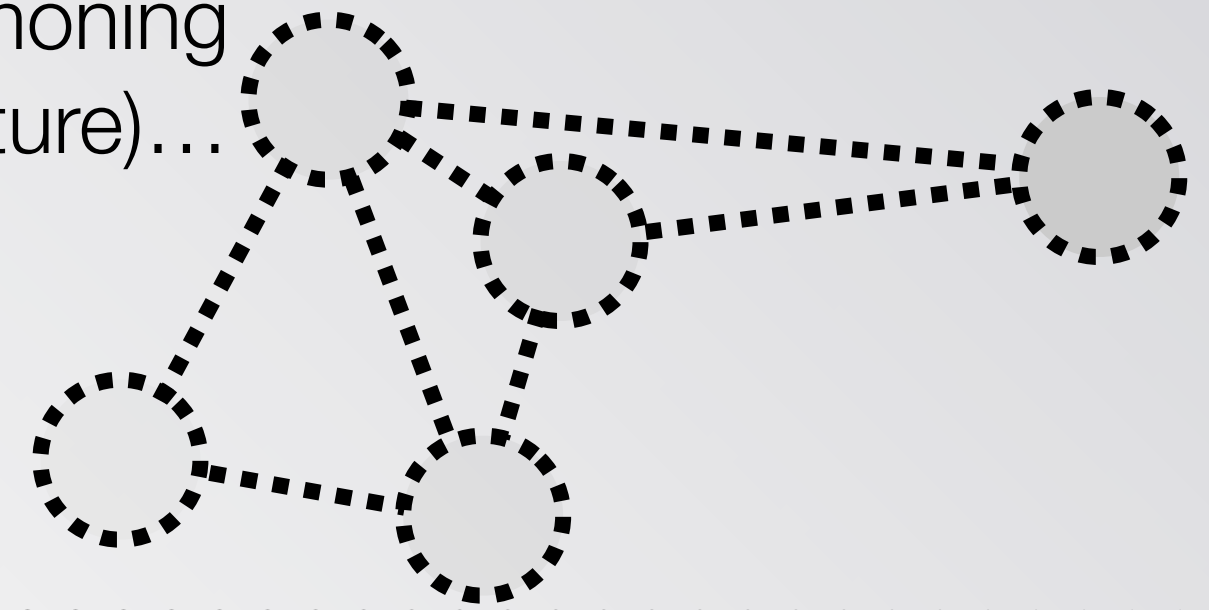
Social (supra)system (hierarchy)

macro-level

micro-level

... so as to (re)produce/transform...

...commoning relations (structure)...



...that provide conditions for good life of...



actor n

...co-acting... (networking)



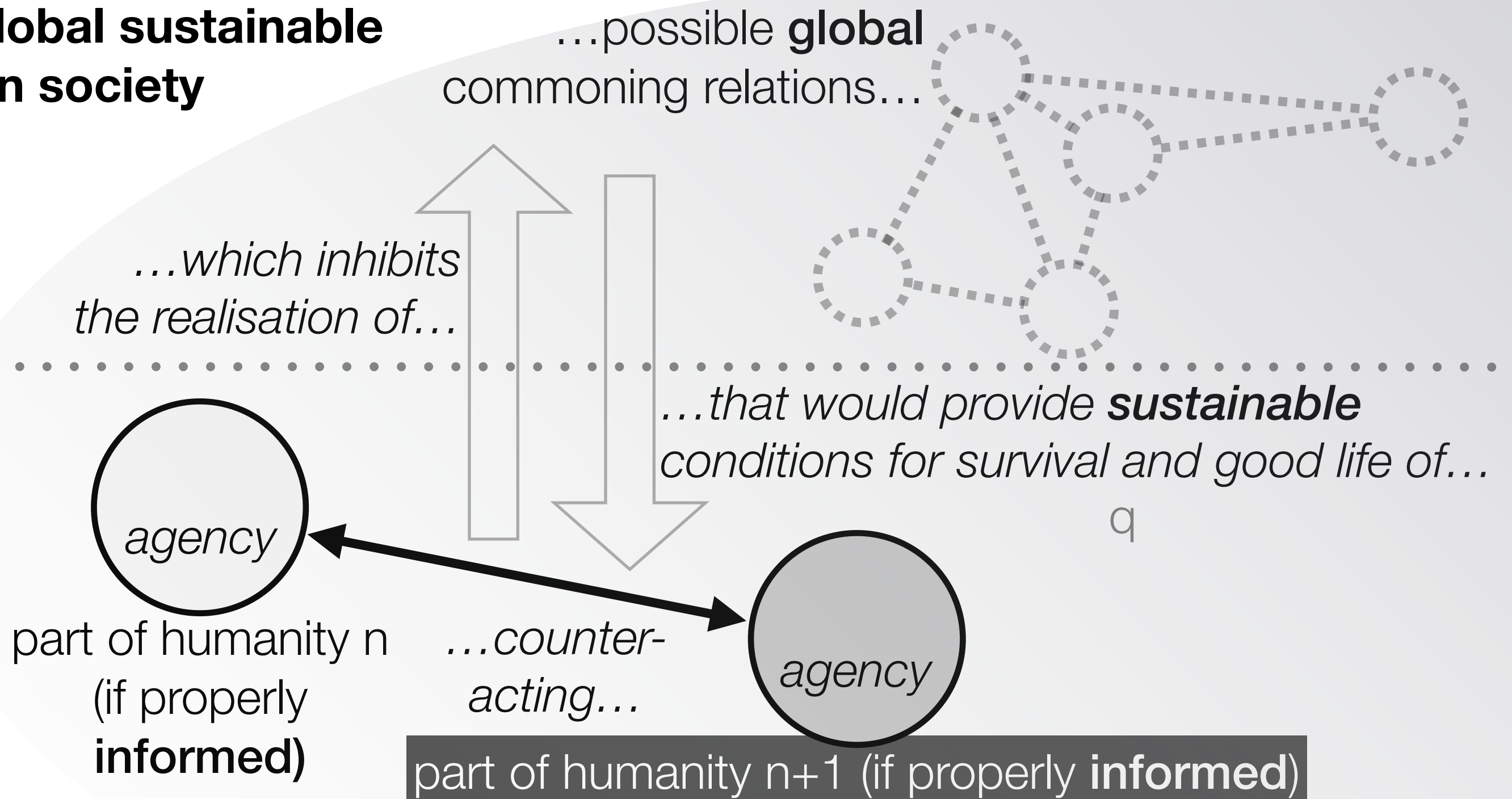
actor n+1

1.2 Transformation

Nascent global sustainable information society

macro-level

micro-level



2 Conditions for thriving and surviving

"Global Sustainable Information Society"

=def. framework of conditions for thriving and surviving at the Great Bifurcation

1 Globality

2 Sustainability

3 Informationality

2.1 Globality

A new understanding of globality

"Globality" =*def.* the state of world society as an **integrated meta-/suprasystem**, that is, after the establishment, for the first time in history, of **commoning relations on a higher-order level** between all parts of humanity in all fields of human/social life
– the social relations of commoning will have been generalised up to the planetary level: **"global(ised)"**

"Globalisation" =*def.* transformational tendency towards **globality**

2.2 Sustainability

A new understanding of sustainability

"Sustainability" =*def.* the state of **re-organisation** of the social relations between all, and throughout any, parts of humanity pursuant to the commoning relations on the higher level such that **anthropo(socio)genic system dysfunctions can be kept below the threshold the transgression of which would endanger the continuation of social evolution** – the organisational relations the role of which is to provide social synergy will **"sustain"** human/social life

"Sustainabilisation" =*def.* transformational tendency towards **sustainability**

2.3 Informationality

A new understanding of (social) information(ality)

"**Informationality**" =*def.* state of informational actors and social systems in which they will have caught up with the complexity they are challenged by to such an extent that they dispose of the **capacity to create requisite information** for recognising the social dysfunctions and for re-organising the relations appropriately

– actors and systems will be "**informed**" actors and systems

"**Informationalisation**" =*def.* transformational tendency towards **informationality**

3 Intelligence, AI, and wisdom

Law of requisite variety*

In order to steer a system the **variety** of the (control) system needs to correspond, if not surpass, the variety of the system to be steered.

Cases: system vs. environment; system and its organisation

- "variety" = "**complexity**":
The steering side needs to be at least as complex as the challenge.
- "complexity" = "**information**":
The steering side can increase its own complexity through generating information.

3.1 Intelligence (1/2)

"Intelligence" =*def.* informational property of agents that capacitates to **achieve emerging goals** in the course of self-organisation, in particular, by generating **information**

Collective intelligence is intelligence emerging on a level above individual intelligences of participating agents and, as a rule, it outperforms them (though still grounded in them).

3.1 Intelligence (2/2)

Intelligence reflects (on) the **means-end relationship**, in particular, the **efficacy and efficiency** of the means towards the end.

The **evolution of self-organising systems** led to an increase in intelligent agency by the usage of

- ever more efficacious and efficient means,
- an ever greater variety of means, and
- an ever greater variety of ends.

Examples:

- Physical systems: crystals*, Bénard cells
- Biotic systems: Dictyostelium discoideum
- Human/social systems (actors)

3.2 AI

"**Artificial Intelligence**" =*def.* feature of a **machine** that supports intelligence of human/social agents (self-organising systems); the machine itself is **not an agent but a patient***, hetero-organised; it functions, in principle, according to **mechanical determinacy**, for the achievement of pre-given goals, and is incapable of emergent products; thus, it is not intelligent as such

Since AI shall afford intelligent behaviour of actors, it shall **not be given autonomy at the cost of autonomy of actors.**

3.3 Wisdom

"Wisdom" =*def.* informational property of actors/social systems that allows to take steps in the direction of a **"good society"** populated by **"happy"** **individuals** conducting a **"good life"**

Wisdom is the uppermost level of the social information pyramid:
Data – Knowledge – Wisdom

Wisdom reflects

- not only the **means-end relationship**
- but also the **end in itself** (and makes the means dependent on the end).

3.4 Conclusion

A **Global Sustainable Information Society (GSIS)**

- is an **intelligent** society as it **optimises goals achievement**;
- is, furthermore, an **AI-society** as it makes use of **AI as tool for supporting collective and individual intelligence** to optimise goals achievement;
- is, in the end, a **wise** society as it orientates all actors and their use of AI towards the **achievement of a good society** as overall goal.

GSIS is an attempt to let the evolution of mankind make another leap **from *homo demens** to *homo sapiens*** by solving global challenges.

Thank you!
