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**Epistemological foundation, coordination, the role of quality
and tools in the implementation of the indicators for
Sustainable Development Goals (SDG)**

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Context and claims

- Problem: advice on **coordination and quality** for SDG's
- Statistics and society
 - Ideal: **decision making, stable reference point**
 - Ideal under attack: **loss of trust in experts**
 - Three revolutions: **explosion in data, neo-liberal government, resistance to expert opinion**
- How is knowledge possible?
 - Statistics: **either “mirror” or “Churchill”**: “I only trust statistics I doctores myself”
 - **Alternative**: Luhmann: functional differentiation / no single truth and morality / “rats in the labyrinth” / **However** we can observe (describe) using distinction and observe observation and thereby “see what we cannot see” (blind spots)”
- Claims: (main) 1: Need for **1. epistemological foundation** to understand statistics and society. Need for improved understanding of 2: **coordination**, 3: **quality**, 4: **tools**

European rationality and differentiation

- **Classical metaphysics** (Aristotle) aims at **correspondence between being and thinking**
- **Subject thinking** (Descartes) subject – object. Aims at rationality a **person is equipped with**
- **Modern rationality:** Functional differentiation -> plurality of rationalities. Social system works through communication and **double contingency** irritating and creating more or less **resonance**

From Husserl to Luhman

- How is “**lifeworld**” and the “**world of science**” related
- Galileo distinguish between **secondary** (our perception of the planets) an **primary** qualities (geometry)
- Luhmann transforms the Husserl “**lifeworld**” into **social systems theory**.

Epistemology: 5 distinctions must be addressed

1. **First order observations:** the distinction between **operation** and **observation**
2. the distinction between the system-reference of the **first-order observer** and the system-reference of the **second-order observer**
3. the distinction between **other-observation** and **self-observation**
4. **Blind spot:** the distinction between what the observed observer observes (what he/she is dealing with) and one based on that which he/she cannot observe (his/her distinction).
5. the distinction between the **binary code** true/untrue and other forms of self- or other-observation.

Cognition as construction

- *Cognition* is **manufactured by operations of observing** and by the **recording of observations (description)** including the **observation of observations** and the **descriptions of descriptions**.
- An **observation** of the **distinction** takes place and, depending on the distinction, the **indication** of something.
- **Indifferent** in regard to the system's form of **operation** that may be life, consciousness, or communication.
- **Indifferent** with respect to the **type of recording (memory)**; it may be biochemical fixations, but it may also be written texts.

Ambition – functional analysis and Luhmanns “life-world”

Functional analysis:

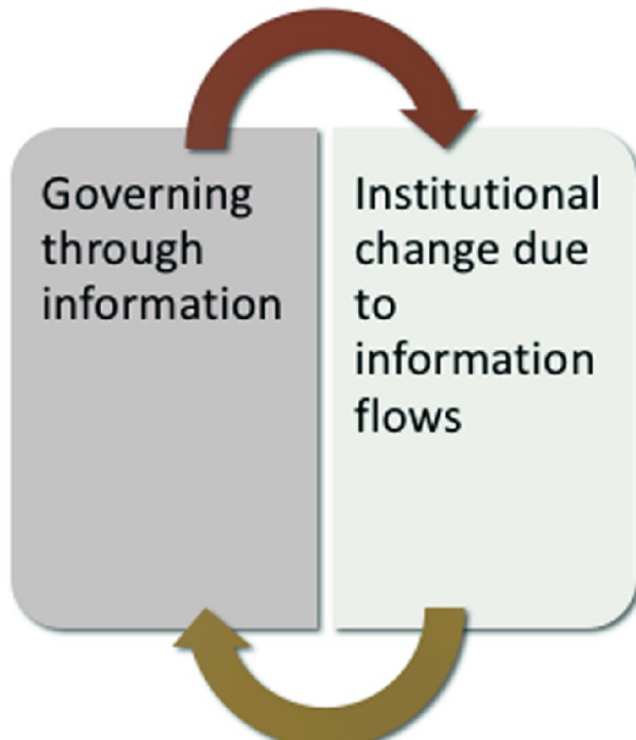
- **Observe observations** - the system's own perception working i various media (power, money, truth, public opinion- non consensual). Identify blind spots
- Set up **alternative solutions to a given problem**, making it possible to **make comparisons**.
“If (it is really true that) inflation solves distribution problems relatively conflict-free, it is a functional equivalent to politically riskier, more conflict-ridden state planning”

Luhman’s lifeworld perspective:

- focus on **distinction we are working with concretely** in observations. It is through these we get knowledge
- Science (like other functions systems) can **observe observation, irritate** and create more or less **resonance**
- **The “scientific theory” or concept do not have primary quality (Husserl).**
 - The traditional scientific thinking: the scientist create a conceptual model and explain the world with this model. This approach cannot create resonance and can lead to accusation of better knowledge.
 - The functional analysis must start with a problem and observations (descriptions) taken place in in concrete communication in functions systems followed by second-order observations identifying blind spot in order to suggest solutions (functional equivalents) opening for comparisons.

Statistics and society observed #1 (Radermacher)

“the distinction”



Knowledge-making is incorporated into practices of state-making (governance) and in reverse practices of governance influence the making and use of knowledge.

Statistics and society observed #2 Reflections

Topic	Radermacher	Luhmann
Knowledge	Knowledge as constituted in interaction between statistical function and policies / political decision. Measurements are conditioned by policies and principles	Knowledge as cognition in social systems. Measurements are recorded observation using various distinctions decided by the political system in more or less resonance with other function system
Co-construction of statistics and society	State-making (society) and statistics are co-created. Problem with first order cybernetics only seeing the co-construction as a machine	The political system is differentiated into subsystems handling complexity. It works in the media power. Statistics is recorded first order observations. Second order observations can identify blind spots followed by suggestions functional equivalents
SDG indicators	Too much complexity when measuring. Sustainable Development can only be defined and achieved by a complicated restructuring process of the society.	A second order observation focusing on production and use of SDG indicators could improve reflections – including improved resonance with the scientific system

Statistics and society observed #3 Governance, form of action and statistics

Conceptualisation of society and economy	Governance	Forms of statistics
Engineer state	Planning of production and population	Demographic statistics, production in physical quantity, input output balance, material balance
Liberal state	Focus on free competition protected by the state	Statistics for market transparency, ensuring competition
Welfare state	Projection of labour markets	Labor market statistics, household budget surveys, consumer prices index
Keynesion state	Focus on demand and its components at macro level	National accounting analysis of the economic situation and business cycles, fiscal statistics
Neoliberal state	Incentive, benchmarking containing the influence of the state, management by objective	Indicators for resource allocation, performance evaluation and benchmarking.

Suggested solutions by Radermacher and Luhmann reflections

Main goal: **“to maintain (or, if already lost, to win back) trust in official statistics”** Radermacher

Initiative	Radermacher	Luhmann
Ethics	Big Data, AI and algorithms requires ethical guidance and legal frameworks. E.g. Mass surveillance in China	“To moralize is to communicate that one cannot respect the other as long as she does not occupy the same position as oneself.” Instead: reflections on solution using second order description.
Citizen science	Involve citizens to generate new knowledge	Agree. As observations they can irritate and create resonance with functions systems.
Scientific analysis	Science must be drawn on to handle complexity	Functional analysis by science: analysis of the role of statistics in various functions systems as first order observations followed by second order observation. Find blind spots.

Claim 2,3 and 4: Reflections using social system theory

Coordination:

- steering in autopoietic system can only be self-steering
- quality requirements can serve as decision premises (to be selected by each organisation)

Quality

- quality frameworks contains distinctions on processes and products and user perception
- Can be used to guide second order observations and descriptions

Tools:

- Tool for coordination must contain data on second-order description. "Second-order machines"
- Thereby: they can support communications and decisions.

