Reflexive Meta-Framework

A Human-Centred Complement to Systems Science

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1. Introduction

Systems science offers a powerful meta-ontological lens, helping us understand how different perspectives construct reality by identifying systems, relationships, and emergent structures. It enables us to model complexity, clarify boundaries, and analyse causal interdependencies across domains.

However, when it comes to comparing or coordinating different ways of knowing, systems science often remains agnostic about epistemic values. It can describe how perspectives function within a system, but it does not always provide a basis for evaluating them in terms of their human relevance or ethical adequacy.

Many meta-frameworks treat people as roles within a structure. This is where a needs-based meta-epistemological framework adds distinct value. The Reflexive Meta-Framework treats people as systems in their own right: complex, adaptive, need-driven, and capable of reflexivity. This shift invites deeper coordination grounded in understanding, not just classification.

Rather than categorising knowledge by method, domain, or structure, this framework asks:

"What human need does this perspective help to satisfy, or what harm does it help to prevent?"

By grounding epistemic evaluation in the functional role knowledge plays in human life, this approach:

- Offers a reflexive, pluralistic standard for navigating diverse worldviews
- Avoids both epistemic relativism and reductionism
- Supports dialogue, design, and policy that is both ethically attuned and practically relevant

Where systems science helps us model what is, this framework helps us judge what matters, and why.

2. Key Definitions

Knowledge Function: A function of knowledge is the specific human need or set of needs that the knowledge helps to satisfy or the contra-satisfactions it helps prevent (e.g., confusion, harm, isolation).

Needs-Based Epistemology: An approach to understanding and evaluating knowledge systems by asking: "What human need(s) does this form of knowing help to satisfy?". Rather than judging knowledge solely by method or truth-claims, it is judged by its function in human life.

Contra-Satisfaction: A state in which a human need is actively frustrated, denied, or distorted (e.g., misinformation undermining safety, exclusion blocking belonging).

Meta-Epistemological Framework: A conceptual system that compares and coordinates different ways of knowing, using criteria such as their purposes, assumptions, and consequences. In this case, the framework is based on need fulfilment.

Reflexive Epistemology: A form of epistemology that is capable of critiquing and situating itself, recognising its embeddedness in cultural, historical, and functional contexts.

3. Key Propositions

Proposition 1: All knowledge systems serve particular human needs, whether explicitly or implicitly.

Proposition 2: The value of a knowledge system cannot be fully understood without reference to the needs it helps to satisfy and the harms it helps to avoid.

Proposition 3: Different epistemologies may be valid within their own functional domain, but incomplete or inappropriate in others.

Proposition 4: Needs-based evaluation allows for epistemic pluralism without collapsing into relativism, because it anchors judgment in human relevance rather than abstract universality.

Proposition 5: Needs-based meta-epistemology is reflexive: it recognises itself as a form of knowledge that satisfies meta-level needs for coordination, equity, and understanding across difference.

Proposition 6: Productive coordination among knowledge systems depends on making their underlying functional purposes explicit, and recognising their mutual limits.

4. What This Meta-Framework Could Practically Achieve

Here are concrete examples of the practical application of the needs-based meta-epistemological framework:

1. Clarifying Disagreements Between Disciplines or Cultures

- *Problem:* A scientist and a community elder disagree about land use.
- *What's happening?* They're using knowledge to meet different needs: prediction/control vs. stewardship/belonging.
- *What the framework does:*
  - Helps make these needs visible
  - Shows that they are not inherently contradictory

- Creates space for productive coordination instead of dismissal

2. Evaluating the Relevance of a Perspective in a Particular Context

- *Problem:* A technical report is full of accurate data but fails to connect with the community it affects.
- *Why?* It satisfies the need for control, but not the need for understanding, trust, or voice.
- *What the framework does:*
  - Diagnoses the mismatch between knowledge outputs and human needs
  - Guides inclusion of narrative, participatory, or ethical perspectives
  - Prevents epistemic harm through overreliance on one type of knowledge

3. Supporting Reflexive Research and Policy

- *Problem:* Policymakers privilege economic models while ignoring local experience.
- *Why?* They're focusing on efficiency and control, not belonging, justice, or long-term resilience.
- *What the framework does:*
  - Helps identify which needs are being privileged or excluded
  - Offers criteria for balancing different knowledge contributions
  - Promotes epistemic reflexivity within institutional processes

4. Navigating Conflicts Without Defaulting to Relativism

- *Problem:* Two groups with opposing worldviews both claim their knowledge is valid.
- *What's the challenge?* Standard epistemology risks either favouring one or treating both as equal.
- *What the framework does:*
  - Evaluates perspectives by how well they satisfy relevant human needs in context
  - Acknowledges partial validity without collapsing into "everyone's right"
  - Provides a grounded, functional basis for judgment

5. Designing Better Interdisciplinary or Transdisciplinary Teams

- *Problem:* Experts talk past each other in complex projects (e.g., sustainability, health).

- *Why?* Their knowledge addresses different needs (e.g., prediction vs. meaning vs. legitimacy).

- *What the framework does:*
  - Helps map the epistemic functions each discipline serves
  - Supports balanced integration based on need fulfilment
  - Reduces turf wars and enhances mutual respect