



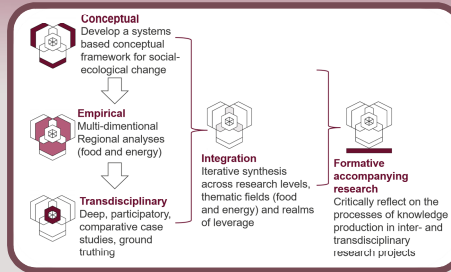
Leverage Points for Sustainability Transformation: Reconnecting people and nature

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Christian Dörninger, Katie Klaniecki

Three research levels:

1. **Conceptual:** Develop a systems-based conceptual framework for social-ecological change.
2. **Empirical:** Detailed multi-dimensional analyses in the Oldenburg region (DE) and Southern Transylvania (RO) on regional food and energy system.
3. **Transdisciplinary:** Deep, participatory, comparative case studies, ground truthing.

Project design:



Three realms of leverage:

1. **ReStructure:** Institutional reform, collapse and renewal, including measures targeting structural or systemic changes.
2. **ReConnect:** fostering mindful connections between people and ecosystems, both in material and non-material terms.
3. **ReThink:** The production and use of knowledge, especially in the context of transdisciplinary processes.

Reconnecting to nature and the biosphere

Aims to conceptualise and quantify human-nature 'connection', and how changes in such connections relate to sustainability outcomes.

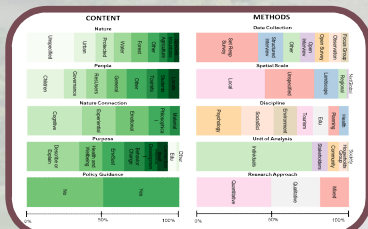
Scholars have proposed society's disconnection from nature as a root cause of the ecological crisis, with new research emerging in conservation biology, sustainability science, environmental psychology and environmental education. Yet, most calls for 'reconnection' have remained speculative and vague, with relatively few concrete insights regarding the characteristics of a connected society or how to achieve this goal.

This research seeks to lay out a conceptual platform to better understand human-nature connectedness. First, we argue that human-nature connectedness is a multifaceted concept incorporating (i) material connections such as resource extraction and use, (ii) experiential interactions, (iii) cognitive connections such as knowledge, beliefs and attitudes, (iv) emotional attachments, and (v) philosophical perspectives on humanity's relationship to the natural world.

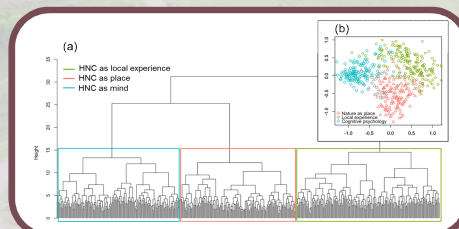
Conceptualizing human nature connections for sustainability transformation (Chris Ives)

This research focuses on reviewing and synthesising existing understandings of human nature connections (HNC).

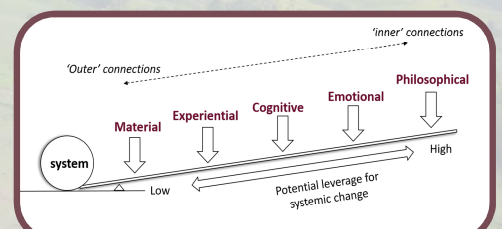
Human nature connections, as symptoms, causes, and treatments of sustainability problems.. It follows that addressing "inner" connections (such as philosophical, emotional and cognitive connections to nature) is necessary to bring about sustainability transformation. Strengthened "outer" connections (such as experiential and material connections) can potentially play supporting roles, but by themselves, are unlikely to bring about transformative change.



Focus and methods in HNC research



Cluster analysis of types of human nature connections

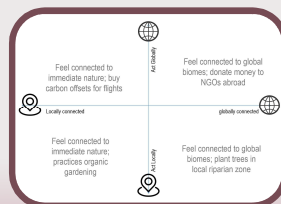
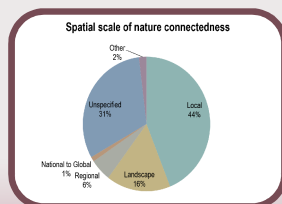


Types of HNC and their leverage potential

Scale, connections and pro-environmental behaviours (Katie Klaniecki)

This research investigates the role of spatial scale in human-nature connections and its impact on pro-environmental behaviours

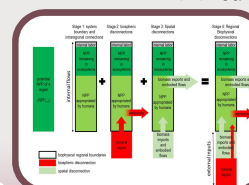
Nature connectedness has been proposed as a key means of facilitating behavioral transformation. Here we use spatial scale as an analytical concept in relating human-nature interactions and their role in shaping or constraining human behaviour



Assessing sustainable biophysical human-nature connectedness at regional scales (Christian Dörninger)

This research focuses on quantifying biophysical disconnections and energy and material flows in regional land use systems.

Humans are biophysically connected to nature through the flows of materials and energy appropriated from ecosystems. While this connection is fundamental for human well-being, many modern societies have disconnected themselves from the natural productivity of their immediate regional environment.



Stage 1 the fraction of the NPP appropriated by humans. Stage 2 biospheric disconnection by means of extra-biospheric inputs. Stage 3 spatial disconnections caused by intraregional biomass imports and exports.