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Why Transdisciplinary Responses to Covid-19 ?



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Outline & Objectives

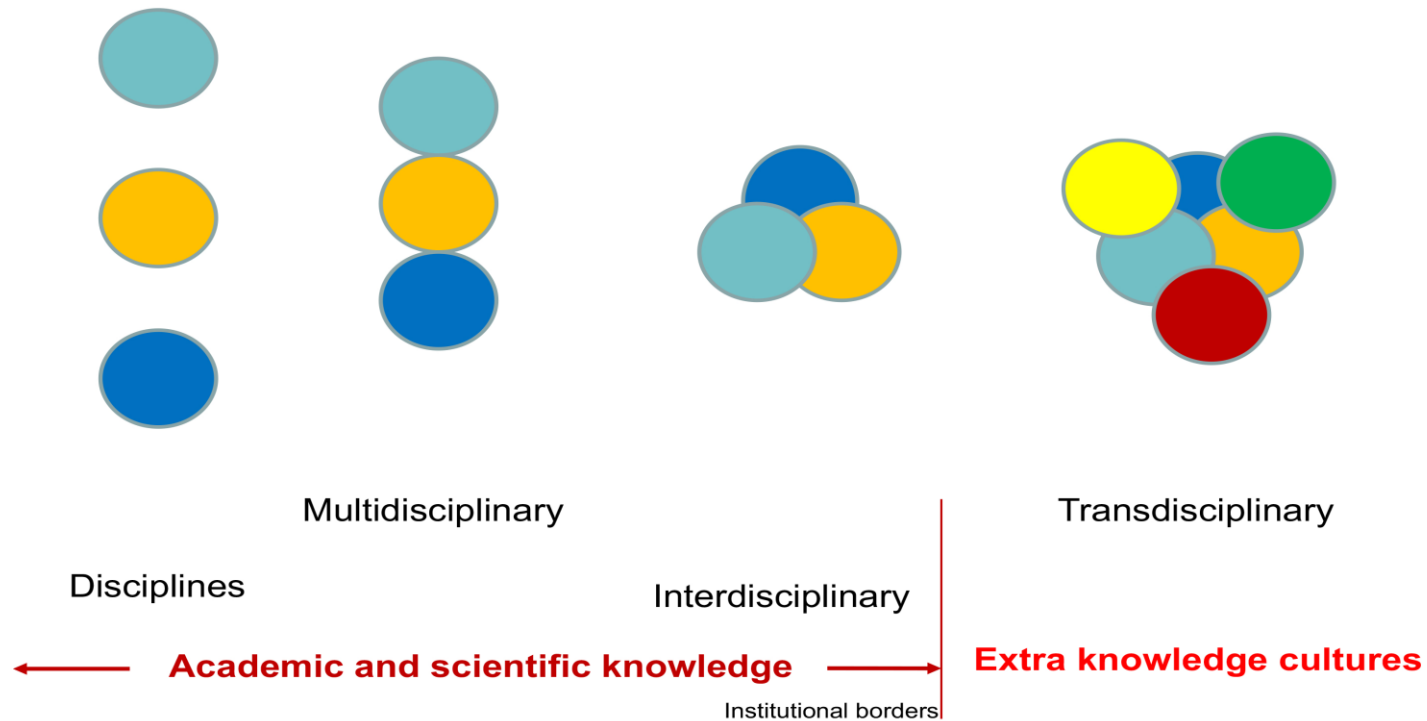
- Understand differences between interdisciplinarity and transdisciplinarity.
- Request a new science – society partnership.
- Identify 3 cornerstones of transdisciplinary responses to coronavirus pandemic and Covid-19 disease.
- Discuss contributions of cities to deal with complex societal challenges (e.g. coronavirus & Covid-19, obesity pandemic).

Through the lens & experience of:
Human Ecology & Environmental Sciences for Urban Health

Interdisciplinary & transdisciplinary inquiry

Swiss Academies of Arts & Sciences
Scientific Advisory Board for td-net (2009-2020).

Science of Disciplinarity: What are we talking about?



Q. What is transdisciplinarity?

TD Core characteristics

- **Conceptual framework:** Sharing information and knowledge between two or more disciplines and other types of extra-scientific knowledge, professional know-how and ways of knowing to develop a shared conceptual framework by relational and systems thinking.
- **Complexity:** Differences, emergence and conflicting values are acknowledged and addressed.
- **Context:** Contextual contingencies of research and practice are taken into account.
- **Agency:** Participation between researchers, practitioners, policy makers and other representatives of society uses diverse communication tools and methods.
- **Change:** Understanding real-world situations and persistent problems in order to reach agreements about changing them.
- **Multiple methods:** Diverse sources of data and information as well as mixed research methods are applied in both analytical and synthetic thinking.
- **Creativity:** Synergies between knowledge cultures, public policies, project implementation and human behaviour are encouraged to implement change.

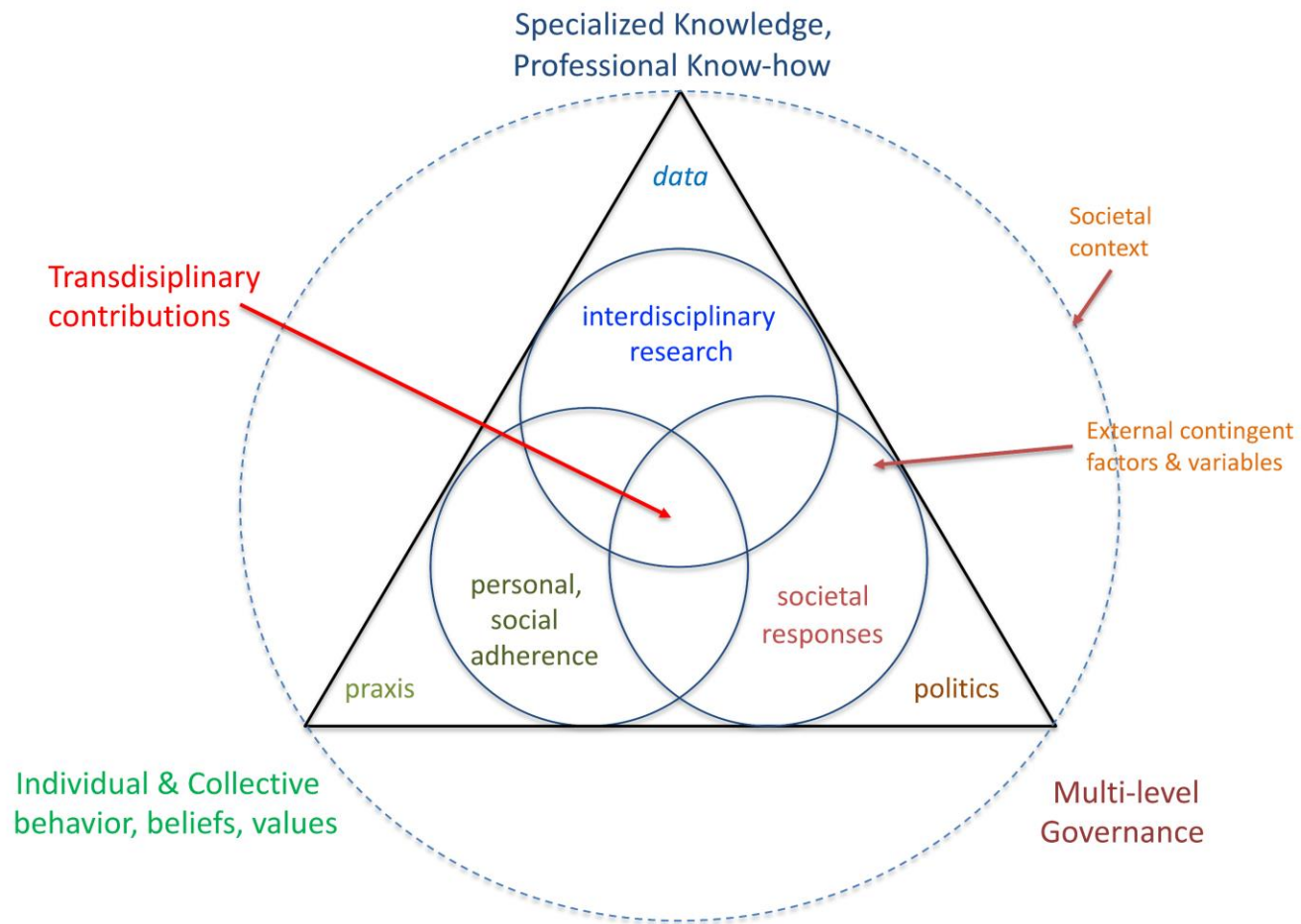
Complexity of Coronavirus SARS-CoV-2 & Covid 19

A Wicked Problem – More than a Scientific Problem

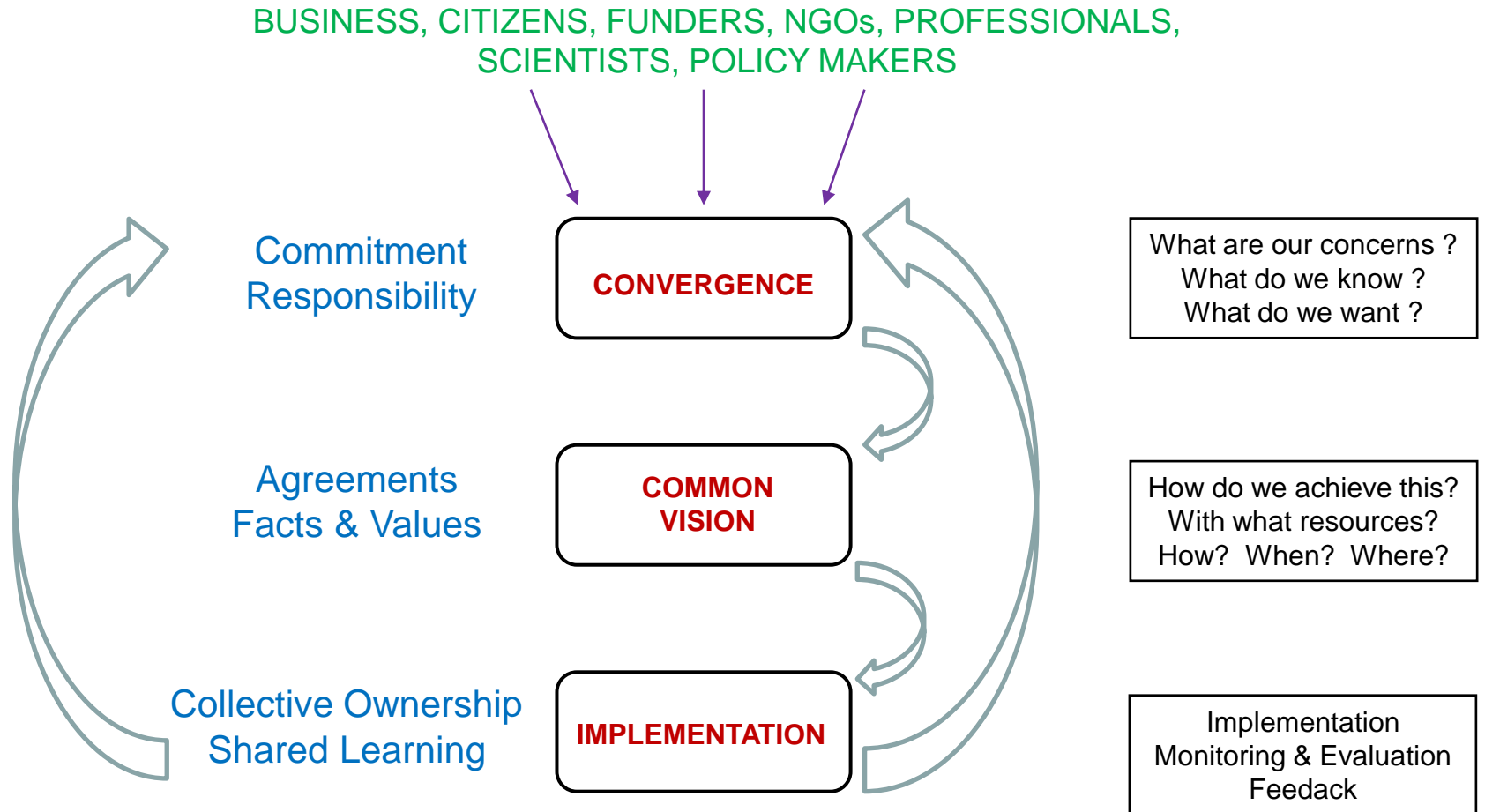
- **A Complex Unknown:** No precedent; What lessons from past pandemics?
- **Dynamic, Emergent & Unpredictable:** Limits of forecasting & predictive models.
- **Temporal scales:** Need for short-, mid- and long- term responses.
- **Multiple Impacts:** Health, Economic, Environmental, Political & Social Impacts.
- **Systemic:** Interactions of Multiple Internal & External variables at different levels.
- **Context:** Global challenge & Place-based specific conditions.
- **Agency:** Proactive public health interventions & Reactive medical treatments.
- **Multiple Resources:** Live Data, Information & Specialized Knowledge; Hospital Infrastructure; Medical & Pharmaceutical Supplies; Medical, Health and Social Welfare Personnel.
- **Creativity:** Synergies between disciplinary expertise, Professional knowledge, Public policies, & Human behaviour are necessary for effective responses.

Transdisciplinary Responses are pertinent.

Transdisciplinary Responses to Covid-19



Diversity of Transdisciplinary Contributions



A NEW SCIENCE - SOCIETY CONTRACT

Responses of Cities to Covid-19



Coordinated National and Local responses

Political leadership & responsibility

Community adherence & responsibility

Transdisciplinarity for Societal Challenges

**We can't solve
problems by using the
same kind of thinking
we used when we
created them.**



Albert Einstein
German Theoretical-Physicist
(1879-1955)

QuoteHD.com

Key References

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Sources

Swiss Academies of Arts & Sciences

Td-net : <http://www.transdisciplinarity.ch>

The network was launched in 2000 by the Swiss Academic Society for Environmental Research and Ecology ([SAGUF](#)) and taken over by the Swiss Academy of Sciences in 2003.

Since 2008 the td-net for transdisciplinary research has been a project of the [Swiss Academies of Arts and Sciences](#).

My Blogs

Scaffolding Transdisciplinary Projects

<https://i2insights.org/2020/09/01/scaffolding-transdisciplinary-contributions/#roderick-lawrence>

Three Tasks for Transdisciplinary Bridge Builders:

<https://i2insights.org/2017/10/17/transdisciplinary-bridge-builders/>