Tour d’Horizon of Literature 2020

td-net
Network for Transdisciplinary Research

In order to give an overview of key literature in the area of inter- and transdisciplinarity, td-net invites every year experts in the field to list recent key publications (see list of contributors, page 9). In this document, we present literature published in 2020 with short annotations written by the experts that recommended the publications.

We would like to thank the contributors for their inputs and are looking forward to another productive year for inter- and transdisciplinary research.

All previous “Tour d’Horizon of Literature” issues can be found on our website.

This document is interactive: the references are hyperlinked with the matching website.

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Theories and epistemologies


- Two Masters approached each other from Philosophy and Art. Abellio assumes to be gnostic in the tradition of Kabbalah. Lima is close to Basarab Nicolescu and founder of transdisciplinarity. (JTi)


- Augenstein et al. (2020) discuss the dilemmas of scaling up sustainability alternatives that is of high interest in research to foster urgently needed transformative change. They decisively discuss how this effects the science and practice of transformative transdisciplinary research.
- The paper makes a very useful contribution (identifying three dilemmas of up-scaling from innovative/transformative niches) grounded in an acknowledgment of complexity and non-linearity key to understanding societal dynamics. The paper is also of utmost timeliness and relevance, given the less than 10 years remaining for a successful transition towards sustainability. (TMi)


- In addition to his latest volume, Dr. Ali Bagheri has authored and edited numerous books and articles on a number of medical and bioethical topics that are relevant to the international transdisciplinary community. He has worked with the UN and WHO in the field of bioethics in the past, and continues to write and lecture on that topic. (RJo)


- This study seeks to reinforce the digital skills in the professional profile of teachers with a transdisciplinary educational innovation philosophy which uses ITC. (FPa)


- Interesting paper on the challenges researchers face when they study transdisciplinary projects in a co-productive way. They have to balance observation and participation, curiosity and care and impartiality and investment. (CPo)


- This paper makes an important contribution to Td research by analysing various in way in which power plays a role during Td projects. It identifies different forms of power relationships and traces their potential influence at different stages of Td research projects. (OEj)
- The article provides a concise summary of social theories of power. It illustrates how the three categories of power “become manifest in transdisciplinary knowledge productions processes. Thus it is very useful for conducting research in the field. (USe)


- Collection of understandings of and approaches to transdisciplinarity from very different angels. Interesting for those who want learn more about understandings beyond the dominate one in the European sustainability science context. (CPo)

- Offers a deep dive into systems philosophy, including the phenomenology of time, and shows how this is relevant to the uniting of systems thinking and fututes practice. Very accessible to practitioners as well as having a great deal of depth (few authors are able to combine these two attributes). (GMi)


- The paper deals with a very relevant topic for science and policy. It’s a good guideline for further discussion as it provides helpful food for thought. (TMi)


- The praxis and transpraxis, their juxtaposition revealed that augmenting transdisciplinarity with transpraxis and vice versa is a noteworthy addition to both strands of thought. Transdisciplinarity gains reflexivity, dialogic exchange, transpraxis space, contingent universalities and provisionality, and the notion of deconstructing self-serving hierarchies. Transpraxis gains a rich methodology for creating new knowledge emergent from deconstructing self-serving hierarchies and binaries. It is enriched with the zone of nonresistance, the unifying Hidden Third, and a richer notion of resistance in the form of multiple levels of Reality. (AEs)


- This publication provides inspiring food for thought on problem-orientation of transdisciplinary research. The concept of the problematic is interwoven with design research into ‘problematic designing’ in order to open a new thinking practice. Since reading the paper, I can no longer use the colloquial words such as project design, research design and the like carelessly. (ALu)


- The special issue aims at stimulating the debate on capturing links between transdisciplinary research processes, their results and intended (or unintended) effects as well as the challenge of categorizing and tracing different types of effects. It collects the broad understanding of impacts in transdisciplinary (sustainability) research and shows the clear needs for further research on this topic. (ALu)

- This Special Issue gathers a broad array of papers discussing the societal impact potentials of transdisciplinary research approaches and projects as a result of of the 3-year collaborative research project “TransImpact – Effective Transdisciplinary Research”. (BSm)
Approaches, methods and tools


- Caniglia et al. (2020) make a valuable contribution to better understand and co-design action-oriented knowledge, which is of utmost importance in transdisciplinary research. (DLa)


- This book offers a subtle and sophisticated view of systems thinking, and shows how it could transform global-to-local governance of one of the most presssing issues of our time. (GMi)


- This paper discusses the importance of joint problem framing in Td research and identifies key challenges to it's implementation. The paper introduces a tool for Td researchers to reflect on their own practice of joint problem framing. (OEj)


- The authors present ETH Zurich’s course Umweltproblemlösen, in which Bachelor’s students in the environmental sciences use systems thinking to analyse a case, and design thinking to develop measures together with stakeholders. Participants thus produce transformation knowledge and anticipate their future role as transdisciplinary sustainability scientists. (AJo)


- An original anthropological view on the work carried on by geologist in the fields, their practices, language, etc. It reveals that they have a very phenomenological approach on site, leading to an inclusive standpoint about their environment and the concept of "nature", which seems quite different to the one of laboratory geologists. (BHu)


- This book offers two fundamental challenges to the methodology and practice of systems thinking. First, it argues that, despite several paradigm changes during the 20th Century, systems thinking still marginalizes arts-based methods and other forms of practice that go beyond the rational-analytic. Second, drawing on Indian philosophical ideas, it argues that there are two modes of human consciousness - 'striving' and 'abiding' - yet systems thinking assumes the former and mostly misses the importance of the latter. The book offers alternative practices that open up the boundaries of what could be considered a legitimate part of systems thinking. (GMi)


- The Integration and Implementation Sciences framework is used for the evaluation of a transdisciplinary research project in a river catchment in New Zealand which aimed at supporting collaborative policy-making. In this Design Report, the authors draw conclusions concerning the inclusion of community values, the consideration of a project’s losers, and uncertainty, among others. (AJo)
Research policy: funding, quality criteria, evaluation


- In Switzerland, universities of applied sciences have the legal mandate to take a complementary but equal position to universities in the research landscape - their potential to advance TD research is less disputed. In this publication fields of action for different stakeholders are identified and are aimed to initiate discussions in the institutions, in policy-making, among scientists and funding agencies. (TPa)


- In this article, authors identify a set of quality criteria based on the experiences of Austrian Citizen Science projects and the existing international literature. By their nature, these criteria are context-specific, which is why a general application is not recommended without thoughtful reflection. They provide a good baseline. (TPa)


- The study by an international group of experts assessed 28 case studies. From this analysis, recommendations to various stakeholders in science and society were finally formulated on how science can effectively support solutions for complex societal challenges. (TPa)

- A great policy paper for advocacy of TD in policy making. (SRu)


- Since 2020, there are thousands of publications on coronavirus and Covid-19 but only a few that explicitly explain the advantages of transdisciplinary responses to the pandemic. The author argues for concerted action between different knowledge domains in order to combine diverse types of knowledge and ways of knowing that are needed before effective responses can be implemented. (RLa)


- This case study illustrates how social impact of td research can be assessed with an accompanying evaluation conducted by the facilitators of the td research as evaluators (combined role). Based on key TDR features, they provide qualitative evidence on outcome level (network effects, affective effects, cognitive effects, legitimizing effects) and impact level (knowledge enriched policy practice, revised policy agenda & plans, political support). Conclusion contains reflection on the benefits of the combined facilitator-evaluator-role and problematization of pre-defined evaluation criteria. (SSt)


- This article elaborates on tensions between coproducing policy-relevant knowledge, practically relevant knowledge, and scientifically relevant knowledge. It discusses the common (tensions-) coping strategy to work with models, as well as the resulting marginalization of knowledge that is not easily quantifiable. In the conclusions for funders alternative research career incentives, funding schemes for practitioners and institutional requirements are addressed. (SSt)
Case studies and reflections on research projects


- The author is leading the network of the Observatoires hommes-milieux (OHM), he has himself brought in the Institut Ecologie et Environnement of CNRS, interdisciplinarity constituting the main watchword of this program. He presents the theoretical and methodological perspectives which has been mobilised within this network since about ten years. (BHu)


- This study describes the regenerative educational practices developed in the Ecuadorian Curriculo during few years, while it was implemented the TINI methodology. This transdisciplinary study combines scientific knowledge with ancestral wisdom, in order to raise environmental awareness among millions of ecuadorian students. (FPa)


- The politics of hidden agendas and power relations is highlighted in this article based on collaborative research in Asia. These political dimensions are often ignored in articles about the co-production of knowledge, even those projects involving North-South collaborations. (RLa)


- Reflections on an inspiring example of a td research programme, convened by a public administration school, that funds td research, provides capacity building and consultancy, and links td research to the use of public policy evaluation tools. Amongst others, it identifies challenge owners – directors of public bodies with the potential power to influence the issue at hand – and institutional mentors – public officers with managerial responsibilities – and involves them in research teams. (SSt)


- This article discusses why the co-creation of research for global change, based on the outcomes of a pilot program coordinated by Future Earth in Finland, is beneficial in terms of social engagement and responsibility. The approach involves concerted action at both national and community levels in order to respond effectively to sustainability challenges. (RLa)


- The authors argue that academics are insufficiently self-critical about the power dynamics involved in knowledge production with social movements. (AMo)

- Communication and organisation are crucial in real-world laboratories, which face the challenge of being expected to produce not only knowledge but also real-world change. The authors share their experiences and lessons learned from a real-world laboratory in Wuppertal, Germany. (AJo)


- Angola academy before University creation and after national independence is portrayed. Diaspora in other continents is one of the parts local scholars as well as others in diaspora- colonialism or cooperation- are analysed. (JTi)


- An account on knowledge and methodological gaps, when TD is applied to health in a holistic context. (SRu)


- Transdisciplinary process to identify and address vulnerabilities from digital practice in conjunction with expert and stakeholder workshops. (ORE)


- A truly interdisciplinary case study examining the role of wheat in shaping US-American history and society. It is deploying new paths of analysing human-nature-relationships by using methods from the humanities and building on knowledge from the natural sciences. (USE)


- The story of a Swiss veterinary and epidemiologist\'s discovery of the relevance of the\'One Health\' approach to his discipline in an African context, told by himself, opens a vast field of inter- and transdisciplinary exploration and collaboration. With a main focus on adaptation of medical research and intervention to the diversity of real life conditions and cultural contexts, a major point made is the often overlooked importance of language diversity in diagnosis and therapy and hence the place given to linguistics and linguists at the transdisciplinary workplace. (TBe)
Education


– Three PhD students present the analyse of a survey carried out among other PhD students in Environmental Sciences in France, following a conference about interdisciplinary thesis. They point out the main identified difficulties and suggest some recommendations for a better integration of interdisciplinarity within doctoral studies. (BHu)


– The objective of the article is to reflect on the use of digital information and communication technologies (ICT) in the linguistic and educational processes of teachertraining in Ecuador. The research uses a transdisciplinary, qualitative, exploratory, descriptive, and analytical methodological approach, that delves into the digital competences that teachers must develop to enhance artistic and intercultural languages among their students. As a result, the learning technologies used during the filming, development, and production of the film documentary ‘The Lost Art of Education’ are shown. Subsequently, a research, development and innovation (R+D+i) project is presented that aims to spread the intercultural, plurinational, and multi-ethnic idiosyncrasy of Ecuador with the digital inclusion of an interactive educational video-game. It is concluded that the 21st century needs a deep innovation of theories, methodologies, and didactic resources focused on revaluing the practices, customs, wisdom, and worldviews of ancestral peoples with technological tools, digital media, and audiovisuals resources. (JCo)

De Castro et al. (2020): Transdisciplinariedad y educación del futuro. Cátedra Unesco de Juventud, Educación y Sociedad; Universidad Católica de Brasilia, Brasilia. 260p

– This important free book offers in spanish, after a first publication in portuguese last year, an overview of experimented tools and approaches for educational uses based on transdisciplinary approaches. (FPa)


– The research integrates an epistemological dialogue that guides to rethink education, specifically the teaching process, from a complex and transdisciplinary perspective. (AEs)


– A transdisciplinary team of prominent scholars from across the spectrum of the natural, social, and human sciences, collaboratively shed light on what it takes humans to build and cultivate the scientific mind along the lifespan. The book is an important resource for rethinking the vital tenets of both formal and informal learning under conditions of the Anthropocene. Videographed conversations with the authors, available at the ‘Building the Scientific Mind’ YouTube channel, enhance the content of the book. (JVi)
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