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Transdisciplinarity as a Way of Being: A New Perspective on Personal Engagement for Sustainability Transformations

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Short Letter

Since its inception in the seventies, transdisciplinarity (TD) has evolved in different streams and approaches [1], [2], [3]. Particularly, a common classification distinguishes two types: 1) “Theoretical” TD, led by the work of Nicolescu [4]; 2) “Practical” TD, which corresponds to the “Zürich school” [5], [6]. Although this classification has been very useful to date in many ways [7], the TD research field has matured in such a way that it is now time to move beyond. Firstly, there are today many transdisciplinary approaches that do not fit so well with this Western centric typology, such as the idea of “Indigeneous TD” [8]. Second, I have suggested that it might be more fruitful now to reframe the debate, by considering TD as a discipline by itself and/or a “way of being” in tension [9]. As a discipline, TD corresponds to specific skills, methods, and theories for knowledge integration and implementation within the scope of problem-solving research projects [10]. When TD is instead considered as a way of being, by contrast, it extends far beyond the scope of research projects and can manifest ubiquitously in the researcher’s life. In both cases, social engagement can be intense and practical outcomes tangible; there are also important overlaps between the two, particularly in terms of researchers’ skills and attitude [9]. However, whereas TD as a discipline is rather a *means* by which scientists contribute to problem-solving, TD as a “way of being” can also be seen as a solution that must be enhanced in society at large [9]. The aim of this short Letter is to explore further, in other words, the implications for sustainability transformations of being *transdisciplinary*, in contrast to practicing *transdisciplinarity* (as a discipline). I will start by briefly describing the second (the discipline), and show that it reaches some limits when it becomes either very global or very personal. This will be useful to further explore the TD way of being in a second time, with a focus on its implications for personal engagement in sustainability transformations.

Practicing transdisciplinarity (as a discipline) is typically an activity performed by professional academic researchers, in the context of research projects with stakeholders. The aim is to solve complex problems, generally at a local scale, and the TD process by itself lasts for a given period of time (corresponding

to the duration of the research project). In this context, an idealized TD process has been proposed with three classical phases: 1) Problem framing; 2) Knowledge co-creation; 3) Application of co-created knowledge [11]. During these three stages, the TD practitioner applies specific skills and methods (i.e. participatory workshops, modeling, serious games, forum theatre...), as described by Pereira et al. [12] in the particularly stimulating context of T-Labs (transformation Laboratories). Two important challenges for TD practitioners have been identified [6]: 1) How to involve non-academic stakeholders in the process of knowledge production; 2) How to deal with normativity and bias, as researchers are themselves societal stakeholders (whose stakes are more or less high depending on projects). *Now, a thought experiment*: What happens if a TD process would focus not on a local community as usual, but on the whole Planet Earth as a case study, and if the problem to be solved was the whole sustainability crisis, the future of Humanity? Figuratively, the character of an outside academic researcher from a far university coming to facilitate some problem-solving in a foreign community would simply make no sense: If the target community is Humanity, there is no other choice than to be all equally stakeholders on the same boat, with the highest possible stakes. Another limit case of an application for *practicing transdisciplinarity* is when the problems to be solved become closer and closer to personal issues (for example, if one tries to make her/his own lifestyle more sustainable). As in our global fiction, the researcher and the stakeholder merge to make one. In both cases, the TD challenge of involving stakeholders is not relevant anymore (as it cannot be otherwise), and this has important implications on how to deal with normativity and bias.

Being transdisciplinary, in a way, is a matter of applying TD principles at a very personal level and for the most global questions. As we are all equally somehow “action-researchers” at these levels, *being transdisciplinary* can be relevant for everybody, not only professional academic researchers. For academic researchers, it is also possible to *be transdisciplinary* outside the scope of TD research projects, in the way we are contributing to a discipline or our institutions (for example, by borrowing concepts from other disciplines, questioning deeply existing paradigms, taking care of the way we relate to each other, making new connections with society...). Moreover, as we are entangled researcher-stakeholder, the classical scientific aim for objectivity and neutrality appears to be doomed to fail, or to be an illusion. Indeed, as Lahsen and Turnhout point out [13], the claim of scientific neutrality often acts as a shield reinforcing existing power structures and norms, which can paradoxically be seen as a bias, in favor of reproducing (rather than transforming) the status-quo. Consequently, *being transdisciplinary* implies to acknowledge the importance and inevitability of one’s own subjectivity. Along this line, there is no problem of compatibility for a researcher to engage in transgressive approaches (i.e. involving a violation of a moral or social boundaries), as in research activism [14]. The ethical attitude is not anymore to limit one’s own biases at all costs, but rather to reflect on them, so we can be as transparent and explicit as possible in an open transformative process [14], [15], [16], [17]. At a fundamental level, this reflexivity on one’s own biases can be done through personal introspection, and interesting synergies can be noted with spiritual and religious realms of knowledge (practicing mindfulness, contemplation, prayer...) [18], [19]. Importantly then, the connection between scientific and spiritual knowledge is not only theoretical, as in Nicolescu’s axiomatic notions of “levels of Reality” and the “Hidden Third” [1], [20]. This connection can also be made *in practice*, for example in our way to deal with emotions, or to embody our values and find the courage to “walk the talk” [21] [22]. At a more collective level now, as being *transdisciplinary* can be relevant for everybody (not only professional researchers), we can also understand that it can be enhanced in society at large, through education in a broad sense. An implication for academic institutions is that TD has the potential to become mainstream, in which case it would include and transcend existing disciplines and interdisciplinarity, beyond merely supplementing them [9]. In other words, TD as a way of being could ultimately provide like an umbrella to define societally relevant orientations for scientific disciplines, rather than being merely one more discipline added to the existing disciplinary structure of the academy [22], [23], [24], [25]. An interesting resonance can be noticed between the personal level and the global level, as if *being transdisciplinary* individually was somehow participating to a large collective evolution of thought and consciousness in human beings [26]. When fully embraced, this approach is so radical that it can be seen by itself as some sort of “epistemological activism”, in such a way that we are *de facto* deeply personally engaged in societal transformations. Beyond the classical *theoretical versus practical* classification of TD

approaches, it is my hope that framing TD as a way of being will be resourceful for some “epistemological activists” to find meaning, courage and hope in their journey.

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References

- [1] Klein, J. T. (2015). Reprint of “Discourses of transdisciplinarity: Looking back to the future”. *Futures*, 65, 10-16. <https://doi.org/10.1016/j.futures.2015.01.003>
- [2] Jahn, T., Bergmann, M., Keil, F. (2012). Transdisciplinarity: Between mainstreaming and marginalization. *Ecological economics*, 79, 1-10. <https://doi.org/10.1016/j.ecolecon.2012.04.017>
- [3] Bernstein, J. H. (2015). Transdisciplinarity: A review of its origins, development, and current issues. *Journal of Research Practice*, 11(1):R1
- [4] Nicolescu, B. (2014). Methodology of transdisciplinarity. *World Futures*, 70(3-4), 186-199. <https://doi.org/10.1080/02604027.2014.934631>
- [5] Scholz, R. W., Steiner, G. (2015). Transdisciplinarity at the crossroads. *Sustainability Science*, 10(4), 521-526. <https://doi.org/10.1007/s11625-015-0338-0>
- [6] Lawrence, M. G., Williams, S., Nanz, P., & Renn, O. (2022). Characteristics, potentials, and challenges of transdisciplinary research. *One Earth*, 5(1), 44-61. <https://doi.org/10.1016/j.oneear.2021.12.010>
- [7] McGregor, S. L. (2015). The Nicolescuian and Zurich approaches to transdisciplinarity. *Integral Leadership Review*, 15(2), 6-16.
- [8] Cole, A. (2017). Towards an indigenous transdisciplinarity. *Transdisciplinary Journal of Engineering & Science*, 8. <https://doi.org/10.22545/2017/00091>
- [9] Rigolot, C. (2020). Transdisciplinarity as a discipline and a way of being: complementarities and creative tensions. *Humanities and Social Sciences Communications*, 7(1), 1-5. <https://doi.org/10.1057/s41599-020-00598-5>
- [10] Bammer, G., O'Rourke, M., O'Connell, D., Neuhauser, L., Midgley, G., Klein, J. T., ... Richardson, G. P. (2020). Expertise in research integration and implementation for tackling complex problems: when is it needed, where can it be found and how can it be strengthened?. *Palgrave Communications*, 6(1), 1-16. <https://doi.org/10.1057/s41599-019-0380-0>
- [11] Pohl, C., & Hadorn, G. H. (2008). Methodological challenges of transdisciplinary research. *Natures Sciences Sociétés*, 16(2), 111-121. <https://doi.org/10.1051/nss:2008035>
- [12] Pereira, L., Olsson, P., Charli-Joseph, L., Zgambo, O., Oxley, N., Van Zwanenberg, P., ... Ely, A. (2021). Transdisciplinary methods and T-Labs as transformative spaces for innovation in social-ecological systems. In *Transformative Pathways to Sustainability* (pp. 53-64). Routledge.
- [13] Lahsen, M., Turnhout, E. (2021). How norms, needs, and power in science obstruct transformations towards sustainability. *Environmental Research Letters*, 16(2), 025008. <https://doi.org/10.1088/1748-9326/abdcf0>
- [14] Vogel, C., O'Brien, K. (2021). Getting to the heart of transformation. *Sustainability Science*, 1-7. <https://doi.org/10.1007/s11625-021-01016-8>
- [15] Schneider, F., Kläy, A., Zimmermann, A. B., Buser, T., Ingalls, M., & Messerli, P. (2019). How can science support the 2030 Agenda for Sustainable Development? Four tasks to tackle the normative dimension of sustainability. *Sustainability Science*, 14(6), 1593-1604. <https://doi.org/10.1007/s11625-019-00675-y>

- [16] Popa, F., Guillermin, M., Dedeurwaerdere, T. (2015). A pragmatist approach to transdisciplinarity in sustainability research: From complex systems theory to reflexive science. *Futures*, 65, 45-56. <https://doi.org/10.1016/j.futures.2014.02.002>
- [17] Mitchell, C., Cordell, D., & Fam, D. (2015). Beginning at the end: The outcome spaces framework to guide purposive transdisciplinary research. *Futures*, 65, 86-96. <https://doi.org/10.1016/j.futures.2014.10.007>
- [18] Wamsler, C., Brossmann, J., Hendersson, H., Kristjansdottir, R., McDonald, C., & Scarampi, P. (2018). Mindfulness in sustainability science, practice, and teaching. *Sustainability science*, 13(1), 143-162. <https://doi.org/10.1007/s11625-017-0428-2>
- [19] Woiwode, C., Schöpke, N., Bina, O., Veciana, S., Kunze, I., Parodi, O., ... Wamsler, C. (2021). Inner transformation to sustainability as a deep leverage point: fostering new avenues for change through dialogue and reflection. *Sustainability Science*, 16(3), 841-858. <https://doi.org/10.1007/s11625-020-00882-y>
- [20] Pasquier, F., & Nicolescu, B. (2019). To be or not to be transdisciplinary, that is the new question. So, how to be transdisciplinary? *Transdisciplinary Journal of Engineering & Science*, 10. <https://doi.org/10.22545/2019/0110>
- [21] Augsburg, T. (2014). Becoming transdisciplinary: The emergence of the transdisciplinary individual. *World Futures*, 70(3-4), 233-247. <https://doi.org/10.1080/02604027.2014.934639>
- [22] Shrivastava, P., Smith, M. S., O'Brien, K., Zsolnai, L. (2020). Transforming sustainability science to generate positive social and environmental change globally. *One Earth*, 2(4), 329-340. <https://doi.org/10.1016/j.oneear.2020.04.010>
- [23] Fazey, I., Schöpke, N., Caniglia, G., Hodgson, A., Kendrick, I., Lyon, C., ... Saha, P. (2020). Transforming knowledge systems for life on Earth: Visions of future systems and how to get there. *Energy Research & Social Science*, 70, 101724.
- [24] Mariotti, S. (2021). Forging a new alliance between economics and engineering. *Journal of Industrial and Business Economics*, 48(4), 551-572. <https://doi.org/10.1007/s40812-021-00187-w>
- [25] Adame, D. (2011). From a Disciplinary to a Transdisciplinary Vision of the University: A Space of Knowledge, Culture, Art, Spirituality, and Life. *Transdisciplinary Journal of Engineering & Science*, 2. <https://doi.org/10.22545/2011/0002>
- [26] Wilber, K. (2005). Introduction to integral theory and practice. *AQAL: Journal of Integral Theory and Practice*, 1(1), 2-38.

About the Author



Cyrille Rigolot is a researcher at the French National Research Institute for Agriculture, Food and the Environment (INRAE) in Clermont-Ferrand, France. Trained as an animal farming scientist and engineer, he came to the realization that disciplinary and interdisciplinary approaches will be insufficient to foster sustainability transformations. Consequently, he has cultivated complementary skills to produce knowledge with stakeholders (TD as a discipline), and a reflection on TD as a “way of being” to address deeper “leverage points” for transformations. Committed to “walk the talk” in his own approach to animal farming, he constantly tries to make new connections between diverse disciplines and worldviews, sometimes challenging deeply established scientific and social norms (as in his open explorations of biodynamic farming and quantum social change) ... experimenting by himself the entanglements between personal engagement and sustainability transformations.