Transdisciplinarity 'Meets' Power Structures: Challenges and Experiences of a Capacity Building Project on Transdisciplinarity

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The aim of the paper is to discuss and to reflect on the experiences and challenges encountered during the North-South capacity building project on transdisciplinarity, KNOTS (*Fostering Multi-Lateral Knowledge Networks of Transdisciplinary Studies to Tackle Global Challenges*), which was financed by the EU through the Erasmus+ Capacity Building in Higher Education program. Despite the large body of literature on transdisciplinary approaches and projects, not many studies exist that discuss both the political and the power dimensions within transdisciplinary endeavors, especially not from a social science perspective. Based on the experiences, challenges, and progress over the course of the project, I will analyze how power relations influenced and structured KNOTS. I argue that the success of transdisciplinary North-South collaborations depends very much on awareness of power hierarchies, reflexivity, and positionality as well as different understandings of knowledge. Although differences will be highlighted regarding, for example, the aims of transdisciplinarity or the role of different understandings of science and knowledge, the paper does not aim to increase skepticism regarding transdisciplinarity. Instead, the intent of the reflections is to increase awareness of the influences of power structures and relations in transdisciplinarity projects, especially North-South collaboration projects.

Keywords: Collaboration; Knowledge; North-South; Power Structures; Transdisciplinarity

INTRODUCTION: TRANSDISCIPLINARITY AND POWER

For more than three decades, transdisciplinarity has been discussed in academia and in science policy debates as a promising approach to solve complex societal problems. Transdisciplinary approaches and frameworks have been presented as ways to effectively produce and use scientific research to contribute to societal problem solving and have been promoted as avenues for generating transformative and/or applicable knowledge (Polk, 2015) – knowledge, as stated by Rosendahl, Zanella, Rist, and Weigelt (2015), which is "able to question existing power structures and alter the status quo" (p. 19). For Darian-Smith and McCarty (2016, p. 1), a transdisciplinary framework or approach has the potential not only to produce transformative knowledge but can foster inclusive and relevant scholarship and knowledge especially by opening Western scholarship

to non-Western modes of thinking. It is the positive relationship between transdisciplinarity and societal problem solving that characterizes not only the literature on transdisciplinarity but also the policy debates around it, even though different conceptions and ideas are connected to the term. This positive relationship is explained through the problem focus of transdisciplinarity, namely that research should originate and be contextualized in 'real world problems' and be collaborative (e.g., Bernstein, 2015; Kockelmans, 1979; Nicolescu, 2002). Non-linear and reflexive knowledge production, the transcending of disciplinary boundaries, and the integration of non-academic actors and their knowledge are defined as the most important pillars for generating different types of transformative knowledge (e.g., Klein, 2004; Nowotny, Scott, & Gibbons, 2001).

Structural conditions that may influence or hamper transdisciplinary projects and, thus, knowledge production as well as political and power dimensions are rarely addressed in the scientific discourse. Regarding the implementation of transdisciplinary research projects, there are of course quite a number of studies and evaluations mentioning the problems and challenges that accompanied transdisciplinary projects or research processes. Collaborative problem framing, the participation of non-active actors, or applying integrative research methods are just a few of them that are widely discussed (e.g., Lang et al., 2012; Polk, 2015). However, an analysis of power dynamics or power structures that explains the experiences made or challenges faced in such projects is often missing (Messing, Adelman, & Durfee, 2012, p. 646).

Against this backdrop, challenges faced in the implementation of the *Fostering Multi-Lateral Knowledge Networks of Transdisciplinary Studies to Tackle Global Challenges* (KNOTS)[1] project, which focused on transdisciplinary capacity building in research and teaching within and between universities in the so-called Global South and Global North, will be analyzed and reflected, guided by feminist and postcolonial arguments and perspectives, especially those perspectives that focus on the entanglement of social relations of power in knowledge production. This includes feminist scholars like Haraway (1988) who argued that knowledge is always situated; or Rose (1997) who called for reflexivity of the researcher's positionality in the production of knowledge (Harding, 2005). Given the fact that the object of analysis is a North-South project, postcolonial perspectives are also relevant to understand and explain experiences, especially those explicitly relating to the relations between 'Western' and 'Southern' societies and how these relations have structured the agency, voice, and knowledge of the colonized and the post-colonized not only, but particularly regarding knowledge production and education systems (e.g., Bhambra, 2007; Chakrabarty, 2000). These perspectives, as will be shown, constitute fruitful areas of focus for transdisciplinarity, concerning the theoretical as well as the more practically oriented discussions and strategies (Rosendahl et al., 2015).

The article proceeds as follows: First, the KNOTS project, its aims, activities, and the methodology of the presented analysis will be briefly discussed. In the following analysis, it will be shown that power and power relations structured and influenced the development and implementation of the project and its activities. Power structures that are inscribed in the funding scheme and related to the positionality of the

1 For more information on KNOTS, see https://www.knots-eu.com.

initiators of the project, in addition to power relations between and within the participating actors and actors' groups and their different understanding of knowledge and the relation between science and society, do reflect global knowledge asymmetries.

THE KNOTS PROJECT AND METHODOLOGICAL REFLECTIONS

The KNOTS project, an Erasmus+ Capacity Building in Higher Education project financed by the European Union, aimed to introduce, build, and develop capacities in research and teaching on transdisciplinarity in the participating universities, institutes, and their interested scientific staff. The project was implemented between 2016 and 2019. All participating institutes from Southeast Asia (Thailand and Vietnam) as well as Europe (Germany, the Czech Republic, and Austria),[2] and, thus, the involved academic actors, had a social science background – some working at interdisciplinary institutes, especially in the fields of development or areas studies, while others being occupied in disciplinary environments. All participants had done research on and in Southeast Asia, thus, the project also aimed to intensify already existing working relations and build new ones. Development was identified as the comprehensive topic all academic actors involved were working on, although on different subtopics, from different perspectives, on different levels, and with different understandings of 'development'.

The main aim of the project was to work together on a new framework of knowledge production by discussing and further developing transdisciplinarity in the transnational space. The main activities to reach the formulated project goal included developing capacities for transdisciplinary research and teaching through and in the context of summer schools and field research, and the development of a teaching manual. The key argument thereby was that global problems are multidimensional and cannot be studied from one scientific discipline with its specific approaches and methodological strands exclusively (Hirsch Hadorn, Bradley, Pohl, Rist, & Wiesmann, 2006). Transdisciplinarity, as a framework for knowledge production, allows the inclusion of different actors in and outside academia with their respective knowledge, which is crucial since global challenges require not only new but also regionally contextualized knowledge (e.g., Bernstein, 2015; Brown, Harris, & Russel, 2010). Another aim was to build transdisciplinary knowledge networks to define and develop research and teaching methodologies on global and development related issues. The focus was on the broad and interrelated topics of social inequality, migration, and environmental resources – topics in which all partners have expertise, or that are part of their research agendas. The guiding principle was to engage in a multilateral learning process instead of a knowledge transfer from the North to the South.

The reflections and discussions presented in this paper are the result of my involvement in the KNOTS project. Observations, informal talks with participants and colleagues from the different universities during the different activities, like summer schools and field trips, consortium meetings, round trips, as well as train-the-trainer

2 I will refrain from specifying which universities, institutes, and colleagues in the different countries participated in the project for anonymity reasons.

sessions as part of the development of a teaching manual on transdisciplinarity constitute the empirical material on which the following analysis is based. This material also includes empirical research on the implementation of transdisciplinarity in teaching and research conducted by students during one summer school and field trip[3] (cf., Braunhuber, Goisauf, & Reinisch, 2019; Semmler, 2019). Thereby, it is important to mention that my experiences and observations are of course highly influenced by my position as an initiator and coordinator of the project. My colleagues and I from the Department of Development Studies at the University of Vienna coordinated the application process as well as the project implementation. We communicated with the EU, answered questions and decided when funds to the partner universities in Vietnam, Thailand, Germany, and the Czech Republic were transferred. Thus, power structures primarily, but not only, along postcolonial legacies accompanied the development and the implementation of the project.

In the following, I will contextualize and interpret the observations and experiences, which I have written down in a 'project diary'. It is important to further highlight that I had a special position in this project not only as a coordinator but also as a female professor from a European University. Additionally, as mentioned already, the participants had different disciplinary backgrounds and epistemological perspectives, which means that not all colleagues shared my constructivist sociologist belief that knowledge is socially constructed. Being part of the project meant being both frustrated and very satisfied with the cooperation and the activities that we implemented. It also meant realizing how difficult it is to understand each other, to find a common language, to be open and tolerant about other perspectives, and to formulate common goals. This paper is, thus, not only concerned with critical reflections of power dynamics on different levels but also with knowledge production and knowledge co-production as a social process.

WHOSE PROJECT AND WHOSE INTEREST?

It is important to describe the process of developing and writing the project proposal because challenges that accompanied us during the project's lifetime had to do with power structures, and differences in expectations, language, understandings, and logics, which were inscribed already at this stage and structured and influenced the project activities in different ways. The Vienna group read the call, got engaged, asked colleagues to join, and wrote the proposal. Based on our experiences in teaching, research, and critical reflection on 'development' as a vision, discourse, and practice, we perceived such a project as a possibility for us as well as for the participating colleagues from the partner universities to redefine and reexamine our roles in providing knowledge and innovation for and about 'development' and to change power relations in knowledge production. Against this background, we assumed and argued in the project proposal that transdisciplinarity could be the framework to produce new forms of integral knowledge. The main argument for the proposed North-South cooperation was the fact that most literature on and about

3 The author of the paper was in charge of the research seminar in which these studies were conceptualized.

transdisciplinarity and transdisciplinary projects is produced and takes place in the Global North and had not yet been applied in the Global South.[4]

In the process of writing the proposal, we formulated questions and aims and circulated several draft versions asking for comments and ideas; however, we only received a few responses. Since the timeframe between the call and the deadline for handing in the proposal was very short[5], there was definitely not enough time to discuss the aims, activities, and distribution of work packages with our partners. Due to the pressure to be ready in time, we were not pushing for more participation but assumed that the formulated aim to develop transdisciplinarity as a new framework of knowledge production would be a shared common venture.

Our focus on transdisciplinarity set the tone and led us to overlook other integrative concepts of knowledge production, which of course do exist in the Global South. One example of such a framework is *Thai Baan* research.[6] Thai Baan research is research that is undertaken by villagers in Northern Thailand and supported by academics from Chiang Mai University.[7] The research processes and aims of this counter-hegemonic methodology have been adopted and replicated in different parts in Southeast Asia. Thai Baan differs from transdisciplinarity research but also shares some similarities, which will not be discussed here in detail (for a detailed discussion, see Heis & Chayan, 2020, this issue; Myint, 2016). Important in the context of this paper is that this approach was not introduced or included while writing the project proposal, even though academic actors who have accompanied the Thai Baan research process in Northern Thailand were part of the KNOTS project. It was only later that this approach entered the project activities and was discussed. It can be argued that we, as initiators of the project, asked the wrong questions when communicating with the partners in the process of proposal writing and did not look for alternative knowledge but instead formulated the development of alternative knowledge as the aim of the project, thereby focusing exclusively on transdisciplinarity. By doing so, we made ourselves the prime agents of the project since we did not question the proposed transdisciplinary framework, nor did we look for alternative frameworks in our partner countries or beyond. We reproduced North-South power relations that then structured the expectations and the implementation of the project.

4 Even though the main challenge of transdisciplinarity is, according to McGregor (2017, p. 1), to address the complexity of the world and thereby respecting the individual and collective diversities, most of the philosophical, theoretical, and conceptual perspectives discussing and developing transdisciplinarity further neither include nor refer to diversities and inequalities between and within the Global North and the Global South, nor discuss explicitly how transdisciplinarity could enhance or overcome inequalities regarding knowledge production or the inclusion of non-Western knowledge or worldviews. Exceptions are papers by Schmidt and Pröpper (2017) or Schmidt and Neuburger (2017), for example, discussing how postcolonial power imbalances between the Global North and the Global South influence transdisciplinarity and transdisciplinary projects.

5 The call came out in November 2015 and the proposal had to be submitted in February the following year. Thus, altogether there were four months to finalize a proposal.

6 Other concepts of knowledge production are, for example, approaches connecting Paulo Freire's dialogue approach with transdisciplinarity (cf., Novy, 2012; Vilsmaier, Faschingeder, & Mercón, 2020), or connecting African Philosophy and transdisciplinarity (Du Plessis, Sehume, & Martin, 2013).

7 For more information, see the website of the Living River Siam Association (http://www.livingriversiam.org/en-tbr.htm), or "Thai Baan Research: An Overview" by Chayan (n.d.).

We also did not question the logic of the funding scheme. Felt, Igelsböck, Schikowitz, and Völker (2015) argue that "transdisciplinary research programs reflect proponents' specific cultural and institutional framing of the research and, more broadly, of science-society relationships" (p. 4). The EU capacity building program reflects the cultural and institutional understanding of the European Union of what capacity in higher education means and how it should take place, namely through a transfer of capacities from the Global North to the Global South. This mirrors how the role of European higher education organizations is understood and perceived, namely, as exemplars of 'modernity' whereas the 'others' are seen as still lagging behind. Thus, the KNOTS project's embeddedness in specific structures and procedures, such as the funding scheme, the time frame for handing in the proposal, and EU's strategies and priorities, contributed to power asymmetries, which became apparent already in the writing process of the KNOTS proposal (cf., Schmidt & Neuburger, 2017, p. 64).

Hegemonic structures between the Global North and the Global South, expressed through the funding scheme with us as initiators and coordinators of the project, ensured the privileged positioning of the Vienna group within institutional, organizational, and individual power relations. Although we theoretically recognized 'difference' and were aware of our hegemonic position through our reading and critical attitude towards development and knowledge production, it did not make a difference to our self-understanding and practice when writing the proposal or using this specific funding scheme. As Bhambra (2007) argues, a theoretical engagement with postcolonial theories and approaches does not, also not in our case, imply a critical engagement with funding schemes or an in-depth confrontation of our positionalities. Even though the aim was to further develop transdisciplinarity together with the partners in the Global South, thereby reducing hierarchies, and to introduce new opportunities and a more equal framework of knowledge production in order to change the status quo regarding, for example, knowledge hierarchies or the persistence of uneven power relations in North-South research partnerships (Basile & Baud, 2019, p. 17), we did not question transferring transdisciplinarity as an approach from the Global North to the Global South. Nor did we actively look for alternative possibilities for knowledge production (like Thai Baan) or adequately reflect on the power structures that we, as academics from the Global North, embody through our organizational and social positions.

The process described above explains why the aim formulated in the proposal did not correspond with the aims of all partners involved. Some of the partners, especially, but not only, from the Global South, were expecting that, in the project, the partners who are more familiar with transdisciplinarity would introduce and teach methodologies which could be applied for collaborative research. For them, transdisciplinarity is primarily a methodology of collaborative research with applicable outcomes. Whereas for us, as initiators, and as written in the proposal, transdisciplinarity is connected with the negotiation and creation of new forms of integral knowledge production and the development of methodologies making this possible. Already during the kick-off workshop in Vienna, these different perceptions became apparent. However, it took several activities, discussions, and conflicts before we could discuss and formulate our different expectations and understandings, and

before it became clear that we could not 'deliver' such a methodology, but that such a methodology can only be an outcome of the project. Thus, whereas we expected active participation, the willingness to participate and invest time under these conditions lessened, especially among those colleagues in leading positions. The latter expected to get familiar with a 'new' methodology – a methodology that could be an important asset to compete on the 'global research market'.

North-South projects, independent of whether they focus explicitly on research or capacity building, are embedded in the global hierarchy of higher education marked by global inequalities concerning the production and circulation of organized knowledge (Connell, Pearse, Collyer, Maia, & Morell, 2017, p. 429). Asia, for example, as Qi (2015) argues, is "marginalized on the global science map" (p. 30). For decades, scientific concepts, knowledge, as well as practices in teaching and education have been transferred from the North to the South – another postcolonial continuity – and scientific 'quality' has been judged according to so-called global standards (Marginson & Wende, 2007). Knowledge generated in the North still serves as the foundation of these standards and, thus, has a far superior status to knowledge produced in the South (Girvan, 2007). This is, as Langthaler, Witjes, and Slezak argue (2012, p. 237), also true for the use of knowledge in institutions as well as its epistemic recognition. North-South research partnerships can, thus, be seen as a possibility to assess and increase global competitiveness of national research institutes and capacities, especially in countries that have gone through economic transformations. David (2007) shows that economic growth, especially in countries of the Global South, leads to an increase in higher education organizations and in competition between institutions within and between countries. What this implies for Vietnam, for example, is elaborated by Doi (2020) in this issue. To compete in national, regional, and global higher education sectors still means an orientation to and dependency on the institutions, scientific concepts, methodologies, and techniques of the Global North (Connell et al., 2017, p. 42). Thus, for some colleagues, the KNOTS project was seen as an opportunity for their higher education organizations and institutes to raise their profile, which is a very rational strategy given the global hierarchy in the higher education sector.

In the context of the project, this can explain the different aims that accompanied the activities as well as some of the frustrations on the side of those partners who felt that the way the activities were conceptualized and implemented could not deliver the assumed outcome. One example here is the development of the teaching manual.[8] Whereas the Vienna group, as coordinators of the project, planned that the teaching manual would be developed together and would initiate a mutual learning process, others expected that the coordinators of the project would prepare the necessary material. Therefore, discussing or critically commenting on the prepared material, or providing context specific examples, hardly took place during the three workshops. It turned out very difficult to motivate some of the colleagues to participate, especially those in higher positions. Some younger colleagues who participated throughout the project, however, became very engaged. Especially during the last

8 The teaching manual can be accessed on the project's open access platform (see https://www.knots-eu.com/the-teaching-manual).

summer school, they used the material and changed it according to the assumed needs of their colleagues and students in very innovative ways, like using technological tools that most of the European partners have never implemented in teaching. It is difficult to predict whether their engagement will lead to the use of the manual in teaching and research. The hierarchical structures in some of the participating universities are expected to have an impact on whether or not and in how far the manual will be utilized in teaching and research (see Doi, 2020, this issue).

Another example for the different aims and frustrations mentioned above are the three clusters of joint research and teaching activities during the summer schools and field research. Each year, transdisciplinary approaches and methodologies were discussed, developed further, practiced, and implemented during summer schools and field research, each with a specific thematic and geographical focus. Students and staff from all universities participated in these activities, non-academic actors were especially involved in the field research. All summer schools and field researches had to be organized by the partners in the Global South and had to take place there[9] according to the funding guideline for the Erasmus+ Capacity Building Projects. Through this guideline, the partners in the Global South become merely 'case studies', which Baber (2003) describes as typical for North-South projects. To avoid this allocation of roles, the coordinators tried to communicate to the Global South partners that 'we' do not perceive ourselves as being in the role of organizers, conceptualizers, or agenda setters in the course of these activities but that we hope that they will take over the responsibility for the summer schools and field trips.

However, this changing of roles and responsibilities was only partly successful. It can be concluded that we, especially the Vienna group, tried to "de-scribe" the funding scheme in a particular way by attempting to redefine or partly reject the "script", as Felt et al. (2015, p. 4) describe drawing on Akrich's (1992) approach. However, some of the partners remained in their rigid roles as either recipients or pure providers. The partners who felt primarily responsible for the organization, as foreseen by the funding guideline, did a great job. The tasks of agenda setting or taking over responsibilities, for example, for the field trips, were shifted to colleagues from the Global North, who often actively took over despite not being familiar with the local setting or the non-academic actors. This pattern strongly resembled the mainstream organizational structure of North-South research projects, also transdisciplinary ones (Schmidt & Neuburger, 2017, p. 63). The 'reluctance' of the colleagues who organized the activities can be interpreted as a lack of ownership since we allocated these work packages to them according to the EU guidelines and/or an expression of their interest to learn a new approach that would allow them to position themselves in the global and national science arena, the latter especially in the case of the Vietnamese partners. To put it more generally, it can be seen as a reaction to the decade's long experiences of scientists and intellectuals in the Global South who, as the study by Connell et al. (2017) shows, have been treated as a workforce in the periphery by knowledge institutions and scientists from the Global North who predominantly hold epistemic and institutional authority, or 'function' as spokespersons for voices or approaches from the Global South (Basile & Baud, 2019, p. 17). Thus, attempting

9 In 2016 and 2018, the activities took place in Vietnam, and 2017 in Thailand.

to change these historical asymmetries and structures 'just' by re-interpreting the script was certainly 'naïve'.

However, it is also important to stress at this point that the categorization and differentiation between 'we' and the 'others' as employed in the last paragraphs is, of course, a difficult one, since none of the constructed groups is a homogeneous unit. This is necessary to indicate since also the expectations and the self-understandings within the groups varied. North-South power asymmetries definitely played out from the beginning. However, intersections with gender, age, and language as much as the self-understanding of the involved scientists, positionalities, and understandings of knowledge, also structured not only the activities in the frame of the KNOTS project but also collaborative capacity building and research activities in general (Bärnthaler, 2020, this issue).

The activities of the KNOTS project reveal that, for some, it was difficult to reflect upon power structures and privileges, be it because of having been trained in the Global North or because of gender, university position, or age or the intersection of these social positions. For others, especially those familiar with feminist or post-colonial theories, it was a challenge to turn their reflections into practice given the workload prescribed by the 'script' and the responsibility perceived towards the funder. It must be concluded that the aim of the KNOTS project to create a space for mutual learning and a critical reflection of knowledge production has only partly been achieved. What became obvious is that reflecting on existing power structures is essential, like in all transdisciplinary research (Schmidt & Neuburger, 2017, p. 55). However, the project demonstrated that this is extremely difficult in practice, which is in concrete situations and interactions. It would imply a conscious effort of the scientists involved, be it professors, students, or academic staff, to question not only power structures and privileges but also habitual modes of thought and practice emerging from specific historical and social contexts and in communication with others (Turino & Lea, 2004).

This questioning and reflexivity could be selectively observed in the work of smaller groups that comprised members from different academic positions (students, scientific staff, and professors) and countries during the summer school or field trips, as Braunhuber et al. (2019) reveal in their empirical study. As Vilsmaier et al. (2015) show in their paper, working on a single case in a small group seems to allow for mutual learning and, thus, reflexivity to take place. In bigger workshops and conferences, gendered, ethnic, or national identities of the involved actors and, thus, various power asymmetries are reinforced by the actors themselves or by others in these social situations. To question or challenge statements or approaches put forward by, for example, European colleagues or colleagues in higher positions, to bring in different viewpoints, or to share experiences from one's own research endeavors, seldomly took place during bigger KNOTS meetings or activities. Different university cultures as well as language doubtlessly played an important role here. Especially some of the younger colleagues from universities in Southeast Asia did not feel comfortable communicating in English, as the evaluations reveal, especially not in front of their supervisors or professors from the Global North (see Doi, 2020; Seemann & Antweiler, 2020, this issue).

Transdisciplinary collaborative endeavors need to be designed to enable a process of mutual learning and knowledge generation, a postulation that is articulated in

many academic papers on transdisciplinarity (Ison, 2008; Mobjörk, 2010, Pohl, 2011; Schmidt et al., 2013). The questions of what is needed to enable such processes, what hinders such processes, or what role power structures play, as discussed above, are just beginning to enter the debates. There are, of course, different strategies discussed and put forward in the literature of how to conceptualize and implement successful collaborations between different actors in transdisciplinary endeavors. There are debates about the various degrees of stakeholder involvement and the 'best' number of involved stakeholders (e.g., Brandt et al., 2013; Lang et al., 2012; Pohl, Krütli, & Stauffacher, 2017; Polk, 2015) as well as discussions about what kind of participation is needed and how participation can best be implemented. Furthermore, reflections about participation, setups, or strategies are part of the discourse (e.g., Elzinga, 2008; Padmanabhan, 2018; Schmidt et al., 2013). Important themes are often put forward in papers by authors representing the school of thought that aims to develop methodologies for collaborative solutions, especially in sustainability or health studies. These discussions show what Wiesmann et al. already stated in 2008, which is that "participation is often one of the major stumbling blocks in transdisciplinary practice" (p. 437) because most of the debates and evaluations do not critically reflect on power structures and relations. This has important implications not only for participation but also for the transformative potential of transdisciplinary knowledge production (Rosendahl et al., 2015). Furthermore, the discussions focus almost exclusively on the collaboration between academic actors and non-academic actors, and not between academic actors alone (Djenontin & Meadow, 2018, p. 886). This section emphasized that the KNOTS project has shown that complex and diverse power relations between academic actors influence transdisciplinary endeavors. The same holds true for different understandings of knowledge, as will be shown in the following section.

SCIENCE, KNOWLEDGE, AND POLITICAL CONTEXTS

Different expectations were related to different understandings of transdisciplinarity, of science, of the role of science and scientists, and of the relation between science and the public. These factors structured and influenced the discussions and activities in the KNOTS project. The main challenge was to realize and recognize the different understandings and expectations regarding transdisciplinarity and their embeddedness in different understandings of knowledge and science, science and politics, as well as in power relations between disciplines and between the different actors representing different university cultures and relations. As mentioned, there were different understandings of transdisciplinarity that reflect the two versions or schools of thought that are also discussed in the literature (Augsburg & Henry, 2016). One school of thought perceives transdisciplinarity as a new framework of knowledge production. The methodology should develop during the research process and should be reflective as well as responsive to particular questions, settings, and actions (cf., Bergman et al., 2012; Klein, 2004, 2013; Pohl, 2011; Pohl & Hirsch Hardon, 2008; Wickson, Carew, & Russell, 2006). This understanding, focusing primarily on the development of transformative knowledge, mirrored the understanding and, thus, position of the coordinators and some colleagues from Thailand, for example. Whereas for other colleagues, especially but not exclusively those from Vietnam, a

new transdisciplinary methodology should be the main outcome of the project – a methodology that advances neutral, universal, and objective knowledge about a phenomenon. This understanding reflects the second version of transdisciplinarity which is concerned primarily with problem solving through a transdisciplinary methodology. Even though all partners had a social science background, the discussions about transdisciplinarity revealed that different paradigmatic views came together, which also influenced the understanding of transdisciplinarity and led to misunderstandings and irritations. For some colleagues, science had to be analytical and objective, while others criticized this dominating knowledge paradigm as 'Western' (cf., Studley, 1998) and advocated postcolonial or feminist approaches and perspectives. Thus, space and time was needed to discuss different epistemologies, which were perceived by some as competing.

Whereas North-South hierarchies in the global education sector were addressed above, the debates and conflicts around the 'modern' knowledge paradigm showed another dimension, namely, how successfully the still dominant understanding of science and knowledge as objective and universal was, as Chakrabarty (2000) argues, transferred from the so-called core towards the so-called peripheral countries. This "continued hegemony of positivism" (Chhachhi, Hutter, Damodaran, & Baud, 2019, p. 304) in science generally and the hierarchies between different worldviews also made conversations about knowledge difficult in the context of the project (see Bärnthaler, 2020, this issue). Additionally, not only, but primarily male colleagues from the partner universities showed a certain resistance to the discussion of the situatedness of knowledge (Haraway, 1988) or to the reflection of the taken-for-granted categories in scientific endeavors, like *ethnicity* or *women*, even when criticizing the dominant knowledge paradigm. Of course, not all participants subscribed to all assumptions of the dominant knowledge paradigm, nor was the North-South divide as clear cut as summarized, especially when feminist or postcolonial approaches were brought into the debates to address science and knowledge production as relations of power and domination. Here, gender and age structured the positions taken during discussions. The experiences of the KNOTS project revealed that positionalities are an important element that influences collaborative and mutual learning processes. However, the experiences also revealed that an openness and willingness to reflect one's positionality is embedded in a certain understanding of knowledge and of the role of science. Reflexivity needs more time than the activities, which suffered from permanent time constrains, allowed. Thus, even those who were theoretically aware of how important it is to make one's own positionality transparent were not always able to live up to their own claims and expectations.

The discourses among project participants during the implementation of the activities have further shown that different understandings of science and knowledge were the main challenge to overcome, not disciplinary knowledge as such. This is not to say that disciplinary knowledge production and disciplinary identities were unimportant, but that the experiences support Darian-Smith and McCarty's (2016, p. 7) argumentation that, in practice, disciplinary boundaries have been blurried for quite some time, despite the inclusion and sharing of, for example, themes, theories, and approaches to varying degrees. It was the general understanding of the role of science and knowledge for society as well as the different epistemological stances that

influenced the expectations and visions concerning 'new' approaches and methods for organizing knowledge. Thus, a thorough reflection on the role of science and knowledge[10] – as, for example, done by Augsburg and Henry (2016), or Carp (2001) – is a precondition for the development of transdisciplinary frameworks, even if context-bound or case-based (Vilsmaier et al., 2015).

During the capacity building project KNOTS, the discussions of the role of science and knowledge for society, especially regarding the topics of focus (i.e., migration, social inequality, and environment), revealed another challenge transdisciplinary endeavors may face. In some interactions (between professors, scientific staff, and students from the different universities), the discussions endorsed reflections on the participants' understanding of science and knowledge. This helped to explicate perspectives or categories that are often taken for granted, allowing an alternative framing of the respective topics. In other interactions, yet, there was a lack of willingness to reflect on so-called objectified categories, and it was therefore not possible to discuss whether ethnicity or class, for example, are really relevant categories to start with. Connected to this point is yet another, namely, how to handle the pre-framing of phenomena and problems that transdisciplinary research projects are planning to tackle. Although it is outside the scope of this paper to discuss this aspect in detail, the experiences and observations in the context of this project have shown that the context-based topics used as cases for 'practicing' transdisciplinarity were pre-framed. This often occurred unconsciously, either due to theoretical perspectives or the respective political contexts influencing science cultures. A scientific pre-framing, for example, could be observed in the case of social inequality when only economic structures were put forward at the expense of engagement with questions of gender or cultural difference; or when universalist templates of development and theoretical categories based on European experience were proposed without reflecting the historical and social structures that pervade them. Regarding this point, there was no observable North-South divide. Rather, disciplinary, gendered, or ideological positions were at stake. Political pre-framing occurred especially by those scientists coming from societies where the universities and, thus, knowledge production are controlled and influenced by political actors and their interests (and where knowledge is perceived, e.g., as merely a means to power or economic advantages). In the case of migration, for example, this implied that 'only' climate change was made responsible for rural-urban migration by some, whereas other aspects, like the modernization or the capitalization of the agriculture sector, were not even 'allowed' to be discussed due to the political strategies and aims of the respective government. Thus, while the topics we took up were inquiry-driven, as put forward in the transdisciplinary scholarship, they were also pre-framed. Johnston (2008) argues that transdisciplinarity can and should "create mindscapes that are unfettered by traditional patterns and procedures" (p. 223). How thinking and acting in traditional scientific patterns and procedures can be overcome is however not discussed by Johnston (2008). Here, the question arises of why, for example, feminist or

10 I argue that this reflection is necessary before discussing the three forms of knowledge that Pohl and Hirsch Hadorn (2008) have defined as relevant for transdisciplinarity, namely, system knowledge as knowledge of the current status, target knowledge as knowledge about a target status, and transformation knowledge as knowledge about how to make the transition from the current to the target status.

postcolonial theories have not been adopted for transdisciplinarity, as put forward by Leavy (2011), or Schmidt and Neuberger (2017). Transdisciplinary scholarship and practice could benefit from postcolonial and feminist traditions as both seek to integrate different disciplinary perspectives including their insights regarding reflexivity and positionality – reflexivity concerning not only transdisciplinary research processes and power structures but also personal and biographical dispositions, social relations, and epistemological perspectives, which are all preconditions for mutual learning. Thus, these theories could pave the way for integrating reflexivity as a practice – a practice needed in all phases of transdisciplinary endeavors.

The different understandings of science and knowledge as well as the pre-framing of the topics also influenced and structured debates and discussions about which non-academic actors should be integrated, whose knowledge they represent, how they should be integrated, and how their knowledge should be respected. As mentioned, the aim of the project was not to conduct complex, transdisciplinary research projects but to build capacities. A possible integration of non-academic actors and their knowledge during field research was very controversially discussed in the preparation and during the two summer schools in Vietnam. Klein (2013) argues that complex problems necessarily need the involvement of various non-academic actors from a range of organizations. However, whom and whose knowledge these actors represent is not considered; neither is the difference in interests of the scientific participants, namely, whether such knowledge should serve science, serve the existing social and power relationships, or challenge the status quo, discussed (cf., Augsburg & Henry, 2016, p. 101).

The conflicts that became apparent in the context of the project serve as an example of these different interests. The inclusion of critical NGOs or activists working on the focus topics was suggested by those aiming at challenging power structures and the status quo, whereas the inclusion of government agencies was demanded by those colleagues who did not want to criticize, for example, the government's migration or environmental policies but aimed to integrate the interests of these actors in future transdisciplinary research activities. Whether non-academic actors are perceived as knowledge producers also depends on the respective understanding of science and knowledge. Those who were postulating that science and knowledge are and should be objective and universal (see discussion above) argued that only science can produce knowledge, hold expertise, and represent the authority to explain. This implies that scientists are assumed to be objective observers, whereas non-academic actors can never be more than research subjects or informants, because their knowledge is situated, contextual, cultural, and inherently social. Defining scientific knowledge as outside of society or culture is not new and is one reason behind the interest in transdisciplinarity (see Dannecker & Heis, 2020, this issue). But even if the need and the relevance of integrating experience-based, local, or cultural forms of knowledge in a participatory way is accepted, a conceptional framework for this integration and participation is difficult to develop, as the scholarship on transdisciplinarity reveals. Exemplary for the analyzed shortcomings is the term *stakeholder*, which is used not only, but especially in transdisciplinary literature discussing methodologies, strategies, and techniques for knowledge integration (e.g., Bracken, Bulkeley, & Whitman, 2014; Polk, 2015). In the KNOTS project, too, the term was broadly used by the

scientific participants independently of their views on science and knowledge. This very instrumental and technological term, which is also used in development cooperation (e.g., Cooke & Kothari, 2001), reduces non-academic actors to representatives of interests and, as Augsburg and Henry (2016, p.110) state, moves away from the important question of what constitutes non-academic knowledge production.

CONCLUSION

The promise of transdisciplinarity and especially, as Messing et al. (2012, p. 645) argue, the promise of dis-entrenching forms of, for example, postcolonial inequality and resulting disparities in knowledge production and problem solving, is inspiring. This was also the motivation for initiating the KNOTS project. However, the different expectations, discussions, and conflicts during capacity building efforts and activities have shown that differing understandings of science and knowledge, and power structures between the involved actors due to gender, age, country of origin, or university position, as well as socio-political constellations influence transdisciplinary endeavors and, thus, have implications for the transformative potential of the knowledge produced. Especially more positivist understandings of knowledge and science do not support the re-configuration of academic actors or their approaches and perspectives in partnerships with colleagues or non-academic actors. Additionally, political structures influence university cultures and knowledge production and, thus, constrain directly or indirectly the collaboration of the involved academic actors (see Bärnthaler, 2020, this issue). The KNOTS project has shown that more time and space would have been needed already during the writing process of the proposal to understand and discuss what impact these differences have on future activities and capacity building – time, which most funding schemes and their output-oriented logic do not foresee.

Nonetheless, the project opened up a space for controversies, explorations, and discussions on knowledge and science. This was very constructive since it broadened the perspectives of the participants, and revealed political and power dimensions that are often not explicitly discussed in transdisciplinary research – although transdisciplinarity is regularly suggested as an avenue for generating transformative knowledge (Rosendahl et al., 2015, p. 19) and initiating problem solving. If attributes such as critical thinking, creativity, and innovation can only be developed in environments that challenge pre-conceived assumptions and push individuals to consider new perspectives, then the project was definitely successful, even if not all scientific colleagues actively participated, and despite the fact that the pooling of multiple knowledge and expertise did not bring the expected synergies to develop a common epistemological basis leading to alternative methodologies (cf., Chhachhi et al., 2019, p. 304). Only time will show how the transdisciplinary capacities discussed and developed during the project will be used in teaching and research. The experiences showed that, also in transdisciplinary endeavors, a primary methodological focus on problem solving leaves many issues and questions untouched. These include issues such as power asymmetries and questions of how to integrate different understandings of science and knowledge and different actors, what constitutes knowledge, and what participation means in practice.

Schmidt and Neuburger (2017) articulate the concern that transdisciplinarity can become just "another academic instrument . . . [of] marginalizing non-Western cultures" (p. 55). The KNOTS project also showed this tendency. However, and despite the North-South power structures, the partners in the Global South challenged the transfer and the priorities set, for example, by questioning our understanding of transdisciplinarity or our understanding and framing of the topics that focused on, namely, social inequalities, migration, and climate change. Not only topics were framed differently, but also the power manifested in administrative rules was challenged, for example, by not fulfilling them, or the resources and their distribution, as foreseen by the funder were questioned. Thus, implicitly, the developmental nature of the Capacity Building in Higher Education Program by the EU (European Union, 2016) was challenged. I, as the coordinator, sometimes frustrated with the administrative role, however recognized the "wealth of knowledge in the Global South" (Connell et al., 2017, p. 56) and integrative frameworks of knowledge production like Thai Baan. Thus, in this regard, the project was successful, at least from my perspective.

REFERENCES

Akrich, M. (1992). The de-scription of technical objects. In W. E. Bijker, & J. Law (Eds.), *Shaping technology / building society* (pp. 205-224). Cambridge, MA: MIT Press.

Augsburg, T., & Henry, S. (2016). Expanding the scope of transdisciplinarity. *Colorado Critical Review, 1*(1), 86-113.

Baber, Z. (2003). Provincial universalism: The landscape of knowledge production in an era of globalization. *Current Sociology*, *51*(6), 615-623.

Bärnthaler, R. (2020). Conflict, controversy, comprise, and compression: The pragmatics of transdisciplinary (development) projects. *Austrian Journal of South-East Asian Studies, 13*(2), 193-210.

Basile, E., & Baud, I. (2019). Introduction: Reflecting on development studies in the new millennium. In I. Baud, E. Basile, T. Kontinen, & S. von Itten (Eds.), *Building development studies for the new millennium* (pp. 1-22). Cham, Switzerland: Palgrave Macmillian.

Bergmann, M., Jahn, T., Knobloch, T., Krohn, W., Pohl, C., & Schramm E. (2012). *Methods for transdisciplinary research. A primer for practice*. Frankfurt, Germany: Campus Verlag.

Bernstein, J. H. (2015). Transdisciplinarity: A review of its origins, development, and current issues. *Journal of Research Practice*, *11*(1), 1-20.

Bhambra, G. (2007). Sociology and postcolonialism: Another 'missing' revolution. *Sociology*, *41*(5), 871-884.

Bracken, L. J., Bulkeley, H. A., & Whitman, W. (2015). Transdisciplinary research: Understanding the stakeholder perspective. *Journal of Environmental Planning and Management*, *58*(7), 1291-1308.

Brandt, P., Ernst, A., Gralla, F., Luederitz, C., Lang, D. J., Newig, J., & Wehrden, H. von. (2013). A review of transdisciplinary research in sustainability science. *Ecological Economics*, *92*, 1-15.

Braunhuber, B., Goisauf, T., & Reinisch, J. (2019). The (re)production and transfer of knowledge in the context of the 'KNOTS Summer School' in Chiang Mai 2018 – a critical approach. Working Paper No. 8, Department of Development Studies, University of Vienna. Retrieved from https://ie.univie.ac.at/fileadmin/user_upload/p_ie/INSTITUT/Publikationen/IE_Publications/ieWorkingPaper/ie.WP8_Braunhuber_2019-12.pdf

Brown, V., Harris, J., & Russel, J. (2010). *Tackling wicked problems through the transdisciplinary imagination*. New York, NY: Francis and Taylor.

Carp, R. (2001). Integrative praxes: Learning from multiple knowledge formations. *Issues in Integrative Studies, 19*, 71-121.

Chakrabarty, D. (2000). *Provincializing Europe: Postcolonial thought and historical difference.* Princeton, NJ: Princeton University Press.

Chayan V. (n.d.). *Thai Baan research: An overview*. Retrieved from https://www.iucn.org/downloads/thai_baan_research_an_overview_1.pdf

Chhachhi, A., Hutter, I., Damodaran, S., & Baud, I. (2019). Working towards a shared vision on development studies in India and the Netherlands. In I. Baud, E. Basile, T. Kontinen, & S. von Itten (Eds.), *Building development studies for the new millennium* (pp. 289-313). Cham, Switzerland: Palgrave Macmillian.

Connell, R., Pearse, R., Collyer, F., Maia, J. M., & Morell, R. (2017). Negotiating with the North: How Southern-tier intellectual workers deal with the global economy of knowledge. *The Sociological Review, 66*(1), 41-47.

Cooke, B., & Kothari, U. (Eds.). (2001). *Participation: The new tyranny?* New York, NY: Zed Books.

Dannecker, P., & Heis, A. (2020). 'Transdisciplinarity': A framework of knowledge production in North-South partnerships? *Austrian Journal of South-East Asian Studies*, *13*(2), 165-174.

Darian-Smith, E., & McCarty, P. (2016). Beyond interdisciplinarity: Developing a global transdisciplinary framework. *Transscience, 7*(2), 1-16.

David, M. (2007). Equity and diversity: Towards a sociology of higher education for the twenty first century? *British Journal of Sociology of Education, 28*(5), 675-690.

Djenontin, I. N., & Meadow, A. E. (2018). The art of co-production of knowledge in environmental sciences and management: Lessons from international practice. *Environmental Management, 61*, 886-903.

Doi, N. M. (2020). Institutional prospects and challenges to transdisciplinary approach in the knowledge production system of Vietnam: Reflections on a North-South partnership project. *Austrian Journal of South-East Asian Studies, 13*(2), 229-242.

Du Plessis, H., Sehume, J., & Martin, L. (2013). *The concept and application of transdisciplinarity in intellectual discourse and research*. Johannesburg, South Africa: Mapungubwe Institute for Strategic Reflection.

Elzinga, A. (2008). Participation. In G. Hirsch Hadorn, H. Hoffmann-Riem, S. Biber-Klemm, W. Grossenbacher-Mansuy, D. Joye, C. Pohl, . . . & E. Zemp (Eds.), *Handbook of transdisciplinary research* (pp. 345-360). Dordrecht, Netherlands: Springer Netherlands.

European Union. (2016). Erasmus+ Capacity Building in Higher Education: EU Support to Higher Education Institutions Around the World (No. 2014-3663/004). Retrieved from https://eacea.ec.europa.eu/sites/eacea-ite/files/capacitybuildinginhighereducation_b5_web.pdf

Felt, U., Igelsböck, J., Schikowitz, A., & Völker, T. (2015). *Transdisciplinary sustainability research in practice: Between imaginaries of collective experimentation and entrenched academic value orders*. Department of Science and Technology Studies, University of Vienna. Retrieved from https://sts.univie.ac.at/fileadmin/user_upload/i_sts/Publikationen/Preprints/Preprints_Transdisc.pdf

Girvan, N. (2007). *Power imbalances and development knowledge*. Paper prepared for the project Southern Perspectives on Reform of the International Development Architecture, the North-South Institute, Ottawa.

Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective*. Feminist Studies*, *14*(3), 575-599.

Harding, S. (2005). Rethinking standpoint epistemology: What is "strong objectivity"?. In A. Cudd & S. Andreasen (Eds.), *Feminist theory: A philosophical anthology* (pp. 218-236). Oxford, UK: Blackwell.

Heis, A., & Chayan, V. (2020). Thai Baan methodology and transdisciplinarity as collaborative research practices. Common ground and divergent directions. *Austrian Journal of South-East Asian Studies, 13*(2), 211-228.

Hirsch Hadorn, G., Bradley, D., Pohl, C., Rist, S., & Wiesmann, U. (2006). Implications of transdisciplinarity for sustainability research. *Ecological Economics*, *60*(1), 119-128.

Ison, R. (2008). Methodological challenges of trans-disciplinary research: Some systemic reflections. *Natures Sciences Sociétés*, *16*(3), 241-251.

Johnston, R. R. (2008). On connection and community: Transdisciplinarity and the arts. In B. Nicolescu (Ed.), *Transdisciplinarity: Theory and practice* (pp. 223-236). New York, NY: Hampton Press.

Klein, J. T. (2013). The transdisciplinary moment(um)*. Integral Review*, *9*(2), 189-197.

Klein, J. T. (2004). Prospects for transdisciplinarity. *Futures*, *36*(4), 515-526.

Kockelmans, J. J. (1979). Why interdisciplinarity? In J. J. Kockelmans (Ed.), *Interdisciplinarity and higher education* (pp. 123-160). University Park, PA: Pennsylvania State University.

Lang, D. J., Wiek, A., Bergmann, M., Stauffacher, M., Martens, P., Moll, P., . . . & Thomas, C. (2012). TD research in sustainability science: Practice, principles, and challenges. *Sustainable Science, 7*, 25-43.

Langthaler, M., Witjes, N., & Slezak, G. (2012). A critical reflection on knowledge hierarchies, language and development. *Multicultural Education & Technology Journal*, *6*(4), 235-247.

Leavy, P. (2011). *Essentials of transdisciplinary research: Using problem-centered methodologies*. Walnut Creek, CA: Left Coast Press.

Marginson, S., & Wende, M. van der. (2007). To rank or to be ranked: The impact of global rankings in higher education. *Journal of Studies in International Education*, *11*(3/4), 306-329.

McGregor, S. (2017). Challenges of transdisciplinray collaboration: A conceptual literature review. *Integral Leadership Review*, *4*(22), 1-15.

Messing, J., Adelman, M., & Durfee, A. (2012). Gender violence and transdisciplinarity. *Violence Against Women*, *18*(6), 641-652.

Mobjörk, M. (2010). Consulting versus participatory transdisciplinarity: A refined classification of transdisciplinary research. *Futures*, *42*, 866-873.

Myint, T. (2016). *Citizen science in a democracy: The case of Thai Baan research*. Paper prepared for the Tocqueville Lecture Series at the Vincent and Elinor Ostrom Workshop in Political Theory and Policy Analysis, 9 September 2016. Retrieved from https://ostromworkshop.indiana.edu/pdf/seriespapers/2016F_Tocq/Myint%20paper.pdf

Nicolescu, B. (2002*). Manifesto of transdisciplinarity*. New York, NY: State University of New York Press.

Novy, A. (2012). 'Unequal diversity' as knowledge alliances: An encounter of Paulo Freire's dialogue approach and transdisciplinarity. *Multicultural Education and Technology Journal*, *6*(3), 137-148.

Nowotny, H., Scott, P. B., & Gibbons, M. T. (2001). *Re-thinking science, knowledge and the public in an age of uncertainty*. Cambridge, UK: Polity Press.

Padmanabhan, M. (Ed.). (2018). *Transdisciplinary research and sustainability. Collaboration, innovation and transformation*. London, UK: Routledge.

Pohl, C. (2011). What is progress in transdisciplinary research? *Futures, 43*(6), 618-626.

Pohl, C., & Hirsch Hadorn, G. (2008). Core terms in transdisciplinary research. In G. Hirsch Hadorn, H. Hoffmann-Riem, S. Biber-Klemm, W. Grossenbacher-Mansuy, D. Joye, C. Pohl, . . . & E. Zemp (Eds.), *Handbook of transdisciplinary research* (pp. 427-432). Dordrecht, Netherlands: Springer Netherlands.

Pohl, C., Krütli, P., & Stauffacher, M. (2017). Ten reflective steps for rendering research socially relevant. *GAIA*, *26*(1), 42-51.

Polk, M. (2015). Transdisciplinary co-production: Designing and testing a transdisciplinary research framework for societal problem solving. *Futures, 65*, 110-122.

Qi, J. (2015). *Knowledge hierarchies in transnational education: Staging dissensus*. London, UK: Routledge.

Rose, G. (1997). Situating knowledges: Positionality, reflexivities and other tactics. *Progress in Human Geography*, *21*(3), 305-320.

Rosendahl, J., Zanella, M. A., Rist, S., & Weigelt, J. (2015). Scientists' situated knowledge: Strong objectivity in transdisciplinarity. *Futures, 65*, 17-27.

Schmidt, L., Domptail, S., Klintenberg, P., Gruber, M., Schmiedel, U., Zimmermann, I., & Falk, T. (2013). Transdisciplinary research and stakeholder involvement: A review of the TFO approach. *Biodiversity & Ecology*, *5*, 195-212.

Schmidt, L., & Neuburger, M. (2017). Trapped between privileges and precariousness: Tracing transdisciplinary research in a postcolonial setting. *Futures, 93*, 54-67.

Schmidt, L., & Pröpper, M. (2017) Transdisciplinarity as a real-world challenge: A case study on a North-South collaboration. *Sustainability Science*, *12*(3), 365-379.

Seemann, F., & Antweiler, C. (2020). Linking European and Southeast Asian transdisciplinary knowledge production: Lessons learnt by doing evaluation. *Austrian Journal of South-East Asian Studies*, *13*(2), 243-259.

Semmler, L. (2019). Dissemination and communication of the transdisciplinary project "KNOTS". Wokring Paper No. 7. Department of Development Studies, University of Vienna. Retrieved from https://ie.univie.ac.at/Institut/institutspublikationen/aktuelle publikationen/

Studley, J. (1998). Dominant knowledge systems and local knowledge. Community-Based mountain tourism: Practices for linking conservation with enterprise. Paper presented at the Electronic Conference of the Mountain Forum. Retrieved from http://thunderbolt.me.uk/wordpress/wp-content/uploads/Dominant+Knowledge+Systems+and+Local+Knowledge.pdf

Turino, T., & Lea, J. (2004). *Identity and the arts in diaspora communities*. Warren, MI: Harmonie Park Press.

Vilsmaier, U., Engbers, M., Luthardt, P., Maas-Deipenbrock, R. M., Wunderlich, S., & Scholz, R. W. (2015). Case-based mutual learning sessions: Knowledge integration and transfer in transdisciplinary processes. *Sustainable Science, 10*(4), 563-580.

Vilsmaier, U., Faschingeder, G., & Mercón, J. (2020, in press). Methods for inter- and transdisciplinary research and learning based on Paulo Freire. *Journal of Development Studies*, *37*(2/3).

Wickson, F., Carew, A. L., & Russell, A. W. (2006). Transdisciplinary research: Characteristics, quandaries, and quality. *Futures*, *38*(9), 1046-1059.

Wiesmann, U., Hirsch Hadorn, G., Hoffmann-Riem, H., Biber-Klemm, S., Grossenbacher, W., Joye, D., & Zemp, E. (2008). Enhancing transdisciplinary research: A synthesis in fifteen propositions. In G. Hirsch Hadorn, H. Hoffmann-Riem, S. Biber-Klemm, W. Grossenbacher-Mansuy, D. Joye, C. Pohl, . . . & E. Zemp (Eds.), *Handbook of Transdisciplinary Research* (pp. 433-441). Dordrecht, Netherlands: Springer Netherlands.

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