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The (re)production and transfer of knowledge in the context of the 'KNOTS Summer School' in Chiang Mai 2018 – a critical approach

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The (re)production and transfer of knowledge in the context of the 'KNOTS Summer School' in Chiang Mai 2018 - a critical approach[a]

Barbara Braunhuber, Theresa Goisauf, Junita Reinisch

Abstract

The transdisciplinary approach aims to produce knowledge by including different perspectives and knowledge forms of academic and non-academic actors. This paper analyses how knowledge, knowledge production and transfer were understood and practiced within the context of the Summer School in Chiang Mai 2018. The Summer School was part of the KNOTS project[1], which is concerned with transdisciplinarity and intends to establish a network of knowledge exchange by linking partner universities from five countries. The research paper demonstrates the attempt to shift knowledge production into a transdisciplinary direction and describes challenges that occurred. Even though the transdisciplinary approach and the KNOTS program aim to significantly reduce knowledge hierarchies by transforming knowledge production, the results show that this still remains a challenging task. Knowledge hierarchies and power relations were still visible and felt by most of the participants. The most strongly perceived asymmetries, which were considered from an intersectional perspective, were in the realms of role (student or lecturer), nationality (European or Southeast Asian), language and gender. While hierarchies cannot be eliminated completely, the paper discusses the attempts by the participants to reduce the still existing asymmetries. The results are a further contribution to transdisciplinary research, which so far has not taken the field of sociology of knowledge into sufficient consideration, particularly in regard to knowledge and knowledge hierarchies.

Keywords: transdisciplinarity, sociology of knowledge, feminist and post-colonial approaches, knowledge hierarchies, KNOTS Summer School

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[1] *"Project KNOTS (Fostering multi-lateral knowledge networks of transdisciplinary studies to tackle global challenges) was established in October 2016 with the help of a grant by the European Commission's Erasmus+ programme."* (Universität Wien n.d.) See: https://knots.univie.ac.at/
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1. Introduction

The aim of this paper is to get a better understanding of knowledge in transdisciplinary research, particularly with regard to the sociology of knowledge. This subject matter is of special importance as the term knowledge is often used in the literature on transdisciplinarity and transdisciplinary projects without a precise definition of its meaning. The research topic was chosen because the concept of transdisciplinarity itself plays and will continue to play an important role in higher education, as its goal is to transform science. (cf. Pohl 2011: 619; Nowotny n.d.) However, we argue that most people working within the transdisciplinary domain have a concrete epistemological interest and are not primarily concerned with the sociology of knowledge. Taking discussions and arguments from the sociology of knowledge into account would enhance the transdisciplinary approach, as it could lead to a better understanding of what knowledge in transdisciplinarity means and how different forms of knowledge can be integrated. Since transdisciplinarity is a relatively new approach and a work in progress, the paper brings new insights into knowledge production and how different forms of knowledge are valued and, therefore, contributes to the enrichment of the approach.

The research took place in the context of the KNOTS Summer School from July 17 to July 30, 2018 in Chiang Mai, Thailand under the framework of the KNOTS Project (Fostering multi-lateral knowledge networks of transdisciplinary studies to tackle global challenges (KNOTS)). The project was funded by the European Commission's Erasmus+ Programme and connects partner universities from five countries[3] to address new challenges in a changing world. The Summer School and Field Trips in Chiang Mai 2018 evolved around the topics of social inequality, climate change and migration - issues that, so the assumption of the participants, cannot only be treated in a disciplinary way. To tackle these challenges, different perspectives and actors and their specific knowledge need to be included in the production of socially relevant knowledge. Regarding to this, the main aim of KNOTS is to establish knowledge networks on transdisciplinary research. To analyse how knowledge was (re)produced in the KNOTS project, the following theories and approaches were considered: 1. Modern science[4], 2. Sociology of knowledge[5], 3. Feminist and post-colonial approaches[6], Transdisciplinarity[7], and 5. Transdisciplinarity in the higher education sector[8]. Modern science, which was and still is often thought to be analytical and objective (cf. Studley 1998: 10f.; Huff 2017: 3), continues to be the dominant knowledge paradigm until today. It is also known as "'western scientific' knowledge". (Studley 1998: 2) This paradigm, which also led to disciplinary knowledge production, has been criticised for a long time (cf. Stichweh 2013: 17f.). New paradigms emerged to criticize modern science and try to better understand the complexity of reality (cf. Studley 1998: 5f.).

One example of these critiques is the sociology of knowledge. The core topic and central thesis of the sociology of knowledge is the sociality of knowledge and cognition. Sociality of knowledge means

[3] Universities from Austria, Czech Republic, Germany, Thailand and Vietnam

[4] For a detailed discussion of these approaches see: Hay 2006, Huff 2017, Pühretmayr 2012, Stichweh 2013, Studley 1998, Wisdom 1945.

[5] For a detailed discussion of these approaches see: Berger/Luckmann 2016, Knoblauch 2014, Singer 2005.

[6] For a detailed discussion of these approaches see: Rose 1997, Grosfoguel 2007, Haraway 1988, Knoblauch 2014, Reuter 2010, Singer 2005, Quijano 2007.

[7] For a detailed discussion of these approaches see: Choi/Pak 2006, Darbelley 2015, Dieleman 2013, Knoblauch 2014, Nicolescu 2006, Novy 2012, Nowotny n.d., Pohl 2011, Rosendahl et al. 2015, Schmidt/Neuburger 2017.

[8] For a detailed discussion of these approaches see: Freire 2005, Nicolescu 2013, Novy 2012, Park/Son 2010.

that the people who gain knowledge are embedded in a social context, which influences the content and the process of knowledge production. (Knoblauch 2014: 14) Knowledge is often considered to be socially derived and socially constructed, as everyone in society is part of a collectively shared and established knowledge (cf. Knoblauch 2014: 360f., Berger/ Luckmann 2016: 3; 16-18). Therefore, science is also entangled with social conditions, cultural values and norms and is not value-free (cf. Singer 2005: 9). Feminist and postcolonial theories are more current themes within the sociology of knowledge (cf. Knoblauch 2014: 252; 345). Feminist approaches criticize that knowledge, besides being embedded in power hierarchies, also still remains scientific, technological, militarized, racist and male dominated (cf. Rose 1997: 306f.). Knowledge always depends on one's location and position. Therefore, knowledge is always situated knowledge, which affects the whole process of knowledge production (cf. Haraway 1988: 348; 350; Rose 1997: 306f.). Feminist standpoint theorists argue that what is essential is not only the reflexivity to our own and to others´ practices, but also the recognition of different knowledges. Transdisciplinary research then should recognize diverse knowledge in the process of knowledge production. To realize this within transdisciplinary projects, feminist as well as postcolonial ideas have to be taken into consideration. Postcolonial thinkers criticise global asymmetries and power mechanisms and argue that the postcolonial critique leads to a change of perspective within the sociology of knowledge (which is enrolled in the ´western´[9] form of knowledge), the deconstruction of (neo-)colonial and Eurocentric discourses, and the analysis of the history of colonialism as an epistemic force. (cf. Singer 2005: 196) Transdisciplinarity is a further approach that can be understood as an alternative or opposing idea to the dominant knowledge system, that could – and partly already does– lead to a fundamental change in knowledge production (cf. Knoblauch 2014: 280f.), also called Mode 2 knowledge production. Mode 2 can be understood as the transition from knowledge which is primarily organized in a disciplinary way (Mode 1), to a transdisciplinary knowledge (Mode 2) (Nowotny n.d.). Mode 2 knowledge production[10] is about transcending disciplines and including different actors and their different knowledge in knowledge production processes. (cf. Pohl 2011: 619f.; Schmidt/Neuburger 2017: 54) Since KNOTS' Summer School 2018 took place in a transdisciplinary setting in the field of higher education, where learning and teaching played a crucial role, the paper – last but not least – focuses on approaches of transdisciplinarity in the higher education sector. Transdisciplinarity is understood as a critique of the dominant teaching model. It aims to create new forms of interactions between students and teachers, as well as new forms of knowledge production through participatory collaboration. Students and teachers construct their own knowledge, rather than receiving and accepting knowledge given by the teacher. (cf. Park/Son 2010: 85; Freire 2005: 72) These theories build the basis for understanding the process of knowledge production and accompanying power structures in transdisciplinary research projects like KNOTS. The results of the research are discussed in chapter 3, whereas chapter 2 describes how the research was carried out.

2. Methodology

[9] Certain terms are put in quotation marks to emphasize that these terms are taken from other authors and that the authors of this paper do not approve of their use, as this generates inequalities and/or differences

[10] For more information on Mode 2 knowledge production, see chapter 3.1.

The transdisciplinary approach is a work in progress[11] and will continue to play an important role in the future, particularly in the Higher Education sector. The research itself could not include the whole Higher Education sector and therefore was carried out within a particular transdisciplinary project, namely the KNOTS project. In the field, the following three methods for data collection were chosen: guideline-based interviews, participatory observations and questionnaires. In addition, the KNOTS project proposal for EU funding was analysed. Based on the KNOTS proposal, which deals with knowledge production and knowledge transfer, knowledge asymmetries and the contribution of the project to the solution of social problems (cf. KNOTS application 2015: 27-33), the following research question was taken into account:

How is knowledge conveyed and produced within the 'Summer School in Chiang Mai 2018' in terms of transdisciplinarity? The focus was on the role of knowledge, the participants' [12] contribution to knowledge transfer and production and knowledge hierarchies within the KNOTS project. Based on the participant's perceptions and inputs, the paper also discusses how a more equal process of knowledge production can take place within a project such as KNOTS as well as in transdisciplinary research generally.

2.1. Data Collection and Analysis[13]

The methodological triangulation, or mixed method approach was applied through: a. guideline-based interviews, b. participatory observations and c. questionnaires. Since the interviews only covered the lecturers' point of view, questionnaires were used to include students' perceptions. Thus, the inclusion of all participants in the KNOTS Summer School was guaranteed. As a research team, the investigator triangulation (Thurmond 2001: 254) gave us the opportunity to collaborate and discuss with one another which, in turn, enabled us to gain greater credibility concerning the observations and interpretations of the empirical data, as well as to increase the value of our findings. (cf. Thurmond 2001: 254) Different perspectives on the data could be gained, which led to constant reflection on our own positionality as coincidentally being both – researchers *and* participants of the KNOTS Summer School[14]. During the Summer School, seven guideline-based inter- views with six lecturers from the participating universities[15] and one person from the organizational team were conducted[16]. To obtain diverse perspectives, the lecturers were chosen by their different backgrounds: in terms of *gender*, *discipline/role in the KNOTS project*, *university* and *nationality*[17]. Seven different

[11] New ideas and contributions that this paper provides can be included in the concept as it is still evolving.
[12] Participants were all those who took part in the Summer School and its activities, namely students and academic staff.
[13] For a detailed discussion of the mentioned theories/methodologies see: Breuer 2010, Burges 1990, Dannecker/Vossemer 2014, Johnson 2007, Kearns 2010, Kuckartz 2014, Przyborski/Wohlrab-Sahr 2010, Saldaña 2016, Schultz 2014, Thurmond 2001.
[14] See chapter 2.2.
[15] Charles University, Chiang Mai University, Chulalongkorn University, Ho Chi Minh City Open University, Southern Institute of Social Sciences, University of Bonn, University of Vienna and the Vietnam Academy of Social Sciences
[16] It was important to gain the perspective of the person who led the organizational team for the Summer School and made decisions regarding content and presenters. For more on this, see chapter 3.3.
[17] Certain terms are written in italics by the authors of the paper to emphasize that they are prefigured terms taken from the literature, research findings or common discourse. We want to highlight the fact that such categories are socially constructed and, by using them, inequalities and/or differences are generated

sessions[18] were observed as part of our participant observation, as this "facilitates the collection of data on social interaction" (Burges 1990: 79) and supports other methods of data collection by adding additional information (Kearns 2010: 314f.).

In total, 39 questionnaires[19] with standardized and open questions were collected. Since only lecturers were interviewed, the questionnaire allowed for the inclusion of all participants' perspectives. This ensured the representation of different views and perceptions.

To analyse the data, the Grounded Theory and quantitative data evaluation were combined. All interviews, observation protocols and open questions of the questionnaires were coded. The following categories were formulated: the role of knowledge in transdisciplinary research, power relations, the reduction of hierarchies, group dynamics, role allocation and teaching. The quantitative data was collected by including standardized questions, which consisted of a scale from one to six. The data evaluation took place in Excel and followed the methods used by Udo Kuckartz (2014: 105). The results are presented in chapter 3.

Table 1: Overview of the participants' personal information in the questionnaires

Gender	University	Age
Male: 12	Charles University Prague: 1	20-25 years: 9
Female: 26	Chiang Mai University: 6	26-31 years: 14
Other: 1	Chulalongkorn University: 1	>31 years: 16
	Ho Chi Minh City Open University: 7	
	Southern Institute of Social Sciences: 1	
	Vietnam Academy of Social Sciences: 3	
	University of Bonn: 9	
	University of Vienna: 11	

Source: Authors.

2.2. Research Ethics

As part of Grounded Theory, transparency and self-reflection are important aspects of research. Moreover, as mentioned, all knowledge is situated, so that both researchers and their research are influenced by previous knowledge that results from social ascriptions and dominant discourses. (Schultz 2014: 75) In this context, Rose (1997: 307) addresses the fact that due to axes of social identity such as *nationality, race, age, gender, social and economic status, sexuality*, etc., the position of the researchers entails a situated knowledge and is embedded in power structures. Therefore, to redress presuppositions, previous knowledge, such as the position of the researcher[20] itself, has to be reflected (self-)critically. (Schultz 2014: 88)

The process of self-reflection accompanying our research focused on knowledge production, situated knowledge and positionality. Due to our double role of being part of KNOTS Summer School and analysing the workings of KNOTS at the same time, critical self-reflection was important. Since we

[18] These sessions consisted of different formats, e.g. plenary sessions, smaller group discussions and working groups.
[19] See table 1 for an overview of the participants personal information in the questionnaires
[20] This is of special importance in our research, as it is based on developmental sociology research, where previous knowledge is often embedded in colonial discourses. Thus, during the conduction of our research we kept in mind that all data is embedded in dominant discourses which influenced our presuppositions. (Schultz 2014: 88)

produced knowledge with our research, we were aware of the fact that, in contrast to our 'research objects', we held a privileged position (Rose 1997: 307) to decide which kind of knowledge is produced and disseminated, because we not only decided on what questions to ask but also how the collected data was to be interpreted and presented. Our previous theoretical sampling could have also influenced our observations or perceptions on how we perceived power structures, as well as the choice of interview partners and questions.
Moreover, conducting the interviews we were aware that, as young, female researchers from Europe, our positionality not only influences our perceptions, but also the respondent's answers. The other participants, such as our interview partners, framed us as students or young researchers from Europe, which might have changed their behaviour and answers. For instance, one interview partner framed us as European students who have better English language skills and knowledge of transdisciplinary research than Thai colleagues. Without knowing us, our interview partner automatically gave us a higher level of authority. (Dannecker/Englert 2014: 244) This was even more challenging as we dealt with postcolonial and feminist approaches, as well as with the transdisciplinary approach itself, before attending the KNOTS Summer School in Chiang Mai. Even if all these approaches aim to include different actors equally in producing and exchanging knowledge and we tried to abide by them, the mentioned ascriptions often hindered practicing equal participation. Therefore, hierarchies remained.

3. Results

The results gained from the collected data demonstrate four main aspects: a. transdisciplinarity and knowledge, b. transdisciplinarity and other forms of knowledge, c. knowledge and power relations, and d. the reduction of (knowledge) hierarchies.

3.1. Transdisciplinarity and Knowledge

To be able to discuss the subject of transdisciplinarity, which is closely linked to knowledge, this term had to be clarified and debated by the interview partners. The research results confirm that knowledge is a very complex and abstract term without a clear definition (cf. Knoblauch 2014: 10). Therefore, different understandings of the term exist.However, most of the interview partners had a similar understanding of the term knowledge, although they focused on different forms, like academic or local knowledge, and on the interaction of different forms of knowledge. The understanding of knowledge differs, as it is interlinked with the concept of situated knowledge. (cf. Haraway 1988: 348) This concept means that one's positionality, personal background and knowledge is always embedded in a social context, therefore it is never free of values. Some considered knowledge from a more "western scientific knowledge" (Studley 1998: 2) viewpoint, but generally acknowledged different "bodies of knowledge" (Schmidt/Neuburger 2017: 54), and that knowledge is socially derived.
In the literature on transdisciplinarity, producing socially relevant knowledge is one of the main goals (cf. Pohl 2011: 619f.; Choi/Pak 2006: 351, 359; Novy 2012: 138; Schmidt/Neuburger 2017: 54). Most interview partners state that knowledge within transdisciplinary research is (co-)produced through the interaction and exchange between different actors during the process of defining and working on a

problem together. In interview 1, the interview partner mentioned that the goal is for different actors to internalize the knowledge that is generated through transdisciplinarity and that their thoughts and behaviors change in that process. (Interview 1) These understandings of transdisciplinarity largely coincide with the literature on this topic[21], where transdisciplinarity is defined as the collaboration between different actors from different disciplines and backgrounds, whereby different forms of knowledge are valued and included. On this, Nowotny writes: "No discipline knows more than all disciplines [and that] [k]nowledge seeps in both directions, from science to society, as well as from society to science". (Nowotny n.d.) Overall, the interviewees not only describe the knowledge production within transdisciplinary research projects as a coproduction of knowledge but more broadly as an interaction process. With regard to social interaction, two respondents mention that transdisciplinarity can be understood as a way of producing actionable knowledge. Interviewee 3 stated that transdisciplinarity is about transforming the power of knowledge by including other's perspectives. (Interview 3)

In general, it can be said that the interview partners gave answers that were very similar to the literature on Mode 2 knowledge production and transdisciplinarity. The main aim of Mode 2 knowledge production is to reorganize academic knowledge, in order to discuss the relevant social problems. (cf. Pohl 2011: 619; Nowotny n.d.) An essential characteristic of Mode 2 knowledge production is the involvement of knowledge of different actors - from science, civil society, private and public sectors, and participatory research[22] - which would integrate both academic and non-academic actors. (cf. Pohl 2011: 619) In summary, within transdisciplinary research, knowledge is considered to be transgressive. (cf. Nowotny n.d.)

Since there is no single definition of the term transdisciplinarity (Nicolescu 2006: 1f.; 5; Pohl 2011: 619f.), there is some leeway for interpretation, which is also reflected in the answers of the respondents. Pohl (2011: 619f.) talks about different concepts of transdisciplinarity which do not all include all features related to transdisciplinarity but focus on certain aspects while leaving out others. The interviewees focused almost exclusively on joint-problem solving as a goal of transdisciplinary research, rather than a common definition or clear methodology. As mentioned in the introduction, the focus for people working with transdisciplinarity often lies on the practical aspects. In these cases, questions regarding the reduction of knowledge hierarchies cannot be tackled theoretically, but rather practical ideas are implemented. To expand the field of transdisciplinarity theoretically and methodologically, the sociology of knowledge could be included, to incorporate different forms of knowledge and to think about ways to reduce knowledge hierarchies.

3.1.1 Different Levels of Knowledge of Transdisciplinary Research

The participants had different levels of knowledge of transdisciplinary research. On the first day of

[21] For a detailed discussion of these approaches see: Choi/Pak 2006, Darbelley 2015, Dieleman 2013, Knoblauch 2014, Nicolescu 2006, Novy 2012, Nowotny n.d., Pohl 2011, Rosendahl et al. 2015, Schmidt/Neuburger 2017.

[22] Participatory Research, which gained in importance particularly during the 1980s, is an approach that aims to reduce power relations between the researcher and the community under research. Research participants which are mostly members of a community are no longer ´objects´ but ´subjects´ of the study. Participants therefore have control over the whole research process. Participatory research also involves action, in other words, problems are not only discussed but additional possible solutions and action are thought of. (cf. Neef 2019: 1-11)

the Summer School an introduction game was played, where all participants had to rate their own degree of knowledge of transdisciplinary research (cf. observation protocol 3). The results showed that according to the participants' own assessments, the knowledge of transdisciplinary research varied significantly. These findings were confirmed by the interviewees, who mentioned the different levels of knowledge of transdisciplinary research repeatedly. Moreover, the interviewees also differed in this respect: Some lecturers had an extensive understanding of transdisciplinary research, whereas others admitted that the topic of transdisciplinary research was new and not yet fully understood. One interview partner mentioned that all the knowledge of transdisciplinary research she gained was due to joining KNOTS project. (Interview 3)

This imbalance of knowledge of transdisciplinary research itself led to knowledge hierarchies among the lecturers and students. Some lecturers were very comfortable talking about the subject, while others were more cautious. Also, the fact that some interviewees learned about transdisciplinary research through KNOTS indicates a knowledge transfer from those participants of KNOTS who had already gained knowledge of transdisciplinary research before they became part of the project to those who joined the project with little to no experience in transdisciplinary research. The three interview partners who mentioned that the concept was new to them and that they only learned about it over the course of the KNOTS project were lecturers from Thai and Vietnamese universities. Also, during the introduction game it could be observed that especially participants from Southeast Asian institutions felt that they had little to no knowledge of transdisciplinary research. (cf. observation protocol 3) While the transfer of knowledge of transdisciplinarity through the KNOTS project reflects the idea of capacity building, as described in the KNOTS application (2015), it is also visible that transdisciplinarity is a 'western' concept, which is more known to Europeans. This will be discussed in more detail in the following chapter.

3.2. Reflection on the Usage of Transdisciplinarity and Not Including Other, Similar Concepts Like Thai Baan Research

During the analysis, a concept that was unknown to the authors of this paper came up, as it was mentioned in one of the questionnaires: Thai Baan Research. The principle idea is that local people do their own research to make local knowledge visible. (cf. Chainarong n.d.) Although local knowledge is a topic of interest in development studies, it is often seen as inferior to academic, scientific knowledge. Further, scientific knowledge is still often viewed as better suited to solve issues of communities and villagers. (cf. Vaddhanaphuti n.d.: 2) According to the Thai Baan Research concept, local people have a better understanding of their surroundings and the complexity of their situation. Thai Baan Research is regarded as a *"counter-hegemonic approach"*. (Chainarong n.d.)

The concept was created in 2000 as a reaction to the opening of the Pak Mun Dam in Thailand. Universities were instructed to do research on the effects, but some communities felt that the academics did not see the social reality and the ecological changes that they themselves could see. Local people are considered to have the wisdom and experience that is necessary to better anticipate how nature will be affected by certain changes. Moreover, doing villager-led research empowers local groups. Consequently, Chiang Mai University, along with regional NGOs and the Southeast Asia

Rivers Network, initiated Thai Baan Research. (cf. Chainarong n.d.)

> Thai Baan research is more than conventional participatory research. Villagers chose what they wanted to study and their communities decided who were to be members of the research team and key informants. They collected data as they went about their everyday life: fishing, making fishing gears, selling their catch, collecting plants and vegetables, and preparing food for Buddhist monks. Outsiders worked with them as advisors, research assistants and helped write and edit their report. The Thai Baan villagers are the authors of their own research. (Vaddhanaphuti n.d.: 2)

In contrast, transdisciplinarity is an approach that was created in Europe, by Europeans. The term was coined by Jean Piaget, Erich Jantsch and André Lichnerowicz at an OECD workshop in France in 1970. In 1994, the First World Congress of Transdisciplinarity took place in Portugal. Further approaches were created at the Zürich Congress and its main supporters are European academics. (cf. Nicolescu 2006: 1ff.) Transdisciplinarity could, therefore, be considered a European concept. While transdisciplinarity aims to not reproduce dominant structures, most articles published on transdisciplinarity were written by academics from the 'North'. (Schmidt/Neuburger 2017: 55) From a post-colonial viewpoint, it can be argued that this is an example that demonstrates that colonial power structures are still present. Grosfoguel, a Puerto Rican Sociologist, criticises that 'western' science and philosophy produce knowledge that is claimed to be universal, while it is not mentioned who produced this knowledge. (Grosfoguel 2007: 213-214)

During the Summer School, transdisciplinarity was the main topic of discussion, as it is the concept that guides KNOTS. No alternative form of knowledge production was discussed during the Summer School. Although Thai Baan Research was created with the assistance of Chiang Mai University, and this University organized the Summer School and Field Trips, it was not brought up during any of the lectures or field trips. It could have been included in the Field Trip to the Mekong River, for instance, where Thai Baan Research was practiced by local interview partners. It was a missed opportunity, since the introduction of a ´non-western´, counter-hegemonic approach that is in some ways similar to transdisciplinarity (although important differences exist) would have been a transfer of Thai knowledge to the ´western´ students and lecturers and could have led to a real and equal knowledge exchange. Instead, the transfer of a ´western´ concept to all participants took place.

In summary, Thai Baan Research shows a form of knowledge hierarchy between transdisciplinarity and other knowledge forms, which existed during the whole two weeks in Chiang Mai. This correlates closely to the next chapter, where other forms of persisting hierarchies during Summer School are analysed.

3.3. Knowledge and Power Relations

Although one aim of transdisciplinarity and the KNOTS project is to exchange knowledge equally (KNOTS application 2015: 36) by including as many perspectives as possible, the content of the collected data shows that knowledge hierarchies were still persistent in the KNOTS Summer School in Chiang Mai 2018. The data suggests that the strongest forms of power relations manifested between

students and lecturers, and between Southeast Asian and European participants[23]. Further topics in regard to power relations were different levels of English language proficiency and the inequality between *men* and *women**[24]. By taking the intersectional concept[25] into consideration, it is clear that all forms of hierarchies mentioned in this chapter are interlinked. The types of hierarchies mentioned cannot be considered to be separate and unrelated issues, as they are, in fact, interwoven. This is exemplified by statements like "old white men". (Questionnaire 2) Power structures and hierarchies do not exist in isolation, meaning they never just exist between students and lecturers or just because of language. Each of the following subchapters focuses on one of the mentioned forms of hierarchies, but interlinkages are visible throughout.

In this chapter, not only intersectionality has to be considered, but also by whom the Summer School 2018 was organized. It needs to be reflected that the KNOTS Summer School and Field Trips 2018 was organized by the Chiang Mai University and its staff working for the KNOTS project. This chapter shows that hierarchies regarding knowledge existed and the reduction of hierarchies was not considered in some of the planning for the Summer School, i.e. who was responsible for the organisation and presentation of certain sessions and which topics should be covered. The exclusive focus on transdisciplinarity and the dominance of European male lecturers was decided by the Chiang Mai University, within the frame of the KNOTS program. For this, a postcolonial view can be considered. Even if the location of knowledge production would be considered - in this case the decision-making by the staff of the Chiang Mai University - a further differentiation between the 'epistemic location' and the 'social location' of a person is necessary. A person who finds him or herself in a 'disadvantaged' position may still think like people in dominant positions. This shows the success of the world-system that still adheres to colonial ways. (cf. Grosfoguel 2007: 213-214; Quijano 2007: 174)

3.3.1 The Perception of Knowledge Hierarchies in KNOTS Summer School and Field Trips

While the majority of the participants observed hierarchies and noticed power relations, some mentioned that they did not notice any such hierarchies. With regard to the questionnaires, seven out of 39 questioned participants indicated that they did not perceive any (knowledge) hierarchies within KNOTS Summer School and Field Trips (Questionnaires 1, 14, 22, 24, 29, 36 and 37).

A few of the participants tried to identify possible reasons for the emergence of the hierarchies that

[23] This conceptualization was taken over from the empirical data, where the respondents mainly talked about "Europeans" or "Southeast Asians". Nevertheless, we are aware that the use of these terms has to be critically examined, as they have a strong tendency to homogenize members of the same ethnic groups, thus, deemphasizing possible differences between them.

[24] This word is marked as a quotation by the authors in order to distance themselves from the norm of the binary sex categorization and also to draw attention to people who do not (want to) identify with a dichotomous *gender* image.

[25] Instead of a master category such as *woman*, the intersectionality, which means the overlap or interaction of different entangled differences such as *gender*, *sexuality*, *class*, *nationality/ethnicity*, *age*, *religion*, etc. is analysed empirically and theoretically. (cf. Burchardt/Tuider 2014: 392) With this concept, which Kimberlé Crenshaw introduced in 1989, categories of inequality can be analyzed. These social categories are interconnected and cannot be examined separately from each other. Concerning scientific research, researchers should always consider how relations of oppression are (re)produced and accompany the whole research process. (cf. Klapeer 2014: 57-71; McCorkel/Myers 2003:210f.; 200f.)

were mentioned. Language was mentioned as one important factor that can be used to explain power asymmetries. Some (Questionnaires 8, 10, 13, 31) believed that different universities, countries, (academic) backgrounds, and disciplines foster different mindsets, which were identified as a reason for the hierarchies they experienced. For some, this led to differences in the level of participation. Vietnamese students were specifically mentioned in this regard: "some Vietnamese students were not eager to undermine the opinion of the teachers / professor". (Questionnaire 12) Also in this statement: "another form of inequality existed between some students from Vietnam and other students due to their academic training, which is less critical". (Questionnaire 15) Three out of these four questionnaires were filled out by participants from Universities from Bonn and Vienna. This singling out of Vietnamese students is a form of 'othering'[26]. In this regard, the topic of othering could be discussed more closely in future projects, as it came up a few times during our analysis.

3.3.2 Power Relations between Academic Actors in Knowledge Production and Transfer (Student-Lecturer Hierarchies)

While the majority of the interviewed lecturers focused on the benefits of the students by identifying them as the primary beneficiaries of the Summer School, students´ opportunities for participation were limited because of the lecture format. Many sessions consisted of presentations by lecturers, while only a few discussion rounds took place (in which lecturers were also relatively dominant). Depending on the lecturer, the opportunity for discussions and questions varied and students could not always give their input (Observation protocols 2, 3). Therefore, a major finding in the analysis was that power relations were highly present within the academic sector, especially between students and lecturers. Three out of seven interviewed persons mentioned that participating professors had more power in the Summer School than students. These student-teacher hierarchies were most focused on in the observation protocols as well as in the questionnaires, where 16 out of 39 participants referred to this form of power relation. Moreover, 4 out of 16 people who stated in their questionnaires that they did perceive hierarchies, criticized European professors for being particularly dominant.

Most sessions were presentations by lecturers, a very classical setting in which lecturers talked and students listened. Although there was generally room for questions and discussions after the presentations, the plan some lecturers had of including students actively did not translate into their actions. This could be explained by the relatively strict teaching and presentation format, which may have hindered lecturers in including students more. However, observation protocol 2 references a smaller group discussion that took place apart from the regular lectures, describing how the interaction between all participants happened on an equal basis. Everybody had equal speaking time

[26] ´Othering´ is a term that not only encompasses the many expressions of prejudice on the basis of group identities, but we argue that it provides a clarifying frame that reveals a set of common processes and conditions that propagate group-based inequality and marginality. [...] We define "othering" as a *set of dynamics, processes, and structures that engender marginality and persistent inequality across any of the full range of human differences based on group identities*. Dimensions of othering include, but are not limited to, *religion*, *sex*, *race*, *ethnicity*, *socioeconomic status (class)*, *disability*, *sexual orientation*, and *skin tone*. Although the axes of difference that undergird these expressions of othering vary considerably and are deeply contextual, they contain a similar set of underlying dynamics". (Powell/Menendian 2018, para. 7-8)

and equal chances to express and exchange their knowledge. In contrast, questionnaire 25 tells of a different experience on the smaller group discussion by suggesting that "[l]ecturers should step back a little bit more in group discussions in order to give space to participating students". This shows that the smaller group discussions were experienced quite differently.

For the most part, these findings are contradictory to the aim of transdisciplinarity in higher education. Unlike in transdisciplinary learning settings, students could not participate that much; rather, lecturers delivered knowledge to the students, as it is done in disciplinary learning settings. Therefore, students did not become knowledge producers themselves, but rather remained pure depositories, as the critical educator Paulo Freire (2005: 72) would say. In a transdisciplinary learning format, not only pupils should learn, but also lecturers. Both, then, would collaborate in producing and exchanging knowledge. Transdisciplinarity in higher education aims for a concept of equal knowledge exchange, including the creation of space for dialogue, collective thinking and equal ways of communication. (cf. Novy 2012:141) Therefore, in further projects more space should be opened for students: for example, students could also be part of presenting and giving inputs before discussion rounds[27].

3.3.3 Power Relations Between European and Southeast Asian Participants

As already mentioned, power relations between different participating institutions play a major role in the collected data. The schedule of the Summer School, determined by the organiser of the Summer School, showed that especially men from European universities dominated topics such as transdisciplinary research and social inequality, whereas lecturers from Southeast Asian institutions were mainly responsible for presenting ongoing research in the region. Although regional lecturers presumably have more 'expertise' on research in the region, the class on field research methodology was held by a professor from the University of Bonn. Moreover, the whole Summer School was moderated by female staff from the University of Vienna. These findings show that staff from European institutions especially dominated the Summer School by moderating, organizing, transferring contents and holding lectures.

In reference to role allocation within the Summer School, the schedule demonstrates that all facilitators, which were responsible for coordinating the lectures (divided into three topics: migration, inequality and environment) are from European institutions. Although the aim of the coordinator and the KNOTS programme in general was to include all participating higher education institutions equally (Interview 6; KNOTS application n.d.: 36), the observations and the schedule of the Summer School prove that this was not the case, as indicated by the clear dominance of European staff.

Furthermore, the results of the questionnaires and interviews confirm these hierarchies between European and Southeast Asian Participants. This affects not only staff members but also students. Three of the interviewed lecturers argue that a difference between students from Southeast Asia and Europe during Summer School existed. For instance, it was mentioned that Southeast Asian students are shyer compared to European students and therefore participated less. (Interview 6) Also, it was pointed out that even European students talked less than the lecturers from Europe. One reason given

[27] For more ideas on the reduction of hierarchies, see chapter 3.4.

for that was the knowledge levels in general and more particularly language skills. It was assumed that Southeast Asian Students, and especially Vietnamese students, were less skilled in the usage of the English language. (Interview 4) This statement combines the above-mentioned student- teacher hierarchies with power asymmetries between the students. This builds on the assumption that English is a language that is foreign to most Southeast Asians, while implying that this is not true for Europeans. This has to be seen critically as it is an ascription of abilities to a certain group of people, namely ´western´ educated staff and students. These ascribed characteristics put a certain group in a position of authority and power. (cf. Dannecker/Englert 2014: 244)

In general, the existence of this form of hierarchy can be explained from a postcolonial perspective: "[W]e still live in a colonial world and we need to break from the narrow ways of thinking about colonial relations, in order to accomplish the unfinished and incomplete twentieth century dream of decolonisation". (Grosfoguel 2007: 221) This statement by Grosfoguel is as important today as it was back then, as problematic statements regarding ´western´ and ´non-western´ knowledge were made by two male interview partners, from Europe and Southeast Asia. An answer to the question on the inclusion of Southeast Asian scientists/authors in future sessions - as most sessions were dominated by ´western´ sources - was that Thai scientists can be considered. Nevertheless, they should have some form of 'western' education, as that would give them knowledge of modern theories and methods. (Interview 4) This shows the speaker's appreciation of European scholars, and how the dominant knowledge system is still embedded to a certain extent in the minds of some academics ´Western´ academia is deemed to be more modern. Other forms of knowledge, or even scientific knowledge from other geographical locations, are considered inferior. The only way that Thai knowledge would have been considered equal under these conditions is if it had the epistemic location of ´western´ academia. The dominance of the 'West' preserves its status by strengthening its own structures, like languages, theories, and methods. (Schmidt/Neuburger 2017: 63) Another statement was made that elevated European participants above their Southeast Asian colleagues by stating that students and professors from European institutions were more eloquent, had more knowledge and even were considered *"better"* (Interview 6) than their Southeast Asian counterparts. This is an external ascription by the interviewee, who assumed that the European lecturers and students are 'better' and more articulate than the Southeast Asian Participants.

Overall, the questionnaires show that 14 participants confirmed that in the Summer School and Field Trips, hierarchies between Europeans and Southeast Asian Participants existed. The participants perceived hierarchies especially during discussions, stating that students as well as lecturers from Europe generally participated more and led most of the discussions and had longer speaking times. Students from Vienna & Bonn were mentioned in this context. (Questionnaire 16, 25, 26)

The results so far contradict the theoretical arguments of how transdisciplinary research should work. They show that the critical approaches are valid and necessary, as the practical implementation of transdisciplinary research is far from optimal. In transdisciplinarity, different groups should be involved in knowledge production. In this context, Knoblauch (2014: 287) states that this would result in a relativization of the dominant *white, ´*western*´,* male position.

3.3.4 Power Relations between Men and Women*

The results show that (knowledge) hierarchies regarding *gender* were also part of the respondents' observations and reflections. During the five days of Summer School, most content-based and not-facilitation-based sessions were led by male lecturers. Five out of the 16 participants who perceived hierarchies mentioned that in the Summer School, men dominated not only in knowledge production (Questionnaire 33), but also occupied "representative positions". (Questionnaire 18)
In feminist literature, it is mentioned that historically, women* have been excluded from University institutions. So far, despite criticism and the fact that gender inequality is now largely recognized, to this, the feminist approach points out that the dominant position of man and *white* in science still remains dominant. (cf. Knoblauch 2014: 253f.) This statement cannot stand unreflected, as the quantitative data shows that more female participants attended the Summer School than male participants. (cf. Table 1) Having said this, taking the feminist approach into consideration, the female share on holding content-based sessions was still low, as mentioned in feminist critique. This leads to a lack of different perspectives in academic discourses and sessions during the Summer School in Chiang Mai 2018. (cf. Knoblauch 2014: 253f.) It needs to be considered that the choice of lecturers and sessions were made by the organization team of the Chiang Mai University. The individuals who presented presumably had no influence on the selection of the lecturers.

3.3.5 Power Asymmetries Through Language

Language plays an essential role in society and therefore has also been considered in connection to the production of knowledge (cf.Knoblauch 2014: 33-35). This was taken into consideration not only by some of the interviewed lecturers, but also by other participants of the Summer School. In interview 7, during which language was mentioned as another example of power relations, the interviewer and interviewee argued that it was challenging to use English, the common language of the project, as using a lingua franca is different from communicating in one's native language. The interviewee adds that being expected to use English, which is a second language for most participants, could have been the reason for low participation, but does not refer directly to asymmetries between participants from Europe and Southeast Asia. (Interview 7) The same interviewee states that English is "the language of the more powerful" and therefore will always "produce and increase inequalities" (Interview 7), which results in the exclusion of certain people.
According to the Italian philosopher who is part of the sociology of knowledge, Giambattista Vico, language has also to be taken into account when producing knowledge. Throughout history, language plays an essential role in the transfer of knowledge, since it allows us to formulate, convey and communicate knowledge. But like thought processes, language is socially determined and can therefore not express our individual experiences. (cf. Knoblauch 2014: 25) Each society can only express their

thoughts and knowledge in terms that are their own, i.e. form part of their language in a certain time and place. Language influences how societies are structured: Vico claims that language is a producer of social order and social change. (cf. Knoblauch 2014: 33f.)
The results demonstrate the dominance of the common language English, which is used as lingua franca, and shows how participants with a good grasp of the language had an easier time participating. Still, the usage of English, compared to any of the other languages spoken by participants, meant that the smallest possible number of people were excluded from being able to participate. While some other forms of hierarchies could have been reduced more easily, language skills could not be tackled in this setting, as the goal was to have participants with various mother tongues discuss ideas and exchange different kinds of knowledge.

3.3.6 Perceived Power Relations in the Quantitative Data

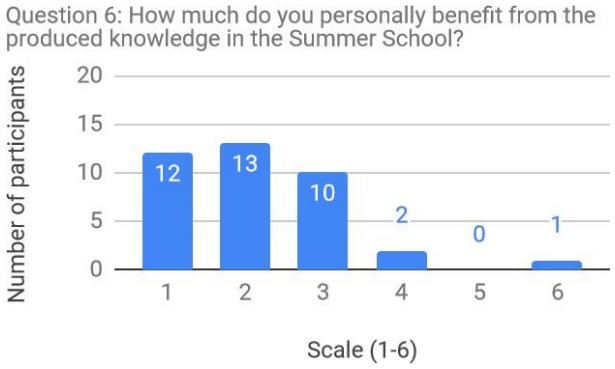
In the questionnaires, the participants were asked how much they were able to contribute their knowledge during the Summer School, if they personally and academically benefited from the generated knowledge and how much their input was appreciated by the other participants. This data was gathered through standardized questions, which consisted of a scale from 1 (Very much / Very well) to 6 (Not at all). The values 1 to 3 are considered to have a more positive connotation, while the values 4 to 6 are considered to have a more negative connotation.
In general, most of the participants felt that they could contribute their knowledge to the Summer School and that their knowledge was appreciated by both students and lecturers. In the three questions (Question 9,10 and 11) regarding this topic, 7, 4 and 5 out of 39 participants, respectively, felt that they could not contribute their knowledge very well and/or that their input was not appreciated (see table 4-6). It is noticeable that a majority of the participants who felt that way were women* from Southeast Asian universities. However, a large percentage of those who indicated that they could contribute very well and their contribution was highly appreciated by the other participants were female students from the University of Vienna. This indicates that hierarchies existed especially between men and women* and between participants from Southeast Asian and European universities. These results are a strong indication for the existence of inequality or power asymmetries that emerge through different social axes like *gender* and *nationality.*[28]
Out of the 39 participants, only 3 felt that they did not benefit much from the produced knowledge of the Summer School, personally and/or for their future research (Questions 6 and 7). Therefore, almost all participants felt that they benefited from the produced knowledge. This shows that even though knowledge exchange did not always take place on equal terms and hierarchies continued to exist, almost all lecturers and students, no matter their *gender, age or nationality*, gained knowledge during the

[28] The groups that were considered here, like "female students from Southeast Asia" or "female students from Europe" were quite heterogeneous. While female students from Vienna were the largest "group" who recognised male-female hierarchies and they also were among the participants who felt most appreciated. And while four out of the seven students who said they did not feel hierarchies in the Summer School were female participants from Southeast Asian universities[#], they also made up the majority of participants who stated that their input was not appreciated. Although there were a few instances of such 'contradictions' within the same questionnaire, this was generally not the case. Therefore, individual experiences cannot be easily explained by putting people into categories such as *gender, age* or *university.* This is why intersectionality was considered in this paper, as it deals with this challenge and recognises that the categories that were brought up in this paper are interlinked.

Summer School.

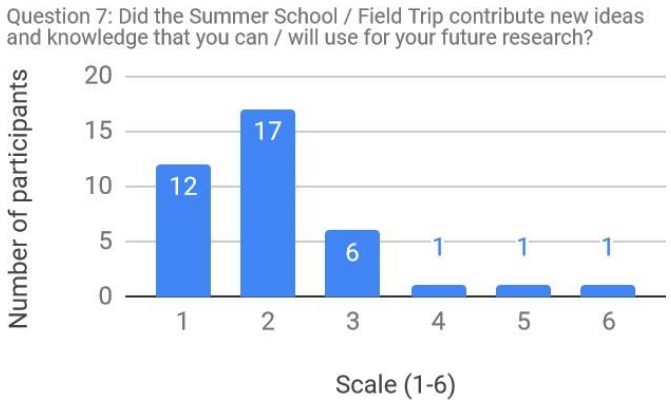
Even if hierarchies regarding the status of lecturers and students, and knowledge hierarchies regarding knowledge of a certain topic remain, knowledge can still be negotiated within those power structures, if a debate between the different participants takes place. For instance, if students raise their own viewpoints or add their own knowledge to a conversation, lecturers can also learn from that and adjust/broaden their knowledge. To this, Freire states that "Education must begin with the solution of the teacher-student contradiction, by reconciling the poles of the contradiction so that both are simultaneously teachers and students". (Freire, 2005: 72)

Table 2: Personal benefits from generated knowledge (Scale 1 (Very well) to 6 (Not at all)



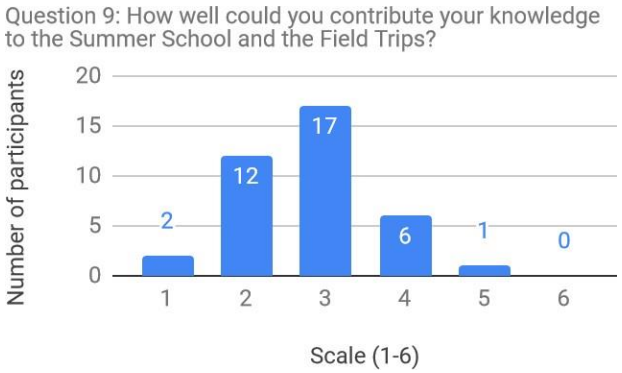
Source: Authors.

Table 3: Summer School contribution to knowledge for future research (Scale: 1 (Very much) to 6 (Not at all))



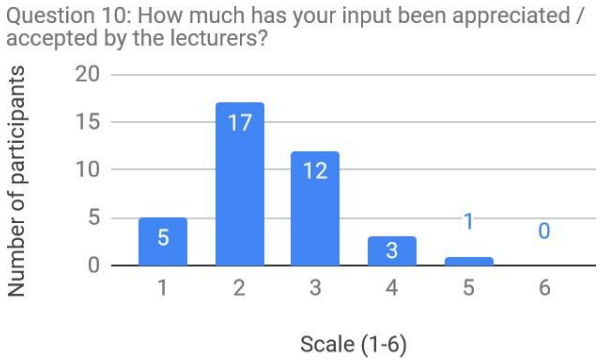
Source: Authors.

Table 4: Participants contribution to knowledge (production) (Scale 1 (Very well) to 6 (Not at all)



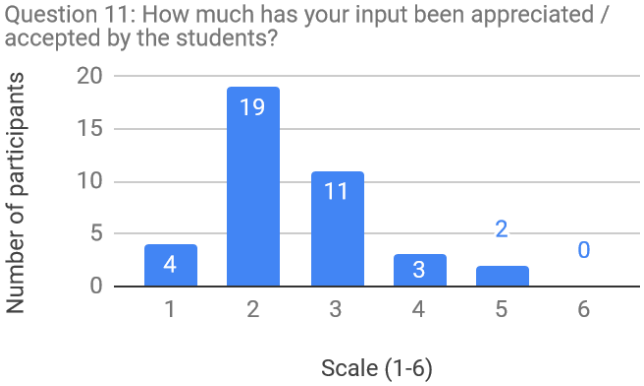
Source: Authors.

Table 5: Appreciation of the participants inputs by the lectures (Scale 1 (Very well) to 6 (Not at all)



Source: Authors.

Table 6: Appreciation of the participants inputs by the students (Scale 1 (Very well) to 6 (Not at all)



Source: Authors.

3.4. Reduction of (Knowledge) Hierarchies

While the perceptions of (knowledge) hierarchies and power structures were analysed in the previous subchapters, this subchapter explains if and how such hierarchy structures can be reduced in a transdisciplinary project like KNOTS. Further, it looks at the attempts and efforts that have been taken in this regard. As transdisciplinary research is a work in progress and a relatively new approach, challenges and criticism have to be considered (cf. Rosendahl et al. 2015: 17). For the further development of the approach, for example, the question remains open to how a shift of knowledge production (from Mode 1 to Mode 2) can effectively break or lessen already existing asymmetries and lead to the inclusion of different perspectives and actions in an equal way. In this context, Rosendahl et al. (2015: 17, 26) mentions that the inclusion of different actors in a project is not enough to guarantee equality.

All interviewees perceived power structures in the KNOTS project as visible, but in different forms and dimensions. Three of them add that "power relations are everywhere" (Interview 7), and that it is only possible to reduce them, but not to eliminate them completely. This standpoint is also expressedby Schmidt and Neuburger: "Although power-free spaces will not exist, revealing and reflecting existing structures is essential to slowly approach the ideal of ITR." (Inter- and transdisciplinary research) (Schmidt/Neuburger 2017: 55) Although power structures can never be completely abolished, a transdisciplinary setting can at least open a space to reduce them.

With reference to the question of how knowledge hierarchies can be reduced, Interviewee 1 gives a general input on how to manage this situation "by catalyzing debate and trying not [to] be authoritative of what the true interpretation [is]." (Interview 1) Further, the interviewee implies that by categorizing specific matters, by stating "this is how we do [it][...]", the understanding of issues becomes limited. It is necessary to consider different kinds of viewpoints and interpretations by engaging all participants that take part in the KNOTS project so that everyone can learn from each other. This can broaden the horizon, which means that the participants actually profit from projects such as KNOTS (cf. Table 2), as this is the main goal of the project. (cf. KNOTS application 2015: 31)

Interviewee 3 states that the transdisciplinary approach enables researchers to overcome disciplines by including different perspectives and aspects into their work. Interviewee 3 adds that transdisciplinary settings attempt to change the level of involvement, which can already be seen as the beginning of the transformation of knowledge hierarchies. (Interview 3) With this point of view, the boundaries of modern science as the dominant knowledge paradigm can be overcome. Even though in different knowledge systems science is always a process of acquiring knowledge, critical views perceive science as an interactive process, in which power relations are embedded. (cf. Hay 2006: 263, 61) Science, research and knowledge production are always linked to questions of power, different interests, positionality and hegemonic ideas and systems. To name one example: it must always be questioned, who has access to (scientific) knowledge, who is excluded, and why certain scientific discoveries have more (power) relevance than others. (cf. Pühretmayer 2012: 37)

Relating lecturer-student hierarchies, which were most strongly perceived, Interviewee 2 acknowledges that the professors are responsible for their sessions, as they prepare presentations and materials for each topic in order to transfer their knowledge and explain certain issues to the students. Nevertheless, even though students are partly seen as receivers of the transferred knowledge, Interviewee 2 states that

students play an important role by engaging in discussions and by exchanging knowledge with other students. This implies a stronger involvement of participating students within the KNOTS project. The interviewee did not mention his/her personal contribution, but sees teachers as the responsible persons to reduce hierarchies. Contrarily, Interviewee 4 speaks out more strongly on the personal contribution to the reduction of knowledge hierarchies. By stating that hierarchies can be lessened by listening more to what others have to say, instead of constantly talking.

Further, Interviewee 4 also considered physical aspects: Changing the sitting positions for example, that could already help to reduce physical hierarchies. This argument matches the observation protocols, which demonstrate that two of the respondents (including respondent 4), changed their sitting positions several times during lectures and discussion panels. (cf. observation protocol 4 and 5) The interviewee decided to switch between the two roles of an "active" (talking) and "passive" (listening and observing) participant (Interview 4), in order to give more space to others to participate. This can be seen as a step forward and a positive transformation in adapting the transdisciplinary approach and by reflecting on one's personal actions.

Moreover, Interviewee 4 adds that, especially in a transdisciplinary framework, all participants should attend classes from the beginning, where "different thoughts of styles" (Darbellay 2015:163) are presented to create a common basis of understanding. That is why it is important that all participants participate from the beginning to ensure that they are on the same level of knowledge, which is the precondition for an equal collaboration and working exchange which, in turn, helps to avoid and/or reduce knowledge hierarchies. Nevertheless, as mentioned by Haraway (1988: 347), through situated knowledge everyone is at a different level of knowledge, which should not be seen as a negative impact, but as a mutual enrichment for each other.

Apart from the lecturer's personal attempts and ideas to reduce hierarchies, other efforts to transform (knowledge) hierarchies in the Summer School could be observed: The KNOTS Summer School was structured in a way that, apart from content-based sessions by the lecturers, discussions in smaller groups took place. Through this division into smaller groups, certain structures and hierarchies were reduced. This open (discussion) format gave participants the opportunity to participate and to express themselves more freely, and provided a room for a more trustful exchange (cf. observation protocol 6). Moreover, observation protocols 2 and 6 demonstrate that the setting of the smaller group discussions was utilized with the intent of being more inclusive, which was achieved by creating a circular sitting order. The formation of circles fosters the interaction between all participants and can be seen as an (un)intended attempt to reduce hierarchies. Students were also asked to sit next to people that they had not spoken to very often. (cf. observation protocol 6)

A further attempt that was taken to reduce hierarchies within the group was that in one small group discussion (Observation paper 2) the moderator tried to lead the discussion by starting to ask questions to the entire class. By doing this, the floor was opened for discussion and a more interactive dynamic developed (Observation paper 2). Thereby she tried to extract knowledge and perspectives from students, or motivate them to participate, instead of maintaining the predominant teaching method and transferring knowledge and information into one direction. (cf. Freire 2005: 72) In dominant education systems, teachers deposit content and knowledge, while students are the depositories**:** "Instead of communicating, the teacher […] makes deposits which the students patiently receive, memorize, and repeat". (Freire, 2005: 72) Students partake only passively in knowledge production by "receiving, filling and storing the

deposits". (Freire, 2005: 72) Freire identifies this as a "misguided system", where students´ creativity, transformation and knowledge are oppressed, as knowledge would only emerge through interaction between people. (cf. Freire, 2005: 72) "Education must begin with the solution of the teacher-student contradiction, by reconciling the poles of the contradiction so that both are simultaneously teachers and students". (Freire, 2005: 72) The moderator intended to initiate more interactive discussion, including different participants' perspectives in (re)producing knowledge. This can be seen as an attempt to produce a transdisciplinary learning setting, where students participate and are interactively engaged in cooperation, based on shared learning objectives and problems. In contrast to more conventional learning settings, whereteachers deliver knowledge to the students (knowledge receivers), in transdisciplinary learning, teachers become interactive learning designers, while students become knowledge producers. (cf. Park/Son 2010: 82-84) To sum up, this example shows that the shift of Mode 1 to Mode 2 knowledge production can be achieved, at least partly, by taking a step back and asking questions in order to receive knowledge from other actors.

Moreover, Interviewee 5 expressed that, although attempts were made to enable an open exchange within the Summer School, certain hierarchies remained. Interviewee 5 stated that one of the lecturers of the Summer School used to be his/her supervisor and mentioned that through the difference in terms of "[...] rank between the professor and students" a hierarchy existed. However, the interviewee adds that through the organization of the KNOTS project, the Summer School gives room for discussion in which all participants are invited to contribute their knowledge in an equal manner despite the predetermined role of lecturers and students. Interviewee 5 clearly stated that in the Summer School, people were given the opportunity to disagree with others and were also able to express their own opinion. (Interview 5)

Even though the participants attempted, or at least mentioned ideas on how to reduce knowledge hierarchies (see above), it still appears that certain structures are difficult to overcome. (cf. Schmidt/ Neuburger 2017: 55) However, it has to be kept in mind that the transdisciplinary approach is a new framework that still needs time to change the mindset of different actors. Moreover, it is still a subject of debate if its implementation is even possible and enforceable. (cf. Interview 3) Members of transdisciplinary projects face suboptimal conditions, and while transdisciplinarity sounds interesting and exciting, it may still end up as an intellectual concept rather than a practical approach. (cf. Interview 4)

4. Conclusion

This paper looked at the KNOTS Summer School 2018 in Chiang Mai regarding transdisciplinarity and knowledge production and transfer. The example was used to raise arguments that concern transdisciplinarity as a whole. As explained in the paper, transdisciplinarity challenges old prevailing structures and conceptions of academic knowledge production. Still, in contrast to our research, articles on transdisciplinarity usually do not address power structures directly. (Schmidt/Neuburger 2017: 54f.) Therefore, the question remains how such a shift can effectively break already existing asymmetries and implement different perspectives and actions in an equal manner.

The results of the research demonstrate that power hierarchies still exist in a transdisciplinary setting like the KNOTS Summer School. The most noticed hierarchies were in the realms of role (student-lecturer), nationality (Southeast Asian or European), language and gender. These are interlinked

hierarchies that cannot be looked at in isolation. In addition, other forms of knowledge production and knowledge exchange, such as the Thai Baan Research, were not included in the Summer School. Instead, the knowledge transfer of transdisciplinarity as a ´western´ concept dominated. Overall, during the KNOTS Summer School some attempts of reducing hierarchies by appreciatingand including other forms of knowledge in knowledge production processes were visible. Attempts include changing the format of some sessions, changing sitting positions, and motivating students to participate and being part of knowledge production processes. However, "power relations are everywhere" (Interview 7) and it is possible to reduce them, but not to eliminate them completely[29].

For further research, this paper raises the following questions: how does transdisciplinarity plan to integrate different forms of knowledge? And how does transdisciplinarity reduce hierarchies with it? In many articles on the topic, knowledge is a term that is used without further clarification. It is not considered how knowledge production and transfer can take place in practice. As was mentioned in the introduction and as it was also seen in the project[30], most people working within the transdisciplinarity domain have a practical interest and do not consider theoretical and methodological aspects. Transdisciplinarity does not have a strong epistemological foundation. Considering that knowledge is a key point in transdisciplinarity, and Mode 2 knowledge production is often mentioned, the term and its meanings need to be included more in debates and discourses on transdisciplinarity. It is also argued that an equal knowledge exchange, which includes various actors and forms of knowledge, is part of transdisciplinarity. Therefore, more thoughts should be invested in how this can be achieved. Although transdisciplinarity "represents a new thought style and a promising future for education and research" (Darbellay 2015: 163), the approach still has to be evolved. This paper states that the inclusion of other perspectives and other critiques of the dominant knowledge system, for instance the sociology of knowledge, feminist and post-colonial approaches, could benefit the approach to transdisciplinarity, as they discuss the questions that are not yet sufficiently answered.

The goal of transdisciplinarity, i.e. creating a space that is not only dialogue-based, but also open for mutual-learning and critical reflection, (Schmidt/Neuburger 2017: 54), is an attempt to lessen hierarchies and offers an opportunity for a new movement of knowledge production. Even if power structures will always exist, they can at least be reduced by including other viewpoints. For enhancing the approach and ensuring its potential, it is necessary to integrate constructive criticism. It is important to get all participants on board with the idea of leaving behind the dominant knowledge system and the patriarchal, Eurocentric and (neo)colonial structures that are embedded therein, and to value each input equally.

As Novy (2012: 139) adds to Paulo Freire (1989: 39): "as ´nobody knows everything, nobody knows nothing´ we can all learn from each other".

[29] A paper by Schmidt/Neuburger 2017 states exactly this. The paper is a constructive critique of transdisciplinarity and correlates with our findings.

[30] See chapter 3.1

Table of Figures

Bibliography

Berger, Peter L./Luckmann, Thomas (2016): Die gesellschaftliche Konstruktion der Wirklichkeit. Eine Theorie der Wissenssoziologie. Frankfurt am Main: Fischer Taschenbuch Verlag.

Breuer, Franz (2010): Reflexive Grounded Theory. Eine Einführung für die Forschungspraxis. Wiesbaden: VS Verlag für Sozialwissenschaften.

Burchardt, Hans-Jürgen/Tuider, Elisabeth (2014): Das vermachtete Subjekt: Feministisch-postkoloniale Perspektiven auf Entwicklung. In: Müller, Franziska et al. (Eds.): Entwicklungstheorien. Weltgesellschaftliche Transformationen, entwicklungspolitische Herausforderungen, theoretische Innovationen. PVS-Sonderheft 48, Baden- Baden, 381-404.

Burges, Robert (1990): Methods of Field Research 1: Participant Observation. In: In the Field: An introduction to Field Research. London: Routledge, 78-100.

Chainarong, Sretthachau (n.d.): Case Study for Empowerment and Democratisation High Level Panel. Thai Baan Research (Villagers' Research): Local Wisdom for Resources Management. Living River Siam Association, http:// www.livingriversiam.org/2work/tb/tb_a7.html (25.1.2019).

Choi, Bernard C K/Anita W P Pak (2006): Multidisciplinarity, Interdisciplinarity and Transdisciplinarity in Health Research, Services, Education and Policy: 1. Definitions, Objectives, and Evidence of Effectiveness. In: Clin Invest Med 29(6): 351-364.

Dannecker, Petra/Englert, Birgit (2014): Praktische und ethische Aspekte der Feldforschung. In: Dannecker, Petra/Englert, Birgit (Eds.): Qualitative Methoden in der Entwicklungsforschung. Wien: Mandelbaum, 233-265.

Dannecker, Petra/Vossemer, Christiane (2014): Qualitative Interviews in der Entwicklungsforschung. Typen und Herausforderungen. In: Dannecker, Petra/Englert, Birgit (Eds.): Qualitative Methoden in der Entwicklungsforschung. Wien: Mandelbaum, 153-175.

Darbellay, Frédéric (2015): Rethinking Inter-and Transdisciplinarity: Undisciplined Knowledge and the Emergence of a New Thought Style. In: Futures 65, 163–174.

Dieleman, Hans (2013): From Transdisciplinary Theory to Transdisciplinary Practice: Artful Doing in Spaces of Imagination and Experimentation. In: Transdisciplinary Theory & Practice, United States of America: TheATLAS, 67-85.

Freire, Paulo (1989): A importância do ato ler: em três artigos que se completam. Cortez, São Paulo.

Freire, Paulo (2005): Pedagogy of the Oppressed. 30th Anniversary Edition. New York/London: continuum, 71-86.

Grosfoguel, Ramón (2007): The Epistemic Decolonial Turn. Beyond political-economy paradigms. In: Cultural Studies 21(2-3), 211-223.

Haraway, Donna (1988): Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. In: Feminist Studies 14(3), 575-599.

Hay, Colin (2006): Political Analysis. A political Introduction. Basingstoke: Palgrave.

Huff, Toby E. (2017): The Rise of Early Modern Science. Islam, China and the West. Cambridge: Cambridge University Press.

Johnson, R. Burke/Onwuegbuzie, Anthony J./Turner, Lisa A. (2007): Toward a Definition of Mixed Methods Research. In: Journal of Mixed Methods Research 1(2), Sage Publications, 112-133.

Kearns, Robin (2010): Being There: Research through Observing and Participating. In: Hay, Iain (Ed.): Qualitative Re- search Methods in Human Geography. Ontario: Oxford University Press, 313-333.

Klapeer, Christine M. (2014): Intersektionalität statt ein verlegenes *et cetera*: Methodologische Impulse zum Umgang mit der Verwobenheit von ungleichheitsgenerierenden Kategorien. In: Dannecker, Petra/Englert, Birgit (Eds.): Qualitative Methoden in der Entwicklungsforschung. Wien: Mandelbaum, 55-74.

Knoblauch, Hubert (2014): Wissenssoziologie. Konstanz: UVK-Verl.-Ges., München: UVK/Lucius.

KNOTS-Projektantrag. Call for Proposal EAC/A04/2015. Development & Global Studies: Fostering multi-lateral knowledge networks of transdisciplinary studies to tackle global challenges (KNOTS). Version 1 (2016) - 20.10.2015.

Kuckartz, Udo (2014): Mixed Methods. Methodologie, Forschungsdesign und Analyseverfahren. Wiesbaden: Springer Verlag.

McCorkel, Jill/Myers, Kristen (2003): What differences Does Difference Make? Position and Privilege in the Field. In: Qualitative Sociology 26(2), 199-231.

Neef, Andreas (2019): Qualitative Social Research for Rural Development Studies. Definitions, origin, principles, schools of thought, and typologies of participatory research. University Hohenheim, https://www.uni-ho-

henheim.de/fileadmin/einrichtungen/entwicklungspolitik/05_Teaching/02_Lecture_Material/05_Qualitative_Research_Methods_in_Rural_Development_Studies/Day_04/Specific_methods II Part_1_-_Neef.pdf (17.02.2019).

Nicolescu, Basarab (2006): Transdisciplinarity - Past, present and future. In: Moving Worldviews - Reshaping Sciences, Policies and Practices for Endogenous Sustainable Development, 142-166. Holland: COMPAS Editions.

Nicolescu, Basarab (2013): The Need for Transdisciplinarity in Higher Education in a Globalized World. In: Transdisciplinary Theory & Practice. United States of America: TheATLAS, 17-28.

Nowotny, Helga (n.d.): The Potential of Transdisciplinarity, http://www.helga-nowotny.eu/downloads/helga_nowotny_b59.pdf (12.06.2018).

Novy, Andreas (2012): "Unequal diversity" as knowledge alliance: An encounter of Paulo Freire´s dialogical approach and transdisciplinarity. In: Multicultural Education & Technological Journal 6(3), Emerald Group Publishing Limited, 137-148.

Park, Ji-Yong/Son, Jeong-Bae (2010): Transitioning toward Transdisciplinary Learning in a Multidisciplinary Environ- ment. In: International Journal of Pedagogies and Learning 6(1): 82-93.

Pohl, Christian (2011): What is progress in transdisciplinary research?. In: Futures 43(6), 618-626.

Powell, John A./Menendian, Stephen (2018): The Problem of Othering: Towards Inclusiveness and Belonging. In: Othering & Belonging: Expanding the Circle of Human Concern, http://www.otheringandbelonging.org/the-problem-of-othering/ (03.11.2018).

Przyborski, Aglaja/Wohlrab-Sahr, Monika (2010): Qualitative Sozialforschung. München: Oldenbourg Verlag. Pühretmayer, Hans (2012): Bedeutung wissenschaftstheoretischer Reflexionen für den politikwissenschaftlichen Erkenntnisproduktionsprozess. In: Kreisky, Eva/Löffler, Marion/Spitaler, Georg (Eds.) Theoriearbeit in der Politikwissenschaft. Wien: Facultas WUV.

Quijano, Aníbal (2007): Coloniality and Modernity / Rationality. In: Cultural Studies 21, 168-178.

Rose, Gillian (1997): Situating knowledges: positionality, reflexivities and other tactics. In: Progress in Human Geo- graphy 21(3), 305- 320.

Rosendahl, Judith/Zanella, Matheus A./Rist, Stephan/Weigelt, Jes (2015): Scientists' situated knowledge: Strong objectivity in Transdisciplinarity. In: Futures 65, 17-27.

Saldaña, Johnny (2016): The Coding Manual for Qualitative Researchers. Third Edition. SAGE Publications, 1-43.

Schmidt, Laura /Neuburger, Martina (2017): Trapped between privileges and precariousness: Tracing transdisciplinary research in a postcolonial setting. In: Futures 93. Hamburg: Elsevier, 54-67.

Schultz, Ulrike (2014): Über Daten nachdenken. In: Dannecker, Petra/Englert, Birgit (Eds.): Qualitative Methoden in der Entwicklungsforschung. Wien: Mandelbaum, 75-93.

Singer, Mona (2005): Geteilte Wahrheit. Feministische Epistemologie, Wissenssoziologie und Cultural Studies. Wien: Löcker.

Stichweh, Rudolf (2013): Wissenschaft, Universität, Professionen. Soziologische Analysen. Bielefeld: transcript Verlag.

Studley, John (1998): Dominant knowledge systems and local knowledge. In: Community-Based Mountain Tourism: Practices for Linking Conservation with Enterprise. Synthesis of an Electronic Conference of the Mountain Forum.

Thurmond, Veronica A. (2001): The Point of Triangulation. In: Journal of Nursing Scholarship 33(3), 253-258. Universität Wien (n.d.): KNOTS (Erasmus+ CBHE Project), https://knots.univie.ac.at/ (8.7.2019).

Vaddhanaphuti, Chayan (n.d.): Thai Baan Research: An Overview, https://cmsdata.iucn.org/downloads/thai_baan_research_an_overview_1.pdf (25.1.2019).

Wisdom, J.O. (1945): Positivism. In: Mind 54(213), 65-70.