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DECODING SUSTAINABILITY IN THE HEALTHCARE SYSTEM. TEACHING STUDENTS HOW TO PROBLEMATIZE COMPLEX CONCEPTS

*Decodificando a Sustentabilidade no Sistema de Saúde. Ensinando os Alunos a Problematizar
Conceitos Complexos*

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Abstract: This paper approaches the concept of “sustainability” in the context of healthcare systems by applying the strategy of Decoding the Disciplines. The strategy of Decoding the Disciplines aims to make the implicit accesses behind central concepts of a discipline transparent by decoding them systematically. The concepts that are to be decoded are specific bottlenecks which are seen as necessary conditions for appropriate learning. This paper illustrates how the process was approached in a seminar with students majoring in Political Science in Germany, and suggests that this might have increased students’ learning and changed their way of applying sustainability. Being a single-case study, findings should be treated with caution. However, the goal of this explanatory study is to start a broader exchange among scholars, encouraging them to make their implicit and often hidden assumptions explicit to the community. The strategy of Decoding could then be a valuable tool for bridging the gap between disciplinary boundaries and transdisciplinary sustainability science.

Key words: Health Care Systems, Decoding Sustainability, Bridging Learning Gaps.

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Resumo: Este artigo aborda o conceito de “sustentabilidade” no contexto dos sistemas de saúde aplicando a estratégia de decodificação das disciplinas. A estratégia de Decodificação das Disciplinas visa tornar os acessos implícitos por trás dos conceitos centrais de uma disciplina transparentes, decodificando-os sistematicamente. Os conceitos a serem decodificados são gargalos específicos que são vistos como condições necessárias para o aprendizado apropriado. Este artigo ilustra como o processo foi abordado em um seminário com estudantes de ciências políticas na Alemanha, e sugere que isso pode ter aumentado o aprendizado dos alunos e mudado sua maneira de aplicar a sustentabilidade. Sendo um estudo de caso único, os resultados devem ser tratados com cautela. No entanto, o objetivo deste estudo explicativo é iniciar um intercâmbio mais amplo entre os acadêmicos, incentivando-os a tornar suas suposições implícitas e muitas vezes ocultas explícitas para a comunidade. A estratégia de decodificação poderia então ser uma ferramenta valiosa para preencher a lacuna entre as fronteiras disciplinares e a ciência da sustentabilidade transdisciplinar.

Palavras-chave: Sistemas de Saúde, Decodificando a Sustentabilidade, Pontes para preencher lagunas de Aprendizagem.

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INTRODUCTION

Apart from recognizing the famous definition of sustainable development by the Brundtland commission in 1987 (“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”; WCED, 1987, p. 41) as its main legitimization, scientific efforts around the topics sustainability and sustainable development have become a diverse area of research. It can be disciplinary, interdisciplinary or transdisciplinary (Bursztyn & Drummond, 2013; Miller, 2013), then “bringing together scholarship and practice, global and local perspectives from north and south, and disciplines across the natural and social sciences, engineering, and medicine” (Clark & Dickson, 2003, p. 8060). The definition of every scientific discipline implicitly implicates drawing boundaries to other forms of conducting research. These demarcations lead to a specific self-image of researchers within a discipline, which is distinctive for each academic field and not just valid for research on sustainability. By developing and using a disciplinary vocabulary and by certain meta-knowledge of how to approach problems, the discipline more and more takes on a life of its own. Consequently, the implicit steps of how to approach a research problem are not explicitly enunciated for each case anymore but silently taken as a given (Shulman, 1987). Starting from this observation, the strategy of Decoding the Disciplines (“Decoding”) has been taking a closer look on the meta-level. It argues that the very interdisciplinary nature of today’s problems requires research to understand the kind of thinking which is applied in different disciplines. In order to do so, it suggests systematically “decoding” a discipline’s central “bottlenecks” (Pace, 2017).

This paper would like to present the approach exemplified by a case study from decoding sustainability in the context of the healthcare system in a seminar of the author about German health politics. Just as the variety of contexts in which sustainability is applied (Heinrichs et al., 2016), the notion of sustainability in the healthcare system is ambiguously disputed (Fischer 2015). This makes it all the more essential to be transparent in the ways the concept’s distinct and controversial nature is approached by the researcher. In order to meet this objective, this paper is structured the following way: After a short introduction to some general characteristics of the Decoding strategy and some further information on the context in which it was applied for this article, the Decoding process will be illustrated by means of the concept of sustainability in the context of the healthcare system. This is followed by a concluding section, in which also the potential of the approach for the broader field of transdisciplinary sustainability science will be outlined.

METHODOLOGICAL APPROACH AND CONTEXT

Decoding the Disciplines describes a didactic strategy to make explicit the often hidden or implicit steps which are necessary to perform tasks or to understand concepts in a given discipline. The goal is to define certain points where the learning of students or young scholars is prevented, to make the steps of how an expert would approach the situation explicit, and to give the students or scholars the chance of practicing the required skills in order to receive feedback (Middendorf & Pace, 2004).

As the approach had been the result of an experience-based and iterative process of university scholars, three core assumptions have proven to be important for approaching a discipline’s central “bottlenecks” (Pace, 2017): First, it is suggested to focus on distinct disciplines and concrete bottlenecks instead of trying to uncover the myth behind general phenomena like “critical thinking”. The researcher is invited to put his or her specific experience of a discipline’s obstacles at the center of the analysis. Second, it is assumed that the mental and/or emotional operations which are necessary to master tasks in a discipline are not always evident to the specialists. They might often skip some of the key steps and perform them unconsciously. This makes it all the more important that scholars from outside the respective discipline contribute to helping the specialists in structuring their efforts. Decoding also relies upon a qualitative approach, making the mental operation of one specific researcher transparent as the basis for sharing and an intersubjective discussion within a research community. And third, the methodology recommends to focus on the target group’s actions. The mental tasks are practiced by modeling them and by giving feedback.

Even though the Decoding strategy is a flexible tool (Pace, 2017), making the concept particularly adaptable for specific contexts, a process model resulted from the joint efforts of interdisciplinary scholars (Middendorf and Pace, 2004). The concrete case which is introduced in this article is dealing

with problematizing “sustainability” in the context of the healthcare system. In a Higher Education workshop with Prof. David Pace, one of the co-founders of the Decoding approach (Pace, 2017), this was identified as one of the main bottlenecks in the author’s research and teaching about health politics. Then, the operations by means of which the author would approach the bottlenecks were made explicit. Afterwards, the tasks were modeled, practiced, and discussed in a seminar of the author about German health politics at the University of Würzburg, Germany. In the following sections, the steps as suggested by Middendorf and Pace (2004) will be referred to in greater detail.

PROBLEMATIZING SUSTAINABILITY IN THE CONTEXT OF THE HEALTHCARE SYSTEM

Identifying a bottleneck

As a first step in the process of Decoding, it is suggested to define a bottleneck, describing a concept, which (based on the subjective impression of an instructor) presents an obstacle for the target group to learn effectively (Pace, 2017).

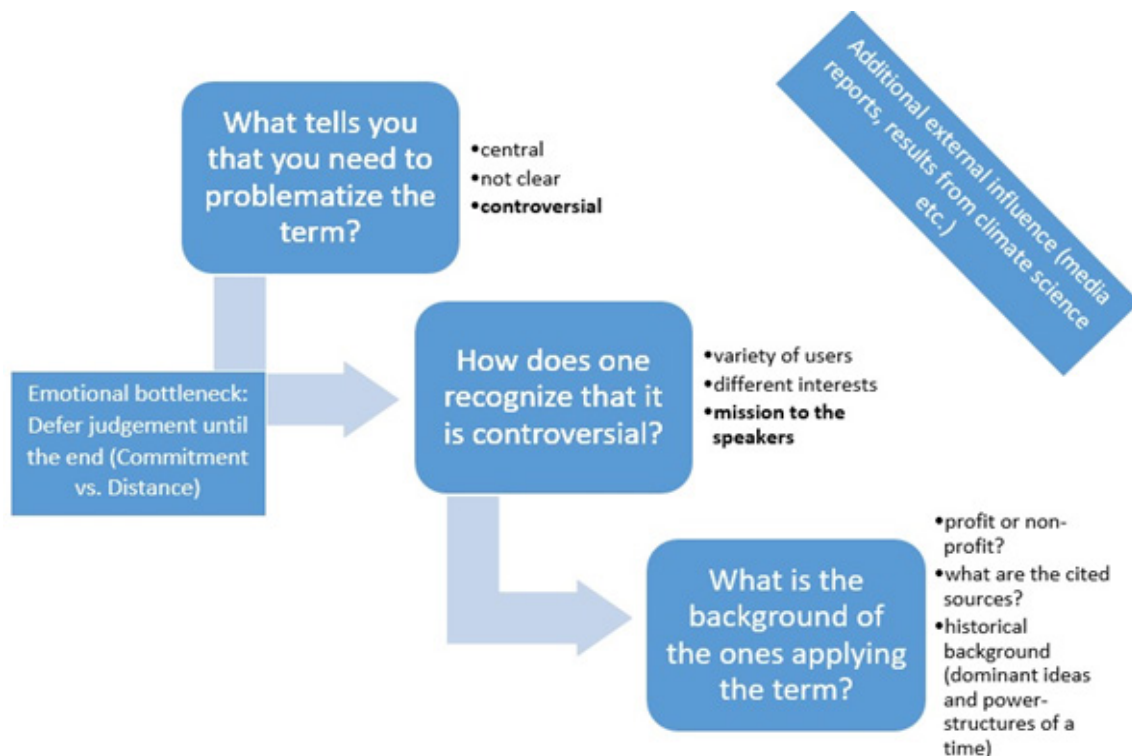
Identifying the bottleneck of this article started with the recognition that sustainability in the context of healthcare systems must be seen as a relative and ambiguous term. Contrary to other terms such as “efficiency”, which allow for clear measurement by applying mathematical formulae, there is no intersubjective-general agreement upon the concrete definition of sustainability in the healthcare system. In the past, this led to certain problems when it was applied in the university setting. In seminars with university students, the author could frequently observe that the respective target groups did understand sustainability on a general and descriptive level. For example, this referred to their ability to memorize and describe certain key aspects such as the Brundtland commission’s definition very well, while the overall ability of handling the concept flexibly and applying it to the context of the healthcare system was considerably less developed. This caused a tendency within the seminars that either “everything”, hence every political measure, was considered as incorporating aspects of sustainability, or that the concept of sustainability was rejected from the beginning as too abstract or too ideological.

As a consequence, the bottleneck was defined as the ability to problematize sustainability in the context of the healthcare system adequately. This included both the ability of comparing different arguments in favor of or against a certain position, and to express justified criticism of existing positions while taking their contexts into account. As it will become clear in the following, this required the students to practice the comparison of arguments and the inclusion of context-specific knowledge.

Exploring an expert’s approach

After the bottleneck has been defined, the Decoding strategy suggests identifying the mental operations by an expert interview that an expert in the respective field would apply in order to get past the bottleneck (Pace, 2017).

Figure 1: Overview of the identified bottlenecks as a result of the interview (own illustration)



In the concrete case of this article, an interview of about one hour with the author of this article was conducted by Prof. David Pace. “What”, “How”, and “Why” questions aimed to find out more about how the author as the expert would approach the bottleneck. The goal was to dig beneath the surface, to make him uncover the operations which might be obvious to the expert but only vague or undefined to others. Simultaneously to asking the questions, notes about possibly interesting points were taken, and the data was analyzed by the author and Prof. Pace in order to receive a stringent overview of how the author would master the topic.

Figure 1 gives an adjusted overview of the identified expert’s approach which was arranged around three questions as a result of the interview. The first question referred to the relevance of problematizing sustainability in the context of the healthcare system. It became clear that this relevance results from the nature of sustainability as a concept which is central, not clear, and controversial. Sustainability can be regarded as an important target of health-policy legislation, but it is also subject to controversial discussions. Maybe this is because of its lack of clarity, since it has not been possible to define it as clearly as alternative concepts, as was mentioned earlier.

Starting from this first differentiation, it was possible to differentiate further regarding the controversy of the term. The author outlined three criteria indicating the controversy of sustainability in the context of the healthcare system: First, sustainability is applied by a variety of different users, who deploy the concept with different interests (Fischer 2015). For example, a company in the pharmaceutical industry is likely to be driven by different interests than the Social Democratic Party, even though both might use the expression of sustainability in political debates.

In order to be more specific about the background of the users, a third differentiation was made. It described that each user’s specific interests may be connected to a particular mission. The author differentiated between whether the respective user comes from a profit or non-profit context, whether the applicant uses the concept based on a certain definition, and which sources are referred to. For example, in some of the literature, sustainability seems to be equated with “macroeconomic efficiency” (Arah et al., 2006, p. 7), while other pieces argue that this would leave out the second part of the concept of “sustainable development”, specifying the attempt of achieving a more favorable future (Hudson & Vissing, 2013). Last but not least, the author recommended to take the historical background into

account, which would imply dominant ideas of a given time or the respective sociopolitical power structures. For example, one could refer to the German context and the report of the Commission “Sustainability in Financing the Social Security Systems” (“Nachhaltigkeit in der Finanzierung der Sozialen Sicherungssysteme”) published in 2003. Even though the Commission dealt with a broad spectrum of reforming the system of social security in Germany, some scholars saw the Commission’s ideas as a means to legitimize neoliberal reforms of the German labor market by the governing red-green coalition under the headline of the so-called “Agenda 2010” (Butterwegge, 2005; Engelen-Kefer & WieseHügel, 2003). Taking this into account, and deciding upon the consequences of this context for the application of sustainability, was considered an important part of problematizing the concept.

Apart from this content-related assessment of sustainability, the interview with the author also revealed an emotional bottleneck. The author described it as the perceived necessity to make a judgment about sustainability after having sufficiently discussed both the concept’s implications and the context in which it is used. This bottleneck aimed at addressing the observed tendency of students to position themselves emotionally at the beginning of a debate instead of carefully comparing arguments first. Therefore, it was identified as a bottleneck to maintain the right balance between keeping the scientific distance (i.e., the serious examination of sustainability and the respective context in which it is applied), while not abandoning the concept emotionally from the outset. In a final step, it was discussed that dealing with sustainability might often be influenced by certain additional external developments. For example, this may refer to certain media reports or results from climate science, where the general increase in terms of public awareness of sustainability might strengthen its perception in the context of the healthcare system.

Modeling these tasks

After exploring one’s approach towards a bottleneck, the expert makes the implicit steps explicit to the target group. Not all the identified bottlenecks need to be covered in detail. The expert is free to focus on selected parts, and may emphasize some of the bottlenecks more than others. Generally, modeling the tasks can be supported by providing the target group with a metaphor for the aspired thinking, by performing the necessary operations in front of the target group with a similar example, and by integrating the desired thinking into the regular course, so that the target group gets the opportunity to repeat the operations frequently (Pace, 2017).

As stated in the beginning, the theoretical considerations of the Higher Education workshop were applied in a seminar about German health politics at the University of Würzburg, Germany. The seminar consisted of 17 students, bringing together a mixture of students of teaching and Bachelor students majoring in Political Science in their second or fourth semester. The seminar was held as a compact course over four consecutive days and divided into three parts: On the first day, the students received some theoretical input regarding the German healthcare system and German health politics, while the last two days consisted of a creative workshop developing solutions for concrete problems of the German healthcare system. The second day was kept free for explicitly presenting and practicing the ability of problematizing sustainability in the context of the healthcare system (an outline of the second day is sketched in the appendix). The students were also instructed in the strategy of Decoding the Disciplines on a meta-level, and their participation was on a voluntary basis.

At the beginning of the second day, the students were asked to write down their spontaneous (content-related and emotional) associations with regard to the concept of “sustainability”. Afterwards, some of the connections were collected on the flipchart by outcry. Both collections demonstrated that the associations represented some aspects which can be seen as a fundamental consensus regarding the meaning of sustainability (e.g., “long-term view”), and aspects indicating a dominance of ecological issues (e.g., “ecologic footprint”, “environmental concerns”). Generally, the comments indicated a very positive connotation of the students regarding the term sustainability. This could be seen as an indicator for the effectiveness of transformative approaches, such as communication and education for sustainable development, in higher education (Djordjevic & Cotton, 2011), which might have led to a sort of basic consensus relating to sustainability within the younger generation. However, it is interesting to note that neither social sustainability nor a direct connection to issues of the healthcare system were mentioned in the collected quotes even a single time. This could be seen as being in

line with the tendency that the social pillar of sustainability has still been said to be neglected in sustainability scientific research (Eizenberg & Jabareen, 2017).

The review of associations was followed by a short introduction to both the Brundtland definition and the reason for problematizing sustainability as described in section 3.2. In order to especially exemplify the controversial nature of sustainability, some basic contradictions within the community of sustainability scientists were outlined, such as the difference between strong and weak sustainability; the application of the three-pillar (ecological, social, economic) model or an integrative approach of sustainability; or possible goal conflicts between sustainability and development (Grunwald & Kopfmüller, 2012; Hudson & Vissing, 2013). The section ended with the conclusion that sustainability as a relative concept needs to be discussed on the basis of the respective context and by taking the applicant's background into account. A scientist – different from spontaneously taking sides in everyday discussions – is expected to defer judgment until he or she has gained a holistic overview. However, the importance of making a decision after this careful comparison was also stressed. Here, the metaphor of planning a wedding was introduced by the lecturer. Although one might not like every one of the invited guests, in preparing the wedding still each of them needs to be taken into account with a sense of empathy before an eventual decision upon the final setting is made.

In order to model the serious comparison of arguments, the author introduced an imaginary example. Based on the novel of the German writer Juli Zeh (2009), "Corpus Delicti", he presented a dystopic society in which everything is subordinated to the increase of public health. In the example, this system leads to a situation of dictatorship and the eradication of individual liberty, but also to tremendous progress in terms of the general health status of the population. Based on this story, the students were divided into two groups. One group had to argue only in favor, one only against such a dystopic system. While it seemed hard at first to find serious arguments in favor of such a regime, the students realized that some restrictions of individual liberty for the common good have been discussed and partly implemented already in German politics, such as strict smoking bans, a compulsory vaccination or bonus programs and financial incentives of health insurances for a health-conscious life-style. After both sides had collected their main points, the arguments were brought together in the plenum and a final decision was made. It is clear that both the students and the lecturer still argued against this sort of system. However, the justification of the students was much more grounded on arguments than on emotional attachment. Even though the students reported difficulties in discussing such an utterly fictional example, they seemed to realize that – no matter how unrealistic and far away a case might be – it is possible to look at the case with empathy for both sides, and to make an informed decision afterwards.

Practicing the required skills and motivating the target group

The Decoding strategy suggests constructing assignments and learning opportunities for the target group to make them practice the required skills and get feedback by the expert (Middendorf & Pace, 2004). Furthermore, it is also an explicit part of the Decoding strategy to consider the motivation of the target group as a decisive factor of their learning. As motivation is not expected to occur automatically, a motivating learning environment should be consciously created (Pace, 2017).

In order to make the students practice the reluctance of passing a judgment before considering each side's core arguments, an "arena of discourse" was created. The goal of this exercise was to make a strict comparison of arguments in health-related debates regardless of the students' personal opinions, and to make a final, differentiating judgment afterwards. Thus, three groups were formed: one group was to argue only in favor of a topic, one group only against the same matter. The third group ("observers") was supposed to listen carefully to each group's arguments, to write down important points, and to pass a sentence after the discussion. A total of three rounds of discussion was held (topics: pro/contra of "assisted suicide"; of "imposing a tax on products containing sugar"; of "legalizing marijuana"), so that each group had to play each of the three roles once. By making use of components of the so-called fishbowl method (Gallavan, 1999), the groups were positioned face to face to each other, and each point of one group was strictly followed by a point of the other group.

Several measures to enhance the motivation of the students were taken. To decrease the pressure of making only serious contributions and to invite the students to experiment in the protected sphere of the seminar, the author announced before the debate that there was no right or wrong in this kind of value discussion, and that students should enjoy representing opinions which might not be their own. However, in order to increase the competitiveness between the groups, the observers really decided upon a winning and a losing side. Some students remarked afterwards that they were surprised by the quality of arguments the other side had introduced. The relevance of this kind of comparative and argumentative skills for wider academic and occupational purposes was also stressed. Furthermore, students' motivation was increased by including them in the topics which were to be debated. In the opinion of the author, this led to an intense engagement of each student, exemplified by verbal statements at the end of the final discussion, such as "I could keep on discussing forever" or "This has never happened to me in a seminar; that the lecturer had to stop me from just keeping on working".

Assessing the mastery of the tasks

The expert is encouraged to find appropriate means for assessing the learning progress, which does not just refer to graded and final assignments (Pace, 2017). The so-called Classroom Assessment Techniques (Angelo & Cross, 1993), small in-class exercises providing for quick and anonymous feedback, have proven to be very effective.

In order to assess their ability to problematize a complex concept like sustainability in the healthcare system, the students were confronted with the fictional case of a politician from the Conservative Party in the German parliament (CDU/CSU) on the online platform accompanying the seminar the following day. They should imagine that the politician uttered the following statement: "By increasing private contributions to be paid by the insured persons, we contribute to the sustainability of the healthcare system." Based on the experience of the previous day, the students should outline the strategic procedure of how they would come to an answer on a meta-level. Afterwards and based on this procedure, they should write down their concrete response to the politician.

As the review of anonymous quotes submitted by the students suggests, the students differentiated very carefully: One could observe the attempts of some students to understand the politician's conceptualization of sustainability, and to develop empathy for him in an intersubjective exchange (e.g., "The term sustainability would need to be defined upon consultation with the [politician...]"); "First, [I would] question the applied term of sustainability, as different understandings may lead to problems. Afterwards [I would] deal with the statement itself. [I would] consider advantages and disadvantages, then pass a judgment"; "To convince the conservative politician that I understand him. Only afterwards [I would] introduce my own argument"). Other students suggested collecting arguments in favor of and against the politician's statement regardless of their own opinion, and to pass a judgment afterwards (e.g., "To let the politician utter and explain his arguments (listener stays neutral and doesn't judge) – think over counter-arguments – evaluate both sides and come to an own opinion"; "To make sure how the statement was meant. Get an overview of all points before I have an opinion"). Also the concrete replies of the students suggested that they had acquired the ability to differentiate. Some students restrained their own judgments based on the limited information provided by the case ("In order to give an appropriate answer, a collection of arguments and more background knowledge would be necessary – thus I do not want to pass a premature judgment"). Others discussed possible alternatives for increasing the private contributions of the insured persons (e.g., "One would have to assess if private payments would really make such a difference. Furthermore, one would have to check which direct effects the insured persons would be confronted with. After examining different facts, one could [for example] also think of increasing the social contributions in order to strengthen and improve the healthcare system"), while others passed an explicit judgment after considering possible arguments (e.g., "Analyze the contributions of the insured persons – define the meaning of sustainability, compare share of the tax-based contributions in the total funding of the system – assess the extent to which the increase of private contributions could help to guarantee the provision of future generations – decision against the statement as the increase of private payments would not be sufficient to maintain sustainability of the healthcare system"). However, there were also statements indicating that some students still used the acquired argumentative skills instrumentally in order to

convince the politician with respect to their own opinion (e.g., “The financial burden for the individual in the healthcare system is already quite high”; “Increasing private contributions would not help much. More important would be a common insurance including all professions”). In reality this might lead to a situation where polarized arguments stand next to each other without the possibility of a mutual consensus, as has happened in many cases of real health politics (Fischer 2016).

In addition to the case-based assessment, an anonymous minute paper about the students’ general perception of the seminar was collected at the very end of the course. The general tone of the comments relating to the arena of discourse was very positive. Students mentioned how important they perceived the acquired skills also for their future working lives. They explicitly stressed the relevance of the arena of discourse for daily debates (e.g., “Comparing and analyzing arguments BEFORE an opinion is expressed is, unfortunately, too often ignored in everyday life!!!”; “The arena of discourse helped me a lot in order to be more self-confident and to show empathy for contrary positions.”).

CONCLUSION

This paper introduced the strategy of Decoding the Disciplines with the example of problematizing sustainability in the context of the healthcare system. Making hidden cognitive and emotional operations transparent to the members of a respective target group, and letting the target group practice the required skills would enable them to gain insights and to acquire competencies in how to problematize complex concepts also on a more general level. Based on the collection of the students’ statements in the concrete case, one could argue that the strategy really made a difference in how students approach complex discussions.

Of course, the presented data are not the result of a carefully conducted causal analysis. The general interactive nature of the seminar, and the positive group dynamic might have also contributed to the positive evaluation of the seminar. Therefore, the results of this case study cannot make a claim for objectivity. However, making transparent the individual and selective approach of how an expert deals with bottlenecks in his or her discipline could be seen as one of the many advantages of the Decoding strategy also in a broader context. It is one approach of demystifying and deconstructing the hidden boundaries that often stand between highly-specialized experts and students or other stakeholders. Therefore, sharing experiences with other scholars, observing and evaluating alternative accesses relating to a topic, and mutual discussions are an explicit part of Decoding the Disciplines (Pace, 2017) and could be beneficial both for the school and the academic context. The goal of the approach is to start establishing a feedback culture in the discipline(s) of sustainability science and also beyond disciplinary boundaries. In the future, decoding could be a valuable approach especially for transdisciplinary research (Scholz, 2017). When, for example, not only scientists from various disciplines but also different practical actors from business, the civil society, and politics are brought together and need to find a common ground, Decoding the Disciplines may serve as a means to translate and mitigate the different accesses to the topic of sustainability. Furthermore, it is planned to expand the “arena of discourse”: The “VR Health Arena”, which is currently conceptualized by the author, describes the vision of a serial entertaining show format. In a discursive show setting, teams would discuss issues of sustainability in the healthcare system in a competitive game mode. The audience would have the possibility of following the show directly in a virtual studio by using Virtual Reality technology. The goal would be to motivate broader parts of the society to problematize sustainability-related arguments in the context of the healthcare system.

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