Transforming regional agrifood systems.

Exploring values and reflecting normativity and solution-orientation

What is the role of sustainability science in transforming regional agrifood systems? How can ethical reflection contribute to transformative change, and how can we deal with normativity in this kind of research? This paper reflects on a research project that used creative methods to stimulate ethically informed debates about the future of agriculture.

Uta Eser, *Claudia Bieling*

Transforming regional agrifood systems. Exploring values and reflecting normativity and solution-orientation
GAIA 33/4 (2024): 389 – 396

Abstract
Based on the leverage points perspective, the transdisciplinary research project, *Eco-Valuation,* aimed to understand how communication about values can promote transformation processes in regional agrifood systems. Creative methods were used to stimulate debates about values. The project's approach and key findings give rise to questions regarding the ethics of sustainability science. How can ethical reflection provide practical solutions to conflicts? By emphasising mutual recognition and discriminating between person and action, ethicists can facilitate a discourse about the desirability of different kinds of futures and ways to achieve them. How can the use of normative concepts in such a project be justified and handled? Interpreting local actors' values in philosophical terms inevitably entails normativity. As facilitators of a process geared around practical cooperation, sustainability scientists should display honesty, modesty, and critical self-reflexivity.

Keywords
agrifood system, ethics, normativity, recognition, solution orientation, sustainability science, values

Dr. Uta Eser (corresponding author) | Büro für Umweltethik | Tübingen | DE | info@umweltethikbuero.de

Prof. Dr. Claudia Bieling | University of Hohenheim | Stuttgart | DE
claudia.bieling@uni-hohenheim.de

https://doi.org/10.14512/gaia.33.4.10
Received February 8, 2024; revised version accepted November 8, 2024 (double-blind peer review).

Philosophy is the methodical and steadfast attempt to bring reason into the world.

Max Horkheimer (1940, p. 334)

As we write this article, enraged farmers are blocking roads all over Germany with their tractors. The social conflict over the future of agriculture is – once again – topical and highly emotional. How is it possible to resolve such disputes and bring the underlying issues to a reasonable discourse, possibly even finding a solution? The *Eco-Valuation* research project aimed to find answers to this question. Using this project as an example, we discuss the question of solution-orientation and the implicit normativity of transformative research.

With a focus on values and norms, the *Eco-Valuation* project addressed issues that otherwise tend to remain hidden behind the alleged facts. We assumed that the anger manifesting on the streets is – at least to some extent – an expression of moral indignation, and that this moral dimension should be taken seriously and not be dismissed as mere self-interest (see Kals et al. 2021). The project, its background and objectives, as well as the research design are briefly described in the first section of the article (for methodological details see Eser et al. 2024).

It is now widely recognized in transformation research that values play an important role in the transformation of our society and economy towards sustainability. Based on Donella Meadows' leverage points (1999), numerous articles have been published in recent years that see a change in values as key for transformation (Horcea-Milcu et al. 2019, Riechers et al. 2022). Leverage points are "places in complex systems where a small shift may lead to fundamental changes in the system" (Abson et al. 2017, p. 30). The leverage points perspective on sustainability recognises that most current interventions only have a little leverage for systemic change, while "deeper leverage points have great potential but are under-researched" (Fischer and Riechers 2019, p. 117). Changes in the design and intent of a system, especially changes in mind-sets and paradigms, are considered to be deeper leverage points. Reconnecting people with nature is regarded as one such potentially powerful paradigm shift (Diaz et al. 2015). The consideration not only of instrumental values, but of the entirety of nature's possible values, is seen as a prerequisite for >

transformation (IPBES 2022). To better understand which values and whose values are important in hindering or facilitating change was one aim of the *Eco-Valuation* project.

By addressing the values underlying the debate over the future of agriculture, we not only wanted to better understand the conflict, but also to facilitate transformative processes in the region. In this respect, we saw our project as being at the borderline between transformation research and transformative research (WBGU 2011). The question of whether such a solution-orientation is desirable and permissible for science is the subject of controversial debate (Strohschneider 2014, Grunwald 2015, Schneidewind 2015, Wehling 2022). It was also discussed at the symposium *Sustainable Development and Ethics of Science* in Hannover, Germany in November 2022, which led to this special issue (GAIA 2023). Using our research as an example, we discuss contributions to solutions in section three.

By including regional stakeholders into the project design, we wanted to ensure the practical relevance of our research. In this respect, we regarded our project as a transdisciplinary endeavour. Such transdisciplinarity claims to include the practical and implicit knowledge of local actors on an equal footing with scientific knowledge. We discuss the extent to which we were able to fulfil this claim and how we dealt with the implicit normativity of philosophical expertise.

The conclusion summarises suggestions as to how researchers can practically manage the issues raised.

The *Eco-Valuation* project

The *Eco-Valuation* project was carried out between August 2020 and August 2023 in the *Heidenheim plus* and *Enzkreis* organic model regions. It was funded within the *Organic Farming Research Program,* launched by the Baden-Württemberg Ministry of Science, Research and Arts (MWK 2020). The research program was prompted by the state's action plan *Organic from Baden-Württemberg,* which aims to increase the proportion of organic farming in the state from 13.2 % in 2019 up to 30 to 40 % by 2030 (MLR 2020). Such an increase will only be possible if the demand for organic products also increases. In order to facilitate and promote the necessary cooperation along the regional value chains, so-called organic model regions have been set up in the state and provided with personnel resources[1]. The research program aimed to address how this transformation can succeed, identify what problems might arise and propose solutions.

While the other projects funded in this program investigated specific challenges such as animal welfare, biodiversity, or the catering industry, the *Eco-Valuation* project focused on resistance to the greening of agriculture, which was expressed, for example, through the erection of green crosses in agricultural fields at the start of the action plan. The project's aim was to better understand the sources of this conflict as a prerequisite for resolving it. We assumed that shifting the focus of the debate away from (controversial) regulations and towards participants' values could build bridges between opposing camps, and thus facilitate transformative processes. The demand for an ethically informed deliberation about values was affirmed in discussions with regional stakeholders during the initial co-design phase of the project (October 2019 to February 2020).

Even at this early stage, it became obvious that it would not be easy for the participants to talk about their values. Values usually are perceived as very personal and are rarely put into words. We responded to this lack of suitable terminology with two measures: Firstly, we created a glossary to provide a common language for all participants (Öko-Valuation 2023). Secondly, we chose a research design that allowed participants to approach the topic in non-verbal ways. Inspired by envisioning methods (Ziegler 1991), we started a photo campaign, asking people to submit pictures that depict the future of agriculture in the region. Through interpretation and reflection, we verbalized the values contained in this process and created an exhibition. This exhibition was presented in various formats and discussed with diverse audiences (cf. Eser et al. 2024):

- exhibition in public places and discussions with the general public;
- discussions with regional stakeholders;
- discussions at a farmers' meeting ("Stammtisch"); and,
- in-depth discussion in a focus group.

While the photo campaign generated images of agriculture, we explored images of food with the help of so-called three-dimensional (3D) installations. We asked people to create 3D representations of what they consider to be a good meal, using a craft kit that we provided (figure 1). Participants were randomly selected at several agriculture-related public events (e. g., a fair-trade market in Heidenheim, and the main agricultural festival in Bad Cannstatt; Öko-Valuation 2024). The contributors' explanations were followed by a short dialog about the values depicted. Important points were recorded from memory afterwards.

Key findings

Both the images of the agricultural future and the representations of a good meal proved to be heuristically valuable. They opened the doors to deliberation. Using interpretation, reflection, and discussion in various discursive settings, these creative works facilitated the expression and discussion of values. Three key findings will be briefly presented here:

1. A *lack of appreciation* of food and those who produce it was perceived as an obstacle to change in agriculture.
2. Resistance to regulations may also be understood as a struggle for *recognition* considering farmers' high level of identification with their profession.

1 MLR (Ministerium für Ernährung, Ländlichen Raum und Verbraucherschutz Baden-Württemberg), Bio-Musterregionen Baden-Württemberg: *www.biomusterregionen-bw.de*.

FIGURE 1: Three-dimensional image and explanation of a good meal by a young female respondent (mid/late 20s), as part of the *Eco-Valuation* project funded by the *Organic Farming Research Program* by the Baden-Württemberg Ministry of Science, Research and Arts. Participants were asked to create three-dimensional representations of what they consider to be a good meal: "A beautiful setting with plants, eating outside, especially when the weather is nice, picnic, a portion of carbohydrates, a portion of protein, preferably plant-based and well-seasoned, a few vegetables, a side salad, wine, and a glass of water, other people must not be missing, who are welcome to be diverse, regional, and seasonal food would be nice, but is not always possible, fair trade would be ideal." *Image and notes: Anna Struth*

3. There is a difference between personally held values and systemic values, which points to issues of *power and responsibility*.

Lack of appreciation

Most of the pictures we received in the photo campaign depicted happy animals and beautiful landscapes. These motifs refer to values of nature that go beyond its usefulness. One might therefore think that furthering such values in society would play a crucial role in the transformation of agriculture. However, these values were largely undisputed in our discussions. We were never confronted with disagreement that animal welfare or diverse and colourful landscapes are desirable.

Yet, the discrepancy between the depicted shared values and the values demonstrated in daily individual decision-making was perceived as a powerful obstacle to change. Our participants observed a lack of appreciation for food and agriculture in three areas: regarding the products of agriculture (low willingness to pay), regarding the land itself (ongoing sealing and settlement), and regarding agricultural practices (disrespect for farmers).

In a roundtable with farmers, a photo portraying night-time harvesting brought up a discussion about conflicts with passers-by and revealed how farmers perceive them as a burden (e. g., "I chose the picture because at night you basically have peace and quiet from walkers and so on, and you can simply work quietly by yourself at night"; cf. Eser et al. 2024). Negative reporting in the press and social media, along with a lack of support from policy makers, were blamed for affecting the self-esteem of farmers. Regarding willingness to pay, a farmer stated in the focus group that he was "really disappointed with the German consumer because he abandoned us in the summer" (Zulic 2023, p. 35, authors' translation). He had intended to convert to organic farming but was forced to abandon this plan when food prices rose due to the war in Ukraine and the sales figures in organic farming collapsed. Another farmer uttered frustration about the fact that German consumers spend less than 10 % of their expenses on food: "They were able to buy big cars, go on vacation [...] They didn't even realize that we were creating endless prosperity for >

them, the consumers. That's where the frustration comes from, you see?" (Zulic 2023, p. 33, authors' translation). Addressing this lack of appreciation was perceived as imperative for the future of agriculture: "If we don't bring this appreciation into society, then local agriculture here will cease to exist" (Zulic 2023, p. 33, authors' translation).

Following this line of reasoning, one possible leverage point for the "greening" of agriculture might not necessarily lie in a greater appreciation of nature, but in a greater appreciation of food and those who produce it. To the farmers, the ignorance of the fundamental value of food demonstrates an alienation of modern people from nature. This alienation is lamented by conservationists, too. Maybe this shared relational perspective can bridge differences between those two otherwise differing communities.

Identity and recognition

A key issue in the debate about the future of agriculture is the high level of identification of farmers with their profession. Cultivating land and producing food are activities that are not just a job, but a way of life. "Becoming a farmer is a matter of conviction" – that was the photographer's comment to an image called *Offspring* that was submitted to the photo campaign in the model region Heidenheim (figure 2). In our discussions, caring for the land and passing it on to future generations was presented as an integral part of the farmers' identity.

Against this background, the future of agriculture is not abstract, but very concrete. It is tied to the future of one's own farm, one's own offspring, and one's own way of life. The high level of identification with the work is part of the attractiveness of the profession. At the same time, it may also be a reason for resistance to demands from outside: any criticism of what farmers do can be perceived as criticism of who they are.

Hence, the conflict over the future of agriculture is not only a conflict about how humans ought to treat nature, but also about how they ought to treat each other. In this vein, we understood farmers' resistance to calls for transformation, at least in part, as a "struggle for recognition" (Honneth 1994). If this need for recognition is not acknowledged, it may present an obstacle to cooperation.

Power and responsibility

The third issue we want to discuss is the difference between the individual level and the system level. The leverage points framework is based on the goals of the system and their underlying values. However, our discussions have shown that these can be at odds with the values that are important to individuals. At the vernissage of our exhibition in Pforzheim, Germany, one visitor commented: "The pictures here: Of course, that's what everyone wants. But that's not how it's going to be!" (cf. Eser et al. 2024, p. 292). This opinion was attributed to external conditions, from purchasing power in the region, to the European Common Agricultural Policy, and the global food market. Due to these constraints, people do not feel able to live, produce, buy, and eat the way they would actually like to. Across the entire value chain, the impression prevailed that individuals could not choose freely. The constraints of the system were experienced as overpowering, and their own actions as powerless.

Farmers, in particular, feel constrained by regulations. For example, in an interview regarding the issue of power, one farmer said: "In some things, one is controlled by others. It is frustrating when I am told which meadow I can mow and which I cannot. Things like that, some regulations are so absurd" (cf. Kröner 2022, p. 59). Where people see no room to manoeuvre, they cannot take responsibility. This is because the very idea of responsibility presupposes that those responsible can choose between alternatives.

It is not the participants' job to decide who are the "good guys" and who are the "bad guys". Indeed, we warn against such a "moralization of the discourse". It hurts the individual and does not lead to results.

A research focus on values must take interactions between the individual and the systemic level into account. Which values, and – above all – whose values, shape the system? Vice versa: which values, and whose values, are excluded or marginalized by the logic of the system? This brings the question of power into sharper focus. Values are largely individual, subjective, and personal. Not all people can establish their values in the system in the same way. Economic and political power, or the cultural dominance of individual actors or groups, play a decisive role in enforcing or hindering values (see Avelino 2021).

Contribution to solutions

The intention of our project was to inspire transformation through ethically informed deliberation. So, what exactly is the specific contribution of ethical reflection to transformation? How can a debate about values and norms facilitate practical cooperation? In short: What practical solutions follow from our findings?

A concrete output of our project is a *conceptual and methodological toolbox*. With the goal of providing practical advice, we explain relevant philosophical concepts in a practice-oriented manner, and present methods and formats in which they can be applied. The idea is that the coordinators in the organic model

regions can use them to facilitate discussions and increase mutual understanding[2].

One key issue that frequently comes up in debates about agriculture is the lack of appreciation of food and farmers. In our research, it proved helpful to understand this complaint as a struggle for recognition and to take it seriously. Hence, we replaced the ordinary language term *appreciation* with the social-philosophical concept of *recognition*. Where did that lead us in practical terms? How is it possible to mediate the demand for (personal) recognition with the demand for (systemic) transformation?

In moderating the discussions, we insisted on the distinction between person and action[3]. This means: We made it very clear that we are not debating whether a person is "good" or "bad". The moral integrity of the individuals was not up for debate. Rather, the focus was on values and actions: Which images of the future are desirable – and for what reasons? What actions are considered appropriate and acceptable – and for what reasons? Regarding recognition, farmers have a right to defend themselves against accusations of disreputable motives, such as greed or selfishness. However, the moral right to recognition refers to persons, not to their actions. There is a danger of confusion here because the farmers identify so strongly with what they do. Recognition of a person does not imply unconditional acceptance of their actions. Conversely, it is possible to question harmful practices without at the same time questioning the moral integrity of the acting person.

Interpreting the farmers' demand for greater appreciation as a struggle for recognition has further implications. The concept of recognition implies a reciprocity. Recognition is not only about the appreciation of one's own person, but also about the willing- >

2 *https://oekovaluation.de/ergebnisse*

3 Treating people and problems separately is a basic principle of the so-called Harvard concept, a classic negotiation technique (Fisher et al. 2004). Although persons and their actions cannot be completely separated, they can be distinguished. To facilitate mutual understanding, participants must not feel as though they are being judged as a bad person. They need to feel free to argue about the meaning and purpose of what they do and believe in.

FIGURE 2: This image was submitted to a photo campaign for the *Eco-Valuation* project funded by the *Organic Farming Research Program* by the Baden-Württemberg Ministry of Science, Research and Arts. The image is titled *Offspring* with the following explanation: "Work 24/7, lousy reputation, uncertain future prospects and yet the decision to become a farmer. The grandson in dialog with the grandfather, a seventh-generation farm. They don't always agree, experience meets new methods. But they live, discuss, and work together. You become a farmer out of conviction. The future belongs to the next generation." *Image and text: Barbara Sopart*

ness to "limit one's own scope of action in favour of the other" (Honneth 1994, p. 30, authors' translation). In other words, those who demand recognition must also be prepared to give recognition. Just as it is not permissible to denounce the farmers' protest as mere self-interestedness, a practice of mutual recognition does not allow environmental concerns to be discredited as ignorant or romantic. In the joint endeavour of outlining the "good" and "right" action, it is not helpful to assume that the other person has inferior motives from the outset. Instead of making assumptions about motivations, the focus should be on the specific actions and the values on which they are based.

Often, it is not a lack of moral integrity on the part of the acting individuals but path dependencies and power constellations that make change difficult. Acknowledging this may not have a direct practical impact, but it may contribute to a less personal and more constructive form of debate that allows for cooperation between actors with different values. As Strohschneider (2014) rightly pointed out, a better understanding of what exactly the problem is, is not in itself a solution. However, it is a necessary condition for finding and facilitating solutions.

Normativity

In our research, we took up the words that were used by the participants and reframed them in social-philosophical terms. For instance, we have translated *self-determination* (Selbstbestimmung) into *autonomy* (Autonomie), and *appreciation* (Wertschätzung) into *recognition* (Anerkennung). In doing so, however, we have inadvertently introduced normative commitments that may not have been intended by the speakers. For example, when farmers demanded more self-determination, they simply may have meant that no one should impose rules on them. In our glossary, we pointed out that a philosophically substantial concept of autonomy contains the idea of voluntary self-obligation:

> *Self-determination or autonomy refers to a person's right to determine the rules she wants to live by and not be determined by others. Autonomy does not simply mean that everyone can do whatever they want. Rather, autonomy is linked to the recognition of others. This means that the rules to which we subject our own actions must not only favour ourselves. They must be such that we can wish they were followed by everyone.*
>
> Öko-Valuation 2023

Similarly, we linked recognition to the idea of reciprocity:

> *All people need recognition to be well. Beyond this everyday understanding, the term expresses in philosophy that living together as a society requires mutual recognition. This means that because they recognize each other, individuals voluntarily limit their scope of action in favour of the freedoms of others. Recognition includes personal recognition (in the family and among friends), legal recognition (in politics and society), and economic recognition. Social conflicts are often based on the need for recognition.* Öko-Valuation 2023

Is the provision of definitions at odds with the ideal of co-production which underpins transdisciplinary research? Shouldn't we give equal consideration to academic and non-academic ways of knowing? What claims to validity can philosophical concepts make vis-à-vis the moral intuitions of the participants? A glossary contains a certain degree of normativity, in that it prescribes specific understandings of terms and rejects others. Regarding the goal of mutual learning, the provision of definitions might be perceived as instructional or even patronizing. "The very concept of, discourse on, and research about, social change and innovation [...] is in itself an exercise of power, and has power implications", writes Avelino (2021, p. 15). However, this power need not be of the oppressive kind. Rather than exercising power over local participants, the provision of reflexive concepts may contribute to the actors' power to communicate, cooperate, and bring about change. If we take seriously the idea that scholars have a special ability and mandate to contribute to social change, then we can, and must, also bring in what the sciences are essentially about: their critical attitude, their methodological doubt, and their willingness to consider other perspectives. If there is anything to be learned from the sciences in the public discourse, then it is reflexivity.

Regarding the role of science in the quest for sustainability, we encounter an ambivalent attitude in the public. On the one hand, many hope that science will not only provide descriptions and explanations, but also practical solutions ("Listen to the sciences!"). On the other hand, many regard modern science with its distinction between subject and object, or humans and nature, as the very cause of recent problems. For them, the path from the control of nature through knowledge to its destruction through technology seems inevitable. Neither the demonisation of modern science nor its glorification are appropriate. The path of reflexive, transdisciplinary sustainability research lies beyond these two false extremes. It recognizes both the explanatory achievements and the normative limitations of empirical sciences – that they are about "Is" and not about "Ought".

Various typologies of the role of researchers in transformative processes emphasise the role of critical reflexivity and self-reflexivity. Drawing on Wittmeyer and Schäpke (2014), Peltola et al. (2023) stress that researchers should regard themselves not only as knowledge brokers, process designers, and capacity builders, but also as critical researchers. Affirming the claim that "reflexivity is key" (Kuehner et al. 2016), they plead for a strong reflexivity. "While weak reflexivity is aimed at eliminating the influence of the researcher in the process, strong reflexivity underlines the experiences of researchers as resources in transformative processes" (Peltola et al. 2023, p. 879). In this vein, we understand our intervention as an experienced contribution that provides valuable resources. By pointing to the reciprocity of ethical concepts, we aimed at fostering favourable conditions for actors to collaborate.

Conclusion

What is the role of sustainability science in transforming regional agrifood systems? How can ethical reflection contribute to transformative change, and how can we deal with normativity in this kind of research? To answer these questions, this paper reflected on a research project that used creative methods to trigger ethically informed debates on the ground. Based on these experiences and reflections, we suggested the following answers:

The transformation of regional agrifood systems is a collaborative endeavour in which communication and mutual understanding are key. The purpose of discourses is to reach a consensus on rules: which actions are permissible, and which should be prohibited. It is not the participants' job to decide who are the "good guys" and who are the "bad guys". Indeed, we warn against such a "moralization of the discourse" (van den Daele 2001). It hurts the individual and does not lead to results. On the other hand, a discourse on morals, which means a discourse on the question of what actions are right and what actions are wrong, is essential for the future of agriculture. Mutual recognition is a precondition for such a discourse. Scientists and philosophers can support this collective effort as interpreters and facilitators. Critical self-reflexivity is required to fulfil these roles in a way that fosters favourable conditions for collaboration. In a process aimed at practical cooperation, our role as scholars is asking the right questions rather than giving the right answers.

Sustainability science in general, and ethical reflection in particular, do not provide simple solutions. Instead of searching for quick, cheap, and easily communicable remedies, they take a more differentiated approach to the problems, involving different actors and their perspectives. In the engagement with stakeholders, we must refrain from questioning the moral integrity of the actors. Instead, we need to distinguish between person and action, and restrict discussions to the question of which practices are considered right or wrong, and for what reasons. In order to facilitate such a discourse, we advocate an attitude of honesty and modesty. Such humility also considers the possibility that asking the right questions may not suffice to find the solutions needed on the ground.

Acknowledgements: This project would not have been possible without the active support of the bio regions' managers and all local actors who invested their time and creativity in our research. *Andreas Greiner* and *Jutta Schneider-Rapp* facilitated the multiple communication processes. *Veronica Hector, Verena Kröner, Carolin Schweizerhof, Anna Struth,* and *Birke Zulic* (Uni Hohenheim) were responsible for the data collection, developing, and using various methods and formats. *Thomas Potthast* and the members of the research group *Nature and Sustainable Development* at the ethics centre (Uni Tübingen) provided support and valuable feedback. Thanks to all of you! We also wish to thank *Alison Elisabeth Butler* for improving the paper's level of English. Finally, we would like to thank two anonymous reviewers and the editors for their helpful comments.

Funding: This work was funded by the Baden-Württemberg Ministry for Science, Research and Arts within the *Research Program Ecological Farming: https://oekolandbauforschung-bw.uni-hohenheim.de.*

Competing interests: *CB* is the editor-in-chief of *GAIA*. She declared her dual role as author and editor in the submission process, and abstained from discussions and decisions about the manuscript.

Authors' contributions: *CB:* project initiation; *UE, CB:* research design; *CB:* supervised field research; *UE:* data interpretation from an ethical perspective; *UE:* drafted and finalised the manuscript; *CB:* inputs and suggestions.

References

Abson, D. J. et al. 2017. Leverage points for sustainability transformation. *Ambio* 46/1: 30–39. https://doi.org/10.1007/s13280-016-0800-y.

Avelino, F. 2021. Theories of power and social change. Power contestations and their implications for research on social change and innovation. *Journal of Political Power* 14/3: 425–448. https://doi.org/10.1080/2158379X.2021.1875307.

Díaz, S. et al. 2015. The *IPBES Conceptual Framework:* Connecting nature and people. *Current Opinion in Environmental Sustainability* 14: 1–16. https://doi.org/10.1016/j.cosust.2014.11.002.

Eser, U., A. Greiner, J. Schneider-Rapp, C. Schweizerhof, C. Bieling. 2024. Kommunikation über die Zukunft der Land(wirt)schaft: Mit Bildern das Gespräch über Werte eröffnen. In: *Landscapes for Future – Landschaften und sozial-ökologische Transformationen.* Edited by M. Leibenath, L. Gailing, A. Birnbaum. New York: Springer. 277–295. https://doi.org/10.1007/978-3-658-43082-5_17.

Fischer, J., M. Riechers. 2019. A leverage points perspective on sustainability. *People and Nature* 1/1: 115–120. https://doi.org/10.1002/pan3.13.

Fisher, R., W. Ury, B. Patton. 2004. *Das Harvard-Konzept: Der Klassiker der Verhandlungstechnik.* 22th edition. Frankfurt am Main: Campus.

GAIA. 2023. *GAIA Special Issue 2024.* Call for papers: Sustainable development and ethics of science – mutual impulses and challenges. *GAIA* 32/2: 218.

Grunwald, A. 2015. Transformative Wissenschaft – eine neue Ordnung im Wissenschaftsbetrieb? *GAIA* 24/1: 17–20. https://doi.org/10.14512/gaia.24.1.5.

Honneth, A. 1994. *Kampf um Anerkennung. Zur moralischen Grammatik sozialer Konflikte.* Frankfurt am Main: Suhrkamp.

Horcea-Milcu, A.-I. et al. 2019. Values in transformational sustainability science: Four perspectives for change. *Sustainability Science* 14: 1425–1437. https://doi.org/10.1007/s11625-019-00656-1.

Horkheimer, M. 1940. The social function of philosophy. *Studies in philosophy and social sciences* (formerly: *Zeitschrift für Sozialforschung* 8/3, 1939): 322–337. https://doi.org/10.5840/zfs19398373.

IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services). 2022. *Summary for policymakers of the methodological assessment of the diverse values and valuation of nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.* Edited by U. Pascual et al. Bonn: Zenodo. https://doi.org/10.5281/zenodo.6522392.

Kals, E., I. T. Strubel, J. Maes. 2021. Gerechtigkeitserleben. In: *Handbuch Globale Kompetenz.* Edited by P. Genkova. Wiesbaden: Springer. 1–15. https://doi.org/10.1007/978-3-658-30684-7_95-1.

Kröner, V. 2022. *Die Rolle von Macht in Transformationsprozessen des Landwirtschafts- und Ernährungssystems – eine empirische Untersuchung am Beispiel der Bio-Musterregion Enzkreis in Baden-Württemberg.* Masters thesis, Faculty of Agricultural Sciences, University of Hohenheim.

Kuehner, A., A. Ploder, P. C. Langer. 2016. Introduction to the special issue: European contributions to strong reflexivity. *Qualitative Inquiry* 22/9: 699–704. https://doi.org/10.1177/1077800416658069.

Meadows, D. 1999. *Leverage points: Places to intervene in a system.* Hartland: The Sustainability Institute. https://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system (accessed October 28, 2024).

MLR (Ministerium für Ernährung, Ländlichen Raum und Verbraucherschutz, Baden-Württemberg). 2020. *Der weiterentwickelte Aktionsplan "Bio aus Baden-Württemberg".* https://mlr.baden-wuerttemberg.de/de/unser-service/presse-und-oeffentlichkeitsarbeit/pressemitteilungen/pressemitteilung/pid/aktionsplan-bio-weiterer-ausbau-des-oekologischen-landbaus (accessed February 5, 2024).

MWK (Ministerium für Wissenschaft, Forschung und Kunst, Baden-Württemberg). 2020. *Ökologischer Landbau: Land fördert vier Forschungsverbünde mit 1,2 Millionen Euro*. 27.05.2020. https://mwk.baden-wuerttemberg.de/de/service/presse/pressemitteilung/pid/oekologischer-landbau-land-foerdert-vier-forschungsverbuende-mit-12-millionen-euro (accessed February 5, 2024).

Öko-Valuation. 2023. *Glossar – Was ist eigentlich ...?* https://oekovaluation.de/glossar (accessed February 5, 2024).

Öko-Valuation. 2024. *Aktuelles: Fair Trade Aktionstag in Heidenheim und Landwirtschaftliches Hauptfest, Bad Cannstadt.* https://oekovaluation.de/aktuelles (accessed October 28, 2024).

Peltola, T. et al. 2023. Researcher roles in collaborative governance interventions. *Science and Public Policy* 50/5: 871–880. https://doi.org/10.1093/scipol/scad034.

Riechers, M., J. Fischer, A. O. Manlosa, S. Ortiz-Przychodzka, J. E. Sala. 2022. Operationalising the leverage points perspective for empirical research. *Current Opinion in Environmental Sustainability* 57: 101206. https://doi.org/10.1016/j.cosust.2022.101206.

Schneidewind, U. 2015. Transformative Wissenschaft: Motor für gute Wissenschaft und lebendige Demokratie. *GAIA* 24/2: 88–91. https://doi.org/10.14512/gaia.24.2.5.

Strohschneider, P. 2014. Zur Politik der Transformation von Wissenschaft. In: *Die Verfassung des Politischen.* Edited by A. Brodocz, D. Herrmann, R. Schmidt, D. Schulz, J. Schulze Wessel. Wiesbaden: Springer. 175–192. https://doi.org/10.1007/978-3-658-04784-9_10.

Van den Daele, W. 2001. Von moralischer Kommunikation zur Kommunikation über Moral. Reflexive Distanz in diskursiven Verfahren. *Zeitschrift für Soziologie* 30/1: 4–22. https://doi.org/10.1515/zfsoz-2001-0101.

WBGU (Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen). 2011. *Welt im Wandel. Gesellschaftsvertrag für eine Große Transformation.* Berlin: WBGU.

Wehling, P. 2022. Transdisziplinarität und Solutionismus. Ein verfehlter Vorwurf, aus dem sich trotzdem einiges lernen lässt. *GAIA* 31/1: 19–23. https://doi.org/10.14512/gaia.31.1.6.

Wittmayer, J. M., N. Schäpke. 2014. Action, research and participation: Roles of researchers in sustainability transitions. *Sustainability Science* 9: 483–496. https://doi.org/10.1007/s11625-014-0258-4.

Ziegler, W. 1991. Envisioning the future. *Futures* 23/5: 516–527. https://doi.org/10.1016/0016-3287(91)90099-N.

Zulic, B. 2023. *Anerkennung als Hebel für eine nachhaltigere Landwirtschaft: Anerkennungsdefizite aus der Perspektive der Landwirt:innen verstehen.* Bachelor's thesis at the Faculty of Agricultural Sciences, University of Hohenheim.

Uta Eser
Independent environmental ethicist and associate member of the International Centre for Ethics in the Sciences and Humanities at the University of Tübingen, DE. Studies in biology and ethics at the same university. Research interests: exploring the borderland between biology, politics, and ethics; ethical aspects of biodiversity communication and nature conservation.

Claudia Bieling
Professor in Societal Transition and Agriculture at the University of Hohenheim, DE. Studies in forestry sciences in Freiburg and Göttingen, DE. Research interests: ecological and social dimensions in land-use and food systems, the role of values in transformation processes. *GAIA* editor-in-chief.