

Energy Pasts, Energy Futures

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The Summer School “Post-Carbon Futures” took place in September 2021. About 30 students and researchers from different areas of Central Europe came together, trained in fields such as Anthropology, Human Geography, Sociology and STS (Science and Technology Studies). The participants covered a wide variety of research cases and brought unique perspectives to the overarching topic of post-carbon futures. For example, some cover the present conditions and prospects of the mining and resource extraction industries in different countries. Others focus on cities’ and people’s entanglements of energy production.

My research project in the field of Sociology ponders around the question: What role do sciences, including social sciences, play in the process of structural change? How can anthropologists and other social scientists contribute to the challenge of decarbonization and structural change in this central European coal mining region? In the following, insights from several field trips shed some light on these questions.

Past Energy shaping different futures for different people

Field trips were part of the Summer School program to get to know the places subject to structural change. The visit of the open-pit mine of the mining company MIBRAG at Profen is one example.

A tour bus picked us up to drive us into the mining area. When we got off the truck at the centre of the lignite coal mine, I just remembered that it was the day of the global climate strike - and I sent a short text message to my kids, telling them:

“It’s Friday, don’t forget to prepare for today’s F4F-demonstration! Unfortunately, I cannot make it today, but you will go, right?” I added a picture showing me in front of a giant excavator.

They responded: “Are you going to block that thing, mama?!”

“Well, no. Certainly not, guys. I am here as a researcher.” So I muted my phone to focus on the tour and listen to the tour guide’s explanations.

The company’s tour guide dives into the history of charcoal that goes back in time for hundreds and thousands of years. Up to 20.000.000 to 40.000.000 years back, the deeper we got into the open cast mine. It is impressive, of course, but I have ambivalent feelings towards this source of energy. The notion of “conserved sun” is rather disturbing when you hold the brown crumbling coal in your hands and imagine how much heat it will give away when being burned. Because, you know, it’s not just heating. It is the material that fuels global warming. Hence, aside from all kinds of global impacts, it also affects the future of my children.

You may wonder, why would I care to listen then? I am concerned for the future in times of global warming, children’s living conditions, and the costs they will have to bear. This concern stems from my training as a sustainability scientist - the IPCC climate report was at the core of my studies. The consequences of global warming were closer to me than the working and living conditions in the central German coal mining areas. Therefore, I would describe myself as an engaged researcher aiming for a socio-ecological transformation, envisioning a climate-neutral and environmentally sustainable future. I share motivation with other scientists who, for instance, research lithium economy or engineers who work on (green) hydrogen fuels. You find more on this ambivalent role of researchers in the transformation process in Herberg, Staemmler & Nanz (2021) .

Still, I am also concerned for the local future(s). I am engaged in the sense that I care for a socio-ecological transformation. I methodologically consider the living realities of the people involved. As a social scientist, I observe, I listen and I do not judge easily. I reflect on my position and standpoint. I refuse to overlook existing tensions; I do not aim to simplify complex situations. You won’t find me putting you in boxes of black and white, building categories of pro- or against coal exit, or prepared vs non-prepared for the post-carbon future. There is always more to it than simple solutions. As a scientist, I will not give you a future vision for your places. I want to know yours - your understandings, your challenges, your visions.

To return to the field trip experience at the lignite mine: At the end of the tour, our guide voiced his concerns as a district mayor of a village neighbouring the mining area edges. Is this village soon to be drained, he asks, if people retire, young adults and families move to the urban centres because socio-economic infrastructure and good working and living conditions are lacking? Is the train, as they already got used to, bypassing without stop? Is the financial support for structural change invested into the urban centres of Halle and Leipzig leaving the people in the rural areas with no chances to enhance projects and infrastructures for a livable future?

The mining company employee and local district mayor is concerned about the post-carbon future for the people living here. These concerns are pretty common for other rural areas of decarbonization transformation, for instance, in Lusatia . More on this urban-rural divide and different dimensions in the central German coal region is to be found in Sander, Schüler & Siebenmorgen (2021) . So he also has a legitimate concern to care for the futures at stake.

During the Summer School, I experienced how carefully and passionate the researchers dedicate their time to understand the particularities of the places subject to change. How engaged they asked questions and got involved with the people's stories. And this is our task as social science researchers, to consider those places and the people living there thus being affected by decarbonization processes. Because the living and working conditions in this mining region are not made top-down, they are made by and with the people living here. Therefore, the endogenous potentials can best be raised by those who know the place, understand the conditions and directly see the everyday challenges and socio-economic dynamics.

In that sense, I argue that researchers of social science and anthropology, engineers and scientists and industrial workers of energy production work towards the same goal: to make the future work for all of us. Of course, we take different angles, but we all work for a socio-ecological transformation and just transition at the end of the day.

So, to make it a “just transition” instead of “just another transition” at the expense of the people living here, social scientists can make the places under transition matter (Kesküla 2021, 2016). We need each other to understand better where we are, where we go, and how we get there - and this knowledge is context-specific. So, field trips

are essential to understanding, getting to know each other, and entering into a dialogue.

Past and future decarbonization efforts of a power production company

Another field trip brought us to the power plant of Halle-Dieselstraße. We learned that the company that runs the power station, Stadtwerke Halle, was already under transformation several times. A constant change in technologies and processes shaped the working conditions at the heat production company.

At the power plant Halle-Dieselstraße, we first went to the power plant's neat, spacious and modern conference room, where the company's managing director of heat and power generation presented the history of the power plant. It was installed in 1972. As the street's name - Diesel-Straße - may already indicate, it first ran on heavy fuel. In 1995 the first step to greener energy production was made by shifting to biofuels (natural gas). Stadtwerke Halle implemented further modernization steps from 2005 onwards. In 2016, the company's manager convinced the board to invest in a vast district heating reservoir to gain renewable energies flexibility. The heat reservoir can balance the fluctuations in electricity markets. The latest modernization step of thermal heat coupling was finalized in 2021 when new challenges already appeared at the horizon: the German CO₂-reduction scheme to net zero emissions by 2038 demands to develop immediate conversion steps towards renewable energies. Like me, the manager seemed to be ambivalent regarding the time frame. He says: "I wish for my kids to get out earlier, like by 2030", to continue that "it is a great challenge for everybody" in the sector.

Subsequently, the shift supervisor who had been employed at the plant for about forty years gave us a tour. The machinery seemed neat, modern and intelligent. Measurement units for all kinds of in- and outflows and fluctuations, including the number of CO₂ emissions, kept control. At the end of the tour, the technical worker summarizes the working conditions: "It never got boring. I want to take a breath after the last few years have been exhausting. The changes were necessary due to technological modernization." He adds: "Although we're shaken from the recent modernization schemes, there is no way around. We know what politicians say. New structural changes are ahead."

When it comes to future visions and the progress and modernization narrative, one must consider the scale: the workers' ideas are more locally embedded than the global concepts for transformation. As already mentioned above, at particular (work-)places, it may feel like "just another transition" than a "just transition". This is especially the case when the change scheme is politically induced and top-down implemented. Then, actors such as the mining and power production companies have to react to political changes. They will do so, but the tone towards future outlooks is tense. "We made efforts to reduce emissions in the past years, but there are harder years ahead of us" is one take-away I overheard when I listened to the presentation of the company's manager. Although slightly optimistic that the company will manage the decarbonization challenge somehow, the outlook is somewhat uncertain regarding concrete measures to cut down carbon emissions substantially.

I see Anthropology as a significant contribution to bridge that gap between global trends, top-down politics and local entanglements. The way anthropologists work, field-site oriented and interested in specific situations that cause unease in pursuing common pathways, is valuable. Making places matter is helpful to consider the living and working conditions of people affected by changes. In addition, it is of use to consider specific local challenges and entanglements that are not easily dissolved by the introduction of new technologies or tools. Finally, the broader perspectives stemming from the exchange with peers during the summer school are helpful, too. Social scientists and anthropological researchers add valuable views to the challenges ahead to do justice to the common futures we must build collectively.

References

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About the Author

Hermine Bähr is doing a PhD on the 'Laboratories of Transformation' at the Max-Weber-Kolleg in Erfurt. She is researching how practices of knowledge production in the energy transition change under the condition of research done in transdisciplinary settings.