


RESEARCH ARTICLE

Care for the Family and the Environment in China's Coal Country

Charlotte Bruckermann 

University of Cologne, Cologne, Germany

Corresponding author: charlotte.bruckermann@uni-koeln.de

(First published online 27 March 2023)

Abstract

In the “coal province” of Shanxi, residents grapple with tensions between caring for their families and caring about their environment. In creating ethical pathways through care, residents must navigate the paradox of livelihoods dependent on forms of development that endanger lives and pollute environments. This dilemma has crystallized over time, as the personal and particular demands of the present have become enmeshed with long-standing concerns over environmental degradation. Rather than characterizing family care as concrete and environmental care as abstract, acts of care in Shanxi link the reproductive crisis of the family with the reproductive crisis of the environment: the article presents instances under which the attention, empathy and recognition of care for concrete others are scaled up to the levels of ecology and planetary crisis.

摘要

在山西这个“煤炭大省”、人们在照顾家庭和保护环境之间的矛盾之间挣扎。山西的民众创造性地使用“照顾”作为道德话语、然而这却令他们面对一个矛盾：他们需要发展经济以确保家庭的生计、而这些经济发展形式却威胁家人的生命并且污染当地环境。这个矛盾随着时间的推移而实现、因为个体在当下对于生计的具体需求、与长期持续而抽象的环境恶化问题交织在一起。山西民众没有简单的把照顾家庭当作具体、把爱护环境当作抽象。相反、他们的照顾行为将家庭再生产的危机与环境可持续发展的危机结合在一起。本文介绍了一些例子、这些例子表明山西民众为具体的他人提供照顾时，他们将关注、同情和对照顾的认可提升到了生态和地球危机的层次。

Keywords: pollution; coal; reproduction; environmentalism; ecological civilization; Shanxi

关键词: 污染; 煤炭; 再生产; 环境主义; 生态文明; 山西

Sitting in his beat-up car in early April 2019, Fangdi and I made our way up the dusty, ochre-coloured hillside of south-central Shanxi's loess plateau. When we emerged from the heavy, white pollution that hung in the valley below, Fangdi cracked a window to let outside air into the musty vehicle. A mixture of toxic particulate and allergenic pollen flowed in with the spring breeze. As Fangdi coughed and wheezed, I briefly closed my eyes against the sting of the airborne particulate and sipped hot water from a Thermos to alleviate the parched sensation in my throat. Fangdi quickly closed the window. Above the hazy ravine, a denuded hillside came into view that was regularly blasted with explosives, a local stone quarry. On the far side of the mountain lay one of the coal mines where Fangdi's father had made his fortune as an official for the local mining bureau.

The Shanxi mining industry allowed many well-positioned and well-connected residents in the region to become rich (*facai* 发财) in the reform era, leading to the proliferation of the nouveau riche (*tuhao* 土豪), with the notorious coal bosses (*mei laoban* 煤老板) at the helm. The development of the local coal-mining sector simultaneously hollowed out the silty mountains and depleted usable groundwater, forcing many villagers, including Fangdi's family, to move into the urban

valley. The day before our car trip was Mid-Autumn Festival (*Qingming jie* 清明节) and Fangdi had returned to the remnants of his deserted childhood home with his brother to offer sacrifices at his father's grave, a place now so dry that even the wild sallow buckthorn, or "sand-thorns" (*shaji* 沙棘), that his family used to collect to make ends meet struggled to survive. Indicating towards his ancestral village, Fangdi sniffed and exclaimed, "You think this is a place to study ecological civilization (*shengtai wenming* 生态文明)?! Look at that!" Fangdi waved his hand towards the degraded mountains, "This is the place to study ecological destruction (*shengtai pohuai* 生态破坏)!"

Fangdi's father had died of lung cancer a decade ago. According to Fangdi, a lethal combination of pollution and cigarettes was to blame, with his father literally dying for development. When I met Fangdi in 2009, his father had recently passed away, and Fangdi had to find a job to support himself and his mother, with whom he lived in a modern, urban apartment block in the city. Deciding where to work was a difficult decision. On the one hand, Fangdi wanted to contribute to his family's livelihood and honour the memory of his father. Moreover, the coal mining corporations were the main employers in the region. On the other, he did not want to follow in his father's footsteps, joining an industry that caused so much of the asthma, skin conditions, emphysema, cancer, and black lung in the region, sometimes even in children. In the end, Fangdi took a job as a tour guide for a corporation with its origins in coal mining and associated heavy industries of energy, steel and chemicals, that was just beginning to diversify into the emerging tourism industry¹ and real estate development in the late 2000s.² After a few years, Fangdi worked his way up to his current position as a bureaucratic liaison between the corporation and the government on commercial housing issues.

Winding up the hillside within a context of pollution and uncertainty, the promise of ecological civilization failed to capture Fangdi's imagination. However, embodied memories and future risks related to dust, smog and pollution flowed into his personal narrative of the ethical dilemma of work and family, and coalesced into an atmosphere that brought together his internal disposition and the wider affective environment. Fangdi's concerns suggest a dilemma of how to care for both the family and the environment, and a reluctance to neglect either one by caring too much about the other. This desire to balance these two commitments of care reflects shifting moral horizons for residents of Shanxi, and possibly elsewhere in China.

The state orients ecological civilization towards progress and development as a socio-technical undertaking of environmental restitution under Communist Party leadership.³ Zhejiang villagers, for instance, drew on ecological civilization's logic of science and technology, as well as its impetus of social stability, to organize and confront what they considered serious pollution sources.⁴ The history of the concept of ecological civilization reaches into past narratives of cultural unity and projects policy pathways towards the future to meet the demands of both domestic priorities of environmental redress and global environmental governance under Chinese leadership, emphasizing innovation and competition with sustainable technologies.⁵

As a national imaginary, ecological civilization is, of course, a top-down state instrument, yet on the ground the concept opens up spaces for environmental agency and disputes.⁶ For decades, rural citizens have negotiated with state authorities despite the limits of possible scientific evidence,

1 Despite pollution, Shanxi boasts a range of attractive tourism sites, including its 19th-century architectural heritage based on the province's pioneering role in Chinese banking and finance. For example, the UNESCO heritage town of Pingyao, "red tourism" sites of Chinese Communist Party heroism such as points on the Long March and sites related to Red Army spies, and even museums, mines and gravesites related to the industrial and energy history of China. See Bruckermann 2016.

2 For an overview of Shanxi province's previous phases of industrialization, see Goodman 1999.

3 Hansen, Li and Svarverud 2018.

4 Hansen and Liu 2018.

5 Geall and Ely 2018.

6 Hansen and Liu 2018.

technological solutions and economic dependencies.⁷ These interventions build on growing grassroots challenges to pollution through lawsuits and protests focused on risks posed to health and livelihoods.⁸ Meanwhile, in a survey-based ranking of factors, urbanites weighed environmental concerns over air pollution against physical health, family, well-being, employment and education in a complex balancing act of priorities.⁹ Across China, media investigations and medical reports combine to paint a bleak, yet increasingly clear, picture of citizens' exposure to anthropogenic environmental hazards and cataclysmic events.¹⁰

My contribution to these debates embeds experiences of pollution and disappointments with ecological civilization within the broader field of living alongside and in the midst of pollution, and the many ethical challenges this entails. I investigate how environmental care unfolds with enmeshed concerns, particularly for family and work, within this holistic person-centred view. The ways citizens subject the state-sponsored imaginary of ecological civilization to critique and cynicism reveal multiple temporalities and relations of scale. Rural citizens, in particular, navigate how concrete experiences tie into abstract understandings of care, pollution and landscapes of degradation and hope. To bring these dimensions to the forefront, I propose a theoretical framework and methodological approach based on two intertwined analytical concepts: care and reproduction.

This perspective arises from long-term fieldwork in Shanxi, where I have spent over 20 months since 2009. Initially, I lived with a family in the mountain village of Sweeping Cliff for over a year, where an energy corporation diversified its portfolio by developing rural tourism. Inspired by feminist and Marxist approaches to care and reproduction under devaluation of the countryside, I developed an ethnography of domicile, the loss of home, in the village.¹¹ Returning for several months of fieldwork in Shanxi with a more focused environmental research agenda since 2016, I expanded my focus on care and reproduction as labour to include environmental work.

This research agenda and theoretical framework comes close to what Elizabeth Lord has described in neighbouring Shaanxi province as "socio-environmental reproduction" in rural communities.¹² As environmental work and environmental sacrifice meet in rural communities, villagers often internalize the blame for ostensibly local pollution failings promulgated by the central state.¹³ Rural citizens thereby face the ensuing contradiction of shouldering both the environmental harm wrought by the ruralization of pollution in their localities on the one hand and bearing the environmental obligations of turning national ecological policies into a lived reality on the other.¹⁴ Both resignation and protest inform the rural environmental justice sensibility that draws on a broader national discourse of ecological attention and redress.¹⁵

During my fieldwork in rural Shanxi, long-standing obligations towards kin met with a growing acknowledgement of ecological destruction, and the willingness to share these anxieties with others, that suggested a sharpening of awareness towards the environmental cost of regional development as a personal dilemma. Yet, legacies of care in central Shanxi challenged a clear contrast between care for the family as concrete and historical and care about the environment as abstract and novel. Instead, everyday defensive measures families adopted against environmental degradation and long-term family histories of intergenerational and ecological care reveal the intersections of ecological and familial reproductive crises over time. Therefore, I do not argue that environmental attention in Shanxi is new, but that ecological concern has long been embedded with continuities of

7 Ibid.; Lora-Wainwright 2021; Jing 2000.

8 Lora-Wainwright 2013.

9 Li and Tilt 2018.

10 Litzinger and Yang 2020.

11 Bruckermann 2020.

12 Lord 2020.

13 Ibid.

14 Ibid.

15 Lora-Wainwright 2021.

care and reproduction. Nonetheless, these modes of care increasingly adopt the language, knowledge and evidence brought forward by contemporary state policies, media coverage, medical reports and forms of protest, thereby bolstering explicit acknowledgement of these intertwined reproductive crises.

Recognizing Care, Claiming Belonging

I ground the concept of “reproductive crises” in the experiences of families in rural Shanxi, especially those bearing the brunt of industrialization drives, who constantly encountered personal, familial and social senses of loss as they sought to make sense of their reproductive lives. Loss was based on the hardships previous generations faced, which made it difficult to create generational continuity in the family.¹⁶ These crises were exacerbated by moments, events and times when forging the next generation became unstable, untenable and fraught. As events from the Great Leap Forward famine to the family planning policy upended expectations of future kin in the Shanxi countryside, whole communities rallied to make reproduction possible through exchanges of care. Similar responses reverberated across northern China as women in particular attempted to alleviate some of the personal and familial challenges of reproduction during the collectivization¹⁷ and reform eras.¹⁸ In Sweeping Cliff these contributions to creating, rearing and safeguarding the future were conceptualized as having wide-ranging consequences. Contributions of care, in particular, underlay “claims” that could subsequently be made over the lives of others – claims of obligation, reciprocity and belonging.¹⁹

Cast as heroes, perpetrators and victims in official narratives, families in Shanxi attempted to gloss over the disruptive temporalities of before and after the 1949 revolution, in biographies, genealogies and homes.²⁰ Over subsequent decades, the notion of “sacrifice for the nation” became a paradigm in central Shanxi to enact and legitimize claims to the home.²¹ This allowed families to rehabilitate themselves within powerful visions of the advance of history.²² As elsewhere in China, recent configurations of “red capitalism” and socialist sovereignty have mobilized this very notion of sacrifice.²³ In Sweeping Cliff, these configurations paved the way for a renewed “neosocialist” wave of home dispossessions by recasting the courtyard as cultural heritage belonging to the Chinese nation.²⁴

Although care was enacted through attentive co-growth to make the world liveable,²⁵ the way care unfolded in central Shanxi reinforced multiple and sometimes contradictory caring logics: care grounded in naturalized conceptions of kinship and personhood on the one hand and care mobilized in state discourses and policies through cooperation and entitlement on the other.²⁶ These dynamics were extended into the market era through the graded differentiation between the qualitative value of contributions to broader social projects, especially governance by *suzhi* 素质 (“human quality”).²⁷ In the mountains surrounding Sweeping Cliff, these logics also fed into conceptions of the state as the all-encompassing carer to whom citizens belonged, as the state provided the “national home” (*guojia* 国家) to all citizens.²⁸ However, state care could also

16 Bruckermann 2017; 2019; 2020.

17 Herschatter 2011; Guo 2003.

18 Yan 2003; Greenhalgh 1993.

19 Bruckermann 2017.

20 Husman 2011; Hinton 1966; 1983.

21 Bruckermann 2019.

22 Ibid.

23 Palmer and Winger 2019; Pieke 2018.

24 Bruckermann 2019.

25 Steinmüller, this issue.

26 Bruckermann 2017.

27 Bruckermann 2020; see also Kipnis 2007.

28 Bruckermann 2019. For a theoretical discussion of care as a concept for organizing social relations, see Thelen 2015.

be thoroughly disappointing when these promises failed to materialize, for instance when local development dispossessed villagers of their physical homes.²⁹

Facing the dilapidated mountainside of central Shanxi, the promising rhetoric surrounding the coming ecological civilization over the past decade rang particularly hollow.³⁰ Reminiscent of earlier phases of reproductive crisis, environmental degradation and atmospheric pollution created massive challenges. As sheltering from pollution cast a shadow over the health and livelihoods of families, trajectories of developmental progress and brighter economic futures lost their lustre.³¹ It was previously taken for granted that natural resources and the broader ecological environment would foster personal achievement and forge regional development. Although awareness of pollution and attending to ameliorating its effects were part of the provincial industrial history, the density and ubiquity of atmospheric pollution was cause for concern. Official recognition and mounting critique regarding the ecological crisis, in Shanxi and elsewhere in China, could even cause political and personal hopes of incremental progress to go up in smoke.³²

In rural Shanxi in the past decade, caring for families and environments, as practical acts of attending to constitutive co-growth, increasingly converged with public critique and official acknowledgement of the severity of the pollution crisis. This poses the questions of how carers seek recognition for their care through acknowledgement by others. As recognition comes to be evoked in tension with claims made by others, especially kin and the state, this raises dilemmas about how care flows into everything from children to development, and thereby shapes their futures. How do people pay attention and attend to these different dimensions of futurity and reproduction in their everyday lives? How do the immediate demands of the present, of caring for families and environments, connect to more holistic and abstract appeals of caring about future reproduction?

Changing Atmospheres

Making choices about how to sustain a livelihood and contribute to their families, Shanxi residents navigate a complex field in which even the mountains are moved and the ground becomes hollow, desiccated and unstable, so that striving to do the right thing cannot simply rely on paths forged in the past or follow rules set for the future. Residents in Shanxi are, of course, not unique in needing to work and wanting to have children, and thereby defending their means of sustenance in forms production and reproduction in the face of ecological destruction. The powerful trope of those who came before and those who will come after is often evoked in environmental discourse the world over, such that trite questions of “what is to become of the children?” help to scale the ecological crisis up from the personal reproduction of offspring to the more general plight of the planet.³³

As Fangdi’s familial, professional and even ecological reflections reveal, caring for and about families and the environment is deeply entangled in personal and regional history, already enmeshed with the work of production and reproduction of life-worlds. As different Shanxi generations faced one another through the work and labour they did for one another, their care emerged in dialogue with local conceptions of kinship, personhood and reproduction.³⁴ Shifts between the immediacies of “caring for” something in concrete encounters and the more distant “caring about” something in the abstract as a matter of principle³⁵ connected in an encompassing field of attentive engagement. The environment, including the atmosphere, provided this setting, a

29 Bruckermann 2019. On the different scales of legitimacy between the local and central state, see also Bruckermann 2016.

30 For in-depth analysis of ecological civilization at the policy level, see Hansen, Li and Svarverud 2018; Geall and Ely 2018.

31 See Lora-Wainwright 2021; Lord 2020; Hansen and Liu 2018.

32 Litzinger and Yang 2020.

33 Rutherford 2013.

34 For a general discussion of these entanglements, see Drotbohm and Alber 2015.

35 Steinmüller, this issue.

context that framed what could be taken for granted and assumed without saying, merging attentive and non-attentive modes of engagement.

Far from a static background, attunement and engaged recognition changed over time. Elsewhere in China, the formalization of boundaries of attention has been circumscribed through administrative legislation and kinship obligations, for instance in livelihood guarantees between state and family,³⁶ but also through ritualization in acts, such as suicides that demand attention towards the historic and personal injustices experienced and give expression to shared psychic traumas.³⁷ These temporal changes in care and disjunctures between registers of care, from the personal to the political, manifested in Shanxi residents' apprehensions in talking about pollution, ecological degradation and planetary crisis.

On the roads snaking through the craggy Shanxi hillside, travellers often complained of *fengchen* 风尘 – wind and dust – indicative of both the immediate experience of travel fatigue and the hardships and uncertainties in an unstable environment in the more abstract sense. Similarly, widespread complaints about atmospheres of *yumen* 郁闷, gloom and doom, swirled somewhere between the self and the world, while a whole host of experiential psycho-physical ailments, from exhaustion and anxiety to depression and general malaise were attributed to air pollution. While *qifen* 气氛 may be an apt word for describing these experiences of atmosphere, they also resonated with the more contained notion of ambience as *fenwei* 氛围, and the mutable practices and moods of *fengqi* 风气. Moreover, these experiences connected personal mental states (*xinqing* 心情, *xinjing* 心境) with the amorphous sphere of physical air (*kongqi* 空气).

Pollution concerns were rarely openly discussed during fieldwork in Shanxi a decade ago, at least with a nosy foreign anthropologist. Nonetheless, widespread awareness of pollution formed a constant source of disquiet, as it demanded a flow of attention towards reducing harm from toxicity that manifested in the everyday defensive practices to combat the effects of pollution on families, homes and the environment discussed below. Nonetheless, residents were reluctant to share internal struggles, from tricky ethical dilemmas to debilitating psychological states, that resonated with the broader environment of disruption and destruction of which they were a part.

This atmosphere has shifted towards acknowledging air pollution more explicitly and publicly, as residents bring up the issue with friends, family, colleagues and even strangers. Shanxi residents now frequently comment on the environmental degradation permeating their everyday lives, and openly reflect on their shifting and diverse modes of care. The following sections consider the humdrum activities involved in forging a good life, from family to work, in a context of atmospheric toxicity. These grassroots practices of recognition form the basis for reckoning with pollution discourse as it proliferated in state policy, media outreach, popular outcries and medical research in the past decade. Everyday measures of care thereby paved the way for adopting outspoken acknowledgement of ecological degradation in modes of caring for the family and environment.

Situated Responses to Atmospheric Toxicity in Shanxi

Even in the single mountain village of Sweeping Cliff where I have conducted much of my fieldwork in central Shanxi, different attitudes towards pollution abound. Two contrasting sets of concerns encountered in the late 2000s, which we will turn to now, illustrate this diversity. Jia, a 76-year-old woman, had lived in the village for 64 years; she had moved there with her husband as a child bride. Since then, she had rarely left the village and dedicated most of her work and attention to looking after her courtyard and caring for her family, in the fields and at the stove. Despite firing up indoor coal stoves all day long to heat, cook and boil water, taking care to ensure that flows of oxygen carried out asphyxiating gases and dusting her home meticulously several times a day to remove noxious dust, Jia was resolute that pollution was a decidedly urban phenomenon, resulting from transport and industry, not stoves.

³⁶ Lammer, this issue.

³⁷ Feuchtwang, this issue.

By contrast, Liuwei had grown up in the nearby city of Pingyao 平遥, a UNESCO heritage site, and lived in the city of Jiexiu 介休 that sat in the valley basin below the mountains. Each day a work bus picked him and other young tour guides up from urban junctions and transported them out of the valley. As the vehicle snaked up the mountain roads, a grey mist of pollution was left behind, and in the evening the bus often delivered them back down into a white blanket that had settled in the valley. Although Liuwei admitted that thinking about the grey haze hanging in the valley on the daily drive home made him anxious, he was particularly concerned with domestic pollution and the risks of asphyxiation from coal and gas vapor, possibly a legacy of his hometown's early adoption of solar roof panels to clear the air for tourism. He not only installed a monitor for pollution in his own home, but by the mid-2010s even bought a high-end air filter to protect his wife, their two children and himself from the noxious particulate in the home.

Neither Jia nor Liuwei volunteered their concerns about pollution and its effects on themselves, their families or their environment, and only shared their thoughts on this with me in response to my questions back in the late 2000s. One could even say that at the time, pollution was a matter of attention without acknowledgement, rarely to be discussed with others, especially outsiders. However, far from not caring about environmental degradation, awareness of the dangers of atmospheric pollution clearly emerged in practices and actions residents took in caring for their respective families and immediate environments.

In Sweeping Cliff, methods of combatting pollution included families switching between different fuels (for instance from coal to wood) and between different ventilation options (especially opening doors and windows) regularly, often multiple times a day. While some families updated their heating and cooking installations by switching fuel, adding an extraction fan or moving the furnace or stove outside, others moved into new homes offering technologies considered clean and hygienic due to their lower emissions, including gas installations, shared boilers and central heating.³⁸ Le, a farmer in her fifties, renovated her home and constructed two modern buildings for her sons, so they would be able to marry and move into the village with their wives. To make their courtyard home more attractive by reducing domestic pollution, she modernized and innovated on the conventional technology of coal-fired heating through the *kang* 炕, an elevated stove-bed platform, within the house. Instead, she moved the cooking and heating stoves from inside the home to the outside courtyard and installed underfloor heating throughout the living and sleeping rooms to make the entire ground surface as warm and cozy as the *kang* had previously been.

Beyond the domestic sphere, outdoor pollution was also a growing concern for village residents. Already in the late 2000s most farmers moved through the fields with masks, especially when doing work that allowed polluted dust to whirl and spread in the dry air via wind and tools. Although this might appear to be the result of a purely practical concern with the effects of dust and other airborne particulate on the respiratory system, some forms of care were more poignantly directed at caring for, and about, the environment, such as rejecting genetically modified seeds, cleaning dust from plants and paths and avoiding chemical fertilizers. For instance, accompanying a stone quarry worker to his fields in 2010, I noted that he shouldered two buckets of human slurry from the outhouse pit for the family fields; he explained that manure kept the fields in a healthy condition and was the preferred additive for his fields. When manure was in short supply, he regretted to admit that he also turned to conventional chemical fertilizer on the crops intended for strangers in the urban market, retaining the superior slurry for plots to feed the family.

The Wider Atmosphere Surrounding Pollution in China

To make sense of these diverging attitudes to pollution in Shanxi it is worth situating them within the broader set of multiple and contradictory responses in China. Clearly, within locales and even

38 Bruckermann 2019; see also Flitsch 2008.

individuals an eclectic mixture of denial, protest and acceptance can coexist, coalescing into a stance that Anna Lora-Wainwright astutely terms “resigned activism.” By conducting ethnographic research in different sites and building on research by Ajiang Chen and collaborating teams, Lora-Wainwright traces how different sources of pollution shape varied responses to its origins and effects.³⁹ Examples from fertilizer production, zinc and lead mining and e-waste recycling show that how well industrial sites are integrated into local political structures and their role in regional employment relations affect the particular forms of action local residents take.⁴⁰

Much like Jia’s responses to questions about airborne pollution described above, rural residents elsewhere in China often blame industrial pollution for their hazardous environment and bracket out the detrimental consequences of domestic household pollution deriving from cooking stoves and heating systems.⁴¹ Even in the absence of reliable scientific data on local air quality⁴² and definitive medical causality between levels of pollution and prevalence of illness,⁴³ rural residents in other parts of the Chinese countryside also prioritize ecological protection over economic development. As different sources of pollution shape local reactions, the focus of attention, flows of acknowledgement and apportioning of responsibility appear deeply and intimately interwoven with the social and relational fabrics of particular locales.

Beyond the geographic variety of experiences with pollution, multiple temporalities pattern understandings of pollution. Chinese ecological commentary, from government propaganda and official media to environmental activists and grassroots campaigns, draws analogies between Chinese air quality and pollution crises of other times and places. Comparisons with London smog of the 1950s, the Ruhr Valley of the late 19th century and Los Angeles in the 1970s are particularly prevalent.⁴⁴ Chinese urbanites also balance different factors for their quality of life, with one survey ranking children’s health in the highest position, followed by personal health, family harmony and children’s education, but nonetheless marking environmental quality above jobs and income in their list of immediate personal priorities.⁴⁵ Even the government considers temporal urgency a major risk factor in determining whether decision-making on particular environmental policies should follow a more coercive or consultative process.⁴⁶

In current Chinese environmental discourse, atmospheric pollution amounts to a crisis that projects detrimental contemporary and historical experiences from particular locales into the future, as dystopian scenarios to be averted.⁴⁷ Specifically, the depiction of Shanxi as an early symptom of ecological decay has affected provincial self-understanding. During fieldwork in the late 2000s, many residents in China’s “coal province” (*meitan dasheng* 煤炭大省) depended on mining and related heavy industries for their livelihoods and made themselves at home in the region, despite labour devaluation, ecological degradation and spatial relocation at the hands of the energy sector.⁴⁸ Living in a landscape shaped by extraction, where noxious soot blankets the soil, settles in the home and enters the body through the lungs, residents were nonetheless reluctant to discuss the sensitive topic of airborne particulate.

39 Lora-Wainwright 2021.

40 Ibid.

41 Hansen and Liu 2018.

42 Ibid.

43 Lora-Wainwright 2013.

44 Li and Svarverud 2018.

45 Li and Tilt 2018.

46 Ahlers and Shen 2018.

47 Li and Tilt 2018; Svarverud and Li 2018.

48 Bruckermann 2019.

Shanxi Province at the Forefront of the Pollution Crisis

In the last decade, the widespread awareness and outrage over pollution put environmental redress at the top of the state's policy agenda. Shanxi locals contributed significantly to this ecological awakening by warning of the growing pollution crisis and igniting popular demands for environmental justice, most famously when Shanxi journalist Chai Jing's 柴静 documentary *Under the Dome* (*Qiongdong zhixia* 穹顶之下) went viral in 2015. Foreign media frequently hailed this as China's "Silent Spring moment," referring to the 1962 book by Rachel Carson that helped bring environmental issues into mainstream politics in the United States. Bringing together ecological and familial reproduction in the opening of the documentary, Chai credits her daughter's prenatal tumour diagnosis with fuelling her personal war on pollution. As an investigative journalist for China Central Television's documentary programme *News Probe* (*Xinwen diaocha* 新闻调查) in the early 2000s, Chai documented the pollution crisis enveloping Shanxi in ways that could serve as a warning and call to action for the rest of the nation. In *Under the Dome* she recalls an interview from that time with the chief of the environmental bureau of Xiaoyi 孝义, a coal-producing township near Sweeping Cliff, who explained: "Xiaoyi is Shanxi in miniature (*suoying* 缩影), Shanxi is China in miniature." *Suoying*, as the shrunken shadow, the reflection or even trace of something, both a microcosm and epitome of a situation, concisely captures how exemplary models are not only role models for emulation.⁴⁹

Instead, as a negative model Shanxi represents a cautionary path to be avoided, despite the ephemeral, and even occluded, nature of a phenomenon like airborne pollution. Eco-media events, as well as the circulation of medical and media investigations, crystalized widespread suspicions about pollution with investigative clarity and concrete facts.⁵⁰ These shifts in the atmosphere and mood were gradual, overlapping and contradictory, yet marked changing modes of care for the family and environment in the last decade, locally and nationally, and sedimented Shanxi's role as both trailblazer and guinea pig.

Increasingly, Shanxi residents voiced their experience of caring for others through being heroic pioneers, both in terms of fuelling industrialization through their coal reserves⁵¹ and also in terms of dealing with the resulting experience of atmospheric toxicity, groundwater depletion and soil degradation. Although Shanxi residents expressed anger over predatory coal bosses and inequalities of extraction, or lamented the pollution emanating from the valley with the intensification of industry and transport, their anxieties surrounding ecological degradation rarely made their way into official government reports distributed to the wider public in the 2000s. However, journalistic accounts from investigative reporting in hospitals and fields, as well as medical research and laboratory findings, were occasionally spread through radio airwaves, television programming and internet bulletin boards at the time. Meanwhile, widespread concern about airborne particulate and toxic pollution manifested in taking care to reduce exposure or combat its symptoms. Shanxi residents poured constant effort into combatting the effects of pollution, domestic, airborne and agricultural, despite their stifled verbal complaints.

As official policy began to address the mounting pollution crisis throughout China, Shanxi residents drew on their own experiences and accounts of the phenomenon to voice their concern. For instance, Chai's earlier documentaries on pollution were already well known in Shanxi by the late 2000s, usually streamed through online services among the younger population. These documentaries were sometimes even cited explicitly in connection to environmental degradation. For instance, the famous footage of a little girl who told Chai she had never seen a blue sky in a 2004 episode of *News Probe* was rebroadcast and became a national viral meme with the release of *Under the Dome*.

49 Bakken 2000.

50 For an overview of events across China, see Litzinger and Yang 2020.

51 For an account of the mobilization of mining in Chinese revolutionary narratives, see Perry 2012.

However, in Shanxi the dialogue from this interview was already quoted as shorthand for the pollution crisis a decade before Xi Jinping's blue-sky promises were cynically termed "APEC blue."⁵²

Not everyone was comfortable verbalizing and addressing pollution concerns so explicitly. When a documentary exposing the effects of emissions from coal combustion on laboratory rats came on television in a Sweeping Cliff living room in 2010, a seasoned industrial worker changed the channel. In response to my question about why he did not want to watch the programme, he explained in despair that "We all live in the pollution experiment, pollution is everywhere, what is to be done?" In contrast to his resignation, others satirized the situation. One autumn evening in 2009, I watched a particularly mischievous nine-year-old playing on his family's anxieties about the vapor, standing dramatically on the room's *kang* shortly after it had been relit after the long summer hiatus in heating. Theatrically clutching his throat as if suffering from asphyxiation, he staggered across the warming surface sneezing, coughing and wheezing. The family did not stand for this performance for long, and after a number of verbal admonishments, his grandmother pulled him off the *kang* and gave him a slap.

These responses beg the question of whether "caring for" the family and environment presupposes a refinement of attention already constituted through a presupposition of "caring about" these issues. As the following section shows, the official acknowledgement of environmental degradation in media, medical and political channels built on long-standing and ongoing care for defending the family and environment against pollution, and eventually led to the pervasive public acknowledgement of pollution in Shanxi.

The Everyday Fight of Combatting Pollution

From the demands of domestic dusting to the ethical dilemmas regarding livelihood choices in the industrial landscape, the concerns of Shanxi residents reveal that a general atmosphere of recognition of atmospheric pollution underwrote the transition from implicit to explicit acknowledgement of the risks of pollution for families and environments in Shanxi. Ever since I had first arrived in Sweeping Cliff in 2009, crossing the threshold from the outside to the inside of the home has been accompanied by a repertoire of practices intended to keep pollution at bay, whether inhaled on the village streets and fields, or accumulated during commutes from mines, construction, roadworks or other locales further afield.

These practices included such mundane and habituated forms of behaviour as encouraging one another to drink hot water to wash out dryness from the throat and digestive system at regular intervals, as well as clearing the throat by spitting out contaminated phlegm. Skin and digestive disorders were combatted by paying attention to food (especially avoiding food treated with pesticides), drinking filtered, boiled water and using ointments to calm and relieve inflammation. Outdoor inhalation of particulate was combatted with scarves and facemasks and evaded through keeping car windows closed and steering clear of moving vehicles. Children were admonished that especially dusty roads and surfaces were not for playing. When asked about these forms of behaviour, the explanation a decade ago would oscillate between following habit (*xiguan* 习惯) and avoiding dust (*chentü* 尘土), usually without explicit reference to pollution (*wuran* 污染).

In the winter of 2010, I arrived at a neighbour's courtyard in Sweeping Cliff to interview the village electrician. His wife, Limin, was caught off-guard by my mid-morning arrival, as she had not yet cleaned their home and expelled all the particulate matter that day. She apologized with embarrassment for the dust from the heating stove that had covered her home with sheet of grey overnight. Limin first insisted I drink something hot from the boiling wok, a courtesy always extended to guests to soothe their throats parched by the dust swirling through the village streets and courtyards. She took a cup from the shelf where receptacles were kept upside down, to make sure no dust would settle inside, thereby avoiding the accumulation and ingestion of pollution.

⁵² See Aunan, Hansen and Wang 2018, 292.

After handing me a cup of green tea, Limin rushed around the room, emptying the burnt-out coal embers from underneath the stove. She then moved on to the actual stone-and-metal stove, cleaning it with a rag and water left from washing faces the night before, wringing out the increasingly grey water into a large bowl. Kneeling on the vinyl-covered *kang*, she grabbed the dusting mop made of old cotton fabric pieces between both hands and threw her whole body into a methodical wiping motion as she wet wiped all the surfaces in the living room. Even the interstices of the wooden window frame, the top of the doorway and the brick ledges around the painted walls were given a wipe.

Limin then sprinkled water from last night's foot washing to moisten the stone slabs of the floor so the dust would not disperse into the air when she swept. After dampening the floor, she gave all the rooms a thorough sweep with a hand-held broom made of a sorghum sheaf. Refuse such as cigarette stubs, dropped food, stray clumps of earth and sunflower seed husks were all swept into the lower part of the stove, where the red burned out coal debris accumulated. Meanwhile, her husband cleared his throat, lit a cigarette and we began our formal interview, without any words being lost on the everyday practices of removing particulate matter from airborne pollution that we were witnessing.

Ten years later, I joined old friends from the village for a dinner at home in their urban apartment with family, friends and colleagues. In response to my new research topic on ecological civilization, a heated discussion unfolded about allergies and sensitivities that were said to be connected to pollution in complex ways, and the prevalence of asthma, black lung and cardiovascular disease. One couple, the grandparents of young children at the table, were particularly concerned with whether the environmental clean-up campaigns of the present could truly clear the air, water and soil of the pollution that they had lived with their whole lives.

No longer merely performing unspoken practices of attention and thereby expressing bodily recognition of pollution, these local residents have become vocal about the hardship, loss and suffering that local development has wreaked on their bodies and their health. They are not alone. In recent years, medical examiners, laboratory scientists and journalists have raised concern, while coal miners, agricultural workers and their families are speaking out about the long-term health effects such as black lung, silicosis, emphysema and cancer, as well as depression and anxiety in the region.

Increasingly, caring for and about the family and the environment intersected in unambiguous ways. For instance, Liuyang had married out of Sweeping Cliff into the township capital further down the mountainside, where her newborn son developed skin rashes. She became extremely anxious about medical advice that this could be the result of the poor quality of indoor air in her home in the suburban valley, that was heated by an indoor coal stove and therefore contaminated with dust, soot and vapour. However, she also did not have any alternative place to reside during her enforced period of postnatal recuperation, although she eventually moved from her mother-in-law's courtyard home to her own mother's courtyard home further up the mountainside.

Another acquaintance, Wangfang, originally from a mountain village, faced a similar dilemma when her eight-year-old son developed asthma where they lived in the city, so he had to be sent up into the hills to his grandparents, a trade-off that the parents found extremely difficult to navigate, as they raised concerns that they were faced with a choice that pitched the pursuit of education, ambition and aspiration into an incompatible trade-off with health, continuity and reproduction. Their urban employment meant they could not accompany him and they were concerned of how he would develop without their nurture and supervision.

Deciding where and how to work, and the safety and sustainability of workplaces, was often counterposed with the economic income that could come from particular employment. While some employees strongly defended their respective industries – with energy and mining conglomerates being considered the best employers in the region, providing career mobility and work protections – others saw them as exploitative corporations and refused to take jobs with them, particularly in the wake of experiencing dispossession through forced displacement. Moreover,

quite a few local residents working for the energy corporations were ambivalent about their employment, many having trained and hoped for something else, but ending up in their positions in the industry due to a lack of alternatives.⁵³

This was as true a decade ago as it is today, but the concerns about certain industries and locations of residence and employment have expanded to more clearly include environmental concerns about pollution. The long history of engaging with atmospheric toxicity, especially in rural areas bearing the brunt of environmental costs of industrialization and coal combustion, led residents to simultaneously struggle with economic woes and ecological concerns of water scarcity, soil degradation, airborne particulate and changing weather patterns in ways that were far more proactive and political.

Coal Families under Pressure

The projection of Shanxi as a pollution crisis in miniature, a cautionary example to be held up as a prism for the future and to ward off disaster, increasingly manifests in residents pointing out polluted rivers, dying animals, desiccated forests, acidic soil and so forth to a visiting anthropologist, in a way they did not share with foreigners a decade ago. Indeed, international NGOs like Greenpeace have extremely limited access to the province. Yet the personal and scientific call to arms in a war on coal is not simply enacted through minute and constant rhythms of everyday practice, but also through pointed ethical deliberation over choices of professional work and career, despite Shanxi's "coal culture" (*meitan wenhua* 煤炭文化).

A mine collapse in the Sweeping Cliff area on 14 March 2019, for instance, was only fully uncovered through popular reports and tip-offs on social media channels, rather than through an official company disclosure to the coal supervision bureau. This scandal of delayed and false reporting that came to light as a direct result of popular outrage on social media led to a large-scale investigation of the mine by the Ministry of Emergency Management. Associated coal mines in the area were forced to stop operations. Meanwhile, high-level managers and executives of the parent company scrambled to show contrition by travelling to the hospital where the wounded miners were stationed and issuing apology after apology for the mismanagement both in the run-up to the accident and the ensuing fall-out.

The full investigation by the bureau found collusion at multiple levels between the coal mine and municipal government, though not the multiple investment firms and subsidiary corporations, often dominated by members of the "lineages" (*jiazu* 家族) of corporate managers and executives of the firms. Images of mine managers and energy executives in hospital at the bedside of the surviving miners and the subsequent speeches and promises broadcast online through official corporate WeChat accounts and on the local airwaves led to widespread critique about the performative and affected care that aimed at minimizing damages, rather than safeguarding the future.

People working in the coal industry pointed out that avoiding responsibility was also part and parcel of the system of subcontracting and outsourcing, as well as shareholding. They complained that this allowed coal bosses to draw family, friends and associates into businesses, such that "lineages" owned large swathes of the Shanxi economy. The ensuing corruption, mismanagement and lack of punishment contributed to the occurrence of these industrial accidents and wreaked havoc on human lives and the ecological environment. Furthermore, criticism of the coal industry was shifting amid this volatile ethical atmosphere and moral mood, as combatting pollution became an explicit concern connected to avoiding destruction of families and the environment writ large.

For instance, Han Qiang, an electrical engineer by training, had reluctantly taken a job with a coal mine. Initially, he was in charge of piping in the mines, but working with the tunnel system and calculating risks of collapse was too much responsibility, particularly due to pressure the company put on engineers to speed up the mining process, at the expense of safety. Reflecting on the

53 For an overview of the Chinese coal industry, see Wright 2011; Thomson 2003.

events surrounding the mine disaster in March 2019, Han Qiang expressed concern about the potential death of strangers through collapsed mines. This would be too much for him to bear, given that he already felt guilty about the kind of world he was creating for his six-year-old daughter and unsure of whether this area would be viable for her to grow up and grow old in. Han Qiang feared that unless the environment improved, she would have to leave the area and find herself “without a home to return to” (*wu jia ke gui* 无家可归).

In the midst of the revelations around the mine collapse in spring 2019, these concerns were becoming ever more explicit, with even strangers sharing information about the dangers of the mining and energy sector. In the month following the mine accident, I sat with two female friends who previously worked in tourism for the energy corporation, in a temple complex restored by the mining company that now boasted a landscaped park, traditional red wooden pagodas and glistening pools of water. As we sat in the shade, we began chatting with senior women who came to do evening exercises. Upon hearing we had all been involved with the energy corporation, they asked in hushed tones what it was like to work there, for the boss, especially as women, implying a threat to our safety, as well as the area, from such powerful figures.

In many ways, as local pioneers coal bosses were blamed in three ways: for making money, ruining families and destroying the environment. In addition, residents increasingly made leaders of the energy industry responsible not just for mining accidents but structural change, particularly the increasing instances of forest fires, lack of rain and poor agricultural yields in the past decade. A consensus emerged that trade-offs between “your money or your life” were no longer acceptable; instead, endangering one’s own family, or those of others, by degrading the environment became morally reprehensible. The ethical atmosphere surrounding the big energy players in the region had shifted, as residents navigated decisions about making a living and protecting life. Concrete encounters of “caring for” families, livelihoods and the environment increasingly intersected with the abstractions of “caring about” the fate of others in the context of ecological awareness, attention and attunement beyond the immediate concerns of the here and now.

From Ecological Destruction to Ecological Civilization

Living in the shadow of “ecological destruction” raises dilemmas of how to balance priorities of care, work and kinship in response to environmental degradation and economic development. As families across central Shanxi agonized about forging ethical pathways through care, they also encountered one another, the state and corporations through this care. However, the quest for recognition for this care was difficult to attain, given that residents were complicit, even if involuntarily, in the pollution crisis that was making life hard to sustain. It was even more impossible for energy companies and government bureaus to recuperate the narrative of constructing an ecological civilization on this degraded landscape.

Family and environmental care relate through a broader atmosphere of “reproductive crisis” that encompasses the “environmental crisis” emerging as a central tenet of modes of attention for caring for the future. Nonetheless, these historical processes appear more concrete and localized through everyday experiences of hunger and poverty (at least in hindsight) than through contemporary airborne pollution and health hazards, where much of the information is based on global abstraction, both in terms of providing scientific evidence and tracing chains of causality. In parallel, care within state discourse – that is, claims for entitlements and collaboration – emerges through local industries and the developmentalist state, where political and personal claims of contributions intersect. All these elements become enfolded in the market era through a future orientation premised on economic growth, despite the limits to sustainable livelihoods this entails. This contradiction emerges in the paradox of thinking about horizons of ecological civilization or ecological destruction, with either of these futures appearing possible.

Even a decade ago, when open conversations about pollution in the Shanxi countryside were rare, a huge amount of work went into preventing pollution from entering homes and bodies.

The lack of verbalized reflection on these practices of work and labour does not relegate them to a surface phenomenon. This constant attention through action formed an atmosphere or mood that eventually coalesced into an explicit discourse. Earlier attunement to the dangers of dust in particular were connected to physical exhaustion from high levels of atmospheric particulate, now articulated as pollution. In parallel to these concerns, emotive complaints about melancholy, anxiety and depression increasingly overlaid the physical hardships of ecological degradation through development in the past decade. This public recognition was reinforced through scientific accounts, media coverage and state policy on pollution, that Shanxi residents absorbed into their everyday critiques and concerns about the family and environment.

In their personal confrontations with these ethical dilemmas Shanxi residents forged moral projects in the face of contradictory predicaments, but also shared in a broader mood that diffused through the area in engagement with others. Sharing in a sense of devastation orients and shapes modalities of caring and sharpens the sense that something existential is at stake. This underwrites the problematic of scale as a lived experience, where the repetition and intersection of crises, from the reproductive to the environmental, refocuses caring for and caring about one another. The emerging modalities of care and attunement of attention thereby increasingly connect the posterity of one's own family and children with the future generations of the world, and even the global fate of the earth.

Acknowledgements. My deepest gratitude goes to my research interlocutors, hosts and friends in Shanxi who have shared their experiences and insights with me for over a decade. I am also very thankful to Hans Steinmüller for initiating the workshop and guiding ongoing discussions on contemporary care in China. Especially amid the upheavals and isolation of COVID-19, the resulting exchanges with all participants provided intellectually nourishing food for thought.

Funding. Funding for this research was provided by the Max Planck Institute for Social Anthropology, the Bergen Foundation, the Department of Social Anthropology at the University of Bergen and the Department of Social and Cultural Anthropology at the University of Cologne.

Conflicts of interest. None.

References

- Ahlers, Anna, and Yongdong Shen. 2018. "Breathe easy? Local nuances of authoritarian environmentalism in China's battle against air pollution." *China Quarterly* 234, 299–319.
- Aunan, Kristin, Mette Halskov Hansen and Shuxiao Wang. 2018. "Introduction: air pollution in China." *China Quarterly* 234, 279–298.
- Bakken, Borgen. 2000. *The Exemplary Society: Human Improvement, Social Control and the Dangers of Modernity in China*. Oxford: Oxford University Press.
- Bruckermann, Charlotte. 2016. "Trading on tradition: tourism, ritual, and capitalism in a Chinese village." *Modern China* 42 (2), 188–224.
- Bruckermann, Charlotte. 2017. "Caring claims and the relational self across time: grandmothers overcoming reproductive crises in rural China." *Journal of the Royal Anthropological Institute* 23 (2), 356–375.
- Bruckermann, Charlotte. 2019. *Claiming Homes: Confronting Domicide in Rural China*. Oxford and New York: Berghahn Books.
- Bruckermann, Charlotte. 2020. "Why do grandparents grumble? Chinese children's birthdays between kinship, market, and state." *Ethnos* 85 (1), 145–167.
- Drotbohm, Heike, and Erdmute Alber. 2015. "Introduction." In Erdmute Alber and Heike Drotbohm (eds.), *Anthropological Perspectives on Care: Work, Kinship, and the Life-course*. Basingstoke: Palgrave Macmillan, 1–19.
- Feuchtwang, Stefan. 2023. "Care as critique of care: public services, social security and ritual responsiveness." *China Quarterly* 254.
- Flitsch, Mareile. 2008. "Knowledge, embodiment, skill and risk: anthropological perspectives on women's everyday technologies in rural northern China." *East Asian Science, Technology and Society: An International Journal* 2, 265–288.
- Geall, Sam, and Adrian Ely. 2018. "Narratives and pathway towards an ecological civilization in contemporary China." *China Quarterly* 236, 1175–1196.
- Goodman, David S.G. 1999. "King Coal and Secretary Hu: Shanxi's third modernization." In Hans Hendrischke and Feng Chongyi (eds.), *The Political Economy of China's Provinces: Comparative and Competitive Advantage*. London: Routledge, 211–248.

- Greenhalgh, Susan.** 1993. "The peasantization of population policy in Shaanxi." In Deborah Davis and Stevan Harrell (eds.), *Chinese Families in the Post-Mao Era*. Berkeley: University of California Press, 219–250.
- Guo, Yuhua.** 2003. "Xinling de jitihua: Shaanbei Jicun nongye hezuohua de nüxing jiyi" (The collectivization of mentality: women's memories of agricultural cooperation in Jicun Village in northern Shaanxi province). *Zhongguo shehui kexue* 4, 79–92.
- Hansen, Mette Halskov, and Zhaohui Liu.** 2018. "Air pollution and grassroots echoes of 'ecological civilization' in rural China." *China Quarterly* 234, 320–339.
- Hansen, Mette Halskov, Hongtao Li and Rune Svarverud.** 2018. "Ecological civilization: Interpreting the Chinese past, projecting the global future." *Global Environmental Change* 53, 195–203.
- Herschatter, Gail.** 2011. *The Gender of Memory: Rural Women and China's Collective Past*. Berkeley: University of California Press.
- Hinton, William.** 1966. *Fanshen: A Documentary of Revolution in a Chinese Village*. New York: Monthly Review Press.
- Hinton, William.** 1983. *Shenfan*. London: Secker and Warburg.
- Husman, Daniel.** 2011. "Long Bow: Memory and Politics in a Chinese Village." PhD diss., University of California – Berkeley.
- Jing, Jun.** 2000. "Environmental protests in rural China." In Elizabeth Perry and Mark Selden (eds.), *Chinese Society: Change, Conflict and Resistance*. London: Routledge, 143–160.
- Kipnis, Andrew.** 2007. "Neoliberalism reified: *suzhi* discourse and tropes of neoliberalism in the People's Republic of China." *Journal of the Royal Anthropological Institute* 13 (2), 383–400.
- lammer, Christof.** 2023. "Care scales: *dibao* allowances, state and family in China." *China Quarterly* 254.
- Li, Hongtao, and Rune Svarverud.** 2018. "When London hit the headlines: historical analogy and the Chinese media discourse on air pollution." *China Quarterly* 234, 357–376.
- Li, Xiaoyue, and Bryan Tilt.** 2018. "Perceptions of quality of life and pollution among China's urban middle class: the case of smog in Tangshan." *China Quarterly* 234, 340–356.
- Litzinger, Ralph, and Fan Yang.** 2020. "Eco-media events in China: from yellow eco-peril to media materialism." *Environmental Humanities* 12 (1), 1–22.
- Lora-Wainwright, Anna.** 2013. "Dying for development – pollution, illness and the limits of citizens' agency in China." *China Quarterly* 214, 243–254.
- Lora-Wainwright, Anna.** 2021. *Resigned Activism: Living with Pollution in Rural China*. Revised Ed. Cambridge: MIT Press.
- Lord, Elizabeth.** 2020. "Theorizing socio-environmental reproduction in China's countryside and beyond." *Nature and Space* 4 (4), 1687–1702.
- Palmer, David, and Fabian Winger.** 2019. "Neosocialist governmentality: managing freedom in the People's Republic of China." *Economy and Society* 48 (4), 554–578.
- Perry, Elizabeth.** 2012. *Anyuan: Mining China's Revolutionary Tradition*. Berkeley: University of California Press.
- Pieke, Frank.** 2018. "Party spirit: producing a communist civil religion in contemporary China." *Journal of the Royal Anthropological Institute* 24 (4), 709–729.
- Rutherford, Danilyn.** 2013. "Kinship and catastrophe: global warming and the rhetoric of descent." In Susan McKinnon and Fenella Cannell (eds.), *Vital Relations: Modernity and the Persistence of Kinship*. Santa Fe: School for Advanced Research Press, 261–282.
- Steinmüller, Hans.** 2023. "Crises of care in China today." *China Quarterly* 254.
- Thelen, Tatjana.** 2015. "Care as social organization: creating, maintaining, and dissolving significant relations." *Anthropological Theory* 15 (4), 497–515.
- Thomson, Elspeth.** 2003. *The Chinese Coal Industry: An Economic History*. New York: Routledge.
- Wright, Timothy.** 2011. *The Political Economy of Chinese Coal Industry: Black Gold and Blood-stained Coal*. London: Routledge.
- Yan, Yunxiang.** 2003. *Private Life under Socialism: Love, Intimacy, and Family Change in a Chinese Village, 1949–1999*. Stanford, CA: Stanford University Press.

Charlotte BRUCKERMANN's ongoing research examines social reproduction amidst economic accumulation and ecological transformation in China. In particular, she examines the cultural, economic and ethical value of carbon in the construction and imagination of Chinese ecological civilization. She is the author of *Claiming Homes: Confronting Domicide in Rural China* (Berghahn Books, 2020) and co-author with Stephan Feuchtwang of *The Anthropology of China: China as Ethnographic and Theoretical Critique* (Imperial College Press, 2016), as well as various articles on kinship, care, environment and ethics in China.