

History Underground: Environmental Perspectives on Mining

Rachel
Carson
Center

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Conveners: John R. McNeill (Georgetown University), Frank Uekoetter (Rachel Carson Center)

Participants: Elisabeth Breitenlechner (Institute of Botany, Innsbruck University), Robert Chester (University of the Pacific), Sonya Duus (Australian National University, Canberra), Bernd Grewe (PH Freiburg), Sebastian Haumann (TU Darmstadt), Arn Keeling (Memorial University of Newfoundland), Stuart Kirsch (University of Michigan), Jagdish Lal Dawar (Mizoram University, Aizawl, India), Julia Landau (Ruhr-Universität Bochum), Jan Ludwig (Dinslaken), Jeffrey T. Manuel (Southern Illinois University, Edwardsville), John R. McNeill (Georgetown University), Muchaparara Musemwa (University of the Witwatersrand, Johannesburg, South Africa), Klaus Oeggli (History of Mining Activities in Tyrol and Adjacent Areas), John Sandlos (Memorial University of Newfoundland), Manuel Schramm (TU Chemnitz), Daviken Studnicki-Gizbert (McGill University, Montreal), Frank Uekötter (RCC), George Vrtis (Carleton College, Minnesota, USA), Donald Worster (University of Kansas)

As John McNeill noted in his opening remarks, mining is a topic that has received less attention from environmental historians than it deserves. After all, it is one of the oldest human activities and arguably one of the most consequential in environmental terms. For millennia, humans have dug holes to retrieve precious materials everywhere from the Yukon to the Australian outback, and the toll for the land, the workers, and the surrounding environment has often been heavy. However, that situation is an opportunity as much as a challenge: how does one write the environmental history of mining that offers more than an endless litany of environmental transgressions?

The workshop was thus faced with a dual challenge: first, to assemble the limited number of researchers who do work on the topic; and second, to discuss narratives and approaches. The participants' response was a lively methodological debate that ran through the entire event, touching on issues of expertise, social and environmental injustices, tailings and wastes, the temporal scale of mining history, and the problem of finiteness of mineral deposits. In fact, the discussion started even before the official opening, as participants were invited to an optional tour of the mining exhibit at the Deutsches Museum. Ten participants showed up for the event, and the multitude of artifacts on

display stimulated engaged discussions.

The conference started with **STUART KIRSCH'S** discussions of how mining companies strategically exploit scientific practices to their advantages. Stressing the similarity to strategies of the U.S. tobacco industry and other branches of business, Kirsch (University of Michigan) described the methods used to modify or delay recognition of mining's environmental impact, e.g. by failing to conduct proper baseline studies for toxic substances, by focusing on average pollution loads rather than dangerous peak loads, or by systematically underestimating impacts during the planning stage. When damage was just impossible to deny, as in the case of the Bougainville copper mine that ignited nothing less than a civil war on Papua New Guinea, industrialists expressed confidence that they would not repeat mistakes of the past. The paper showed the combined advantages of anthropologists' field knowledge with critical approaches in science and technology studies.

Two conference papers focused on coal, with **SONYA DUUS** (Australian National University, Canberra, Australia) making a passionate argument for its pivotal role in modern society, and "nowhere more so than in Australia." The paper traced the *Longue Durée* of coal mining in Australia and elsewhere, stressing the enormous growth of industrial society's energy hunger while not failing to mention coal combustion by some indigenous groups. However, nothing beats the recent boom, with the quantity of black coal dug up having increased tenfold from 1966 to 2006. Since 1973, exports exceed domestic consumption. In discussing bitter labor struggles, the paper moved beyond environmental history, which helped Duus in highlighting the fragmented character of the overall story: "In this example, there is no unifying conceptual language. Rather, what emerges is a kind of stalemate between global-scale scientific understanding, human emotions, political ideologies, short-term governance structures, historical technological legacies, and long term development trajectories."

The second paper on coal focused on the Kuzbass in Western Siberia. **JULIA LANDAU** (Ruhr-Universität Bochum) discussed the peculiar hazards during the 1930s: the coal lay in steep deposits; it had a high gas content; the Five Year Plan asked for more coal; and then, there was Stalin's terror. Still, the coal region expanded enormously, thanks to a rather unusual working population that included engineers from abroad, typically German or Austrian, as well as forced labor. The paper made a case for looking at the "terror underground" – i.e. the enormous workplace hazards – in conjunction with the Stalinist "terror from above," a link highlighted by a firedamp explosion in 1936 that became the stepping stone for show trials.

"Effects and Efficiencies" was the title for the three-paper session that opened the second conference day. **GEORGE VRTIS** (Carleton College, Minnesota, USA) discussed mining in the Colorado

Rockies, arguing that concerns over waste, overconsumption, and pollution gave rise to a conservation discourse in the late nineteenth century. His statement that “finitude is not socially constructed” stimulated a response from Stuart Kirsch: the issue was not finiteness but whether and when this issue was (and is) raised, as the key issue is not the presence of the material *per se* as the costs entailed. JEFFREY T. MANUEL (Southern Illinois University, Edwardsville) provided a fascinating account of iron ore mining on the banks of Lake Superior, where growing efficiency of resource extraction allowed a continuation of mining over a century. However, since the low-grade iron ores needed extensive processing, the mine was essentially trading in worries about depletion against growing concerns about the environmental toll. Fittingly, the mine became subject to one of the longest and costliest environmental lawsuit in US history.

ARN KEELING and **JOHN SANDLOS** (Memorial University of Newfoundland) were the first to look at abandoned mines. However, their argument was that the dead cities in their region of study (Northern Canada) were actually undead – in a phrase that touched a nerve among the speakers, they spoke of “zombie mines,” with indigenous communities being the ones that are (and should be) the most scared. Remediation and clean-up activities were the exception; in one case, a company failed to provide for the removal of the miners and their families when closing a mine. It took arsenic deposits with obscene toxicity to attract attention from the state, though the audience was not terribly impressed by the use of ice hockey rink technology to keep the arsenic frozen in place, all the more so since there was no time limit to remediation. **DAVIKEN STUDNICKI-GIZBERT** (McGill University, Montreal) spoke for the sense of the meeting when he noted, “perpetual care is ridiculous.”

Two papers looked into the clashes between miners and farmers. **MUCHAPARARA MUSEMWA** (University of the Witwatersrand, Johannesburg, South Africa) provided an account of the bitter struggle between both camps in colonial Zimbabwe. As farming and mining were the twin pillars of the colonial economy, the conflict remained unresolved and even unmediated until around World War II. Some discussion took place as to what led to this gradual change of heart; one suggestion was that decolonization in India encouraged a closing of ranks within the white ruling class. **JAN LUDWIG** (Dinslaken) looked at similar conflicts in the Sauerland district in Germany, where the co-existence moved from an avoidance of mining damage through temporary closures to elaborate compensation systems. However, the conflicts would have certainly escalated more if mid-nineteenth century dreams of “California in the Sauerland” had not failed to materialize.

MANUEL SCHRAMM (TU Chemnitz) compared the environmental impact of uranium mining in East and West Germany. He focuses on discussions over nuclear safety, in part because a compari-

son of actual mining activities would suffer from a stark imbalance—East German uranium was always far bigger than its Western counterpart, where environmental protests even stopped mining for a number of years. In an oral “work-in-progress” presentation on lime and lignite deposits in the Rhineland, **SEBASTIAN HAUMANN** (TU Darmstadt) stressed the need to think spatially about mining, drawing strongly on the conceptual work of Theodore Schatzki.

The last session of the second conference day became an exercise in interdisciplinary dialogue. **ELISABETH BREITENLECHNER** (Institute of Botany, Innsbruck University) was joined by **KLAUS OEGGL**, head of the vast HiMAT project (History of Mining Activities in Tyrol and Adjacent Areas). The discussion moved quickly beyond the palynological details of Breitenlechner’s paper towards a candid exchange between the humanities and the natural sciences. Oeggel gave an impressive overview of the potential of scientific approaches while making no bones of open questions. For instance, Oeggel noted that the famous iceman Ötzi carried a copper axe with him, and scientists have so far failed to show where it came from. However, Oeggel was optimistic about solving that mystery within the next six to ten years. The session ended with encouragement from the HiMAT researchers to continue the dialogue in the future.

The last day of the conference started with **DAVIKEN STUDNICKI-GIZBERT’S** paper on five hundred years of mining in Mexico’s Sierra Madre. The perspective on the Longue Durée raised doubts about simplistic stories of rise and decline, as mines repeatedly came back to life depending on the vagaries of global capitalism. In a reference to earlier debates over finiteness, Studnicki-Gizbert underlined the relative insignificance of environmental limits. He also provided a great illustration for the changing scale of mining: “a single Komatsu haul truck consumes as much energy during a single shift as an entire colonial mining operation consumed over fourteen years.”

ROBERT CHESTER (University of the Pacific) gave the final paper on Nevada’s Comstock, arguing that these silver mines became an industrial watershed in U.S. mining history. His in-depth discussion explored no less than eight interrelated themes, from the region’s topography to logging, the construction of infrastructure, and occupational hazards.

Given the diversity of themes and approaches, the title of the concluding session—“All the Same?”—sounded a bit odd. However, the idea to conclude with a broad discussion of general issues proved popular. **DONALD WORSTER** (University of Kansas) called for a broad definition of mining—wasn’t the exploitation of soils or the rainforest a type of unsustainable resource mining as well?—an idea that found resonance with **MUCHAPARARA MUSEMWA** and **JAGDISH LAL DAWAR** (Mizoram University, Aizawl, India). **BERND GREWE** (PH Freiburg) and **FRANK UEKOETTER** explored the merits of colonialism as a conceptual framework; **JOHN**

MCNEILL brought up the case of Canadian arsenic to highlight the importance of intergenerational perspectives. Comments from the audience stressed the spatial dimension of mining and gender issues, once more underscoring the richness of perspectives that the general topic has to offer. If environmental historians continue to underestimate the importance of mining, it will certainly not be for lack of ideas.

-- Frank Uekoetter