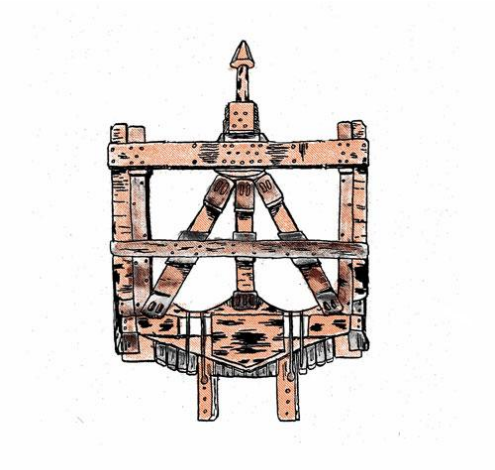
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Shaft Drill

Lichtenwagner, Hans

The advent of improved drilling technology made the extraction of geological resources easier: from coal, metals such as iron and gold, minerals, rare earth elements and rocks, rock salt, to, most of all, fossil fuels and natural gas. This development brought about enormous economic growth, which in turn led to prosperity, increased life expectancy, good medical care, and a better standard of living for many people. Today, economic growth plays a central role in how we define our world.

Have we - those living in the Anthropocene - reached the limits of how far we can go, as was postulated by the Club of Rome in 1972? In terms of the availability of geological resources, we have not. However, we have almost stretched the limits of the earth's system to its breaking point. If we step beyond these planetary boundaries, there will be serious consequences, and this will endanger our entire civilization.



Shaft Drill
Hans Lichtenwagner

Drawn by Hans Lichtenwagner, 2014.

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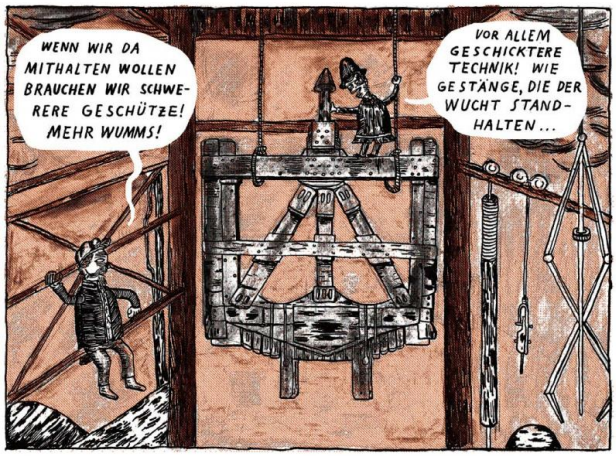
Shaft drill

Text and images by Hans Lichtenwagner
University of the Arts (UdK), Berlin



The Shaft Drillers
"Unbelievable! Look at what these animals transport to the surface everyday! Amazing!"
"Well, moles do not have to fight floods and broken poles..."

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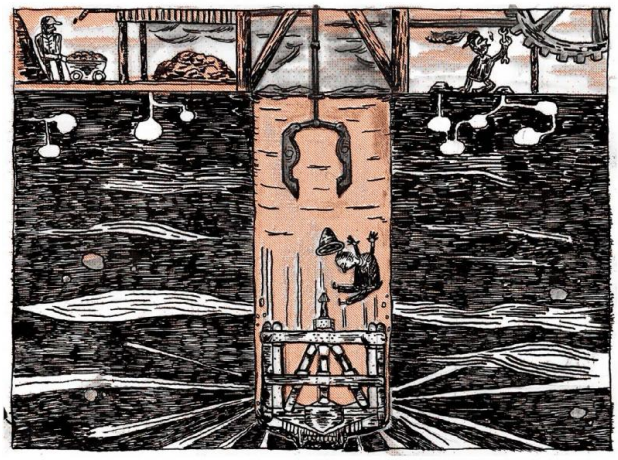
"If we want to keep up with that, we need to roll out the really heavy artillery! More boom!"
"Better technology. And poles that can handle the weight..."

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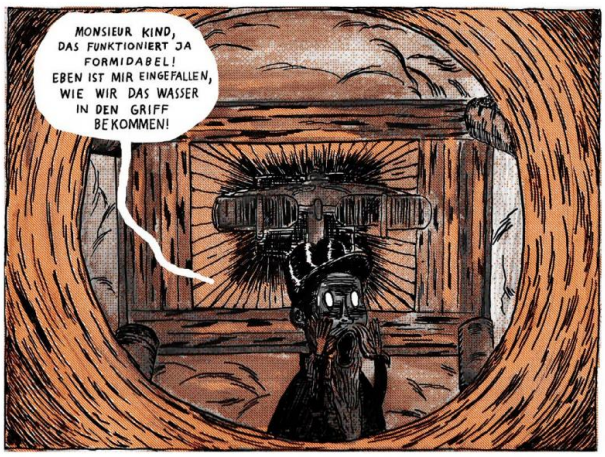


"We can only dig deeper with the 25-ton chisel!"
"But without the invention of my free fall device... it would be useless, wouldn't it?"

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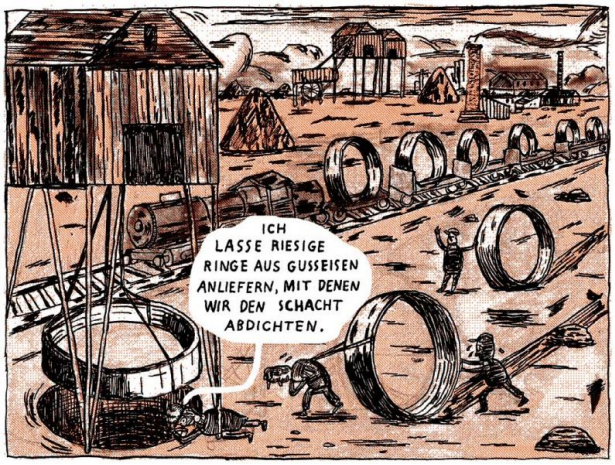


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"Monsieur Kind, it's working perfectly! I just figured out how we can deal with the water!"

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"I'll order giant rings made out of cast iron to seal the shaft."

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"Great idea, Mr. Chaudron! But please hurry up, I'm getting wet feet down here!"

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"Amazing, we will be awarded the Grand Prix de Paris for our achievements in the drilling industry!!!"
"Your wits and my boom; the two of us are making heap upon heap!"

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Artist's comment

At first I only scratched the surface by looking at photographs from the start of the past century. Layer by layer I descended into the underground world of the pits. One photo showed a horse being lowered into a pit using ropes and pulleys to work as a pit horse below ground, pulling cart loads of coal and metals. This brace horse and the will to bring what is inside to the surface inspired me.

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Further readings:

- Sources and Literature for the Anthropocene Milestone Comics

Related links:

- Welcome to the Anthropocene. The Earth in Our Hands. Special exhibition at the Deutsches Museum http://www.deutsches-museum.de/en/exhibitions/special-exhibitions/archive/2015/anthropocene/
- Welcome to the Anthropocene. The Earth in Our Hands. Virtual exhibition on the Environment & Society Portal https://www.environmentandsociety.org/node/6354
- "History of Mining: The Evolution of Shaft Sinking Systems" by C. Graham and V. Evans (Canadian Institute of Mining, Metallurgy) http://www.cim.org/en/Publications-and-Technical-Resources/Publications/CIM-Magazine/November-2007/history/history-of-mining.aspx
- Comic-Anthology, Deutsches Museum Website http://www.deutsches-museum.de/sammlungen/entdecken/comics/