

Contractual orientation

This also acted as protection against authoritarianism as the institutions of the state began to develop. A monetised economy is a key step towards building a nation state, as then taxes can be raised to build a bureaucracy, establish a civil service and raise an army. "In Europe, the barter economy lasted well into the 13th century. When money replaced the barter economy, rulers could start to think about building a state, a bureaucracy and an army," says Professor Welzel. Raising taxes was essential to this, and city dwellers were a prime target; Professor Welzel believes that strong social organisations protected people against over-ambitious rulers. "There were local assemblies, city assemblies and associations that were built on a voluntary basis, and they were practiced in self-organisation. They knew how to organise resistance against over-ambitious rulers," he explains.

"In Europe, the authorities were only able to build a state in return for representation – the principle was no taxation without representation."

The same principle lies at the root of moves in the Protestant West towards universal education. A state is built on the consent of the people, so in order to maintain and strengthen their power base, rulers had to unlock the potential of the whole population, and not just narrow sections of it. "In order to gain power, rulers had to appeal to society. Rulers began to recognise that they had to unlock the intellectual potential of the population, and therefore education was essential. When nation states started to introduce universal schooling, people got an education, became literate, and started to think for themselves," outlines Professor Welzel. Around this time women were also marrying later as a result of lower fertility pressure and having less children, which meant that they could pay more attention to their offspring as a result. "If you don't have a lot of offspring then you have more room and opportunity to invest in those children and their education and skills," points out Professor Welzel.

Historical road-map

Researchers now aim to bring together these ideas and develop a kind of historical road-map. There are a lot of loose ends in the literature, which Professor Welzel believes are connected by the cool water idea. "Our achievement is to create a synthesis, an integration of all those loose ends, which gives us a more comprehensive and coherent understanding of what happened," he says. A key part of the project's work involves collecting supporting data from across the globe. "We are collecting data on households and families in pre-industrial societies for example. We've found evidence on households and families in North America with respect to the leaning towards nuclear families in cool water areas," continues Professor Welzel. "However, we don't want to be misunderstood as people who rigidly believe in geo-climatic determination. In one part of the project – that we're still working on – we've shown that the explanatory power of this cool-water condition has loosened over the past 20-25 years, in parallel with rising globalization."

The cool-water areas of the Protestant West still score well today in important developmental outcomes, such as per capita GDP, life expectancy, gender equality and levels of corruption. However, the explanatory power that the cool water condition has over these and other developmental outcomes has declined over

globalising conditions than it was in earlier periods of history," he points out. "Societies can learn from each other, and so we get a degree of policy diffusion."

This research could help inform the wider process of policy diffusion, something Professor Welzel is keen to explore in the future. In particular, the project's

Western Europe is unique in terms of this **capillary system of smaller rivers**. Rather than having one central stream that dominates the continent, we have a **connected system of smaller rivers** connected to each other that **creates a web of connections**.

the past 20-25 years. "It's a fairly steady process that we can map and trace," says Professor Welzel. This shows that societies can escape the determinative power of geography in today's globalised world, where information flows more easily than ever before, believes Professor Welzel. "Cross-cultural learning is much easier under

work holds important implications for water policy, and how water can be made universally accessible. "It also has implications for how we incentivise lower fertility among women and later marriage. Gender equality is another very important consideration, how do we encourage that?" says Professor Welzel.

THE COOL WATER EFFECT

The Cool Water Effect: Why Human Civilization Turned Towards Emancipation in Cold-Wet Regions

Project Objectives
This project examines the deep causes of this civilizational turn, analyzing the role of geography, genes, disease, agriculture, language, religion, statehood, colonialism, law traditions and other institutional factors, such as emerging democracy. The evidence shows that, among multiple possible paths towards human emancipation today, there is only one narrow route of significance. The very narrowness of this route explains why it took civilization so long to reach towards human emancipation.

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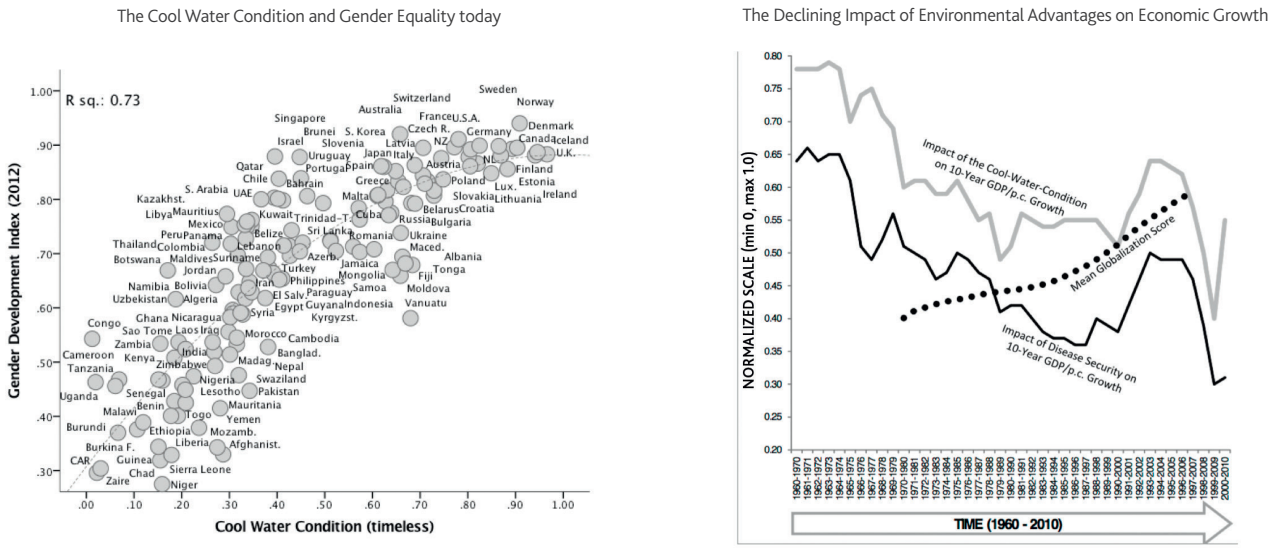
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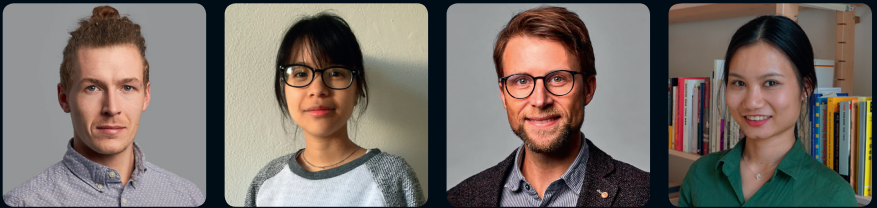
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Professor Christian Welzel,
Principal Investigator



The Cool Water Project Team (from left to right): Lennart Brunkert, MA, Doctoral Researcher, Phuong Pham, BA, Research Assistant, Dr. Stefan Kruse, Postdoctoral Researcher, Le Cam Nhung, BA, Research Assistant.



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