

and archaeologist Abigail Levine. Here, they investigate the ruins of villages that show signs of becoming states. They evolved in different places around the globe at different times as the precursors to civilisation. These scientists say that war triggered the transformation from state to civilisation. Without war, there would be no complex societies. Episode 2 closes with a conundrum. War, says Levine, is actually a form of human cooperation.

EP03: A CHANGE OF MIND

In this episode, the war-and-cooperation-theory is put to the test using a futuristic scientific method. And scientists think they've found the spark of civilisation inside our minds!

Historian Filipe Fernandez-Armesto leaves us with a theory that could blow the meaning of civilisation out of the water. He reminds us how the idea of civilisation has been used to justify wars, brutal colonization and genocide. Civilisation has always been an us-and-them situation, he says.

Peter Turchin is a Professor at the University of Connecticut in the Departments of Ecology and Evolutionary Biology, Anthropology, and Mathematics. He and his colleagues have designed a computer game of civilisation that uses mathematical models and the world's largest database of historical facts.

Turchin believes that war sparked civilisation, and that he can prove this theory on a global scale.

Judith Burkhardt, an anthropologist at the University of Zurich, believes humans have a unique form of cooperation, unlike any other living creature, and it was this trait that lead us on the path to civilisation. She sets out to prove it through experiments where the behavior of children is compared to our closest primate relatives.

Why do we say that some cultures are civilised and others are not?

Which leads us to Filipe Fernandez-Armesto's all encompassing new theory of civilisation. The hunter-gatherers that some of us were, and some of us still are, the societies with different belief systems, in all environments across the globe all have one thing in common. Without exception, they have all civilised nature.

What sparked civilisation? Can we ever know which of these theories, or any future theories are correct? Peter Turchin thinks so. He tells us that mathematics will help us find a grand unifying theory of history. A law that rules how societies rose from small groups to complex societies in their millions.

A spark that changed us all.



HISTORY

4K THE SPARK OF CIVILISATION

3 x 53 min. Written and directed by Ruth Berry

4K, 5.1 and Stereo Executive producers: Martin Mészáros, Sabine Holzer



TERRA MATER
Factual Studios

“To seek the origins of civilisation is to embark on a series of dangerous excavations.”
Historian Lucien Fabre

The Spark of Civilisation' is a flagship series that immerses the viewer in one of humanity's most important investigations; the mystery of how civilisation emerged. It questions the very meaning of civilisation through ground-breaking new evidence.

The most popular theory for the rise of civilisation is the advent of agriculture. It states that agriculture happened approximately 10,000 years ago because of favourable growing conditions at the end of the last ice age, or an increase in population. Agriculture transformed us from nomadic hunter-gatherers to sedentary farmers and this was the first step towards civilisation. 'The Spark of Civilisation' challenges this enduring theory.

Solving the mystery of civilisation is traditionally the domain of historians. 'The Spark of Civilisation' introduces a new trend, the involvement of internationally acclaimed scientists who use the latest breakthroughs in disciplines like genetics, microbiology and mathematics to find answers. Their investigations have uncovered exciting, and even strange new possibilities that will be presented together for the first time in this series.

The evidence is empirical and sometimes peculiar—the sex life of the fruit fly, the wild nature of yeast, the behaviour of marmosets, the domestication of foxes. This is civilisation as it has never before been presented, thanks to science.

'The Spark of Civilisation' is epic in scope, creatively visual, and unafraid to present new, compelling ways to question traditional views about what it means to be human.

EP01: THE DAY IT ALL BEGAN

Opening with Felipe Fernández-Armesto, Professional fellow, Queen Mary University of London and member of the Modern History Faculty at Oxford; an unconventional historian with a mild, unassuming manner and a reputation for thinking out of the box. History books say that 10,000 years ago there was a revolution known as the Neolithic (new stone age) or the agricultural revolution. The scientists in this episode ask: 'if agriculture then why?', replacing the traditional viewpoint with new reasons: alcohol, an accident, a change of religion and a new star.

Professor Patrick McGovern from Pennsylvania museum uses microbiology to prove that alcohol was being brewed before large-scale agriculture took hold.

Steven Mithen, Professor of Early Prehistory at Reading University believes agriculture was an accident. His theory is inspired by a chance discovery at Göbekli Tepe. Within sight of the monument stands a mountain range where wheat was domesticated 1,000 years after Göbekli Tepe was built. Mithen sees a connection. He sets out to prove that the religious worship practices of the hunter-gatherers of Göbekli Tepe lead to the chance domestication of wild plants.

Acclaimed South African rock art specialist Professor David Lewis-Williams says it was not religion itself, but a change of religion that sparked civilisation. By comparing Göbekli Tepe's art and burial practices to those found in caves used thousands of years before, he identifies a dramatic change.

Professor Giulio Magli, an astrophysicist and archaeoastronomer from Milan takes the new religion theory one step further. He presents evidence of the arrival of a new star linking it to the time of Göbekli Tepe's construction and its unique architecture.

EP02: HUMANITY RISING

We traditionally envisage civilisation through monuments, cities, hieroglyphics, temples, vast fields of grain, sophisticated canal systems. The unconventional historian Fernández-Armesto questions this criteria. We now know that monuments were being built before the rise of civilisation, and some civilisations did not have writing. Can there even be a definition? In Episode 2, the domestication of dogs, climate and war lead scientists to pursue new theories of what sparked civilisation.

Greger Larson is Director of the Palaeogenomics at Oxford University and an expert in animal domestication. He believes that this success paved the way for domesticating plants and other animals.

At the same time that we were domesticating dogs, the world was in the grip of an ice age. Climatologist Nick Brooks and archaeologist Joanne Clarke dispute that the melting of the ice ushered in better times which lead to the rise of agriculture and civilisation. Civilisation, they say, was a last resort, sparked by deteriorating climate conditions brought on by a severe weather change that happened 5,000 years ago. The strongest clues lay buried in the sands of the Western Sahara.

In another desolate landscape in the Chinca Valley Peru, we meet Charles Stanish, Director of the Costen Institute of Archaeology UCLA

