



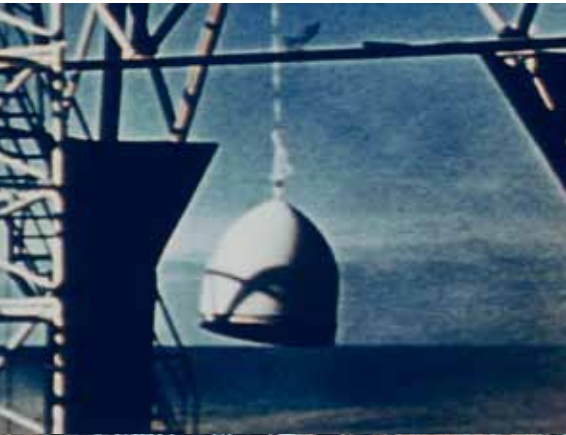
PIONEERS

At the Edge of Understanding



A series of encounters
with the greatest
minds of the modern
world





The one and only film project devoted to the most unorthodox contemporary thinkers who have had the courage to challenge current paradigms.

The emotions of discovering and stress-testing new theories; the passion which prompts one to go against the expectations of others, against the “publish or die” model; the joys and sorrows of exploring frontiers of the known and the unknown – this is what Pioneers is about.

This ongoing project is produced by POLITYKA weekly, a leading, European opinion-forming magazine. It is written, directed, filmed and edited by Karol Jalochowski, an award-winning science journalist, former outreach fellow of the National University of Singapore.



PIONEERS:

Freeman DYSON / Space Dreamer

Freeman Dyson (b. 1923) is a legendary scientific figure who has influenced countless fields of knowledge. He is also known for his optimistically subversive views on key world problems. The world needs heretics to challenge prevailing orthodoxies, he explains. Dyson has been involved in all the major nuclear disarmament initiatives. He has also been a lone proponent of long-term deep space colonization and sailing to the moons of Jupiter, the subjects of this movie.

Running time: 47:00; original language: English; bonus scenes: 20:00



PIONEERS:

Julian BARBOUR / Bottom's Dream

Julian Barbour (b. 1937) is an independent physicist, and a science historian. For 40 years he has been removing what he believes to be unnecessary terms from the physics toolbox. One of them is time, which, according to Barbour, is an illusion. In recent years, he has been working on a theory explaining where our sense of the passage of time and its direction comes from. We meet Barbour at his home in a small village near Oxford, accompanying him in his daily household chores.

Running time: 46:00; original language: English; bonus scenes: 20:00



PIONEERS:

Daniel C. DENNETT / Do Lobsters Have Free Will?

Daniel C. Dennett (b. 1942) from Tufts University is probably the most important philosopher today and a great reformer in the field of knowledge. For nearly half a century he has been searching for the answer to the following questions: What is consciousness? What is free will? Is faith a natural phenomenon? What are the roots of irrationalism? The film is a recording of a one-to-one meeting with the philosopher at his home in northern New England.

Running time: 46:00; original language: English; bonus scenes: 20:00



PIONEERS:

Roy GLAUBER / The Bomb that Shook the World

On July 16, 1945, in the New Mexico desert, in a flash “brighter than a thousand suns” the post-war order was established. The Trinity test had a handful of eyewitnesses and of those just a few took part in the creation of the weapons which less than a month later would destroy Hiroshima and Nagasaki. One of them was **Roy Glauber** (b. 1925). The film presents his extraordinary and deeply personal account of those crucial events.

Running time: 47:00; original language: English; bonus scenes: 20:00



PIONEERS:

Gregory and Virginia CHAITIN / Against Method

Gregory Chaitin (b. 1947) is a mathematician, an expert in complexity. Already as a young prodigy he contributed greatly to the philosophy of mathematics and computer science. Chaitin states that although there are truths in science that cannot be proven, there is reason for huge optimism. He sketches a theory of the source of beauty and creativity in nature. We'll be meeting Chaitin at the tiny Brazilian island of Paqueta, his philosophical retreat.

Running time: 46:00; original language: English; bonus scenes: 20:00



PIONEERS:

Charles H. BENNETT / A Drinking Bird Mystery

Charles H. Bennett (b. 1943) is an American thinker, physicist and information theory pioneer with astonishingly broad interests. But that you can discover on the Internet. In this instalment of Pioneers doc series Bennett will tell a story of the ambiguity of the past, and the complexity of the present. Strolling in the autumnal woods of Massachusetts we shall follow some tiny events like waves shaping the surface of a forest lake and ask whether they're doomed to be entirely forgotten – or not.

Running time: 64:00; original language: English; bonus scenes: 20:00



PIONEERS:

Artur EKERT / The Last Ship to the Spice Islands (in production)

In 1992 **Artur Ekert** (b. 1961), a young maverick mathematician and physicist, invented a unique kind of quantum cryptography. Being a recipe for the perfect cipher, it also questioned some common truths about the nature of free will and randomness. Despite being intensively researched the idea remains remarkably challenging and elusive – as does its inventor. This rare movie presents Artur Ekert in his ad hoc habitat, in Singapore.

Running time: 55:00; original language: English; bonus scenes: 20:00



KAROL JAŁOCHOWSKI

A journalist, reporter, photographer, and film maker of *Polityka* weekly, the author of the Pioneers series. He has worked for *Scientific American* and Polish Public Radio. Outreach Fellow at The Centre for Quantum Technologies, National University of Singapore (2012-2014). He is also recipient of the Grand Press Award (2015).

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