

# PARADOX

by Dan Churach

This Foreword is taken in full from the novel *PARADOX*,  
Amazon Books, 2024, ISBN 9798325534126

## FOREWORD

*Albert Einstein's Paradox:*

*"The more I learn, the more I realise how much I  
don't know."*

Why *PARADOX*? We live in a world filled with paradoxes. Consider – the more our technology allows us to be in constant contact with nearly everyone on Earth, the farther apart we seem to become. The more people argue with each other, the less likely they are to ever reach an agreement. A glance at your latest newsfeed, any media stream or evening news will confirm this. We face a world perhaps more polarised in thought than ever, and we increasingly find that this polarisation transcends mere policy differences... We now live in a world that bombards us with contradictory notions of “opposing truths”. Divergent realities? Alternative facts? This may sound like fiction, but what I describe is the post-COVID world in which we *Homo sapiens* live. Aha! This sounds like a perfect foundation for a novel.

*PARADOX* is a story about our Moon, about our Earth, but mostly

about us... human beings. Perhaps most of us never give it much thought, but we wouldn't be here if our Moon weren't accidentally created by the random impact of a large Mars-sized object that smashed into Earth a few hundred million years after its formation. That object, *Theia*, tore apart a sizeable portion of the Earth's mantle – its outer crust – which went into orbit around Earth. The surfaces of both bodies were molten for many millennia until they cooled enough to solidify. There is evidence of this recorded in the samples of Moon rocks brought back to Earth over the past sixty years.

Lucky? Absolutely. There is little chance we *Homo sapiens* would be writing, reading or doing much of anything without our Moon. We believe that the Earth's rotation is slower today than it would be without the tidal friction of the Moon slowing our spin. Scientists hypothesise that without Luna, the 24-hour day/night cycle we've grown used to might be as short as seven or eight hours. The Moon also acts to maintain our axial tilt at about 23.5 degrees, which remains stable despite an axial precession that completes one 'wobble' every 26,000 years. Those nearly constant conditions allowed life to evolve the way it has because of the tidal effects produced by our companion satellite.

The tidal rhythm of twice-a-day wet-dry cycles along the shores and intertidal zones of the world's oceans had a strong influence on the evolution of marine organisms and most likely provided a convenient way for sea creatures to establish their presence on the land. Today, lunar effects on biological cycles are apparent in things such as menstrual cycles and biological rhythms in humans, the reproductive cycle of some marine animals, and the migration and navigation activities of many birds.

In the past few years, many scientists have argued for a declaration of the Lunar Anthropocene, a geological epoch in our Moon's history that began with the impact of the Soviet Union's *Luna 2* spacecraft in 1959, producing the first human-made crater on its surface. The

Lunar Anthropocene? For starters, let's be clear as to what we mean by Anthropocene.

Geologists have marked the time scale of Earth's development based on the rock layers they could find and then date the fossils contained in those rock layers. Different 'ages' are determined by the prevalent minerals found in the rocks and the presence or absence of certain fossils contained in these layers. Though not officially confirmed as a new epoch in Earth's geological timescale, the concept of the Anthropocene – the Human Epoch – continues to be the centre of lively debates among geologists, climatologists, social scientists, economists, politicians and the public at large. The argument simply calls attention to the reality that human activities have increasingly become a major contributor to the Earth's geological changes.

Many in the scientific community point out that over the few hundred-thousand years now, *Homo sapiens* have been the apex species on Earth. In the last several centuries, humans have left more than a trace of evidence in the rock layers, the oceans and the atmosphere of our planet, enough that many support the notion of the hypothesis of Anthropocene. But the Earth is so large – do we flatter ourselves to think we humans could possibly have that great an effect on our home planet? Really... the Anthropocene?

The term is appropriate since the prefix 'anthrop' is the Greek root word for human. The geology is appropriate since newly formed and forming rock layers today include bits of human-made waste such as elements like plutonium and manufactured radionuclides resulting from nuclear weapons testing to microplastics found in water, fish and much of our food. These 'traces of humanity' find their way into just about every ocean and lake sediment layer examined nowadays. The percentage of carbon dioxide in Earth's atmosphere is almost certainly at the highest level it has been since *Homo sapiens* showed up on Earth. Even the CFCs – the ozone-depleting substances that

caused large holes to open in Earth's ozone layer resulted from human industrialisation. That ozone hole exposed Earth's surface to greater ultraviolet light from the sun, which impacted not only humans but many other species as well. Scientists may debate the details, but there is widespread agreement that *Homo sapiens* have a major influence on Earth's present-day geology.

*PARADOX* embraces these ideas and proposes that the Earth-Moon System is a more correct way of viewing our home planet than merely trying to look at Earth separately. In truth, the Earth-Moon System is the ONLY way of looking at our home planet. Let me introduce a paradox for you to consider: The Moon and Earth are such integral parts of each other that I would not be writing this novel any more than you are reading it without the Earth and the Moon. The two of them are intrinsically locked together by more than gravity!

In the words of fellow novelist Richard Powers, "*The best arguments in the world won't change a person's mind. The only thing that can do that is a good story.*" I don't set out to change any minds here, but the creative writer in me aims to entertain you... and the teacher in me hopes to make you think.

Enjoy the tale of *PARADOX*, dear reader.