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Introduction

THE NEW SPACE Age is here. The plan is simple: settle the Moon, then use the Moon as a practice ground and launching pad for other unprecedented activities in space—like mining asteroids, building giant space stations in near-Earth space, and ultimately colonizing Mars and going interstellar.

There are three big differences between these activities and what has come before. First, all previous space missions were temporary, mere visits. We went to the Moon to return. We launched satellites and probes we knew would eventually come home, burn up on reentry, or degrade over time. Even the International Space Station will be decommissioned and burn up later this decade. But in the New Space Age, we are going into space to stay. The settlements we build there (whether on the Moon, on Mars, or in space stations) will be indefinite. We are expanding our civilization into space.

The second big difference is that almost all previous space missions have been uncrewed. Up until 2024, only six hundred people ever had gone into low Earth orbit (from 100 miles to

about 1,200 miles above Earth's surface). Only twenty-four people had gone farther than that (and all were part of NASA's Apollo program between 1968 and 1972). The New Space Age aims to have many thousands (or even, on some proposals, millions) of people living, working, and holidaying in space in coming decades.

The third big difference is that most previous space missions were designed and run by governments, with private companies acting merely as contractors, building what governments demanded. This time, however, companies are more like partners, or even in certain cases leaders, designing government-funded missions and running their own independent missions (like SpaceX's missions to Mars).

Why are we doing all this? What are the reasons behind this New Space Age? And are these reasons any good? In this book, I carefully set out the ten main reasons or justifications that have been given for this coming new age and consider whether they are any good. These ten reasons are as follows:

1. To back up humanity against existential threats
2. To save Earth's environment
3. To create a world of abundance
4. To maximize the number of future happy beings
5. To give humanity an amazing future
6. To end war
7. To contact aliens
8. To conduct incredible science
9. To excite and inspire humanity
10. To go on holiday

Some people think that these reasons are not only good but so significant that the New Space Age deserves to be ranked as one of the most important things humanity has ever done, on a par with leaving Africa seventy thousand years ago or the discovery of fire.

But I will try to persuade you that all these reasons, on closer inspection, turn out to be spurious. Either the timescales are way off, there are better ways to solve the problems in question, or the relevant goods are not so good after all.

What's more, when it comes to each of the goals in question—backing up humanity, saving Earth's environment, conducting incredible science, and so on—the activities of the New Space Age are actually counterproductive. They will make these things harder. They might even end up destroying us all.

Most critics of human activities in space focus on their huge financial costs and all the wonderful things we could be doing with this money on Earth instead, like helping those in need, better funding schools and hospitals, and so on. Space advocates respond by pointing out that public spending on space is only a tiny fraction of national budgets. There is no reason, they say, that funding for these other things should come at the cost of space, rather than from various other savings we could make. But my view is that *even if the coming space activities were cheap, we should not be doing them*. The benefits for humanity they offer are negligible, and they come with immense risks.

Importantly, I will not be arguing that we should get out of space entirely. On the contrary, there is much important work yet to do there. But it is exclusively *scientific* work. All new space activities in the short to medium term should be purely scientific ones, run collaboratively by governments, with

private companies merely assisting, and for the sake of all humanity rather than the advantage of particular nations, corporations, or individuals.

Pulling the plug on the New Space Age will be incredibly hard for the major space powers, given how much they have already invested in it. It will be especially hard for the United States, the clear leader in the race to control the future of space. But like the One Ring in J. R. R. Tolkien's *Lord of the Rings*, the power of controlling space is too dangerous for any of us to possess—at least, while human civilization is still in its moral infancy. This power cannot be safely entrusted even to ourselves.

Each chapter of this book considers one of the ten reasons that have been given for the New Space Age. I will explain what these reasons are, where they fail, and why the activities of the New Space Age are actually counterproductive with respect to them. I conclude by pulling together threads that run through all of the chapters and summarizing my view.

I want to emphasize from the outset that I do not offer this book as the final word on any of these thorny topics. My main goal is to help readers better understand what is going on in space and, by making my own views clear, stimulate healthy debate. These are incredibly important issues, and we should all be involved in talking them through, forming opinions, and charting humanity's course together. I have tried to write this book as clearly and simply as possible. I hope you enjoy it!

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