

PETER LOTHIAN NELSON & WALTER E. BLOCK

SPACE CAPITALISM

HOW HUMANS WILL COLONIZE PLANETS, MOONS, AND ASTEROIDS

Palgrave Studies in Classical Liberalism



Palgrave Studies in Classical Liberalism

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Peter Lothian Nelson • Walter E. Block

Space Capitalism

How Humans will Colonize Planets,
Moons, and Asteroids

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“In *Space Capitalism: How Explorers Will Set the Pace*, my friend Walter E. Block and his colleague Peter Lothian Nelson have written a *tour de force* on why government cannot be trusted to explore space. The reason? It will steal from and oppress all those who attempt to exercise personal liberty within it—just as government has done on earth. But this research rich book is not only about space. Its subtext is an advanced lesson in the history and future of freedom; and it is a joy to read.”

—Hon. Andrew P. Napolitano, *Senior Judicial Analyst, Fox News Channel*

“Nelson and Block demonstrate, definitively, that the best way—both ethically and economically—to obtain liftoff from our planet is the free enterprise system, not government central planning. There are many writers who focus on the space race; this is the only book that makes the case for *laissez-faire* capitalism in this regard.”

—Hans Hermann Hoppe, *Senior Fellow, Ludwig von Mises Institute*

“Walter Block is known for pushing libertarian theory into uncharted territory. To say this book continues in this tradition would be an understatement. Nelson and Block show that there is no good reason to believe that even major undertakings like space exploration require government backing, and very good reason to believe they would be more successful and efficient if handled voluntarily.”

—Tom Woods, *Senior Fellow, Ludwig von Mises Institute*

“This book must be described with superlatives. It addresses everything you’ll want and need to know about the conquest and colonization of space and the planets. It’s well written and fascinating. I give it five stars.”

—Doug Casey, *President, Casey Research*

“Oliver Wendell Holmes, the famous Supreme Court justice, famously said that ‘One’s mind, once stretched by a new idea, never regains its original dimensions.’ Given Holmes’ equally famous bias in favor of state control of all things, I find myself wishing most fervently that Holmes himself had been stretched by *Space Capitalism*. Occasionally approaching science fiction in their ability to imagine the future, Nelson and Block nonetheless keep their analysis firmly grounded in sound economic principles. The range of the analysis is inspiring, and the quality of the insights presented here is likely to attract a big following. Fifty years from now, scholars and pundits alike may look back at this book and say, ‘That was the work that showed the way.’”

—Michael C. Munger, *Professor of Economics, Duke University*

“A United States senator once said that if the government were put in charge of the Mojave desert there would soon be a sand shortage. Or as Ringo Starr once observed, ‘everything government touches turns to crap.’ These are not merely the impressions of a few politicians and rock stars; they are validated by generations of experience and reams of economic research. There is no reason to believe that anything is exempt from the poison of bureaucratic government interventionism, including space travel. Walter Block and Peter Nelson make a solid case for why capitalism and free markets, not government bureaucracy, should guide the future of space travel and exploration. Their book should be made into a feature film, or even a television series, as a sort of libertarian Star Trek for the next generation of ‘trekkies.’”

—Thomas DiLorenzo, *Professor of Economics, Loyola University Maryland*
and *Senior Fellow, Ludwig von Mises Institute*

“Dr. Walter Block, famous for his dictum to ‘privatize everything,’ is back with a typically thought-provoking look at the economics and ethics of space exploration. Starting with the premise that governments have a terrible track record of threatening human survival, Block and his co-author Peter Nelson argue for keeping them well apart from a purely private system of space travel. Extraterrestrial human activity, while technologically innovative, requires no new systems of law, economics, or ethics. In fact, Block and Nelson tell us, there really is nothing new under the sun: ‘Earthbound precedents’ grounded in private property and free markets provide the best way to deal with space commons and supposed public goods. This book is perfect for this era of burgeoning private space travel, and provides [Block’s] most trenchant analysis of this most libertarian issue.”

—Jeff Deist, *President of the Mises Institute*

Foreword

How does one become a libertarian? There are as many paths as there are advocates of the freedom philosophy. Following are two personal stories related to how your authors were able to write this book. As personal stories, they are written in the first person. The first explains how the first author (Nelson) became a libertarian while the second is illustrative of his observations that keep him there.

Here is Nelson's Story

First incident: One day in school, I became aware that my sixth-grade teacher was lying to us students. It was not just him, it was the administrative staff as well. I doubt that he understood his actions as deceitful. In hindsight, I believe he was ignorant. There was a way of doing things, and he just did them. It was his job.

That day I observed a fellow student break the rules by passing a note behind the teacher's back to another student. This pupil, Frank Adams, and this was the lie perpetuated by the teacher and staff, was regarded as not smart; he was always in trouble and received poor grades. It occurred to me that, in reality, he was quite smart. Despite my only being a sixth grader and though I did not know it at the time, subsequent events proved my assessment correct. He became a successful entrepreneur

founding a business (florist) that lasted his entire career. No fool does that. After my observation, I looked around the class room and saw several others. Rick Carlos, for example, was in the same camp. In high school, he became a star football player and in adult life a restaurateur. In a town known for short-lived, failed restaurants, his Casa Carlos, outlived his career. Again, that deserves respect.

As for me, from that school day I always took what my teachers said with a pinch of salt. No authority was taken at face value; I was on my way to becoming a libertarian. When I was in high school, I concluded that the Supreme Court had erred in the case of *Engel v. Vitale*, 370 U.S. 421 (1962), commonly known as school prayer. Why? The error was in the failure to look at the entire clause which reads “Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof....” Okay, granted that by this clause it seems fairly obvious that a state-run school cannot compose a mandatory prayer for the students, except for a few little, bitty details. First, neither the school board nor the administrators are Congress. So, it is not so obvious after all. Further, if it is the student’s belief that out-loud common prayer is essential before embarking on a serious endeavor such as an education, then the ruling inhibits the “free exercise thereof.” It appeared that no ruling was possible except one: Public education is unconstitutional at least in so far as the Central government can speak to the issue.

Well—if the SCOTUS got it wrong, anybody can fall short. ALL authorities can fail. One must become his own authority. While I had not by that time reasoned out all the implications, I was even then effectively a libertarian. In a six-year period, I had intellectually moved there from believing whatever I was told. Since that time, stories that tended to challenge broadly held authority would catch my attention. It is in this spirit that the next story is worth telling.

Second incident: This story is one of many that confirms my freedom philosophy. My brother-in-law is an incredibly nice black man. He is extremely dark complexioned. The following tale dates from decades before my sister-in-law introduced him to the family. His account reinforces my commitment to libertarianism; though, I suspect he would be surprised by that. It amazes me how two people can provide such opposite meanings to the exact same sequence of events. While I cannot say that I recall his exact

words from the first time he told me this, he has reviewed this passage for accuracy; so, I repeat it in first person with quotes.

I worked as a deliveryman. My route serviced an auto-parts store. Usually, I had a truck that was boldly painted with the artwork and logo of the company. One night, it was in the shop for servicing, and I had an unmarked box van. I pulled up to the loading dock of this one store and proceeded to make up the order. I had a clipboard with all the various orders. So, according to the form, I would drop off cases of merchandise. I had a key to the back door and would put the order inside. At the same time, I would pick up any returns and load them in the truck.

At this store, a neighbor lady became suspicious and called the police. Think of how it must have looked: It was a dark alley where hardly anything was visible—pitch black. I had a shiny metallic clipboard that could have looked like a gun in the dark. My back was to the alley. I had the door open, and I was loading boxes from inside the store into my van. Suddenly I heard “FREEZE!” I slowly raised my hands straight up¹ and froze. The policeman was a young guy, may have been a rookie. He looked scared and probably thought he might get shot by me at any minute. He had his gun drawn and aimed right at me. Fortunately for me, though seeing only my silhouette and the flash of my clipboard, in the split second he felt he had to act, he did not shoot.

After he had verified my identity and determined that I was on legitimate business, he explained that the neighbor had reported me to him. He said it was a good thing that I raised my hands the way that I did because “if you had turned around with your clipboard or swung your arms up, I probably would have shot you.”

I love my brother-in-law and am grateful he survived this incident. The thought that my sister-in-law might never have met him is deeply disturbing. But what does this have to do with my confirmation in libertarian thinking?

The policeman, whether a rookie or not, is an “authority.” We are told: “If we see something, say something.” The neighbor, without knowing all or any of the facts, did just that. One must be careful because way too

¹He physically demonstrated how he raised his hands over his head in a manner resembling a pantograph on an electric train.

often the police will become afraid and shoot first and ask questions later. Then they will get off scot-free because they were just acting according to their training. Knowing that the death of an innocent may occur, my mantra is never call constabulary forces until you know the facts, and even then, be careful.

This policeman ended up not shooting my now brother-in-law, but was ready to pull the trigger nevertheless. If an innocent suspect raises his hands one way (straight up) he will live. If he raises them in any other way, he gets killed. I find these options unacceptable. Even though this particular case happened to turn out alright, once again, I find abhorrent the authorities acting outside the range of tolerable conduct in this way.

Here Is Block's Story

How I became a libertarian by Walter E. Block

Born in New York City of Jewish parents, and living in a half-Jewish neighborhood, I became a left liberal pretty much through osmosis. My views were just about the same as those of Bernie Sanders (who was a fellow track team member of mine at Madison High School; we ran in the same events (half mile and up); we lived in the same quadrant away from school, so would sometimes walk back and forth together from one place to the other; he was one of the best runners in the entire city; I was mediocre; we overlapped for four years at Madison, and one year at Brooklyn College).

I was not very political, but when Ayn Rand came to lecture at Brooklyn College, I was among many undergraduates who met her there to boo and hiss at her, since she favored free enterprise, and all rational and moral people knew this would be the death knell for the poor (these were before the days when free market speakers were physically prevented from lecturing at institutions of "higher learning"). I hadn't spewed enough venom during her lecture; I wanted to further demonstrate my hatred of her and her teachings. So, at the conclusion of her talk when the Ayn Rand study group that had invited her to campus announced there would now a luncheon in her honor, and all audience members were invited to attend even if they did not agree with her, I took them up on their offer.

When I arrived at the lunch room, I saw a long table, with maybe 50 people on each side. Miss Rand was sitting at the head of it, surrounded by such luminaries as Nathaniel Brandon, Leonard Piekoff, Alan Greenspan, and other members of her “senior collective.” I was relegated to the foot of the table, whereupon I turned to my neighbor and averred that socialism was the way to go, or something to that effect, and capitalism must be replaced with this system. He replied that he didn’t know all that much about the subject, but that the people who did were located at the other end of the table. So, chutspanick (assertive fellow) that I was (still am), I marched over there, stuck my head between Ayn’s and Nathan’s, and challenged either or both of them to a debate on socialism versus capitalism. (I was then a senior at Brooklyn College, 22 years old; Brandon maybe 30–35, and Rand some 25 years older than that). Brandon was exceedingly polite to me. He said he would come to the other end of the table to discuss this matter with me, there being no more room for anyone else at this end, if I agreed to two provisos. First, I had to promise to keep our debate going until we “settled matters” and not allow the conversation to lapse after this one session. And second, I would read two books (*Atlas Shrugged* by Ayn Rand and *Economics in One Lesson* by Henry Hazlitt). I promised, and we moved to the other end of the table to begin our first interaction.

I duly read the two books. I simply could not put down *Atlas*. Although some 1100 pages, I read it in one weekend. I was equally blown over by the Hazlitt book. I visited Branden and Rand several times in their apartments in Manhattan in the coming weeks, and, viola, I became a libertarian of the Objectivist variety (I was pretty much interested, only, in their views on economics and liberty; all else, epistemology, metaphysics, aesthetics, etc., left me cold). Subsequently, I attended Nathaniel Brandon Institute (NBI) lectures over the next few months. During the question and answer period after the lectures, Ayn Rand was very welcoming to “soft ball” queries such as: “Miss Rand, on page 436 of *Atlas* you said this... Could you please elaborate.” But, if you asked anything more challenging such as “Miss Rand, on page 436 of *Atlas* you said this... and on page 759 you said that... and I see a contradiction between your two statements,” she would fly into a rage. She would literally kick you out of the lecture hall, and announce she was deleting you from her mailing list.

Needless to say, I was more than just a bit put off by such goings on. I was a supporter of *laissez-faire* capitalism by then, but not a member of what I was now regarding as her cult. So, for months I would stay away. But these were the only people I then knew who supported economic freedom, so I would later return, only to be again perturbed by her cultish behavior, and leave once again. Like a schizophrenic, I adopted an approach-retreat pattern with the Randroids.

When I was a second year student in the Ph.D. program at Columbia University, Larry Moss, a year behind me, approached me based on my comments in a class we were both taking, and said I had to meet this Murray Rothbard, who was an anarchist. “An anarchist,” I said? “He’s a maniac. I don’t want to meet him.” (I was still a Randian limited government supporter, or a minarchist, and like her, adamantly favored a very limited state.) I resisted Larry’s repeated invitations for several months. But, finally, he and his then room-mate, Jerry Woloz, “ganged up” on me and I agreed to meet the ogre.

Before doing so, I read a bit of his work. I pictured a 6’4” muscle-bound boxer-athlete, holding a gun in one hand and a machete in the other, with a snarl on his face. What I got, instead, was pretty much the very opposite. He was a short rotund man with a wild sense of humor who kept me in stitches for hours on end; a real “sweetie pie,” his term of endearment for those he liked. It took him about 10 minutes to rescue me from my minarchist ways. He used Henry Hazlitt type arguments on me, with which I had become very familiar. Why wouldn’t competition and the profit and loss system work not only for pedestrian goods and services such as post offices, shoes, and cars, but also for courts, police, and armies? He knocked my socks off with these challenges, and for the first time in my life, I became a full libertarian, anarcho-capitalist variety. I hope and trust that Murray will be proud of my contribution to this book which, like pretty much all of my intellectual output, I owe to his tutelage, his mentoring and his love of liberty and sound economics.

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Interceptor Storm Sewer by the American Public Works Association and Willow Farm Park by the Colorado chapter of the American Society of Landscape Architects. He frequently offers presentations regarding theology to groups ranging in size from half a dozen to several hundred.

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1

Privatize Space Travel!

We argue two things in this book. One, space travel is vital and beneficial to human well-being. Two, it should be done privately; the state should be kept as far from this initiative as possible, ideally, totally.¹ These two principles inspire this book. We believe that an overwhelming majority of citizens will wonder if we have gone completely bonkers. Our critics will tend to dismiss both propositions out of hand. So, what persuades us to favor these themes? Our main motivation for the first is love for human beings.²

¹ This aphorism applies to all initiatives. The conflict is private vs. bureaucratic management. For a detailed account of the shortcomings of the latter refer to von Mises (1944). While all endeavors (even such as caring for the disabled) benefit from private administration this becomes ever more important where great opportunities and challenges are at stake.

² Statists will think us “Out of touch” and even call us sickos and weirdos. We do not care. Our love for humanity is so great that we are willing to bear the “slings and arrows” (Hamlet, Act III, Scene 1) of critiques of this variety. No matter what the opposition, we cleave to our desire to leave the human race in as good a position as we can, after our departure from it. Most of our best friends are human beings. All of our family members are of this species. We generalize our love for them to the entire human race. We would hate to see them or it disappear. That would be the worst possible disaster imaginable in our view. Space colonization is an insurance policy against that horrid scenario.

Why space—it is so ... well, “OUT THERE.” As *Star Trek* would have it, explorers are driven “to go where no man³ has gone before.” That, alone, suffices. Then, there are the more practical considerations. Moving into space will be profitable. We will learn new technologies which will endow the remaining earthlings with electrifying spillover advantages. For example, will near or actual weightlessness cure diseases? Will resources be discovered in the heavenly bodies (apart from the Moon’s green cheese) that will open new horizons?

We find our second theme, that efforts in this regard be undertaken by market participants, not crony capitalists supported via compulsory tax payments, similarly compelling. Real entrepreneurs throw the dice with their own funds, or those voluntarily entrusted to them. They coerce no one. Why this limitation? Would not our first goal, space exploration, be better served by government itself, given its taxing power or, at the very least, via a partnership between the state and private interests? Absolutely not! Says Rothbard (2015):

The myth has arisen that government research is made necessary by our technological age, because only planned, directed, large-scale ‘team’ research can produce important inventions or develop them properly. The day of the individual or small-scale inventor is supposedly over and done with. And the strong inference is that government, as potentially the ‘largest-scale’ operator, must play a leading role in even non-military

³ Note the use of this word, “man.” It is politically incorrect, but we do not buy into the cultural Marxist requirement that “inclusive” language be used, such as “person.” This word, too, would fall victim to this crazed desire to alter the language, since its last syllable is “son,” which would never do in that realm. Must we resort, instead, to “perdaughter?” This inanity has spread far and wide. Many of the newer biblical translations use “inclusive terminology.” Little or no notice is given to the fact that the original 2000 plus year-old manuscripts use masculine forms. Yet the words are taken to be “inclusive” while similar English is not. “When Paul wrote that ‘a man (*anthrōpos*) is justified by faith’ (Rom. 3:28), the Greek word *anthrōpos* does not mean ‘a man’; it means ‘a person.’” So say Strauss and Wegener (2000). That may be, yet, “*ἄνθρωπος*” in Greek is a first person, *masculine*, singular form. As that very same article demonstrates, the English word “man” also has a “generic” meaning. To illustrate what they are saying, when Jefferson wrote that “All men are created equal,” he did not refer to only males. No, he meant to include all human beings. The point is not to make a more accurate or even a more “inclusive” translation. No, politically correct versions are intended solely to score political points and to improperly, *ex post facto*, impose them on writers from two millennia in the past. We have here yet another reason to escape from this “third rock from the sun” of ours: to leave this particular insanity behind. Throughout, this book uses Jeffersonian not Dalyian (after Mary Daly) style inclusiveness.

scientific research. This common myth has been completely exploded by the researches of John Jewkes, David Sawers, and Richard Stillerman in their highly important recent work.⁴

Pretty much anything touched by government comes with fatal flaws starting with corruption and compulsion. Eliminating state involvement in space frees people rather than limits them. Besides, the ruling powers notoriously mismanage all enterprises.⁵ It becomes a self-fulfilling prophecy, because that very incompetence makes the venture appear far more expensive than it really needs to be.

The record of “picking winners” on the part of governing establishments⁶ does not engender much confidence in government’s capacity to promote this goal. Nor is “contracting out” to private interests likely to provide efficiency in this context. If government cannot do the job itself, there is no reason to believe it will be effective in choosing and funding collaborators. In addition, we believe that even if the state could be effective in promoting such tasks, it would still be improper for it to do so, since its funds are mulcted, unwillingly, from their rightful owners, the long-suffering taxpayers (Rothbard, M. 1998).

In addition to the two primary themes, in a third we note that our species, while admirable in many ways such as the need to explore, is also often quite silly and even more destructive. We have developed weapons of mass destruction, and one despicable government apparatus, venerated by many worldwide, even used them, twice, in 1945.⁷ But we do not

⁴Rothbard is referring to *The Sources of Invention*, St. Martin’s Press, 1959. It discusses such wild inventions as the helicopter and polyethylene. In it Jewkes et al. discuss the influence and relationships of research organizations on and to recent inventions.

⁵This applies even to such mundane activities as collecting refuse (Savas, E. 1979), delivering mail (Adie, D. 1988) and fighting fires (Ahlbrandt, R. 1973).

⁶A recent case in point is Solyndra. But the record is replete with numerous failures; for a long list of such unrequited bailouts, see Bailout Tracker 2015; Kiel, P. 2012; Sprague, I. 2000.

⁷For the view that this had little or nothing to do with ending World War II, but rather was the opening salvo in the Cold War, see Alperovitz, G. (1994, 1996). For the opinion that U.S. entry into World War II in Europe was unnecessary in the first place because prior to December 7, 1941 Germany was already guaranteed to lose the war, see Maybury, R. and Williams, J. (2003). For the perspective that had the United States not entered World War I, there would not have been any World War II, see Barnes, H. 1982, 2004; Buchanan, P. 2014; Fay, S. 1967; Ferguson, N. 2000; Fleming, T. 2004; Keynes, J. 1920; Nock, A. 2011; Radosh, R. and Rothbard 1972; Rothbard, M. 1972, 1980, 1989; Stockman, D. 2014; Tooley, T. 2014.

need to resort to such high technology to murder our fellow creatures. We are fully capable of doing so on a massive scale, without such sophistication. Estimates are that governments have done away with almost 200 million of their citizens in the twentieth century, and this is apart from wars⁸ and traffic fatalities on public highways.⁹

In support of this contention, much in the following pages details the violent nature and destructive results of states. The same applies to would-be governments like ISIS and others that go around shooting police officers. In recent days and months, the evening news (of whichever source the reader consults) has been filled with graphical depictions of bombings and shootings.¹⁰ These are being done by those who do not so much disapprove of government per-se but who do not like *this* state and wish to substitute their own. In addition to being anarchists, we do not approve of would-be states either. As Shaw (1903) said: “He who slays a king and he who dies for him are alike idolaters.” We concur completely that one who ambushes or kills or purposely injures policemen simply lowers himself to the level of these idolaters. To be libertarian requires adoption of the Non-Aggression Principle. That in turn does not admit of murder, assault, or aggression in any way whatsoever against even those of whom we most strongly disapprove.

How will space travel help alleviate mankind’s tendency to kill us? Simple. If we can establish colonies starting with the Moon, Venus, and Mars, and then later, as improved technology will permit, on other planets and moons,¹¹ the odds will improve that if people blow up any one home of the human race, there will still be others, so that our species will still “live long and prosper.”

⁸ Block, W. 2006; Branfman, F. 2013; Conquest, R. 1986, 1990; Courtois, S. et al. 1999; DiLorenzo, T. 2006; Rummel, R. 1992, 1994, 1997.

⁹ For which we also hold responsible statist acting through governments (Block, W. 2009).

¹⁰ Recent examples include such sickening happenings as the mass shooting of police officers in Dallas, TX, the shooting up of Istanbul Airport in Turkey, the Paris attacks in France, and the riots in Milwaukee, WI.

¹¹ And then, in other solar systems. While time-consuming, expensive, and risky, travel to the binary (possibly trinary) Alpha Centauri (Proper name: Rigel Kentaurius) system (NASA n.d.-a), Barnard’s Star (Dolan, C. 1989), or Wolf 359 (Dolan, C. 1989) would probably be possible with existing or readily anticipated technology. The spaceship would have to be, in effect, a self-sustaining world that could keep people alive for the duration. Of particular interest is Proxima Centauri, a red dwarf which appears to orbit the central Alpha Centauri couple. At 4.22 light years, it is now near our side of the solar system and approaching. Round trips would be in the order of a century, maybe less.

There are of course other ways of raising the odds that our fellow creatures will survive their base instincts. There is psychology; perhaps we can eradicate our malevolent impulses through talk therapy. There is biology; maybe human beings can be engineered so that we are not so given to mass murder. Who knows? Maybe we can hypnotize ourselves so that we are more likely to continue to live. But those are topics for other books. The present one assumes away these elegant possibilities for changing the human element.¹²

We probe, instead, the inelegant scenario of leaving members of our species exactly as they are in terms of viciousness, and instead keeping us apart from each other,¹³ so that at least some branch of *homo sapiens* can continue forever.¹⁴ This is but one result that could naturally follow from space exploration. The point is, we desperately want to save (remnants?) of the human race, but, we impose upon ourselves one essential constraint: we obligate ourselves to the non-aggression principle (NAP).¹⁵ Why? Because in our view, violations of the rights of men constitute a significant danger justifying departure from Earth in the first place.¹⁶

Challenges

As long as we limit travel to the inner planets of the solar system, technical challenges are not too severe. However, when we go beyond them, especially past Pluto and Neptune, they become categorically daunting. The story of space is one of ever-expanding orbits. On Earth a person, the

¹²To recreate mankind, as each of the forgoing programs would do, in one's own image is the unfortunate first impulse of tyrants.

¹³Far apart: fences (or the great distances of space) make good neighbors.

¹⁴This may sound like the pessimism that leads to statism. In fact, we are optimistic regarding the prognosis of the race. Humans are resilient. No matter how destructive governments act, individuals overcome and prosper. Hiroshima, a shining example and the first city to be nuked back to the stone age, is now a prosperous and vibrant community after only 72 years and has been for some time.

¹⁵See on this Bergland, D. 1986; Block, W. 2008; Hoppe, H. 1993; Huebert, J. 2010; Narveson, J. 1988; Nozick, R. 1974; Rockwell, L. 2014; Rothbard, M. 1973, 1978; Woods, T. 2013; Woolridge, W. 1970.

¹⁶Here, we are talking about the salutary effects of exploration. Perhaps more important are the adventurous motivations discussed elsewhere in our book.

experiencer, is faced with a floor, or ground, walls, or edges, and a ceiling or forest canopy. This book attempts to break through those limits. But then immediately we arrive at a further one: gravity.

Actual physical restrictions abound. Out there, air does not exist, nor does pressure, nor atmosphere, nor reflections, nor, even if one is far enough away from the Sun, light. In the event, even though gravity pulls a would-be traveler towards Earth, in the outer limits, this force is much less powerful than that to which we are accustomed. Wherever one is in outer space, he would feel like he was falling, unless there was artificial gravity. Until he developed his “space legs,” he would feel constantly sick to his stomach and disoriented.

Thus, the initial impression of the extreme freedom away from planetary or solar gravitation may be somewhat less liberating than it appears at first glance. On Earth, should one wish to go to a particular place, he looks out over the plain and starts walking in that direction. No problem. When flying through the air or diving under the water, one again moves in the direction he desires. Piece of cake.

In space, gravity and colossal distances change all that. Because of gravitational effects, to get where one wants to visit, one first must travel an orbital trajectory. Is the object of travel a long distance away? Then speed is of the essence: that is to say hyper-speed. The speed of light, or even approaching that rapidity, is an unavoidable limitation due to physical principles stemming from relativity theory.¹⁷ For all practical purposes, these limits are severe. Even the speed of light itself is nowhere near fast enough if one wants to travel to distant stars in a lifetime. Therefore, contemplation of life on board ships built for multi-generational voyages is a given.

This book advocates private exploration and ownership of planets and moons and spaceships as well as development. First things first, the book starts with things with which people have familiarity. The concept of first in use, first in right is the mantra. Homesteading is the name for it. But how does this process apply to space?

¹⁷For more on this see Hawking, S. 1996. His book is written for the layman and is easy to follow.

We would not want our readers, at this point, to throw up their arms and give up the possibility of extra-terrestrial settlement. All this talk of light speed is certainly beyond human ability for the foreseeable future. We may well have to wait for the next Einstein, or a few of them in each generation, to overcome these problems,¹⁸ if, that is, it is even physically possible to do so. On pragmatic grounds, we need to walk before we can run. Setting up colonies on the Moon or Mars is not beyond present abilities, or at least those that can be employed in the next decade or two. And, as for reaching the stars, this, too, can be accomplished even in the absence of such astronomical speeds. All we would need is large spaceships and a lot of patience. In two or three generations,¹⁹ at far less than “warp speed” other solar systems can be attained.²⁰ And, in the meantime, these spaceships will constitute a refuge for human beings, if governments blow up the Earth as the tyrants of this Earth seem intent to do.

In succeeding chapters, man’s inhumanity, the advantages of private launches, privatization, and ownership concepts will be discussed in more detail. The scientific limitations implied in the physics of orbits, the properties of extra-terrestrial objects, speed and acceleration limitations, etc. will be taken seriously. In other words, nothing herein will rely on science fiction concepts such as “warp speed”²¹; rather, market support of basic research will be discussed.

Then the human, economic, and physical principles will be applied to the Moon, Mars, the inner planets of the Solar System, the gaseous planets and their moons, asteroids, comets, and other non-planetary objects.

¹⁸ But already implications suggest themselves. We will be more likely to save mankind in this manner if charitable and other discretionary money is directed less towards addressing knowledge gaps between various ethnic groups, and helping mentally handicapped people, and more on the intellectually gifted. As advocates of the free enterprise system we urge no such policy on the part of government. Our recommendation here is a complete separation of the state and education. But, still, as a purely cause and effect relationship, more emphasis on child geniuses and less on others, would be logically implied.

¹⁹ Well, maybe, several hundred generations for distant stars.

²⁰ On the issue of earth-like planets in other solar systems see Jet Propulsion Laboratory 2015; Mother Nature Network 2015; Zolfagharifard, E. 2015; Knapp, A. 2014; Kavli Foundation n.d.

²¹ While impossible in terms of our current knowledge, we do not mean to say that trans-light speed is forever beyond the possible. However, before it can become possible, it will take a revolutionary scientific breakthrough in the order of a new theory, like relativity was.

Interstellar travel and extra-terrestrial life including the “prime directive” or the rights of intelligent beings will be discussed under Space Law. All exploration is fraught with risks, many of which seem insuperable prior to travel.²² The entrepreneurs of our planet have the imagination and ingenuity to figure out what the real risks are and how to mitigate them. Certainly, no book such as this one can pass up the chance to have fun with NASA and other government boondoggles.

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²² *Ex-ante*, risks can only be surmised. One probable peril is the collision with natural space debris such as asteroids too small to be detected yet large enough to destroy a spaceship. For interstellar travel, such an obstacle could be an earth-sized object which would be invisible when the nearest light source is, say, 2 light years (1×10^{13} , or 10 trillion miles) away. That is almost beginning to sound like the size of the national debt.

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2

Man's Inhumanity to Man

A primary reason for proposing space exploration stems from man's inhumanity to man and our love for human beings.¹ We greatly fear nuclear, chemical, or biological warfare, where all people on the planet are wiped out.² If some of our fellow creatures can locate to other planets, such as Mars, or the Moon, then at least a few of our relations will

¹We contend that the reason the state should not be involved in space exploration is because it has demonstrated a tendency toward oppression and needs to be restrained, not granted a wider field of action. In this chapter, we explore that dispute in detail with many real-world examples.

²We exaggerate, but only slightly; we are more optimistic than we sound here. Humans are resilient. As evil as states are, it is unlikely, nay impossible, for them to wipe out humanity. During World War II, Dresden and Hamburg suffered urban fire storms which left those towns devastated. People experienced a return to Paleolithic conditions. Earlier, London too found itself subjected to intense damage. Today, all of those communities are vibrant, prosperous cities. Additionally, the German government adopted a policy of extermination intended "wipe out" the entire Jewish population of Europe. It did much damage and killed millions. It did not, however, succeed in its aim. More likely is a worst-case scenario of unlimited modern war as depicted in such dystopian novels as Veronica Roth's *Divergent* series. These describe a landscape of utter and "complete" devastation but one where people survive. Notice too that in both fiction and reality, these types of tragedies only arise from the deprivations of government activity. Is it any wonder that we decry the involvement of would be overseers in space ventures?