

Origins of the Cold War

"I wish that I could say I was optimistic about the human race. I love us all, but we are so stupid and short-sighted that I wonder if we can lift our eyes to the world about us long enough not to commit suicide."

Isaac Asimov

On July 20, 1989, the 20th anniversary of the Apollo 11 Moon landing, President George Bush announced plans for the Space Exploration Initiative (SEI). His speech described the construction of space station Freedom, it described returning to the Moon, this time 'to stay', and it ended with a proposed manned mission to Mars. Bush laid out, not a ten-year Apollo-style plan, but a long-range continuing commitment. Unfortunately, Congress shot the SEI down in flames due to the huge budget that it would have required. But consider a future where the SEI was passed, where the project thrived because of the international co-operation that the president was able to muster. With new partners on board, including Russia, Space station Freedom ends up looking much like the International Space Station we know so well. It even carries the same name.

What else differs in our alternate history? On August 20, 1998, a barrage of American cruise missiles struck terror camps in Afghanistan, and (unlike in our timeline, where he missed the attack by hours) Osama Bin Laden was killed. There was no 21st century War on Terror. The Space Exploration Initiative enjoyed the optimism and support of a new century unfettered by Middle East wars and on-going terror.

"Don't tell me that man doesn't belong out there. Man belongs wherever he wants to go - and he'll do plenty well when he gets there."

Wernher von Braun, 1958

To the Moon and Mars

Americans return to the Moon in 2001, twelve years after Bush gave his speech on the steps of the National Air and Space Museum. By 2006 there are up to eight astronauts living there semi-permanently. Within another six years they are producing their own oxygen, and crew numbers have doubled. This is a scientific base, on the Sea of Tranquillity.

In 2017 the first manned mission to Mars is successfully carried out. It is truly multi-national, with a great deal of technological support provided by Russia. Using similar technologies to that employed on the Moon, an international crew stay for several weeks and leave behind habitats for more permanent crews who follow on a year later. The modular design allows nations to add to the new colony, expanding its scope and population in fits and starts for the next four years. All of these SEI milestones were reached on time (if a little over budget).

China Reaches Orbit

As the Space Exploration Initiative is embraced and executed in the West, a rising star in the East begins to make its own bid for space. China launches its first astronauts in 2003, and immediately plans further launches, plans the construction of a small space station and even a permanent Moon base. Success, coupled with a competitive spirit, spurs the Chinese government to back its space program to the hilt.

By 2010 the Chinese have landed men on the Moon, five years later they have established a semi-permanent base. By 2020 the Chinese presence on Luna (as the Moon is being referred to) is almost self-sustaining, and a future bridgehead for the planned construction of solar power stations. There are now two separate Lunar colonies, one chiefly American, the other Chinese.

The Power From Space Design Agreement 2015

China made its intentions clear on October 13, 2000, when its space timetable was reported by the Xinhua News Agency. It planned to mine Luna resources and beam solar power from space to alleviate China's massive energy needs. In 2015, China and the US, as the operators of the only two Luna bases, came together to sign the Power From Space Design Agreement. Government investment would match private investment, and the aim was to start mining the Moon's surface in order to build these solar power stations that would beam to Earth free, sustainable energy. The project involved setting up automated mining and processing facilities, as well as solar panel roadways and microwave beaming stations. By 2028 the first beaming stations began to test their equipment, and a year later microwave beaming to the Earth's surface was underway. From 2030 onwards, a new era in Earth's history had begun.

A decade of Earth-Lunar manufacturing followed, immigration of skilled labour from Earth began as a trickle, and ended as a steady flow. In 2032 a mass driver 'catapult' was constructed on the Moon's surface, this would launch unmanned loads of mineral ore out to various nearby orbital positions (the Lagrange points) where experimental spinning space stations were being constructed. These new stations required raw materials from the Moon, in return they would become centres of orbital manufacturing. By 2040 the L5 station began to act as a space vehicle construction and preparation yard. It also served as the prime way station for future manned missions to Mars and a hub of the new space industries. While there were perhaps 6,000 people at the orbital stations by the year 2040, there were over 22,000 living and working on Luna.

"Experience has shown how deeply the seeds of war are planted by economic rivalry and social injustice."

Harry S. Truman

Them and Us – The Orbit War

It wasn't really a war at all, but the orbital fracas of 2044 certainly had dramatic repercussions that are still felt sixty-years later. It had begun in 2040 when the Lunar management requested increased investment to handle the growing labour force. Plans were on the table for a new colony, greatly enlarged and upgraded. Backers on Earth, both governments and shareholders, refused to further stretch the finances of the operation. A backlash movement began on the Moon; a hostile mood was sweeping the habitats of the colony. Earth held fast, pushing for its quota of microwave transmissions, but remained reluctant to step up the investment to unrealistic levels. The Lunar crisis lasted for more than a year, with the rising political movement threatening to halt all power transmission until the Lunar requests were reviewed.

In 2044, a delegation of ministers and company chiefs from Earth landed on the Moon for an emergency summit. It looked like the Lunars had maybe gotten their way, but things were moving fast. Factions there were at odds, and in the ensuing chaos, all of the delegates from Earth were kidnapped and later murdered. Small scale rioting took place, but the habitats of Lunar soon came under the control of the most influential of the anti-Earth factions.

What became known as the Orbit War was actually no more than tit-for-tat destruction of orbital assets. The Lunar colonists sabotaged several communications satellites in Earth orbit, while Earth destroyed a Lunar space vehicle in Low Earth Orbit (LEO) that refused to respond to transmissions. Finally an automated vehicle en route from L5 was crashed into a small modular station over Australia, killing four people. When it became obvious to the colonists that China and the US were putting military forces into orbit, ready for an assault on the Moon bases or the L5 station, the ante was suddenly – and dramatically- upped.

In a state of extreme brinkmanship, the colonists directed the Luna mass driver to launch several ore payloads at Earth itself, each one impacting with the force of an atomic bomb. The three

payloads smashed into the Thar Desert of India, the an-Nafud desert of Saudi Arabia and Egypt's Western Desert. Although it was intended that no lives should be lost, 34 miners on an Egyptian drilling operation were killed by the third payload strike. The governments of Earth had no choice but to stand down their military task force. Everyone understood the harsh new message delivered by these three rocks from space: "don't mess us around again, because next time it'll be Beijing, Miami and Washington ..."

Such daring apocalyptic blackmail prevented an imminent Earth takeover, but of course there was to be no future investment in expanding the Moon colony, in fact there was to be no more investment from Earth at all. The strong ties of belonging, support, nationhood and commerce were quickly severed and although neither side was able or willing to make war on the other, a cold silence descended between Earth and Luna. The Cold War had begun...

Peace, noun. *In international affairs, a period of cheating between two periods of fighting.*
AMBROSE BIERCE, *The Devil's Dictionary*

Towards a Shooting War

How could two Lunar colonies and a space station survive a total Earth embargo? In truth, it wasn't total. Earth had become dependant on the power being beamed to it from the Moon; and the Lunar colonists needed nitrogen. It was amazing how many raw materials that the Moon *could* provide, given suitable excavation technology. Oxygen could be extracted, iron, aluminium, magnesium and silicon too. Water was being mined from craters at the Moon's south pole, and although very costly to ship to the lunar bases at the equator, or out to the L5 station, could then be recycled indefinitely. Habitat construction could continue as it had for the past decade, greenhouse cultivation provided food, and bioplastics, made from corn or potatoes, was beginning to stand in for the traditional Earth-dependant petroleum versions.

But Luna needed nitrogen. It was essential for the success of any artificial crop production and it was also essential as a component in the atmospheres of the Luna habitats. Without it the colonists would be forced to breathe 100% oxygen, a very flammable and potentially disastrous atmosphere indeed. After several months of static, Luna and Earth began to conduct business with one another. It was sullen, reluctant and mistrustful commerce. The Earth governments looked to a future where they didn't need Lunar solar power, where they could gain all the free, cheap and clean energy they needed from fusion reactors. Such reactors were still in development and were perhaps 20-30 years away. Luna looked to a future where it could scoop nitrogen for free, from the surface of a distant moon. That future would one day arrive.

The Forties were a time for Luna to stand on its own two feet and for Earth to undergo a radical and momentous change, for the people of Earth created a what would amount to a world government. After four years of detailed planning, the Lima Conference of 2048 set out the structure of an international confederation that recognised regional organisations such as ASEAN, the EU and the Arab League as decision-making entities linked with a supra-national confederation parliament. Nations gave up some powers to the regional bodies, much as European nations had in the 1990s. With the rise of Lunar ambition, signatories at the Lima Conference agreed that all military space activity was to be carried out under the umbrella of this new Earth Union. Fear and mistrust of the Lunars brought the Earth nations together, perhaps temporarily, perhaps forever.

Under the Asteroids

Out in space, there were others who would help shape the future of humanity. The Mars colonies were expanding rapidly, scientists and engineers vied with prospectors and miners for seats on outbound rocket flights. There were tens of thousands of people from many different nations on Mars by 2040.

Further out even than Mars, are the asteroids of the Belt. Here, throughout the Forties, Chinese astronauts established tiny mining outposts, at first experimentally, and then productively, as newly installed mass drivers began launching valuable ores back toward Earth. China, using the technology developed to drop its astronauts on the Moon, had first sent out a manned prospecting mission to 4660 Nereus (a rogue asteroid orbiting close to Earth) in 2027. The mineral-hungry nation followed it up in 2035 with a long duration mining mission to the Asteroid Belt. This was never part of the 2015 Power From Space Design Agreement. China had gone it alone in a risky venture to prospect for rare minerals. Out in the black, these brave souls were brave beyond measure ... or just desperate. A massive Chinese recruitment drive attracted educated young men with no prospects of marriage since the ratio of men:women was so low. They would expend their energies in the Belt instead, establishing outposts, bases, green-houses, refuelling stops, trade centres and mass drivers ... and how the Earth distrusted anyone with a mass driver!

When news came to Earth in 2052 that envoys from Luna had visited miners in the Belt, the government was electrified with nervous energy. Within months Earth military were in the Belt trying to 'secure the safety of the Chinese beltlers'. Earth did not want Luna to co-opt the belt miners, and have them stop sending raw materials back to their home planet. Instead, the world government cultivated the new concept of Cascadia, a free and independant nation of belt miners. Luna reacted predictably by sending in its own newly constructed military vehicles. Earth fought this war by supplying the Cascadian miners with craft, supplies and weaponry, but they dare not intervene directly. Luna military troops broke up the burgeoning 'nation of Cascadia' created by the free-thinking miners, and imposed their own restrictions. There were an estimated 300 deaths in the Belt, and more than a thousand on Mars, which could not escape the war. Troops of both powers fought each other on Martian soil. In the end, the Moon established a colony on Vesta, and broke up the dream of a free Cascadian nation. As a counter-balance, the Earth Union was able to maintain its first colonial presence in the Belt at the asteroid called Ida.

*"Here men from the planet Earth first set foot upon the Moon. July 1969, A.D.
WE CAME IN PEACE FOR ALL MANKIND"*

Apollo 11 plaque left on Moon.

Showdown Over Mercury

The Earth Union soon found a way to shake-off its dependance on Luna when the first fusion reactor came online in 2060. The 'miracle powerplant', fusion reactors produced very little radioactive waste but incredible amounts of power. Various fuels are needed, the most sought after being helium-3. Although small amounts can be gathered on Earth, the greatest concentrations are out there, in the solar system, waiting to be collected. This helium-3 is blasted into rocky surfaces by the solar wind and is found on Mercury, the Moon and on the gas giants in the outer solar system. Now the Earth Union had to secure a source of He-3 and it set its sights on Mercury, sending an initial colony to the south polar region in 2067.

Luna was determined to spoil this party and a colonial mission of its own arrived in orbit in 2068. It soon emerged that the Earth colony included military assets, and that the Lunar mission had also included weaponry. The stand-off was tense and after several weeks the Luna ships were resupplied with fuel from the Moon and then they withdrew. Crisis talks were held between Luna and the Earth Union, the outcome falling in Earth's favour, it would continue with a 3 year plan of development on Mercury. Here was cheap solar power, immense mineral wealth and a truly amazing export: helium-3. It looked like Mercury would eventually out-perform Luna; Earth had a super-colony!

It wasn't to be. Earth sponsored expensive operations to begin mining helium-3 from the bright-side Sobkou basin, but the robotic installations and equipment fared badly and the equipment shut down. It was now the dash for Saturn, and the vast amounts of helium-3 there, that quickly turned the Sobkou debacle into a forgotten memory.

"Here's my strategy on the Cold War: we win, they lose."

Ronald Reagan, USSR-USA Summit, Moscow, May 29 June 2, 1988

Jupiter and Beyond

The great expansion into the outer solar system began apace in the early 2070s. New rockets, nuclear thermal drives that were based around a fission gas-cored reactor using liquid hydrogen or water as a reaction mass, now powered these long range missions. Both powers established bases at Jupiter, Luna planted a small outpost on Europa that would later develop into a fully-fledged colony, while Earth set up bases to monitor Luna activity at Callisto and Ganymede.

It was in 2082 that a Lunar expedition reached Titan, the sixth moon of Saturn. This world had everything that the Moon didn't, including nitrogen, methane and hydrocarbons! It was going to be the perfect source of raw materials, materials that would be shipped back to Luna to free the people from its reliance on nitrogen from Earth. Within two years the Earth Union had arrived and brought everything it needed to begin mining helium-3 from the Saturnian atmosphere. It established bases on the twin planetoids of Janus and Epimethius. The tension between the Earth depot and the Lunars on Titan grew year by year.

From 2090 onwards expeditions even reached Neptune and Uranus, but settlement has been light and patchy, sponsored not just by the two superpowers, but also by corporations or wealthy individuals.

It was in 2090 that a peace conference was held that would see the cold war between Luna and Earth thaw a little. Three years earlier (2087) a war on Titan between factions backing Earth and the home nation broke out. Military forces eventually arrived and for a year escalation continued to threaten full scale war across the entire solar system. Such a war was unthinkable. Luna could drop rocks on Earth's cities with impunity, Earth could launch missiles at Luna space stations or habitats killing tens of thousands in a single strike. At the last hour a government coup on Earth replaced the leadership with a forward thinking politician, a man who was tired of the decades of suspicion and mistrust. His role in ending the Titan conflict was key, and within a matter of months a timetable for meetings and summits that would bring Luna and the Earth Union closer together, was put forward.

A decade on, the two powers are no longer at war and co-operation is more common than competition; but sixty years of rivalry and mistrust cannot be banished with a wave of the hand.

The future may be uncertain, but one thing *is* certain, events are going to be interesting...

"The Cold War is over but Cold War thinking survives."

Joseph Rotblat

Close Up: The Earth Union

"The day of small nations has long passed away. The day of empires has come."

Joseph Chamberlain 1904

The world of 2040 was still essentially the world of 2010; the United Nations acted as an international debating chamber, the two Koreas faced off against one other, Mexican immigrants still crossed the border into the US, Brazil was struggling with the dilemma of industrialization versus deforestation, and countries like Mali and Niger struggled with rampant desertification. Organisations like the United Nations, NATO and the OAS still existed. However, war, albeit a trifling and low intensity war with people from another world, forever changed the politics of planet Earth.

Backers of the colonies, namely China and the USA, mobilised for a military response to the Lunar aggression of the Orbit War in 2044. The BRIC nations (Brazil, Russia, India and China) had gained the most from the power beamed down from the Moon, it had increased their industrial capacity to turn them into first world nations. These countries, then, were keen to secure the solar power assets upon which their economies now depended. As generals planned their deployments into space, bureaucrats formulated the Orbital Defence Alliance, a treaty which bound these nations together for their strike against the Moon.

The ODA outlasted the invasion plan, which fell apart as soon as the colonists dropped devastating deadfall rocks onto unpopulated areas on the Earth as a show of strength. The ODA began further preparations for a more prolonged war, and 2045 became a year of international turmoil. The ODA members and their allies were pro-war, but there were many anti-war nations at varying levels of resistance. The Outer Space Treaty of 1967 had been broken by all of the ODA nations, and their dominance seemed to flout all international law. Sympathy for the Lunar colonists from the lesser nations, unaffected by the beaming of power from the Moon, also played a part in this unease. The United Nations and its reputation fared badly in the 2045 crisis.

In 2046 it was discovered that Australia, under the guise of shipping life support technology to the Moon had instead been exporting nuclear reactor components. Under further investigation it transpired that Malaysia had similarly been shipping hydrocarbons and weaponry; all this despite a UN general embargo that allowed only life support materials and nitrogen to be sold to Luna. This sympathy for the colonists and open defiance of the UN embargo alerted the nations of the Orbital Defence Alliance to the fact that Earth was not united in its opposition to the Lunars. The ODA was furious, and began sanctions against Australia. Malaysia, which had shipped weaponry to the colonists was treated to limited destruction of its main airbases and air defence installations from orbit. The Arab League, which had initially supported the ODA because of the mass driver strikes on two of its member nations, protested. Three of the League's nations had the ability to launch nuclear missiles, and the leaders made no secret of their ability. Clearly this capability was far outstripped by the military might of the ODA, but even one nuclear strike against a city would be an unthinkable catastrophe. Into 2047 other regional groups of nations began shifting positions, some toward the Arab League, others toward the ODA. Luna was almost forgotten...

The United Nations held many tense meetings about the situation; could this mean World War 3?

Peter Matthias, the retired two-time secretary-general of the United Nations, was asked in April 2047, by several minor, and some of the major, nations to return to the UN to broker an international accord that would suit all of the parties in the disagreement. This statesman had gained the respect of the international community following his settlement of the Baja Affair and the Central Asian refugee crisis. The nations of Earth must face the threat from Luna with one voice, declared Matthias, or risk either annihilation from the skies or a third world war at home.

And war must be avoided at all costs, because it would end all life on the planet, human and otherwise.

Matthias set up commissions to address specific problems, and the two main findings of these commissions were 1) The nations of Earth must create a powerful voice and a medium of international regulation and accountability that goes beyond anything the UN can currently offer; and 2) Earth people should make every effort to colonise other worlds in the solar system, since threats from the Moon and Earth's own nuclear devices could wipe out all life here. And if Earth doesn't spread into the solar system, the Lunars, with their initial advantage, certainly will.

Matthias proposed a third tier of supra-national organization to replace the United Nations that would act as a co-ordination and policy-making body, working closely with the important regional organisations that already existed. These regional bodies, like the Andean Community, European Union, Association of South-East Asian Nations (ASEAN), Gulf Co-operation Council and the Arab League had been in existence for decades and were powerful regional agencies for economic and governmental policy. Now they would bind their member nations closer together, becoming stronger and speaking in the new supra-national parliament with a stronger voice. Initially titled the Union of Inter-regional Organizations (UIO) at the Lima Conference in 2048, this new body was re-named the Earth Union in 2050 following a derogatory speech denouncing the UIO by Lunar Premier Pauline Barclay Wu.

Nations are represented by their regional organisations (European Union, NAFTA, etc.), and these organisations send representatives to the World Parliament. National autonomy is preserved, although a number of laws, mostly external but to some extents internal also, are of necessity directed by Union legislation. The first few years were chaotic, with some overlapping representation, nations trying to opt out, others trying to take a lead at the regional level, but, the overwhelming desire was to step away from the brink, to refrain from war with Luna and also with each other. It was the now defunct Orbital Defence Alliance which backed down, it had wanted its space assets back, but had, in the end, to let them go. One of the requirements of many nations entering into the fledgling UIO was the disbandment of the Orbital Defence Alliance, and the setting up of a multinational equivalent. This new body became the Department for Defence Co-ordination (DDC).

The governing institutions of the Earth Union are not concentrated in a single capital city; they are instead spread across three cities (Hong Kong, San Francisco and Moscow) with other Earth Union agencies and bodies based elsewhere. However, Hong Kong has become the primary seat, with each major institution and now the World Council being based wholly or in part there. The seats had been a matter of political dispute since the states first failed to reach an agreement in 2052. However, a final agreement between the world's nations was reached in 2067 during the drawing up of new regional organisations. Despite this, the seat of the World Parliament remains controversial. The work of the Parliament is divided between all three major cities, which, despite virtual conferences and electronic communications, is still seen as a problem creating extra work and inefficiency. Staff travel between the cities using sub-orbital hypersonic airliners that vastly reduce flight times, compared to traditional wide-body planes. Other branches of the Earth Union include the Council of National Leaders, the World Bank, the Central Court, the World Commission, the International Space Development Agency (ISDA) and the Department for Defence Co-ordination (DDC).

With the reorganisation of the regional bodies in 2067, the Earth Union began to resemble the representative democracy we see today, in 2100.

The Lunar Republic

The Luna government is a representative democracy, established by the first Chinese and American astronauts. The people of Luna prize freedom, self-determination and above all, hard-work, honestly done. They are successful and determined, driven by a sense that there is always a way to overcome a problem. Culturally, the Lunars resemble Asian-Americans of any large American city in the 21st century. Inter-marriage is common, and American names are often mixed with Chinese.

Luna interplanetary policy has been extremely defensive, the new colony has a paranoid view of its place in the solar system. It over-compensates for its small size and industrial capacity with an overt and militaristic attitude to politics, economics and development. It attempts to export revolution to Earth colonies in its fight for solar system domination; a way to win without risking all-out war. With Earth and Luna a mere 300,000 km apart, both could annihilate the other, Earth using its huge stocks of nuclear weapons; Luna with the mass-driver system used to launch ores into Luna orbit. It seems strange to many that two worlds facing each other, their inhabitants able to look up at one another in the sky, should be fighting a proxy war in the remote wildlands of the solar system, hundreds of millions of km from home.