# 1NC v Immac RR---Mars

## 1---T

#### Interp: Topical must only defend the appropriation of outer space. To clarify, this is distinct from celestial bodies.

New World Encyclopedia ND, ["Outer space," No Publication, <https://www.newworldencyclopedia.org/entry/outer_space>] DurSac

Outer space (often called space) consists of the relatively empty regions of the universe outside the atmospheres of celestial bodies. Outer space is used to distinguish it from airspace and terrestrial locations. There is no clear boundary between Earth's atmosphere and space, as the density of the atmosphere gradually decreases as the altitude increases.

#### Violation: Mars is a planet not a part of outer space

#### Vote Neg

#### 1] Limits and ground: the aff interpretation explodes the topic to allow any aff about outer space, and celestial bodies which structurally alters the neg research burden. Allowing them to talk about asteroids means they also are T if they talked about any other planet. Means we get no ground bc of how unpredictable the AC could be from round to round – the counterinterp allows them to talk about appropriation happening on earth itself.

#### 2] Precision – Justifies the aff arbitrarily doing away with words in the resolution which gives way to affs about anything which obliterates neg prep.

#### T is DTD and No RVIs – The whole aff violates and its their burden to be topical---must proactively prove the aff is good since the entire debate follows it. Means T comes first---our abuse was because of theirs.

#### Use Competing Interps – Anything else lets the judge intervene and pick whatever def is best under their bs meter leading to a proliferation of abuse.

## 2---DA

#### Changes in appropriation scare investors and research---spills over to broader space.

Freeland 05, [Steven Freeland, 2005, (BCom, LLB, LLM, University of New South Wales; Senior Lecturer in International Law, University of Western Sydney, Australia; and a member of the Paris-based International Institute of Space Law), “Up, Up and … Back: The Emergence of Space Tourism and Its Impact on the International Law of Outer Space.”, Chicago Journal of International Law: Vol. 6: No. 1, Article 4. 2005. JDN, <https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1269&context=cjil//> Accessed: 02-22-22] Recut Sachin

V. THE NEED FOR CELESTIAL PROPERTY RIGHTS? ¶ The fundamental principle of "non-appropriation" upon which the international law of outer space is based stems from the desire of the international community to ensure that outer space remains an area beyond the jurisdiction of any state(s). Similar ideals emerge from UNCLOS (in relation to the High Seas) as well as the Antarctic Treaty, 42 although in the case of the latter treaty, it was finalised after a number of claims of sovereignty had already been made by various States and therefore was structured to "postpone" rather than prejudice or renounce those previously asserted claims.43 In the case of outer space, its exploitation and use is expressed in Article I of the Outer Space Treaty to be "the province of all mankind," a term whose meaning is not entirely clear but has been interpreted by most commentators as evincing the desire to ensure that any State is free to engage in space activities without reference to any sovereign claims of other States. This freedom is reinforced by other parts of the same Article and is repeated in the Moon Agreement (which also applies to "other celestial bodies within the solar system, other than the earth")." Even though both the scope for space activities and the number of private participants have expanded significantly since these treaties were finalised, it has still been suggested that the nonappropriation principle constitutes "an absolute barrier in the realization of every kind of space activity., 4 ' The amount of capital expenditure required to research, scope, trial, and implement a new space activity is significant. To bring this activity to the point where it can represent a viable "stand alone" commercial venture takes many years and almost limitless funding. From the perspective of a private enterprise contemplating such an activity, it would quite obviously be an important element in its decision to devote resources to this activity that it is able to secure the highest degree of legal rights in order to protect its investment. Security of patent and other intellectual property rights, for example, are vital prerequisites for private enterprise research activity on the ISS, and these rights are specifically addressed by the ISS Agreement between the partners to the project and were applicable to the experiments undertaken by Mark Shuttleworth when he was onboard the ISS.46

#### Unpredictable shifts ruin Confidence---prevents growth and recovery.

Sarah Chaney Cambon 21, Reporter on The Wall Street Journal's Economics Team, BA in Business Journalism from the University of North Carolina-Chapel Hill, “Capital-Spending Surge Further Lifts Economic Recovery”, Wall Street Journal, 6/27/2021, https://www.wsj.com/articles/capital-spending-surge-further-lifts-economic-recovery-11624798800

Business investment is emerging as a powerful source of U.S. economic growth that will likely help sustain the recovery.

Companies are ramping up orders for computers, machinery and software as they grow more confident in the outlook.

Nonresidential fixed investment, a proxy for business spending, rose at a seasonally adjusted annual rate of 11.7% in the first quarter, led by growth in software and tech-equipment spending, according to the Commerce Department. Business investment also logged double-digit gains in the third and fourth quarters last year after falling during pandemic-related shutdowns. It is now higher than its pre-pandemic peak.

Orders for nondefense capital goods excluding aircraft, another measure for business investment, are near the highest levels for records tracing back to the 1990s, separate Commerce Department figures show.

“Business investment has really been an important engine powering the U.S. economic recovery,” said Robert Rosener, senior U.S. economist at Morgan Stanley. “In our outlook for the economy, it’s certainly one of the bright spots.”

Consumer spending, which accounts for about two-thirds of economic output, is driving the early stages of the recovery. Americans, flush with savings and government stimulus checks, are spending more on goods and services, which they shunned for much of the pandemic.

Robust capital investment will be key to ensuring that the recovery maintains strength after the spending boost from fiscal stimulus and business reopenings eventually fades, according to some economists.

Rising business investment helps fuel economic output. It also lifts worker productivity, or output per hour. That metric grew at a sluggish pace throughout the last economic expansion but is now showing signs of resurgence.

The recovery in business investment is shaping up to be much stronger than in the years following the 2007-09 recession. “The events especially in late ’08, early ’09 put a lot of businesses really close to the edge,” said Phil Suttle, founder of Suttle Economics. “I think a lot of them said, ‘We’ve just got to be really cautious for a long while.’”

Businesses appear to be less risk-averse now, he said.

After the financial crisis, businesses grew by adding workers, rather than investing in capital. Hiring was more attractive than capital spending because labor was abundant and relatively cheap. Now the supply of workers is tight. Companies are raising pay to lure employees. As a result, many firms have more incentive to grow by investing in capital.

Economists at Morgan Stanley predict that U.S. capital spending will rise to 116% of prerecession levels after three years. By comparison, investment took 10 years to reach those levels once the 2007-09 recession hit.

Company executives are increasingly confident in the economy’s trajectory. The Business Roundtable’s economic-outlook index—a composite of large companies’ plans for hiring and spending, as well as sales projections—increased by nine points in the second quarter to 116, just below 2018’s record high, according to a survey conducted between May 25 and June 9. In the second quarter, the share of companies planning to boost capital investment increased to 59% from 57% in the first.

“We’re seeing really strong reopening demand, and a lot of times capital investment follows that,” said Joe Song, senior U.S. economist at BofA Securities.

Mr. Song added that less uncertainty regarding trade tensions between the U.S. and China should further underpin business confidence and investment. “At the very least, businesses will understand the strategy that the Biden administration is trying to follow and will be able to plan around that,” he said.

#### Decline cascades---nuclear war.

Maavak 21, [Dr. Mathew Mavaak, PhD in Risk Foresight from the Universiti Teknologi Malaysia, External Researcher (PLATBIDAFO) at the Kazimieras Simonavicius University, Expert and Regular Commentator on Risk-Related Geostrategic Issues at the Russian International Affairs Council, “Horizon 2030: Will Emerging Risks Unravel Our Global Systems?”, Salus Journal – The Australian Journal for Law Enforcement, Security and Intelligence Professionals, Volume 9, Number 1, p. 2-8]

Various scholars and institutions regard global social instability as the greatest threat facing this decade. The catalyst has been postulated to be a Second Great Depression which, in turn, will have profound implications for global security and national integrity. This paper, written from a broad systems perspective, illustrates how emerging risks are getting more complex and intertwined; blurring boundaries between the economic, environmental, geopolitical, societal and technological taxonomy used by the World Economic Forum for its annual global risk forecasts. Tight couplings in our global systems have also enabled risks accrued in one area to snowball into a full-blown crisis elsewhere. The COVID-19 pandemic and its socioeconomic fallouts exemplify this systemic chain-reaction. Onceinexorable forces of globalization are rupturing as the current global system can no longer be sustained due to poor governance and runaway wealth fractionation. The coronavirus pandemic is also enabling Big Tech to expropriate the levers of governments and mass communications worldwide. This paper concludes by highlighting how this development poses a dilemma for security professionals.

Key Words: Global Systems, Emergence, VUCA, COVID-9, Social Instability, Big Tech, Great Reset

INTRODUCTION

The new decade is witnessing rising volatility across global systems. Pick any random “system” today and chart out its trajectory: Are our education systems becoming more robust and affordable? What about food security? Are our healthcare systems improving? Are our pension systems sound? Wherever one looks, there are dark clouds gathering on a global horizon marked by volatility, uncertainty, complexity and ambiguity (VUCA).

But what exactly is a global system? Our planet itself is an autonomous and selfsustaining mega-system, marked by periodic cycles and elemental vagaries. Human activities within however are not system isolates as our banking, utility, farming, healthcare and retail sectors etc. are increasingly entwined. Risks accrued in one system may cascade into an unforeseen crisis within and/or without (Choo, Smith & McCusker, 2007). Scholars call this phenomenon “emergence”; one where the behaviour of intersecting systems is determined by complex and largely invisible interactions at the substratum (Goldstein, 1999; Holland, 1998).

The ongoing COVID-19 pandemic is a case in point. While experts remain divided over the source and morphology of the virus, the contagion has ramified into a global health crisis and supply chain nightmare. It is also tilting the geopolitical balance. China is the largest exporter of intermediate products, and had generated nearly 20% of global imports in 2015 alone (Cousin, 2020). The pharmaceutical sector is particularly vulnerable. Nearly “85% of medicines in the U.S. strategic national stockpile” sources components from China (Owens, 2020).

An initial run on respiratory masks has now been eclipsed by rowdy queues at supermarkets and the bankruptcy of small businesses. The entire global population – save for major pockets such as Sweden, Belarus, Taiwan and Japan – have been subjected to cyclical lockdowns and quarantines. Never before in history have humans faced such a systemic, borderless calamity.

COVID-19 represents a classic emergent crisis that necessitates real-time response and adaptivity in a real-time world, particularly since the global Just-in-Time (JIT) production and delivery system serves as both an enabler and vector for transboundary risks. From a systems thinking perspective, emerging risk management should therefore address a whole spectrum of activity across the economic, environmental, geopolitical, societal and technological (EEGST) taxonomy. Every emerging threat can be slotted into this taxonomy – a reason why it is used by the World Economic Forum (WEF) for its annual global risk exercises (Maavak, 2019a). As traditional forces of globalization unravel, security professionals should take cognizance of emerging threats through a systems thinking approach.

METHODOLOGY

An EEGST sectional breakdown was adopted to illustrate a sampling of extreme risks facing the world for the 2020-2030 decade. The transcendental quality of emerging risks, as outlined on Figure 1, below, was primarily informed by the following pillars of systems thinking (Rickards, 2020):

• Diminishing diversity (or increasing homogeneity) of actors in the global system (Boli & Thomas, 1997; Meyer, 2000; Young et al, 2006);

• Interconnections in the global system (Homer-Dixon et al, 2015; Lee & Preston, 2012);

• Interactions of actors, events and components in the global system (Buldyrev et al, 2010; Bashan et al, 2013; Homer-Dixon et al, 2015); and

• Adaptive qualities in particular systems (Bodin & Norberg, 2005; Scheffer et al, 2012) Since scholastic material on this topic remains somewhat inchoate, this paper buttresses many of its contentions through secondary (i.e. news/institutional) sources.

ECONOMY

According to Professor Stanislaw Drozdz (2018) of the Polish Academy of Sciences, “a global financial crash of a previously unprecedented scale is highly probable” by the mid- 2020s. This will lead to a trickle-down meltdown, impacting all areas of human activity.

The economist John Mauldin (2018) similarly warns that the “2020s might be the worst decade in US history” and may lead to a Second Great Depression. Other forecasts are equally alarming. According to the International Institute of Finance, global debt may have surpassed $255 trillion by 2020 (IIF, 2019). Yet another study revealed that global debts and liabilities amounted to a staggering $2.5 quadrillion (Ausman, 2018). The reader should note that these figures were tabulated before the COVID-19 outbreak.

The IMF singles out widening income inequality as the trigger for the next Great Depression (Georgieva, 2020). The wealthiest 1% now own more than twice as much wealth as 6.9 billion people (Coffey et al, 2020) and this chasm is widening with each passing month. COVID-19 had, in fact, boosted global billionaire wealth to an unprecedented $10.2 trillion by July 2020 (UBS-PWC, 2020). Global GDP, worth $88 trillion in 2019, may have contracted by 5.2% in 2020 (World Bank, 2020).

As the Greek historian Plutarch warned in the 1st century AD: “An imbalance between rich and poor is the oldest and most fatal ailment of all republics” (Mauldin, 2014). The stability of a society, as Aristotle argued even earlier, depends on a robust middle element or middle class. At the rate the global middle class is facing catastrophic debt and unemployment levels, widespread social disaffection may morph into outright anarchy (Maavak, 2012; DCDC, 2007).

Economic stressors, in transcendent VUCA fashion, may also induce radical geopolitical realignments. Bullions now carry more weight than NATO’s security guarantees in Eastern Europe. After Poland repatriated 100 tons of gold from the Bank of England in 2019, Slovakia, Serbia and Hungary quickly followed suit.

According to former Slovak Premier Robert Fico, this erosion in regional trust was based on historical precedents – in particular the 1938 Munich Agreement which ceded Czechoslovakia’s Sudetenland to Nazi Germany. As Fico reiterated (Dudik & Tomek, 2019):

“You can hardly trust even the closest allies after the Munich Agreement… I guarantee that if something happens, we won’t see a single gram of this (offshore-held) gold. Let’s do it (repatriation) as quickly as possible.” (Parenthesis added by author).

President Aleksandar Vucic of Serbia (a non-NATO nation) justified his central bank’s gold-repatriation program by hinting at economic headwinds ahead: “We see in which direction the crisis in the world is moving” (Dudik & Tomek, 2019). Indeed, with two global Titanics – the United States and China – set on a collision course with a quadrillions-denominated iceberg in the middle, and a viral outbreak on its tip, the seismic ripples will be felt far, wide and for a considerable period.

A reality check is nonetheless needed here: Can additional bullions realistically circumvallate the economies of 80 million plus peoples in these Eastern European nations, worth a collective $1.8 trillion by purchasing power parity? Gold however is a potent psychological symbol as it represents national sovereignty and economic reassurance in a potentially hyperinflationary world. The portents are clear: The current global economic system will be weakened by rising nationalism and autarkic demands. Much uncertainty remains ahead. Mauldin (2018) proposes the introduction of Old Testament-style debt jubilees to facilitate gradual national recoveries. The World Economic Forum, on the other hand, has long proposed a “Great Reset” by 2030; a socialist utopia where “you’ll own nothing and you’ll be happy” (WEF, 2016).

In the final analysis, COVID-19 is not the root cause of the current global economic turmoil; it is merely an accelerant to a burning house of cards that was left smouldering since the 2008 Great Recession (Maavak, 2020a). We also see how the four main pillars of systems thinking (diversity, interconnectivity, interactivity and “adaptivity”) form the mise en scene in a VUCA decade.

ENVIRONMENTAL

What happens to the environment when our economies implode? Think of a debt-laden workforce at sensitive nuclear and chemical plants, along with a concomitant surge in industrial accidents? Economic stressors, workforce demoralization and rampant profiteering – rather than manmade climate change – arguably pose the biggest threats to the environment. In a WEF report, Buehler et al (2017) made the following pre-COVID-19 observation:

The ILO estimates that the annual cost to the global economy from accidents and work-related diseases alone is a staggering $3 trillion. Moreover, a recent report suggests the world’s 3.2 billion workers are increasingly unwell, with the vast majority facing significant economic insecurity: 77% work in part-time, temporary, “vulnerable” or unpaid jobs.

Shouldn’t this phenomenon be better categorized as a societal or economic risk rather than an environmental one? In line with the systems thinking approach, however, global risks can no longer be boxed into a taxonomical silo. Frazzled workforces may precipitate another Bhopal (1984), Chernobyl (1986), Deepwater Horizon (2010) or Flint water crisis (2014). These disasters were notably not the result of manmade climate change. Neither was the Fukushima nuclear disaster (2011) nor the Indian Ocean tsunami (2004). Indeed, the combustion of a long-overlooked cargo of 2,750 tonnes of ammonium nitrate had nearly levelled the city of Beirut, Lebanon, on Aug 4 2020. The explosion left 204 dead; 7,500 injured; US$15 billion in property damages; and an estimated 300,000 people homeless (Urbina, 2020). The environmental costs have yet to be adequately tabulated.

Environmental disasters are more attributable to Black Swan events, systems breakdowns and corporate greed rather than to mundane human activity.

Our JIT world aggravates the cascading potential of risks (Korowicz, 2012). Production and delivery delays, caused by the COVID-19 outbreak, will eventually require industrial overcompensation. This will further stress senior executives, workers, machines and a variety of computerized systems. The trickle-down effects will likely include substandard products, contaminated food and a general lowering in health and safety standards (Maavak, 2019a). Unpaid or demoralized sanitation workers may also resort to indiscriminate waste dumping. Many cities across the United States (and elsewhere in the world) are no longer recycling wastes due to prohibitive costs in the global corona-economy (Liacko, 2021).

Even in good times, strict protocols on waste disposals were routinely ignored. While Sweden championed the global climate change narrative, its clothing flagship H&M was busy covering up toxic effluences disgorged by vendors along the Citarum River in Java, Indonesia. As a result, countless children among 14 million Indonesians straddling the “world’s most polluted river” began to suffer from dermatitis, intestinal problems, developmental disorders, renal failure, chronic bronchitis and cancer (DW, 2020). It is also in cauldrons like the Citarum River where pathogens may mutate with emergent ramifications.

On an equally alarming note, depressed economic conditions have traditionally provided a waste disposal boon for organized crime elements. Throughout 1980s, the Calabriabased ‘Ndrangheta mafia – in collusion with governments in Europe and North America – began to dump radioactive wastes along the coast of Somalia. Reeling from pollution and revenue loss, Somali fisherman eventually resorted to mass piracy (Knaup, 2008).

The coast of Somalia is now a maritime hotspot, and exemplifies an entwined form of economic-environmental-geopolitical-societal emergence. In a VUCA world, indiscriminate waste dumping can unexpectedly morph into a Black Hawk Down incident. The laws of unintended consequences are governed by actors, interconnections, interactions and adaptations in a system under study – as outlined in the methodology section.

Environmentally-devastating industrial sabotages – whether by disgruntled workers, industrial competitors, ideological maniacs or terrorist groups – cannot be discounted in a VUCA world. Immiserated societies, in stark defiance of climate change diktats, may resort to dirty coal plants and wood stoves for survival. Interlinked ecosystems, particularly water resources, may be hijacked by nationalist sentiments. The environmental fallouts of critical infrastructure (CI) breakdowns loom like a Sword of Damocles over this decade.

GEOPOLITICAL

The primary catalyst behind WWII was the Great Depression. Since history often repeats itself, expect familiar bogeymen to reappear in societies roiling with impoverishment and ideological clefts. Anti-Semitism – a societal risk on its own – may reach alarming proportions in the West (Reuters, 2019), possibly forcing Israel to undertake reprisal operations inside allied nations. If that happens, how will affected nations react? Will security resources be reallocated to protect certain minorities (or the Top 1%) while larger segments of society are exposed to restive forces? Balloon effects like these present a classic VUCA problematic.

Contemporary geopolitical risks include a possible Iran-Israel war; US-China military confrontation over Taiwan or the South China Sea; North Korean proliferation of nuclear and missile technologies; an India-Pakistan nuclear war; an Iranian closure of the Straits of Hormuz; fundamentalist-driven implosion in the Islamic world; or a nuclear confrontation between NATO and Russia. Fears that the Jan 3 2020 assassination of Iranian Maj. Gen. Qasem Soleimani might lead to WWIII were grossly overblown. From a systems perspective, the killing of Soleimani did not fundamentally change the actor-interconnection-interaction adaptivity equation in the Middle East. Soleimani was simply a cog who got replaced.

## 3---CP

#### CP: States ought to cooperate on the appropriation of Mars by private and public entities.

#### Private sector is key---it’s the base of international coop---solves warming and tech

Stofan 17 – Ellen Stofan is the director of the Smithsonian National Air and Space Museum, 2017 (“When We Explore Space, We Go Together,” March 7th, Available Online at https://slate.com/technology/2017/03/space-exploration-requires-international-collaboration.html )

While the head of the European Space Agency has called for a “moon village” to be the exploration priority, NASA continues to set its sights on Mars, with a plan for the first crewed mission to Mars in the early 2030s. NASA does plan to put the precursor for a Mars transfer vehicle in orbit around the Moon in the mid-2020s, providing a stepping stone for international or commercial partners that want to venture down to the lunar surface. But Mars remains the priority goal, with the first orbital mission followed by astronauts to the surface in the late 2030s, to search for evidence of past life on Mars. The private sector will play a key role in this venture, with SpaceX planning to send an uncrewed Dragon capsule to the Martian surface in 2018 in partnership with NASA. SpaceX’s capability to land its first-stage rocket boosters back on Earth is helping them to develop the needed entry, descent, and landing capabilities for Mars.

Observing this planet is also a closely coordinated effort. The Committee on Earth Observation Satellites and the Group on Earth Observations provide forums for space agencies or offices from around the world to discuss open data policies, coordinate observations, inter-calibrate instruments, and allow data comparison and validation. These coordination efforts are becoming even more critical, as we cope with changing weather and patterns of growing food, and sea level rise due to human-caused climate change. There can be more immediate payoffs, too, particularly when it comes to disasters. During humanitarian crises and natural disasters, the space agencies (more than 15 of them right now) with Earth-observing satellites that have signed the International Charter for Space and Major Disasters can shift their focus and prioritize processing of satellite data to aid rescue and recovery efforts.

While people often think of space exploration as a way to promote national pride, the truth is that the future of space is international. These partnerships are expanding our knowledge of the universe, helping us search for life on other worlds, making critical observations of our own planet, and moving humans outward into space in a much more rapid time frame, and more comprehensively, than would be possible otherwise. In addition, innovations in technology and science are not restricted to one country. Diverse, innovative teams solve problems, and no one country or company can go it alone when it comes to the final frontier of space.

#### Unilateral Mars colonization inevitable---causes next generation space wars---multilat solves

Szocik et al. 17 Konrad Szocik, Department of Philosophy and Cognitive Science, University of Information Technology and Management in Rzeszow, Sucharskiego. Tomasz Wójtowicz, Institute of Security and Civic Education, Pedagogical University in Cracow, Podchorążych. Leszek Baran, Chair of Internal Security, University of Information Technology and Management in Rzeszow, Poland. War or peace? “The possible scenarios of colonising Mars” in Space Policy

6. Towards the new generation war – space wars. The conﬂict scenario of colonising Mars

A military conﬂict between the countries attempting at colonising Mars will become likely if the international relations at the turn of the 21st and 22nd centuries are based on a realistic paradigm. As pointed out by Emanuela Voinea in the article entitled Realism Today, national states continue to dominate in the international arena, which is reﬂected, inter alia, in the sanctions imposed on the Syrian government in the UN forum being vetoed by Russia and China [35]. On the other hand, based on the U.S. National Intelligence Council's projections, signiﬁcant changes to the global political and economic trends should be expected to take place by 2025. The dominant role of the western model of democracy and liberal economy may come to an end, which will cause the international environment to transform from a unipolar model into a multipolar one, characteristic of the second half of the 19thCentury[5]. Taking into account the above projections, along with the United States of America, the People's Republic of China, the Russian Federation and, possibly, India and Brazil will enter the Red Planet race. The Earth's running out of its natural resources may provide an additional incentive. As stressed by Mark Townsend and Jason Burke in the article entitled Earth will expire by 2050, if the natural resources continue to be exploited at the present speed, the humanity will have to colonise not one but two planets within the nearest 50 years [32].

What will the future battle of Mars be like? In order to take a closer look at the potential conﬂict to break out at the turn of the 21st and 22nd centuries, it may seem useful to refer to the division of warfare generations developed by William Lind in 1989. In the article entitled.

The Changing Face of War: Into the Fourth Generation, published in “Marine Corp Gazette,” he proposed dividing warfare into four generations. The ﬁrst generation of military conﬂicts, which ran roughly from 1648 to 1860, was characterized with the general mobilisation of soldiers, line or column tactics, and the monopoly on aggression established by the state. Second generation war concerned such conﬂicts as the Franco-Prussian War of 1870. It brought new types of armour, , such as machine guns. Line tactics was the prevailing form of ﬁghting, but the signiﬁcance of the human factor was reduced by ﬁrepower. First World War and Second World War constituted examples of third generation warfare, based on speed and manoeuvre skills (Blitzkrieg). Tanks and aircraft were symbols of front-line ﬁghts, entailing a shift from line into manoeuvre tactics. Fourth generation war diﬀered considerably from the previously described types of warfare. The parties at war no longer sought to ﬁght one or several major battles in an attempt to dissolve the conﬂict, but they became increasingly more common to engage the entire society in ﬁghts, which hindered the division into civilians and military men. There were no longer mass armies, but the armed forces were professionalised, comprising mobile troops limited in numbers. The warfare purpose was no longer to eliminate the enemy in physical terms but to internally shatter the opposing country [Lind 1989]; p. 23). Since the development of the fourth generation war concept, increasingly more investigators sought to propose further generations of warfare, taking into consideration the course of the most recent conﬂicts, alongwith thegrowing importance oftechnologies and space.

An attempt at describing the future military conﬂicts, based on William Lind's classiﬁcation, has been made, inter alia, by Major I-r Minhas from the Pakistan Army, in the article entitled Deﬁning Concepts of 5th Generation Warfare. According to Minhas, ﬁfth generation war will be similar to fourth generation war. Further decountrifying of warfare should be expected, coupled with the growing role of private military companies, cyber war and information war, as well as war involving the use of non-lethal weapons. On the other hand, the technological revolution will be dominated by biological inventions. Food control and food safety will gain in importance [18]. By means of the High - Frequency Active Aurora Research Program (HAARP) technology, states will be able to inﬂuence weather disturbances (earthquakes, cyclones or tsunami), or to destroy military satellites and aerodynamic missiles. An attempt to characterising the ﬁfth generation war has also been made by Lieutenant Colonel Stanton S. Coerrer from the United States Marine Corps. In his work, entitled Fifth-Generation War: Warfare versus the nonstate, he claimed that future conﬂicts would combine diﬀerent military operations. On the one hand, western countries, including in particular the United States, will seek to make their warfare come to a quick end, through one or a few battles leading to the physical elimination of their enemy (or its leaders, as was the case with Osama bin Laden). On the other hand, the widely-understood nonstate armed groups (i.e. terrorist groups, criminal organisations or failed states) will stick to ideologies uniting their supporters (e.g. Islam), aiming at the maximum prolongation ofthe conﬂict and making it impossible for western countries to secure a quick tactic victory [26]; pp. 64–65).1

Referring to William Lind's war generation concept, it should be stressed that there is no deﬁned length of time, following which a new type of warfare is expected to emerge. The time span between the emergence of ﬁrst generation war (1648) and second generation war (1870) was 222 years, while no more than 70 years passed between the second and third generation (1940). Assuming that Mars will be colonised at the turn of the 21st and 22nd centuries, and radical shifts in war-ﬁghting will occur with an average frequency of 100 years, the humanity is yet to face the ﬁfth, sixth and possibly seventh generation of warfare. Although the issues of space militarisation and the construction of space weapons have been dealt with in literature on the subject matter [24], any presentations of the conﬂict that may arise in several dozen (or hundred) years' time should be treated as science ﬁction research.

Nonetheless, as pointed out by Łukasz Kamieński in his book Nowy wspaniały żołnierz [New great soldier], quality science ﬁction entails creating future scenarios that extrapolate the presence. It should contain visions based on the logical inferences drawn from diversiﬁed processes, scientiﬁc discoveries and technologies, currently observed in their initial forms, mainly through scientiﬁc studies and technological development, along with the dynamics of social, political and economic changes [13].

Contrary to fourth and ﬁfth generation warfare, space wars will be dominated by nation states and international corporations. Elon Musk, Managing Director of SpaceX, a company dealing with the manufacture of jet engines, carrier rockets, and spaceships, claimed that within the nearest 40–100 years over 1 million people might be sent to Mars. He estimated the cost of one person's reaching the Red Planet at USD 200 million [16]. According to the authors of the Mars one initiative, a sum of USD 6 billion will be needed to send the ﬁrst four astronauts to Mars [6]. The need to secure such exorbitant funds virtually excludes any entities other than states and international corporations (terrorist groups, criminal organisations or failed states) from participating in space wars. It should be expected that the future space wars will entail an advanced process of conﬂict robotisation and dehumanisation. The prospective Mars colonisation war may proceed by means of robots – unmanned aerial vehicles. Ender's Game, an American science ﬁction ﬁlm dating back to 2013, based on a novel by Orson Scott Card published under the same title, features scenes presenting such kind of a conﬂict. The ﬁlm is set in 2070. The main hero, ten-year-old Andrew Wiggin, is elected leader of the invading ﬂeet, intended to destroy the native world of a foreign life form threatening the Earth. Andrew Wiggin, believing that he is taking part in training, leads the invading ﬂeet and defeats the enemy. The invading forces comprise only unmanned space drones controlled from a secure place [11]. The progressing robotization and ehumanisation of war will also be inﬂuenced by the strategic culture of western countries (the United States) whose societies show limited tolerance to human loss during military conﬂicts. As stressed by Adrian Lewis in his book The American Culture of War, abolishing the obligatory military service was the most signiﬁcant change introduced in the 20th century to the U.S. war-ﬁghting model. It triggered the professionalization of armed forces, with a mass army being replaced by mobile troops limited in numbers [14]. Along with the robotisation and dehumanisation, the future space wars should also be expected to be brief. Unless the dispute escalating between the global powers evolves into military activities located in the Earth, the conﬂict may end soon after the communication satellites of one of the parties are destroyed, or its space station is damaged. Considering the above, the technological arms race between the competing States, aimed at designing, as fast as possible, a weapon which will enable defeating the enemy in the ﬁrst attack, without any possibility of retaliation, will prove crucial.

The upcoming space confrontation will also encourage the parties concerned to develop a new military doctrine. Similar circumstances occurred in the 1970s when the concept of AirLand Battle was created, in order to prepare the NATO forces to confront the military forces of the Warsaw Pact [25], and also in 2010 when the concept of an AirSea Battle was designed, presenting the possible scenario of the American and Chinese confrontation in Western Paciﬁc [34]. At the turn of the 21st and 22nd centuries, a space battle concept is likely to emerge. Taking into account the content of the existing military doctrines, it will also comprise such elements as the type and examples of space weapons, and other technologies, together with the warfare character and the possible battle scenario. Although we are still very far from the potential space battle, ﬁrst studies on the prospective space warfare technologies have already been developed. Bob Preston et al. in the publication entitled Space Weapons Earth Wars, made a division of space weapons into Directed-Energy Weapons and Mass to Target Weapons. The examples they quoted include a laser for missile target, the use of meteorites to destroy earth targets or a miniature autonomous unmanned aerial vehicle, also serving the purpose of destroying earth targets [19]. A vision of the future space battle has also been presented in a documentary entitled Space Wars. Among technologies that may be key to the victory of one of the parties, its authors indicated a laser weapon as the fastest light missile and a railgun whose speed may be several times higher than the speed of a missile ﬁred from the currently used conventional weapons [3].

7. Conclusion

The purpose of this article was to present two scenarios of colonising Mars. At present, it is hard to project whether this will be a peaceful colonisation or a military conﬂict between the countries engaged in the race. This actually depends on a number of factors, including the trends prevailing at the turn of the 21st and 22nd centuries international relations (realism vs. liberal institutionism), the state of international public law, the amount of natural resources in Earth, the functioning of international organisations (the UN or a new organisation dealing with space exploration) and the role of authorities (i.e. units inﬂuencing the international opinion due to their acquis or individual contribution to space conquest). A peaceful colonisation of Mars, based on joint ventures, i.e. the construction of new orbital stations, cooperation between astronauts and space exploration, certainly seems the most desirable scenario. The worst version, on the other hand, is the military conﬂict triggered by the need to search for natural resources or resulting from a new cold war that may break out between the United States, the Russian Federation, the People's Republic of China, and possibly other new powers, e.g. Brazil and India. One may not rule out the possibility that the defeat and humiliation of one of the parties in the space conﬂict, the hostility may eventually translate into military action in Earth.

#### Coop is key to successful colonization.

Moskowitz 12 Clara Moskowitz. SPACE.com's Assistant Managing Editor since 2011, and has been writing for SPACE.com and LiveScience since 2008. Clara has a bachelor's degree in astronomy and physics from Wesleyan University, and a graduate certificate in science writing from the University of California, Santa Cruz. To find out what her latest project is, you can follow Clara on Google+. Mission to Mars: Why Russia & US Should Tag Team Red Planet https://www.space.com/15600-mars-mission-nasa-russia.html

NEW YORK — Russia is ready and willing to partner with the United States for a manned mission to Mars, a senior Russian space official said recently.

And while NASA has not yet entered into any formal agreement to pursue the Red Planet, the agency's chief agrees that international cooperation is the way to do it.

"I have to say that currently there is no country that could organize a manned spaceflight to Mars and a safe return," Sergey Saveliev, the deputy head of Russian Space Agency (Roscosmos), said April 12 at the United Nations headquarters here to mark theInternational Day of Human Space Flight.

"We strongly believe that this project can be accomplished only through international cooperation," Saveliev said through a translator. "In this field, Russia is ready to cooperate with the United States, with Europe and with other countries."

NASA chief Charles Bolden, who was also on hand at the event, agreed that collaboration is the way to go.

#### Condo Good---proving a CP is bad doesn’t prove the plan is good, a logical policy maker can always choose not to act. Logic outweighs – it’s the basis of all rational arguments.

## 4---K

#### Their scholarship is hateful and a reason to lose the round—their author endorsed pedophilia and actively advocated for pedophilic content.

Moen 15 [Moen, O. M. (Professor of Ethics at Oslo Metropolitan University). “The ethics of pedophilia”. Etikk I Praksis - Nordic Journal of Applied Ethics, 9(1), 111-124. 2015-05-09. Accessed 2/2/2022. <https://www.ntnu.no/ojs/index.php/etikk_i_praksis/article/view/1718> //CHO]

If my arguments in this article are sound, then being a pedophile—in the sense of having a sexual preference for children—is neither moral nor immoral. Engagement in adult-child sex is immoralbecause it exposes children to a significant risk of serious harm, butit is perhaps not always blameworthy to the extent that we intuitively assume. Finally, the enjoyment of fictional stories and computer-generated graphics with pedophilic content is, in and of itself, morally acceptable. If these conclusions are correct, what practical implications follow? A central implication is that in dealing with pedophilia, our aim should not be to find outlets for our disgust and outrage, but rather, to minimize what is the real problem: harm to children. On the least revisionist side, the aim of reducing harm provides us with a good justification for upholding current bans on adult-child sex and child pornography. There are, however, also a number of more revisionist implications. One revisionist implication is that we should stop the outright condemnation of pedophiles. Condemning pedophiles for being pedophiles is unjust, and non-offending pedophiles, rather than deserving condemnation for their pedophilia, deserve praise for their admirablewillpower.4 Possibly, today’s condemnation also prevents pedophiles from telling health professionals about their attraction to children, and insofar as detection and counseling can help prevent abuse, this is very unfortunate. To prevent harm to future children, we would also be well advised to start teaching high school students not just what to do in case they are victims of sexual abuse (which, thankfully, we have started telling them over the last few decades), but also what to do in case they themselves are pedophiles. A certain percentage of high school students either are or will become pedophiles, and currently they are not given any advice on how to handle their sexuality. The production, distribution, and enjoyment of texts and computer-generated graphics with pedophilic content should almost certainly be made legal. Until or unless it can be shown that such texts and graphics lead to more adult-child sex, the justification for today’s widespread ban is weak.

#### Drop the debater—academic spaces have way too many sympathizers who ignore violence against children, and every act must be challenged in the most unflinching terms because anything else reinforces the epistemic bias in favor of rationalizing disgusting behavior.

Grant 18 [Alec Grant (Independent Scholar, retired from the Uiversity of Brighton where he was a Reader in Narrative Mental Health). “Sanitizing Academics and Damaged Lives” Mad In The UK, 12 April 2018. https://www.madintheuk.com/2018/12/sanitizing-academics-and-damaged-lives/ // Cho Recut

Academics who sympathize with paedophilia constitute its intellectual public relations arm. Their role is to make child-adult sex presentable, more acceptable to the public, fit for polite society, sugar-coated, glossed with a scholarly veneer, sanitized. Snapshots of sanitizing academic activity from the last 40 years show how this seeps into and contaminates public policy, education and practice in insidious ways. This is done via the workings of power, privilege, perverse cronyism, and, as Pilgrim (2018) argues, as a result of widespread moral stupor and denial. It’s astonishing that this happens in the face of the psychological and development features of complex post-trauma which are often a consequence of child sexual abuse. By pathologizing adult survivors, often with the ‘Borderline Personality Disorder’ (BPD) tag, mainstream psychiatric business-as-usual plays out its role in suppressing the truth about the consequences of paedophilia among adult survivors. Pilgrim (2018) reminds us that care and mutuality are core ethical features of all sexual practices. As someone who was for many years associated with cognitive therapy, I’m interested in ‘cognitive, or thought distortions’, which are used by people in rationalising their behaviour in self-serving ways. We know from Pilgrim and many other writers, researchers and practitioners about the rationalisations of perpetrators of child sexual abuse and exploitation. They include: Children are not victims but willing participants; They want it; They enjoy it; It’s about friendship; It’s about love; It helps children develop and mature. According to Pilgrim (2018), the ‘heyday’ period of academic versions of such rationalisations was the 1970s. 1977 was the year of an unsuccessful lobby by French intellectuals to defend intergenerational sex. Included among these were the otherwise well-respected philosophers Jean-Paul Sartre, Simone de Beauvoir, Jaques Derrida, Roland Barthes and Michel Foucault. These figures were at the forefront of the use of academic authority to lobby governments to liberalise and decriminalise adult-child sexual contact. In 1978, Foucault took part in a France-Culture broadcast with two other gay theorists, Hocquengham and Danet, to discuss the legal aspects of sex between adults and children. They wanted a repeal of the law preventing this because they took the view that in a liberal (they really meant libertarian) society, sexual preferences generally should not be the business of the law. Foucault, Hocquengham and Danet made the following assertions: that children can, and have the capacity to, consent to such relations without being coerced into doing so; that abuse and post-abuse trauma isn’t real; that the law is part of an oppressive and repressive heteronormative social control discourse which unfairly targets sexual minorities; that children don’t constitute a vulnerable population; that children can and are capable of making the first move in seducing adults (they introduced here the category of ‘the seducing child’); that the laws against sexual relations between children and adults actually function to protect children from their own desires, making them an oppressed and repressed group; that – in the language of the sociologist Stanley Cohen – international public horror about sexual relations between adults and children is a form of moral panic which feeds into constructing the ‘paedophile’ as a folk devil, in turn provoking public vigilantism; that sex between adults and children is actually a trivial matter when compared with ‘real crimes’ such as the murder of old ladies; that many members of the judiciary and other authority figures and groups don’t actually believe paedophilia to be a crime; and that consent should be a private contractual matter between the adult and the child. Fast forward to 1981. The Paedophile Information Exchange (PIE) has been active for seven years. This was a pro-paedophile activist group, founded in the UK in 1974 and officially disbanded in 1984. The group, an international organisation of people who traded in obscene material, campaigned for the abolition of the age of consent. Dr Brian Taylor, the research director and member of PIE, and sociology lecturer at the University of Sussex produced the controversial book Perspectives on Paedophilia, which had the aim of enlightening social workers and youth workers about the benefits of paedophilia. Taylor, who identified as gay, advocated ‘guilt-free pederasty’ (sexual relations between two males, one of whom is a minor). He argued that people generally are hostile to paedophilia only because they don’t understand it, and If they did wouldn’t be so against it. So it was simply a matter of clearing up prejudice and ignorance.

#### Reading blum solves!

## Case

### Solvency

#### China cheats by creating domestic laws that contradict agreements

McDevitt 19 [Michael McDevitt is a Senior Fellow at CNA, a Washington DC area non-profit research and analysis company. During his 21 years at CNA he served as a Vice President responsible for strategic analyses, especially in East Asia and the Middle East. He has been involved in US security policy and strategy in the Asia-Pacific for the last 28 years, in both government policy positions and, following his retirement from the US Navy, as an analyst and commentator. He also attended the National War College and spent a year as a Chief of Naval Operations Fellow on the Strategic Study Group at the Naval War College. April 2019. <https://www.uscc.gov/sites/default/files/transcripts/April%2025%2C%202019%20Hearing%20Transcript%20%282%29.pdf>

But there one huge caveat to that statement, which is international law is fine as long as it moves their ball forward on what they hope to achieve. If it doesn't, suddenly, domestic law takes priority, and domestic law coming out of the National People's Congress can be cooked up pretty quickly. And so, they decide which law, which approach they want to use in the South China Sea or East China Sea, whichever one moves the ball most effectively.

And so, one would have to worry about — now this may be a bridge too far but — a Chinese domestic space law. In fact, one may exist. I have no idea if it does or doesn't. But it would counteract any agreements that are either in place or that could be made.

#### Counterplan Solves it!

### Space Col

### ---Priv Key

#### I’ll concede private companies are key to space col – only have incentives to do so. Hold the line, they cant get out of the turn. They said in cross that only priv companies had the incenvtive to do it.

#### But private property is key to transform short-term goals into settlement.

Jonckheere 18 [Evarist Jonckheere, Master of Laws, Ghent University, “The Privatization of Outer Space and the Consequences for Space Law,” 2018, Master’s Thesis, https://libstore.ugent.be/fulltxt/RUG01/002/479/330/RUG01-002479330\_2018\_0001\_AC.pdf, EA]

The reality is that private enterprises are already moving in a direction that will need a similar regime. So, the big legal uncertainties concerning space property should be dealt with sooner rather than later.194 Legal certainty on an international level would greatly benefit the space industry. The existing risks of space ventures would be minimized as private companies would know what they are up against. This could give a boost to private enterprises to be more technologically innovative and entrepreneurial when it comes to outer space exploration. The prospect of gaining property rights might push them to undergo more fully realized expeditions for larger and fixed rewards. The legal regime should however ensure fairness and order between the competing space entrepreneurs.195

### ---Space Col Good

#### Space colonization solves otherwise inevitable extinction.

Zarkadakis 19 [George; December 26; Ph.D. in Artificial Intelligence; George Zardakis, “Abandoning the metropolis: space colonisation as the new imperative,” <https://georgezarkadakis.com/2019/12/26/abandoning-the-metropolis-space-colonisation-as-the-new-imperative/>]

Space colonization is not only the subject of fiction but of serious science too. The late physicist Stephen Hawking argued that unless colonies were established in space the human race would become extinct. There are several natural phenomena beyond our control that could spell our obliteration. Over a long enough period of time our planet is vulnerable to catastrophic meteorite strikes, or getting exposed to the deadly radiation of a nearby supernova explosion. As our Sun burns its fuel it will start to expand and, in a few million years, will scorch Earth. We can also self-destruct by waging nuclear war, or by tilting our planet’s climate towards a runaway greenhouse effect. Space colonization is therefore the ultimate insurance policy of long-term human survival[4].

#### Colonization of outer space is essential to humanity – 5 warrants

Orwig 15 [(Jessica, a senior editor at Insider. She has a Master of Science in science and technology journalism from Texas A&M University and a Bachelor of Science in astronomy and physics from The Ohio State University. Before NY she spent time as an intern at: American Physical Society in MD International Center for Theoretical Physics in Italy Fermi National Accelerator Laboratory in IL American Geophysical Union in DC), “5 undeniable reasons humans need to colonize Mars — even though it's going to cost billions,” Slate, 4/21/2015, https://www.businessinsider.com/5-undeniable-reasons-why-humans-should-go-to-mars-2015-4] MN

Establishing a permanent colony of humans on Mars is not an option. It's a necessity. At least, that's what some of the most innovative, intelligent minds of our age — Buzz Aldrin, Stephen Hawking, Elon Musk, Bill Nye, and Neil deGrasse Tyson — are saying. Of course, it's extremely difficult to foresee how manned missions to Mars that would cost hundreds of billions of dollars each, could benefit mankind. It's easier to imagine how that kind of money could immediately help in the fight against cancer or world hunger. That's because humans tend to be short-sighted. We're focused on what's happening tomorrow instead of 100 years from now. "If the human race is to continue for another million years, we will have to boldly go where no one has gone before," Hawking said in 2008 at a lecture series for NASA's 50th anniversary. That brings us to the first reason humans must colonize Mars: 1. Ensuring the survival of our species The only home humans have ever known is Earth. But history shows that surviving as a species on this tiny blue dot in the vacuum of space is tough and by no means guaranteed. The dinosaurs are a classic example: They roamed the planet for 165 million years, but the only trace of them today are their fossilized remains. A colossal asteroid wiped them out. Putting humans on more than one planet would better ensure our existence thousands if not millions of years from now. "Humans need to be a multiplanet species," Musk recently told astronomer and Slate science blogger Phil Plait. Musk founded the space transport company SpaceX to help make this happen. Mars is an ideal target because it has a day about the same length as Earth's and water ice on its surface. Moreover, it's the best available option: Venus and Mercury are too hot, and the Moon has no atmosphere to protect residents from destructive meteor impacts. 2. Discovering life on Mars Nye, the CEO of The Planetary Society, said during an episode of StarTalk Radio in March that humanity should focus on sending humans instead of robots to Mars because humans could make discoveries 10,000 times as fast as the best spacecraft explorers we have today. Though he was hesitant to say humans should live on Mars, he agreed there were many more discoveries to be made there. One monumental discovery scientists could make is determining whether life currently exists on Mars. If we're going to do that, we'll most likely have to dig much deeper than NASA's rovers can. The theory there is that life was spawned not from the swamps on adolescent Earth, but from watery chasms on Mars. The Mars life theory suggests that rocks rich with microorganisms could have been ejected off the planet's surface from a powerful impact, eventually making their way through space to Earth. It's not a stretch to imagine, because Martian rocks can be found on Earth. None of those, however, have shown signs of life. "You cannot rule out the fact that a Mars rock with life in it landing on the Earth kicked off terrestrial life, and you can only really test that by finding life on Mars," Christopher Impey, a British astronomer and author of over a dozen books in astronomy and popular science, told Business Insider. 3. Improving the quality of life on Earth "Only by pushing mankind to its limits, to the bottoms of the ocean and into space, will we make discoveries in science and technology that can be adapted to improve life on Earth." British doctor Alexander Kumar wrote that in a 2012 article for BBC News where he explored the pros and cons of sending humans to Mars. At the time, Kumar was living in the most Mars-like place on Earth, Antarctica, to test how he adapted to the extreme conditions both physiologically and psychologically. To better understand his poignant remark, let's look at an example: During its first three years in space, NASA's prized Hubble Space Telescope snapped blurry pictures because of a flaw in its engineering. The problem was fixed in 1993, but to try to make use of the blurry images during those initial years, astronomers developed a computer algorithm to better extract information from the images. It turns out the algorithm was eventually shared with a medical doctor who applied it to the X-ray images he was taking to detect breast cancer. The algorithm did a better job at detecting early stages of breast cancer than the conventional method, which at the time was the naked eye. "You can't script that. That happens all the time — this cross pollination of fields, innovation in one, stimulating revolutionary changes in another," Tyson, the StarTalk radio host, explained during an interview with Fareed Zakaria in 2012. It's impossible to predict how cutting-edge technologies used to develop manned missions to Mars and habitats on Mars will benefit other fields like medicine or agriculture. But we'll figure that out only by "pushing humankind to its limits" and boldy going where we've never been before. 4. Growing as a species Another reason we should go to Mars, according to Tyson, is to inspire the next generation of space explorers. When asked in 2013 whether we should go to Mars, he answered: "Yes, if it galvanizes an entire generation of students in the educational pipeline to want to become scientists, engineers, technologists, and mathematicians," he said. "The next generation of astronauts to land on Mars are in middle school now." Humanity's aspirations to explore space are what drive us toward more advanced technological innovations that will undoubtedly benefit mankind in one way or another. "Space is like a proxy for a lot of what else goes on in society, including your urge to innovate," Tyson said during his interview with Zakaria. He added: "There's nothing that drives ambitions the way NASA does." 5. Demonstrating political and economic leadership At a February 24 hearing, Aldrin told the US Senate's Subcommittee on Space, Science and Competitiveness that getting to Mars was a necessity not only for science, but also for policy. "In my opinion, there is no more convincing way to demonstrate American leadership for the remainder of this century than to commit to a permanent presence on Mars," he said. If Americans do not go to Mars, someone else will. And that spells political and economic benefit for whoever succeeds. "If you lose your space edge," Tyson said during his interview with Zakaria, "my deep concern is that you lose everything else about society that enables you to compete economically."

#### Independently brings immeasurable expected value

Baum 16 – Executive Director of the Global Catastrophic Risk Institute [Seth D. Baum, “The Ethics of Outer Space: A Consequentialist Perspective,” 2016, Springer, pp. 115-116, EA]

Space colonization is notable because it may be able to bring utterly immense increases in intrinsic value. Early colonies might start small, given that other planets and moons have inhospitable environments. However, it may be possible to build large indoor colonies or create more hospitable outdoor environments (i.e., terraforming). Even just on other planets and moons in the Solar System, space colonies could multiply the total area available for human habitation. And there are many more planets around other stars, as ongoing research on exoplanets is now learning. One recent study estimates 22 % of Sun-like stars have Earth-like exoplanets (Petigura et al. 2013), implying billions to tens of billions of potentially habitable planets across the galaxy.

Opportunities at any given star may also be quite a bit greater than those available only on planets. Earth only receives about one two-billionth of the Sun’s radiation. To collect all the Sun’s radiation, humanity would need a Dyson swarm (named after Dyson 1960), which is a series of structures that surrounds a star, collecting its radiation to power a civilization. A Dyson swarm around the Sun could potentially enable a civilization a billion times larger than is possible on Earth. Likewise, Dyson swarms around one billion stars would bring humanity approximately 1018 (one billion–billion) times more energy per unit time.

Space colonies could also increase the amount of time available for human civilization. Earth will remain habitable for a few billion more years (O’Malley-James et al. 2014). Stars will continue shining for about 1014 more years (Adams 2008). That gives us an additional 105 times more energy, for a total of 1023 times more energy than is available on Earth. After the stars fade, other energy sources may be available. And even if our current universe eventually becomes uninhabitable, it may be possible to move to other universes (Kaku 2005). The physics here is speculative, but it cannot be ruled out, and hence there is a nonzero chance of a literally infinite opportunity for space colonization (Baum 2010a).

Whether the opportunity is infinite or merely, say, 1023 times larger than what can be done on Earth, the opportunity is clearly immense. As long as space colonization is an improvement (Sect. 8.3.1), then it would seem that the consequentialist should prioritize space colonization. The sooner space colonization begins, the more of its immense opportunity can be gained. Indeed, Ćirković (2002) estimates 5 × 1046 human lifetimes are lost for every century in which space colonization is delayed.

There can also be large value for space colonization under ecocentric intrinsic value. It is sometimes argued that Earth would be better off without humans. For example, the Voluntary Human Extinction Movement states that “Phasing out the human race by voluntarily ceasing to breed will allow Earth’s biosphere to return to good health” (http://vhemt.org, accessed 25 October 2015). However, this makes sense only if extraterrestrial locations are not intrinsically valued. Otherwise, exterminating humanity ruins the opportunity for humans to bring flourishing ecosystems into outer space. Terraforming other planets or bringing ecosystems into Dyson swarms could bring immense amounts of ecosystem flourishing.

#### Massive spillover effects, solves resources and ex risks

Green 21 [Brian Patrick Green, director of technology ethics at the Markkula Center for Applied Ethics, Santa Clara University, “Space Ethics,” 2021, Rowman, pp. 4-5, EA]

In favor of going into space are such basics as gaining scientific knowledge and developing beneficial new technologies, both of which space exploration and use have already begun to accomplish with dramatic and sometimes unexpected effects for humankind. Scientific advancements include astronomical and cosmological knowledge from various orbiting experiments and telescopes that have let us gain unprecedented understanding about our universe. But space activities have also contributed to a great deal of scientific knowledge about our Earth, including measurements of environmental status, habitat conversion and destruction, detailed knowledge of anthropogenic climate change, and much about Earth’s chemistry and geology. We have also learned a great deal about our local planets, for example, that a runaway “greenhouse effect” in the atmosphere of Venus makes the surface scorchingly hot, while too little greenhouse effect on Mars leaves the surface quite cold. There have also been significant contributions made to medical science, especially concerning the behavior of the human body when subjected to radiation, microgravity, nutritional restrictions, and so on.

On the technological side, everything with American global positioning system (GPS), Russian Glonass, or other global navigation systems—from smartphones to military vehicles—relies on a network of satellites above us, placed there by rocketry and painstakingly tracked with instruments developed for the task. So many technologies have been pioneered by space exploration and use that it is hard to list them all, but some of the more important ones include weather satellites (which are not only convenient but also allow preparation for and evacuation from severe weather), communication satellites, solar photovoltaic (PV) cells, advances in electronics and computers, advances in materials science, and so on.

Space is also an important location for the contention of national interests in a geopolitical and military sense. As the ultimate “high ground” in battle, space allows certain asset classes such as spy satellites to exist in a position unassailable by many or most opponents. While permanent weapons stations and weapons of mass destruction are banned from space by the United Nations Outer Space Treaty (OST), 6 that has not stopped the development of weapons that are impermanent (such as missiles, missile interceptors, and antisatellite weapons) or the research and development of possible space-based weapons platforms, such as were envisioned by U.S. president Ronald Reagan’s Strategic Defense Initiative, nicknamed “Star Wars.” While military and political interests may ultimately seem to be a less noble reason to explore and use space, relative power, safety, and security certainly are very human interests and are valuable to those who feel they are being protected by them.

Space activities are also a key way of promoting international cooperation and global awareness. While the international competition of the “space race” fueled one nation all the way to the Moon, shortly afterward, the Apollo-Soyuz program announced a thawing of this competition and commenced a period of cooperation between the United States of America and the Union of Soviet Socialist Republics. Currently the International Space Station continues this cross-national cooperation in space, with five space agencies (representing Canada, the European Space Agency nations, Japan, Russia, and the United States) participating. In addition to cooperation in space exploration itself, the perspective given from space has itself helped to produce some feelings of unity on Earth, with the famous “Blue Marble” and “Earthrise” pictures showing Earth’s oneness and scientific discoveries supported by space science, such as those related to climate change, helping to promote international cooperation to address these problems.

Gaining access to new critical resources may be another reason to go into space. Earth is a finite planet, and certain elements on Earth are very rare in the planetary crust, particularly platinum group metals that are very dense and siderophilic (iron-loving) and so have tended to sink toward the core over the natural history of the planet. However, asteroids and other objects in space (for example, planets, comets, and moons) can sometimes have these elements in abundance and in more available locations, making them potentially excellent sources for these valuable materials. Now-defunct asteroid-mining startup Planetary Resources once estimated that one “platinum-rich 500 meter wide asteroid contains . . . 1.5 times the known world-reserves of platinum group metals (ruthenium, rhodium, palladium, osmium, iridium, and platinum).” 7 In addition to returning elements to a resource-hungry Earth, further exploration and development of space will require access to resources that are not purely sourced from Earth. In particular, it will be necessary to gain access to water, which is relatively rare in the inner solar system and which would be far too costly to transport in any significant amounts from the Earth’s surface.

Another reason that humans may want to explore space would be to create a “backup Earth” to hedge against global catastrophic and existential risks (risks that may cause widespread disaster or human extinction, respectively) on our home planet. 8 Earth has always been a dangerous place for humans, with asteroid impacts, supervolcanic eruptions, pandemic disease, and other natural hazards threatening civilization. Now, in addition to these natural threats, human-made hazards such as nuclear weapons, climate change, biotechnology, nanotechnology, and artificial intelligence may threaten not only the viability of technological civilization but perhaps the survival of human life itself. A serious global-scale catastrophe could set back civilization many decades or centuries, and the worst disasters could cause human extinction. In one scenario, in which 100 percent of humanity dies, all of human effort for all of history would be for nothing. However, were the same global catastrophe to happen to Earth, yet humans were a multiplanetary species with just one self-sustaining settlement off-Earth, it would not result in the end of human civilization or human extinction. Instead while the same unimaginable fate would befall the Earth (certainly no mere triviality, with perhaps the deaths of 99.999 percent of all humans and possibly the destruction of the ecosphere and everything in it), at least all of human and planetory history would not be for nothing. Human life and culture would go on elsewhere, as well as other Earth species. This is a dire fate, but less terrible than the first.

### Scenario 1

#### Deterrence solves.

**Evanoff 19** [Kyle Evanoff, Kyle is a research associate in international economics and U.S. foreign policy at the Council on Foreign Relations “Big Bangs, Red Herrings, and the Dilemmas of Space Security”, Council on Foreign Relations, 6/27/2019, <https://www.cfr.org/blog/big-bangs-red-herrings-and-dilemmas-space-security>]

More important, U.S. policymakers should avoid making decisions on the basis of a possible, though highly improbable, space Pearl Harbor. They should recognize that latent counterspace capabilities—as exemplified in 2008’s Operation Burnt Frost, which saw the United States repurpose a ballistic missile interceptor to destroy a satellite—are more than sufficient to deter adversaries from launching a major surprise attack in almost all scenarios, especially in light of the aforementioned deep interdependence in the space domain. Adding to the deterrence effect are uncertain offensive cyber capabilities. The United States continues to launch incursions into geopolitical competitors’ critical systems, such as the Russian power grid, and has demonstrated a willingness to employ cyberattacks in the wake of offline incidents, as it did after Iran shot down a U.S. drone last week. Unlike in the nuclear arena, where anything short of the prospect of nuclear retaliation holds limited dissuasive power, space deterrence can stem from military capabilities in various domains. For this reason, an attack on a U.S. satellite could elicit any number of responses. The potential for cross-domain retaliation, combined with the high strategic value of space assets, means that any adversary risks extreme escalation in launching a major assault on American space architectures. Again, well-conceived diplomatic efforts are useful in averting such scenarios altogether.

#### Hotlines solve

Chen Lan 15, Writer on the Chinese Space Program, Go Taikounauts, http://www.go-taikonauts.com/images/newsletters\_PDF/GoTaikonauts18.pdf

Though Sino-U.S. cooperation on human spaceflight is still uncertain, a positive move between the two countries has been made, that is the establishment of a space hotline. Western media reported in November that the hotline has been setup between Washington and Beijing to allow easy sharing of technical information about their space operations, hopefully avoiding any misunderstandings or accidents.

### Scenario 2

#### Read their card---itds not saying space col key to nano, its saying its already coming. Non uniques the whole thing.

#### Their ev is about why space isn’t an escape from nanobots, not why mars col makes it uniquely likely – their ev (durham in blue)

1ac Morton 18 [(Adam, a retired philosopher attached to the University of British Columbia. He is a philosophical generalist with a particular interest in issues about knowledge and about how people understand one another. His book Should We Colonize Other Planets?​ is available now.) “Colonizing Other Planets Could Trigger War on Earth | Opinion” News Week, 11/22/2018. https://www.newsweek.com/colonizing-other-planets-could-trigger-war-earth-and-ecological-disaster-1226630] BC

Another danger is the rise of smart robots. But again, there is no escape in space. Space travel and running a colony use as much computation as they can get. This was true of the moon landings and it is even truer now. Human beings have an essential role in plans and design, but on the trip itself they are mostly just going along for the ride. So, imagine, just for the sake of argument, that hyper-calculating artificial intelligences are in a position to threaten human civilization. The extension of that civilization on another planet relies even more on those very powers, which will have to be networked to earthly computation. If mere humans can hack into machinery in targeted countries to disrupt them, then these super-capable but malevolent AIs will have no problem. Whatever their "motives," these will be the same elsewhere as on earth, and space is less of an obstacle to the flow of (mis)information and commands than to the flow of people and physical objects. No safety there.

#### Their link ev is about ai for computing not weapons so they dotn get the nanobot war impact

### Scenario 3

#### So many alt causes to warming. Mars col is not the only internal link. Colonization against a bunch of other things thumps.

#### The warrant is rocket launch destroys the atmosphere but they cant solve because we still use rockets for other things. Launches happen all the time.

### Scenario 4

#### OST is a meme joke piece of paper document thing. Nobody follows it---Space Force proves.

Huffman 9-22, [Huffman House, 9-22-2021, "Huffman Introduces Bill to Abolish Wasteful Space Force," No Publication, <https://huffman.house.gov/media-center/press-releases/huffman-introduces-bill-to-abolish-wasteful-space-force>] Sachin

The U.S. Space Force was established on December 20, 2019 with enactment of the Fiscal Year 2020 National Defense Authorization Act – despite the country’s commitment under the Outer Space Treaty of 1967, which restricts the placement of weapons of mass destruction in space and banned military maneuvers on celestial bodies. U.S. military spending topped nearly $704 billion dollars in fiscal year 2021 including a staggering $15.5 billion for the Space Force. The Space Force also unnecessarily duplicated much of the existing work within the Air Force including that of Space Command, thereby creating bureaucratic confusion and further waste and risking American and allied national security.

#### All of their cards say militarization occurs but none give an internal link to space war breaking out

#### No space war – it’s hype and systems are redundant

Johnson-Freese and Hitchens 16 [Dr. Joan Johnson-Freese is a member of the Breaking Defense Board of Contributors, a Professor of National Security Affairs at the Naval War College and author of Space Warfare in the 21st Century: Arming the Heavens. Views expressed are those of the author alone. Theresa Hitchens is a Senior Research Scholar at the Center for International and Security Studies at Maryland (CISSM), and the former Director of the United Nations Institute for Disarmament Research (UNIDIR) in Geneva, Switzerland. Stop The Fearmongering Over War In Space: The Sky’s Not Falling, Part 1. December 27, 2016. https://breakingdefense.com/2016/12/stop-the-fearmongering-over-war-in-space-the-skys-not-falling-part-1/]

In the last two years, we’ve seen rising hysteria over a future war in space. Fanning the flames are not only dire assessments from the US military, but also breathless coverage from a cooperative and credulous press. This reporting doesn’t only muddy public debate over whether we really need expensive systems. It could also become a self-fulfilling prophecy. The irony is that nothing makes the currently slim possibility of war in space more likely than fearmongering over the threat of war in space. Two television programs in the past two years show how egregious this fearmongering can get. In April 2015, the CBS show 60 Minutes ran a segment called “The Battle Above.” In an interview with General John Hyten, the then-chief of U.S. Air Force Space Command, it came across loud and clear that the United States was being forced to prepare for a battle in space — specifically against China — that it really didn’t want. It was explained by Hyten and other guests that China is building a considerable amount of hardware and accumulating significant know-how regarding space, all threatening to space assets Americans depend on every day. If viewers weren’t frightened after watching the segment, it wasn’t for lack of trying on the part of CBS. Using terms like “offensive counterspace” as a 1984 NewSpeak euphemism for “weapons,” it was made clear that the United States had no choice but to spend billions of dollars on offensive counterspace technology to not just thwart the Chinese threat, but control and dominate space. While it didn’t actually distort facts — just omit facts about current U.S. space capabilities — the segment was basically a cost-free commercial for the military-industrial complex. In retrospect though, “The Battle Above” was pretty good compared to CNN’s recent special, War in Space: The Next Battlefield. The latter might as well have been called Sharknado in Space – because the only far-out weapons technology our potential adversaries don’t have, according to the broadcast, seems to be “sharks with frickin’ laser beams attached to their heads!” First, CNN needs to hire some fact checkers. Saying “unlike its adversaries, the U.S. has not yet weaponized space” is deeply misleading, like saying “unlike his political opponents, President-Elect Donald Trump has not sprouted wings and flown away”: A few (admittedly alarming) weapons tests aside, no country in the world has yet weaponized space. Contrary to CNN, stock market transactions are not timed nor synchronized through GPS, but a closed system. Cruise missiles can find their targets even without GPS, because they have both GPS and precision inertial measurement units onboard, and IMUs don’t rely on satellite data. Oh, and the British rock group Pink Floyd holds the only claim to the Dark Side of the Moon: There is a “far side” of the Moon — the side always turned away from the Earth — but not a “dark side” — which would be a side always turned away from the Sun. More nefariously, the segment sensationalized nuggets of truth within a barrage of half-truths, backed by a heavy bass, dramatic soundtrack (and gravelly-voiced reporter Jim Sciutto) and accompanied by sexy and scary visuals. Make no mistake there are dangers in space, and the United States has the most to lose if space assets are lost. The question is how best to protect them. Here are a few facts CNN omitted. The Reality The U.S. has all of the technologies described on the CNN segment and deemed potentially offensive: maneuverable satellites, nano-satellites, lasers, jamming capabilities, robotic arms, ballistic missiles that can be used as anti-satellite weapons, etc. In fact, the United States is more technologically advanced than other countries in both military and commercial space. That technological superiority scares other countries; just as the U.S. military space community is scared of other countries obtaining those technologies in the future. The U.S. military space budget is more than 10 times greater than that of all the countries in the world combined. That also causes other countries concern. More unsettling still, the United States has long been leery of treaty-based efforts to constrain a potential arms race in outer space, as supported by nearly every other country in the world for decades. Indeed, under the administration of George W. Bush, the U.S. talking points centered on the mantra “there is no arms race in outer space,” so there is no need for diplomat instruments to constrain one. Now, a decade later, the U.S. military – backed by the Intelligence Community which operates the nation’s spy satellites – seems to be shouting to the rooftops that the United States is in danger of losing the space arms race already begun by its potential adversaries. The underlying assumption — a convenient one for advocates of more military spending — is that now there is nothing that diplomacy can do. However, it must be remembered that most space-related technologies – with the exception of ballistic missiles and dedicated jammers – have both military and civil/commercial uses; both benign — indeed, helpful — and nefarious uses. For example, giving satellites the ability to maneuver on orbit can allow useful inspections of ailing satellites and possibly even repairs. Further, the United States is not unable to protect its satellites, as repeated during the CNN broadcast by various interviewees and the host. Many U.S. government-owned satellites, including precious spy satellites, have capabilities to maneuver.

Many are hardened against electro-magnetic pulse, sport “shutters” to protect optical “eyes” from solar flares and lasers, and use radio frequency hopping to resist jamming. Offensive weapons, deployed on the ground to attack satellites, or in space, are not a silver bullet. To the contrary, U.S. deployment of such weapons may actually be detrimental to U.S. and international security in space (as we argued in a recent Atlantic Council publication, Towards a New National Security Space Strategy). Further, there are benefits to efforts started by the Obama Administration to find diplomatic tools to restrain and constrain dangerous military activities in space. These diplomatic efforts, however, would be undercut by a full-out U.S. pursuit of “space dominance.” This includes dialogue with China, the lack of which Gen. William Shelton, retired commander of Air Force Space Command, lamented in the CNN report. Given CNN’s “cast,” the spin was not surprising. Starting with Ghost Fleet author Peter Singer set the sensationalist tone, which never altered. The apocalyptic opening, inspired by Ghost Fleet, posited a scenario where all U.S. satellites are taken off-line in nearly one fell swoop. Unless we are talking about an alien invasion, that scenario is nigh on impossible. No potential adversary has such capabilities, nor will they ever likely do so. There is just too much redundancy in the system.

## 5---T

#### Interpretation: The affirmative may only descriptively declare the appropriation of outer space as unjust. To clarify they may not specify a policy that [ends/regulates] appropriation of outer space and may only get offense from within the bounds of the rez.

#### “is” is a linking verb---distinct from action---implementation is incoherent.

Grammar Monster, ["Linking Verbs," Grammar Monster, <https://www.grammar-monster.com/glossary/linking_verbs.htm>] Recut Sachin

What Are Linking Verbs? (with Examples) A linking verb is used to re-identify or to describe its subject. A linking verb is called a linking verb because it links the subject to a subject complement (see graphic below). Infographic Explaining Linking Verb A linking verb tells us what the subject is, not what the subject is doing. Easy Examples of Linking Verbs In each example, the linking verb is highlighted and the subject is bold. Alan is a vampire. (Here, the subject is re-identified as a vampire.) Alan is thirsty. (Here, the subject is described as thirsty.)

A picture containing text, sign

Description automatically generated

#### Unjust means –

Cambridge, [“Meaning of unjust in English” Cambridge Dictionary, [https://dictionary.cambridge.org/us/dictionary/english/unjust]](https://dictionary.cambridge.org/us/dictionary/english/unjust%5d) Recut Sachin

unjust adjective US /ʌnˈdʒʌst/ not morally right; not fair: New laws will protect employees against unjust dismissals. (Definition of unjust from the Cambridge Academic Content Dictionary © Cambridge University Press)

#### Resolved, in LD, refers to a statement of value---policymaking fails without an actor.

UPitt, [University Of Pittsburgh Communications Services Webteam, copyright 2015-21, "Basic Definitions," Department of Communication , <https://www.comm.pitt.edu/basic-definitions>] Recut Sachin

Affirmative/Pro. The side that “affirms” the resolution (is “pro” the issue). For example, the affirmative side in a debate using the resolution of policy, Resolved: The United States federal government should implement a poverty reduction program for its citizens, would advocate for federal government implementation of a poverty reduction program. Argument. A statement, or claim, followed by a justification, or warrant. Justifications are responses to challenges, often linked by the word “because.” Example: The sun helps people, because the sun activates photosynthesis in plants, which produce oxygen so people can breathe. Constructive Speech. The first speeches in a debate, where the debaters “construct” their cases by presenting initial positions and arguments. Cross-examination. Question and answer sessions between debaters. Debate. A deliberative exercise characterized by formal procedures of argumentation, involving a set resolution to be debated, distinct times for debaters to speak, and a regulated order of speeches given. Evidence. Supporting materials for arguments. Standards for evidence are field-specific. Evidence can range from personal testimony, statistical evidence, research findings, to other published sources. Quotations drawn from journals, books, newspapers, and other audio-visuals sources are rather common. Negative/Con. The side that “negates” the resolution (is “con” the issue). For example, the negative side in a debate using the resolution of fact, Resolved: Global warming threatens agricultural production, would argue that global warming does not threaten agricultural production. Preparation Time. Debates often necessitate time between speeches for students to gather their thoughts and consider their opponent's arguments. This preparation is generally a set period of time and can be used at any time by either side at the conclusion of a speech. Rebuttal Speech. The last speeches in a debate, where debaters summarize arguments and draw conclusions about the debate. Resolution. A specific statement or question up for debate. Resolutions usually appear as statements of policy, fact or value. Statement of policy. Involves an actor (local, national, or global) with power to decide a course of action. For example, Resolved: The United States federal government should implement a poverty reduction program for its citizens. Statement of fact. Involves a dispute about empirical phenomenon. For example, Resolved: Global warming threatens agricultural production. Statement of value. Involves conflicting moral dilemmas. For example, Resolved: The death penalty is a justified method of punishment. Topic. A general issue to debate. Topics could be “The Civil War,” “genetic engineering,” or “Great Books.”

#### Violation: [they don’t defend the rez, but rather some weird speccy thing]

#### Vote neg –

#### 1] Limits – Letting affs add anything to the aff explodes limits – truisms like "2+2=4” or "racism bad" suddenly become additional aff ground if you meet the floor of the rez – means even if we have ground, the aff will always win truth claims which outweigh on sheer probability. AND lets the affirmative contradict – adding “not” or replacing “unjust” with “just” suddenly becomes topical when we do away with the words in the rez.

#### 2] Ground – wrecks all neg arguments – smart affs under their interp will just add planks outside of the topic to solve DAs or wreck CP competition – planks about R&D funding solves innovation, random reforms could solve econ or warming – makes advantage CPs T. Meeting the floor of the rez is not sufficient if there is no ceiling to topical affirmatives.