### **1**

#### **Advantage 1 is Space Debris**

#### **NewSpace actors on the rise – they’re planning to commercialize space**

**Houser 17**. Kristin Houser - Staff Writer. “Private Companies, Not Governments, Are Shaping the Future of Space Exploration.” Futurism. June 12, 2017. <https://futurism.com/private-companies-not-governments-are-shaping-the-future-of-space-exploration>

In recent years, however, a new Space Race has taken shape—Space Race 2.0. Rather than powerful nations guided by presidents and premiers, however, the competitors in this race are tech startups and private businesses spearheaded by billionaire entrepreneurs. And while the current atmosphere is far less contentious than that of the first Space Race (save the [odd tweet or two](http://money.cnn.com/2015/12/22/news/companies/jeff-bezos-elon-musk-twitter-feud/)), the competition is just as fierce.

SpaceX, Blue Origin, Bigelow Airspace, Virgin Galactic, Boeing, Lockheed Martin… Not only has the number of private companies engaged in space exploration grown remarkably in recent years, these companies are quickly besting their government-sponsored competitors.

“We’re starting to see advances made by private entities that are more significant than any advances in the last three years that were made by the government,” Chris Lewicki, CEO and President of Planetary Resources, tells **Futurism**.

Amazon CEO Jeff Bezos’s Blue Origin and Tesla CEO Elon Musk’s SpaceX are arguably the two companies that are setting the pace. In November 2015, the former completed the first successful vertical rocket landing after sending their New Shepard 100 kilometers (62 miles) into the air. SpaceX [landed its own rocket](https://futurism.com/falcon-9-successfully-launches-11-orbcomm-satellites-space-lands-back-earth/) a month later, only they did so with a craft twice as heavy as Blue Origin’s and traveled all the way into space first.

A month after that, in January 2016, Bezos’s company became the first entity to re-launch and re-land a previously used rocket. SpaceX followed suit in 2017. “The government was never able to [build reusable rockets], but now, two private companies within the space of the same year have done that,” points out Lewicki.

Not only are private companies already surpassing their government counterparts, several are poised to widen their lead in the coming months and years.

#### **NewSpace actors will trigger security tensions – countries can’t distinguish between accidental and purposeful collisions**

**Stockwell 20**. Samuel Stockwell. “Legal ‘Black Holes’ in Outer Space: The Regulation of Private Space Companies.” E-International Relations. Jul 20, 2020. <https://www.e-ir.info/2020/07/20/legal-black-holes-in-outer-space-the-regulation-of-private-space-companies/>

Space debris can be defined as non-purposeful man-made objects that reside in space; made up of inactive parts from former space operations and fragmentations of spacecraft, there are nearly 30,000 pieces of debris in the Earth’s orbit (Pellegrino & Stang, 2016: 25). Despite most debris being centimetres or millimetres in size satellites often travel at the speed of a bullet, meaning that a collision between the two could be catastrophic in terms of environmental, mechanical and financial damage (Black & Butt, 2010: 1).

Since the development of the Kessler Syndrome thesis in 1978 – which predicted that space debris may become so dense as to trigger a chain reaction of major collisions – space debris is considered more of a threat to security operations in the near-term than military space activity (Quintana, 2017: 95). Difficulty over determining whether a collision was accidental or a purposeful act further exacerbates this problem, given that “every object in orbit is a threat to everything else in orbit, regardless of its intended function” (Faith, 2012: 86). Such developments have led to the US administration increasingly adopting a securitisation discourse around orbital debris (Bowen, 2014: 47), which may cause concerns as to whether policymakers may react to future American satellite collisions in a militarised manner.

A number of NewSpace actors are likely to complicate these worries even further through recent satellite proposals. Whilst Boeing is proposing a constellation of up to 3,000 satellites, SpaceX has even grander goals of creating a constellation consisting of 4,425 satellites, eventually expanding to 12,000 satellites in the near-future (Kosiak, 2019: 7). Putting this into context, there are currently just around 1,400 active satellites in orbit around the Earth, highlighting the scale of these projects. The collision between a single US privately-owned Iridium satellite and state-owned Russian Cosmos satellite in 2009 underscored not only the sheer amount of debris caused by these collisions – over 1,500 pieces – but also foreshadowed the possible geopolitical tensions that may arise from them (Wang, 2010: 87-88). Given the number of various commercial satellite constellations possibly going into orbit in the near-future, this raises questions over the possibly devastating security hazards they could pose once in orbit or when they eventually become defunct.

#### **Even absent space debris, space activity creates a security dilemma that increases the risk of war**

**Lubojemski 19**. Aleksander M. Lubojemski - Leiden University, Netherlands. Satellites and the Security Dilemma, Astropolitics. 2019. DOI: 10.1080/14777622.2019.1641689

This paper discussed three important ways in which satellites, through their dual-use characteristics, influence the security dilemma. This is rooted on the theoretical basis that states are not able to recognize if a satellite is offensive or defensive, therefore not knowing if it is a threat to their security. As a result, states start to build-up their own security creating a possible security spiral, a security dilemma. The first way is the lack of immobility in satellites, which is the fact that there are no natural interceptors between states and satellites. This makes states incapable to determine if satellites could be used as offensive weapons. Second, because satellites inherently possess dual capabilities, civilian and military, states are unable to recognize the true intent of a satellite. This is also true for known military satellites as they are classified both for passive, defensive and active, offensive uses. Third, because of the dual-use nature, it is impossible to establish a clear definition of a space weapon in international law, hence damaging trust building in politics forestalling the creation of norms and laws, which can halt the development of an arms race in space. The security dilemma is attributed as a fundamental cause of conflicts in history. Therefore, recognizing that there is one before it escalates into a conflict is important for conflict prevention. If satellites do indeed impact on the security dilemma, as argued herein, then action is needed to address this development. There remains a window of opportunity for such action as operational deployments of space weapons and fighting a war in space are yet to take place. A failure to act, on the other hand, will likely be lethal to international stability and order given the world’s dependence on satellites and satellite systems.

**Space conflict goes nuclear – misperceptions and lack of established norms**

**Skibba 20**. Ramin Skibba - a writer based in San Diego. His work has appeared in Undark magazine, New Scientist, and Nature. “The Ripple Effects of a Space Skirmish.” The Atlantic. July 12, 2020. <https://www.theatlantic.com/technology/archive/2020/07/space-warfare-unregulated/614059/>

So far, there are relatively few international policies or norms about what’s allowed in modern-day space and what’s not. The SWF report notes that an incident or misunderstanding could escalate tensions if it’s perceived as an attack.

The lack of guidance has left room for a range of activities. Weeden said that in December 2019, the Trump administration signaled its intention to strengthen the United States’ space weaponry and protect its spacecraft from possible attacks by Russia and China by transforming the Air Force Space Command into the U.S. Space Force. That shift “brought a full-time operational focus to the space domain, which was a needed change,” wrote Lieutenant Colonel Christina Hoggatt, a Space Force spokesperson, in a statement to **Undark**. With these forces, the Defense Department seeks to “strengthen deterrence” and improve capabilities to “defend our vital assets in space,” she wrote. This emphasis, Burbach said, likely means that the U.S. military will focus on making satellites more resilient to attack, rather than developing offensive weapons.

Compared with the U.S., smaller space powers have fewer satellites and therefore less to lose, the U.N.’s Porras said. He argues that tense regional relationships could be particularly unpredictable. For example, he said, **if North Korean leaders found themselves in a standoff with South Korea and the U.S., they might launch and detonate a nuclear weapon in space;** its dangerous radiation would disable most satellites.

The U.N. and other international groups—including SWF and the Outer Space Institute, a global research organization based in British Columbia—are working to avoid such scenarios. Weeden said that as long as countries don’t launch destructive space weapons near other countries’ spacecraft, conduct overtly provocative tests, or disable critical satellites, peaceful space activities should continue. For now, he points out, countries have only tested missiles on their own defunct satellites, and exercises against other nations’ spacecraft have remained nondestructive.

Existing international laws offer little guidance for modern military technology in space. While these rules—including the Partial Nuclear Test Ban Treaty of 1963 and the U.N.’s Outer Space Treaty of 1967—prohibit weapons of mass destruction in space, they don’t explicitly limit other kinds of space weapons, tests, or military space forces.

Weeden points out that space diplomats could create new guidelines by developing something like the Incidents at Sea agreement, which the U.S. and the Soviet Union signed during the Cold War to maintain safe distances between ships and avoid maneuvers in heavy traffic. But until similar rules involving space weaponry are hammered out, he said, unexpected satellite tests will inevitably fuel speculation and paranoia.

“**Any time you have militaries operating near each other without a lot of transparency or clarity,”** he added, **“you always have the opportunity for misperceptions that could lead to something very bad.”**

#### **Even limited nuclear war ushers in a nuclear winter that causes extinction**

**Starr 14**—Steven, Senior Scientist for Physicians for Social Responsibility, Director of the Clinical Laboratory Science Program (Missouri), commentator in the Bulletin of the Atomic Scientists and the Strategic Arms Reduction, Associate member of the Nuclear Age Peace Foundation, “The Lethality of Nuclear Weapons: Nuclear War has No Winner,” Global Research: Centre for Research on Globalization, 6/5, <http://www.globalresearch.ca/the-lethality-of-nuclear-weapons-nuclear-war-has-no-winner/5385611>

Nuclear war has no winner. Beginning in 2006, several of the world’s leading climatologists (at Rutgers, UCLA, John Hopkins University, and the University of Colorado-Boulder) published a series of studies that evaluated the long-term environmental consequences of a nuclear war, including baseline scenarios fought with merely 1% of the explosive power in the US and/or Russian launch-ready nuclear arsenals. They concluded that the consequences of even a “small” nuclear war would include catastrophic disruptions of global climate[i] and massive destruction of Earth’s protective ozone layer[ii]. These and more recent studies predict that global agriculture would be so negatively affected by such a war, a global famine would result, which would cause up to 2 billion people to starve to death. [iii]¶ These peer-reviewed studies – which were analyzed by the best scientists in the world and found to be without error – also predict that a war fought with less than half of US or Russian strategic nuclear weapons would destroy the human race.[iv] In other words, a US-Russian nuclear war would create such extreme long-term damage to the global environment that it would leave the Earth uninhabitable for humans and most animal forms of life.¶ A recent article in the Bulletin of the Atomic Scientists, “Self-assured destruction: The climate impacts of nuclear war”,[v] begins by stating:¶ “A nuclear war between Russia and the United States, even after the arsenal reductions planned under New START, could produce a nuclear winter. Hence, an attack by either side could be suicidal, resulting in self-assured destruction.”¶ In 2009, I wrote an article[vi] for the International Commission on Nuclear Non-proliferation and Disarmament that summarizes the findings of these studies. It explains that nuclear firestorms would produce millions of tons of smoke, which would rise above cloud level and form a global stratospheric smoke layer that would rapidly encircle the Earth. The smoke layer would remain for at least a decade, and it would act to destroy the protective ozone layer (vastly increasing the UV-B reaching Earth[vii]) as well as block warming sunlight, thus creating Ice Age weather conditions that would last 10 years or longer.¶ Following a US-Russian nuclear war, temperatures in the central US and Eurasia would fall below freezing every day for one to three years; the intense cold would completely eliminate growing seasons for a decade or longer. No crops could be grown, leading to a famine that would kill most humans and large animal populations.¶ Electromagnetic pulse from high-altitude nuclear detonations would destroy the integrated circuits in all modern electronic devices[viii], including those in commercial nuclear power plants. Every nuclear reactor would almost instantly meltdown; every nuclear spent fuel pool (which contain many times more radioactivity than found in the reactors) would boil-off, releasing vast amounts of long-lived radioactivity. The fallout would make most of the US and Europe uninhabitable. Of course, the survivors of the nuclear war would be starving to death anyway. Once nuclear weapons were introduced into a US-Russian conflict, there would be little chance that a nuclear holocaust could be avoided. Theories of “limited nuclear war” and “nuclear de-escalation” are unrealistic.[ix] In 2002 the Bush administration modified US strategic doctrine from a retaliatory role to permit preemptive nuclear attack; in 2010, the Obama administration made only incremental and miniscule changes to this doctrine, leaving it essentially unchanged. Furthermore, Counterforce doctrine – used by both the US and Russian military – emphasizes the need for preemptive strikes once nuclear war begins. Both sides would be under immense pressure to launch a preemptive nuclear first-strike once military hostilities had commenced, especially if nuclear weapons had already been used on the battlefield.

#### **Space war is uniquely likely – lack of historical precedence**

**Roberts 17.** Thomas González Roberts - space security researcher at the Center for Strategic and International Studies, and host of [Moonstruck](https://www.moonstruckpodcast.com/), a podcast about humans in space. [“Why We Should Be Worried about a War in Space.” The Atlantic. December 15, 2017. <https://www.theatlantic.com/science/archive/2017/12/why-we-should-be-worried-about-a-war-in-space/548507/>]

One hundred miles above the Earth’s surface, orbiting the planet at thousands of miles per hour, the six people aboard the International Space Station enjoy a perfect isolation from the chaos of earthly conflict. Outer space has never been a military battleground. But that may not last forever. The [debate in Congress](https://docs.google.com/document/d/1e6zH3AfZHs4hLpGaKwmxAVxR-LfWk0110THq9tIhgOU/edit?ts=5a2f95e8?utm_source=masthead-newsletter&utm_medium=email&utm_campaign=member-newsletter-20171213-20&silverid=%25%25RECIPIENT_ID%25%25) over whether to create a Space Corps comes at a time when governments around the world are engaged in a bigger international struggle over how militaries should operate in space. Fundamental changes are [already underway](https://www.csis.org/analysis/congress-creating-military-space-corps?utm_source=masthead-newsletter&utm_medium=email&utm_campaign=member-newsletter-20171213-20&silverid=%25%25RECIPIENT_ID%25%25). No longer confined to the [fiction shelf](https://best-sci-fi-books.com/23-best-military-science-fiction-books/?utm_source=masthead-newsletter&utm_medium=email&utm_campaign=member-newsletter-20171213-20&silverid=%25%25RECIPIENT_ID%25%25), space warfare is likely on the horizon.

While agreements for how to operate in other international domains, like the open sea, airspace, and even cyberspace, have already been established, the major space powers—the United States, Russia, and China—have not agreed upon a rulebook outlining what constitutes bad behavior in space. It’s [presumed](http://intercrossblog.icrc.org/blog/twmzia1cp84kv2c29bi4iz6q4u03in?utm_source=masthead-newsletter&utm_medium=email&utm_campaign=member-newsletter-20171213-20&silverid=%25%25RECIPIENT_ID%25%25) that International Humanitarian Law would apply in outer space—protecting the civilian astronauts aboard the International Space Station—but it’s unclear whether damaging civilian satellites or the space environment itself is covered under the agreement. With only a limited history of dangerous behavior to study, and few, [outdated guidelines](http://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introouterspacetreaty.html?utm_source=masthead-newsletter&utm_medium=email&utm_campaign=member-newsletter-20171213-20&silverid=%25%25RECIPIENT_ID%25%25) in place, a war in space would be a war with potentially more consequences, but far fewer rules, than one on Earth.

#### **The aff solves – restricting the appropriation of outer space decreases private companies’ activity in space**

**Babcock, 15** -- Jonathan’s practice involves assisting clients in a range of national security matters, including economic sanctions compliance, export controls compliance, and national security reviews before the Committee on Foreign Investment in the United States (CFIUS). Prior to joining Morrison & Foerster, Jonathan practiced in the International Trade and National Security practice groups of a major D.C. law firm.

[Jonathan Babcock, "The Space Review: Encouraging private investment in space: does the current space law regime have to be changed? (part 1)," The Space Review, 1-5-2015, https://www.thespacereview.com/article/2669/1, accessed 6-25-2021]

Space law, derived mainly from the Outer Space Treaty and the Moon Treaty (the latter’s principles carry weight despite having a few signatory states), prohibits national appropriation in space and states that space is a domain for the “common heritage of mankind.” The meaning of these documents, particularly pertaining to their applicability to private actors in space, is ambiguous and contentious, as will be shown in the following section. In any industry, legal uncertainty hinders private investment. Accordingly, a cloudy legal regime in space has hampered the ability of private individuals and firms to raise the capital necessary to fund space activities.16 Moreover, private actors hold that the absence of a legal regime clearly defining the scope of property rights in space deprives them of the assurance that they will reap benefits that will outweigh the capital they invested.17 They argue that the main impediment to further private action in space is that the current legal regime jeopardizes the ability of private actors to make a profit in space.

This is a discouraging climate for private innovation, and will surely discourage future investment in space. The legal regime governing space must be clarified, added to, altered, or changed entirely to encourage private investment in space by allowing actors to realize financial rewards.18 The question then becomes how to accomplish this. In order to better understand the inadequacies of the current legal regime, it is necessary to analyze what exactly the Outer Space Treaty and Moon Treaty state, and how they dictate the climate in which private actors are operating in space.

#### **Debris turns mining – it prevents exploration**

**Mccoustra, 20** -- ScotCHEM Chair in Chemical Physics, Heriot-Watt University

[Martin, "Space junk: Astronomers worry as private companies push ahead with satellite launches," Conversation, 5-13-20, https://theconversation.com/space-junk-astronomers-worry-as-private-companies-push-ahead-with-satellite-launches-137572, accessed 6-25-21]

Since the launch of Sputnik 1 in 1957, the lower orbit around the Earth has become an **increasingly congested** environment with more than 2,200 satellite launches to date. Those satellites – along with launch vehicle components and debris from mechanical disintegration, collisions and explosions – now fill this region with a “**fog” of space debris**. And it’s getting busier. In the last few weeks, SpaceX has launched 60 new satellites as part of its Starlink programme. This brings the total to currently around 400 Starlink satellites in low Earth orbit as part of a programme that aims to bring cheap, satellite-based internet access to everyone. Eventually, this programme could place nearly 12,000 satellites in orbit around the Earth. With Amazon, Canada’s Telesat and others planning satellite constellations of similar scale, low Earth orbit is becoming **ever more crowded**. The debris ranges in size from a few microns to many metres. Stuart Grey, an aerospace engineer at the University of Strathclyde, has produced a stunning visualisation that highlights the more than 20,000 objects over 10cm in size now orbiting the Earth (see video above). But there are many millions of particles 1mm in size and smaller. Closing our window on the universe? Amateur astronomers are already expressing concern over the increasing number of bright, moving objects in the night sky. But the worry is perhaps much greater for the professionals. Crowding in low Earth orbit has inevitable consequences for ground-based astronomers. Bright surfaces on satellites can reflect rays from the sun – giving rise to a burst of sunlight directed towards the surface of the Earth. Such intense bursts of light are much stronger than the weak light sources typically being observed by astronomers and will impede observations of distant objects in space. Billions have already been spent on existing optical telescopes, and many more billions will be poured into new platforms in the next decade, such as the European Extremely Large Telescope being built on the Atacama plateau in Chile. There is intense competition for observing time on such resources, so any potential threat from satellite reflections must be taken seriously as they may make some of the observations driving our understanding of the evolution of the universe impossible. SpaceX has assured the public that Starlink will not contribute to this problem and says it has been taking steps to mitigate the impacts of its satellites on observational astronomy – even to the extent of testing whether a black coating on its satellites can reduce visibility, and adjusting some of the satellites’ orbits if necessary. With some 3% of its planned constellation launched, SpaceX is at least responding to the concerns raised by astronomers. Hopefully other agencies planning satellite constellation launches will also be upfront with their plans to reduce this serious problem to astronomical observation. But crowding in low Earth orbit also has consequences for satellites and other space vehicles, including those designed to carry humans. To achieve orbit, satellites seek a balance between their speed and the effect of Earth’s gravity on them. The speed with which a satellite must travel to achieve this balance depends on its altitude above Earth. The nearer to Earth, then the faster the required orbital speed. At an altitude of 124 miles (200km), the required orbital velocity is a little more than 17,000 miles per hour (about 7.4 km/s). Any object shed by a satellite or other vehicle in orbit will maintain the same orbital speed. Collisions between such objects can therefore occur at combined speeds of potentially up to **34,000 mph** at 124 miles (if it is head-on). The effects of such impacts can be serious for astronauts and space stations – as the dramatic opening scenes of the 2013 movie Gravity depict. There is impact shielding on satellites and space vehicles which is designed to stop objects smaller than 1cm crashing into them. At best, the shielding will do so – though the electromagnetic impulse created may interfere with electronic systems. At worst, larger pieces of space junk could **penetrate the vehicles**. This could result in **internal damage** and **disintegration** that threaten the safety of the mission. Space agencies such as NASA and ESA have therefore established orbital debris research programmes to observe such debris and develop strategies to control its effects. There is little doubt that, with the **increasing use and commercialisation** of space, we **boost the risk of catastrophic events** associated with orbital debris. Agencies, both state and commercial, must recognise this and support efforts to reduce the likelihood of such events by taking steps to remove existing debris and reduce the potential for further debris by removing redundant satellites and other space vehicles. For example the RemoveDEBRIS satellite uses an on-board harpoon to capture junk. Only when we resolve the problem of space junk will our window on, and pathway to, space be truly fully open.

### **2**

#### **Advantage 2 is Inequality**

#### **Wealth inequality is at an all-time high and rising**

**Baker and Salop 15.** Jonathan B. Baker and Steven C. Salop. “Antitrust, Competition Policy, and Inequality.” The Georgetown Law Journal Online, Vol. 104:1. Georgetown University Law Center. (Jonathan B. Baker, a former Director of the Bureau of Economics at the Federal Trade Commission, is a Research Professor of Law at American University. Steven C. Salop is an American economist and academic who is a Professor of Economics and Law at the Georgetown University Law Center.)

Economic inequality recently has entered the political discourse in a highly visible way. Inequality and “middle-class economics” were the centerpieces of President Obama’s 2015 State of the Union address.1 Leading potential Republican presidential nominees have also spoken out on the problem of inequality in the United States.2 This political impact is not a surprise. As the U.S. economy has begun to recover from the Great Recession since mid-2009, the rising tide has not lifted all boats. To the contrary, median income and wealth both declined in real terms between 2010 and 2013. 3 Over essentially the same period, the real income of the top 1% grew by 31.4%,4 and the income share of the top 1% increased from 17.2% to 19.8%.5 The fact that economic growth has effectively been appropriated by those already well off, leaving the median household less well off, raises serious economic, political, and moral issues. The divergence in economic fortunes between those at the very top and the rest of society is not a temporary phenomenon. Median income has been declining since 2000, well before the start of the Great Recession, while real GDP is more than 25% higher now.6 The economic position of the richest Americans has improved during the past decade, while most households have struggled or lost ground. 7 In fact, inequality in the U.S. has been growing since the 1980s. Between 1982 and 2013, the share of income going to the top 1% increased from 12.8% to 19.8%, and the share going to the bottom 40% fell from 12.3% to 9.4%.8 The average income of the top 1% rose by 90% between 1983 and 2013, while the average income of the bottom 60% declined by more than 4% over the same period.9 Wealth inequality exhibits a similar trend. By one measure, the wealth share of the bottom 90% has steadily declined since the mid-1980s, while the wealth share of the highest 0.1% has grown from 7% in 1979 to 22% in 2012. 10 These data also show that the top 0.1% now account for virtually as much total wealth as the entire bottom 90%.11 The 16,070 households in the top 0.01% collectively control 11% of all U.S. wealth, each with more than $111 million in assets. 12 Between 1983 and 2013, the average net worth of the top 1% rose by 81.6% while the average net worth of the bottom 60% declined, and, indeed, the average net worth of the bottom 40% is now negative.13 Inequality was an important political issue a century ago. 14 It has become newsworthy again since the Occupy movement’s protests against Wall Street on behalf of “the 99%” in 2011, 15 and the 2012 election campaign of Elizabeth Warren to the United States Senate.16 Best-selling books by leading scholars have also sparked public discussion of inequality: Jacob S. Hacker and Paul Pierson’s Winner-Take-All Politics: How Washington Made the Rich Richer—And Turned Its Back on the Middle Class in 2011, 17 Joseph Stiglitz’s The Price of Inequality in 2012, 18 and Thomas Piketty’s Capital in the Twenty-First Century in 2014.19 The careful data analysis of economists Emmanuel Saez, Thomas Piketty, and their co-authors has made a substantial contribution to understanding these concerns about inequality. Their data document that large income and wealth gaps have opened up between the top 0.1% and the rest of society. In Lawrence Summers’s succinct summary, this research “has transformed political discourse and is a Nobel Prize-worthy contribution.”20

#### **Extraction of resources in space increases inequality by exclusively benefiting wealthy American shareholders at an unprecedented level**

**Shammas and Holen 19**. Victor L. Shammas (Oslo Metropolitan University, Work Research Institute (AFI), Oslo, Norway) and Tomas B. Holen (Independent scholar, Oslo, Norway). One giant leap for capitalistkind: private enterprise in outer space. *Palgrave Commun* 5, 10 (2019). <https://doi.org/10.1057/s41599-019-0218-9>

But how are we to understand NewSpace? In some ways, NewSpace signals the emergence of capitalism in space. The production of carrier rockets, placement of satellites into orbit around Earth, and the exploration, exploitation, or colonization of outer space (including planets, asteroids, and other celestial objects), will not be the work of humankind as such, a pure species-being (*Gattungswesen*), but of particular capitalist entrepreneurs who stand in for and represent humanity. Crucially, they will do so in ways modulated by the exigencies of capital accumulation. These enterprising capitalists are forging a new political-economic regime in space, a post-Fordism in space aimed at profit maximization and the apparent minimization of government interference. A new breed of charismatic, starry-eyed entrepreneurs, including Musk’s SpaceX, Richard Branson’s Virgin Galactic, and Amazon billionaire Jeff Bezos’s Blue Origin, to name but a selection, aim at becoming ‘capitalists in space' (Parker, [2009](https://www.nature.com/articles/s41599-019-0218-9#ref-CR49)) or space capitalists. Neil Armstrong’s famous statement will have to be reformulated: space will not be the site of ‘one giant leap for mankind', but rather *one giant leap for capitalistkind*. [Footnote5](https://www.nature.com/articles/s41599-019-0218-9#Fn5) With the ascendancy of NewSpace, humanity’s future in space will not be ‘ours', benefiting humanity tout court, but will rather be the result of particular capitalists, or capitalistkind,[Footnote6](https://www.nature.com/articles/s41599-019-0218-9#Fn6) toiling to recuperate space and bring its vast domain into the fold of capital accumulation: NewSpace sees outer space as the domain of private enterprise, set to become the ‘first-trillion dollar industry', according to some estimates, and likely to produce the world’s first trillionaires (see, e.g., Honan, [2018](https://www.nature.com/articles/s41599-019-0218-9#ref-CR30))—as opposed to Old Space, a derisive moniker coined by enthusiastic proponents of capitalism-in-space, widely seen to have been the sole preserve of the state and a handful of giant aerospace corporations, including Boeing and Lockheed Martin, in Cold War-era Space Age.

Under Donald Trump’s presidency, the adherents of NewSpace have found a ready political partner. The commercialization of outer space was already well under way with Obama’s 2010 National Space Policy, which emphasized ‘promoting and supporting a competitive U. S. commercial space sector', which was ‘considered vital to…continued progress in space' (Tronchetti, [2013](https://www.nature.com/articles/s41599-019-0218-9#ref-CR61), p. 67–68). But the Trump administration has aggressively pursued the deregulation of outer space in the service of profit margins. Wilbur Ross, President Trump’s Secretary of Commerce, has eagerly supported the private space industry by pushing the dismantling of regulatory frameworks. As Ross emphatically stated, ‘The rate of regulatory change must accelerate until it can match the rate of technological change!' (Foust, [2018a](https://www.nature.com/articles/s41599-019-0218-9#ref-CR17)). Trump has proposed privatizing the provision of supplies to the International Space Station (ISS) while re-establishing the Cold War-era National Space Council, which includes members from Lockheed Martin, Boeing, ULA, and a series of NewSpace actors, such as SpaceX and Blue Origin. Ross was visibly enthusiastic about SpaceX’s Falcon Heavy launch in February 2018 and seemed to embrace Musk’s marketing ploy. ‘It was really quite an amazing thing', Ross said. ‘At the end of it, you have that little red Tesla hurdling [sic] off to an orbit around the sun and the moon' (Bryan, [2018](https://www.nature.com/articles/s41599-019-0218-9#ref-CR6)). That same month, Ross spoke before the National Space Council, commenting appreciatively that ‘space is already a $330 billion industry' that was set to become a ‘multitrillion-dollar one in coming decades'. He noted that private corporations needed ‘all the help we can give them' and said it was ‘time to unshackle business activity in space' (Department of Commerce, [2018](https://www.nature.com/articles/s41599-019-0218-9#ref-CR11)).

#### **Inequality impedes growth – decreases investment in the economy**

**Baker and Salop 15.** Jonathan B. Baker and Steven C. Salop. “Antitrust, Competition Policy, and Inequality.” The Georgetown Law Journal Online, Vol. 104:1. Georgetown University Law Center. (Jonathan B. Baker, a former Director of the Bureau of Economics at the Federal Trade Commission, is a Research Professor of Law at American University. Steven C. Salop is an American economist and academic who is a Professor of Economics and Law at the Georgetown University Law Center.)

Some inequality is a natural byproduct of a market economy: the market generates winners and losers, and the prospect of economic success helps foster effort, investment, and innovation. But these positive effects on innovation and entrepreneurship do not automatically benefit everyone, as demonstrated by the fact that over the past quarter century labor productivity has increased steadily while hourly worker compensation has stagnated.23 More importantly, this observation does not automatically justify whatever inequality the market happens to produce. Inequality also involves social costs. Interpersonal utility comparisons are beyond the scope of standard economic models. However, individuals generally and policy makers in particular do make such comparisons. We suspect that many people consider a wide economic gap between rich and poor to be objectionable.24 Using the language of economics, in terms of purchasing goods and services, one would say that a dollar of marginal income spent by a less wealthy person is generally more valuable socially than that marginal dollar of income spent by a very wealthy person.25 In populist lay terms, we expect most people would agree that it is more valuable to give an extra thousand dollars to a poor mother to spend on dental care and food for her children than to give it to an investment banker and his partners to spend on a fine dinner and wine. In addition, inequality may undermine the legitimacy of our social order.26 The trend toward greater economic success at the very top while most households lose ground threatens to undermine the American Dream and erode the sense that our society gives everyone a fair opportunity to succeed and an equal voice in the nation’s future.27 By undermining that sense, inequality may harm the morale and work effort of those left behind.28 Another problem is political. The wealthiest have a disproportionate influence on public policy. 29 This gives them an ability and incentive to skew public investments and government policies to favor themselves.30 These policies also may harm others.31 For example, the fundamental short-run policy tradeoff faced by the Federal Reserve is balancing the harms from unemployment against the risks of inflation. The rich have less incentive to favor policies that tilt towards reductions in unemployment relative to prevention of inflation. They are unlikely to become unemployed. And as creditors with some assets denominated in nominal terms, their real wealth is reduced by inflation.32 While unemployment reduces demand for the products sold by the firms they own, that harm to the firms is mitigated somewhat by the fact that high unemployment reduces the wage demands of workers.33 The middle class and poor, by contrast, are far more likely to experience unemployment or lower wages as the result of a higher unemployment rate. They also are more likely debtors that benefit from inflation. This political effect can make inequality self-reinforcing: the economic power of those at the top gives the wealthy political power, which can be used to entrench and enhance their economic power, further increase their political power, and so on. This vicious cycle creates the possibility that inequality could threaten our democracy.34 This concern is exacerbated by the growing trend to greater social separation by the top earners, through gated communities, private schools, and other privileges. For example, it has long been suggested that private schools reduce political support for larger public school budgets. The same point might be made with respect to public health care and transportation when concierge doctors and express lanes cater to the rich. Inequality also can reduce economic growth. The economic literature has reached a “tentative consensus” that inequality “tends to reduce the pace and durability of growth.”35 Even a small reduction in the long-term rate of growth makes a substantial difference to economic well-being from one generation to the next. 36 Inequality can slow economic growth for several reasons. Workers in families experiencing financial hardship may find it difficult to invest in education and training because they lack the necessary savings and because financial market imperfections limit their ability to borrow against their future prospects.37 Their incentives to change jobs, learn new skills, or start new businesses also can be reduced. Poverty makes it harder for students to learn, and a majority of the students in public schools today are from low-income families. 38 Moreover, the disproportionate influence on public policy by those at the very top can lead to insufficient provision of public goods that would disproportionately benefit others, even when those programs foster overall economic growth. These same factors also can contribute to creating a vicious cycle of widening inequality. We are not claiming that concerns about inequality are ignored in our society. Social insurance programs provide benefits to people who are unemployed, poor, retired and disabled. Government programs support public goods such as health care, education, job training, and housing. While certain redistributive policies may impede growth,39 redistribution has generally not done so in practice. 40 Instead, these programs have been found to encourage economic growth, even when they are funded in ways that redistribute resources away from those at the top.41 Despite these benefits from redistribution, existing programs do not appear to have offset the growing inequality in our economy.

#### **Slow growth causes extinction – global conflagration and military confrontation**

**Liu 18 –** Qian Liu, Managing Director, Greater China, The Economist Group – (Qian Liu, November 13th, 2018) – “The next economic crisis could cause a global conflict. Here's why” – <https://www.weforum.org/agenda/2018/11/the-next-economic-crisis-could-cause-a-global-conflict-heres-why>

**The next economic crisis is closer than you think.** But what you should really worry about is what comes after: in the current social, political, and technological landscape, **a prolonged economic crisis, combined with rising income inequality, could well escalate into a major global military conflict.** The 2008-09 global financial crisis almost bankrupted governments and caused systemic collapse. Policymakers managed to pull the global economy back from the brink, using massive monetary stimulus, including quantitative easing and near-zero (or even negative) interest rates. But monetary **stimulus is like an adrenaline shot** to jump-start an arrested heart; **it can revive the patient, but it does nothing to cure the disease**. Treating a sick economy requires structural reforms, which can cover everything from financial and labor markets to tax systems, fertility patterns, and education policies. **Policymakers have utterly failed** to pursue such reforms, despite promising to do so. Instead, they have remained preoccupied with politics. From Italy to Germany, forming and sustaining governments now seems to take more time than actual governing. And Greece, for example, has relied on money from international creditors to keep its head (barely) above water, rather than genuinely reforming its pension system or improving its business environment. The lack of structural reform has meant that the unprecedented excess liquidity that central banks injected into their economies was not allocated to its most efficient uses. Instead, it raised global asset prices to levels even higher than those prevailing before 2008. In the United States, housing prices are now 8% [higher](https://www.zillow.com/home-values/) than they were at the peak of the property bubble in 2006, according to the property website Zillow. The price-to-earnings (CAPE) ratio, which measures whether stock-market prices are within a reasonable range, is now [higher](http://www.multpl.com/shiller-pe/) than it was both in 2008 and at the start of the Great Depression in 1929. As monetary tightening reveals the vulnerabilities in the real economy, the collapse of asset-price bubbles will trigger another economic crisis – one that could be even more severe than the last, because we have built up a tolerance to our strongest macroeconomic medications. **A decade of regular adrenaline shots**, in the form of **ultra-low interest rates and unconventional monetary policies**, has **severely depleted their power to stabilize and stimulate the economy.** If history is any guide, the consequences of this mistake could extend far beyond the economy. According to Harvard’s Benjamin Friedman, [prolonged periods](https://scholar.harvard.edu/files/bfriedman/files/the_moral_consequences_of_economic_growth_0.pdf) of economic distress have been characterized also by public antipathy toward minority groups or foreign countries – attitudes that can help to fuel unrest, terrorism, or even war. For example, during the Great Depression, US President Herbert Hoover signed the 1930 Smoot-Hawley Tariff Act, intended to protect American workers and farmers from foreign competition. In the subsequent five years, global trade shrank by two-thirds**. Within a decade, World War II had begun.** To be sure, WWII, like World War I, was caused by a multitude of factors; there is no standard path to war. But there is reason to believe that high levels of inequality can play a significant role in stoking conflict. According to [research](http://www.hup.harvard.edu/catalog.php?isbn=9780674430006) by the economist Thomas Piketty, a spike in income inequality is often followed by a great crisis. Income inequality then declines for a while, before rising again, until a new peak – and a new disaster. Though causality has yet to be proven, given the limited number of data points, this correlation should not be taken lightly, especially with wealth and income inequality at historically high levels. This is all the more worrying in view of the numerous other factors stoking **social unrest and diplomatic tension, including technological disruption, a record-breaking migration crisis, anxiety over globalization, political polarization, and rising nationalism**. All are symptoms of failed policies that could turn out to be trigger points for a future crisis. Voters have good reason to be frustrated, but the emotionally appealing populists to whom they are increasingly giving their support are offering ill-advised solutions that will only make matters worse. For example, despite the world’s unprecedented interconnectedness, multilateralism is increasingly being eschewed, as countries – most notably, Donald Trump’s US – pursue unilateral, isolationist policies. Meanwhile, proxy wars are raging in Syria and Yemen. Against this background, we must take seriously the possibility that **the next economic crisis could lead to a large-scale military confrontation**. By the [logic](http://www.simonandschuster.com/books/The-Clash-of-Civilizations-and-the-Remaking-of-World-Order/Samuel-P-Huntington/9781451628975) of the political scientist Samuel Huntington , considering such a scenario could help us avoid it, because it would force us to take action. In this case**, the key will be for policymakers to pursue the structural reforms that they have long promised**, while replacing finger-pointing and antagonism with a sensible and respectful global dialogue. T**he alternative may well be global conflagration.**

#### **Resilience is an impact filter – solves all vulnerabilities**

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Furthermore, this work recognizes the importance of self-determination and economic development. These are not inherently bad things. Self-determination recognizes the right of a state as represented by its people to live out the destiny of their own choosing. Economic development, even from this Western modernist perspective, recognizes the value of human life and seeks to protect it through the proper and efficient allocation of resources. However, if peoples choose to withdraw into a closed community, it is their right to do so. Yet the problem remains: states and peoples are now more interconnected than ever. And so instead of remaining insular, everyone in the world has an interest to ensure the proper functioning of the international system and the tackling of the world’s problems such as **global warming, the diffusion of disease and other negative public outcomes**. Such matters bind the autonomy and sovereignty of peoples together in the universal need for survival. Final Words When we study International Relations from the point of view of distribution of capabilities, scholars miss other aspects of the discipline. A state’s behavior is carried out to survive against the systemic vulnerabilities described in this book. Power, driven by economic development, is the tool for neutralizing these vulnerabilities, so as to protect individuals living inside the state. Power can be considered a laundry list of resources (Waltz 2010) meant to achieve invulnerability from sources of threat. Whether from competitor states or disease and cyber-attacks, the role of power is to enhance the state’s survival ability against the odds: to decrease vulnerability. Since resources are necessary to increase resilience to threats, they are the antidote to vulnerability, and the root of power to achieve invulnerability is the economy: economic development is thus the cure for vulnerability. **The stronger**, more advanced **the economy, the more resilient it will be to exogenous shock** in the ways described. **Economic gains** can be transformed into power in military terms, but also **provide the necessary infrastructure to deal with health, cyber, environmental and other shocks and destabilization**. Since power is tied to economic matters, economic vulnerabilities can significantly impede power and a state’s ability to deal with threats. The financial crisis in 2008 damaged the European Union and much of the Caribbean because of their dependence on the USA. The falling price of oil is decreasing global aggregate demand as Russians do not have as much to spend. This has occurred during a period of Russian expansionism and while Eastern Europe is concerned about Russia’s military might, it must recognize the power of the world economy in terms of punishing this sort of action. Waltz focused on the distribution of capabilities as a means toward security. I look at world politics as the struggle to correct vulnerabilities in order to remain secure. **Military power cannot solve such vulnerability.** **Enhancing invulnerability will come through economic development in a modernist perspective but threats will never be truly neutralized until all states in the system are economically developed. The economy, with all its sensitivity and vulnerability, is a source of instability for all actors.**

### **Advocacy**

#### **Resolved: The appropriation of outer space by private entities is unjust.**

### **Framing**

#### **The standard is maximizing expected wellbeing**

#### **1. Desires are the only basis for ethics since good is only coherent in relation to what we desire – we couldn’t obtain evidence of goodness without desire**

**McCord 01** [Geoffrey Sayre-McCord, (Philosophy, University of North Carolina, Chapel Hill) "Mill's “Proof” Of The Principle of Utility: A More Than Half-Hearted Defense" Social Philosophy and Policy, 18(2), 330-360., 2001, https://www.cambridge.org/core/journals/social-philosophy-and-policy/article/mills-proof-of-the-principle-of-utility-a-more-than-halfhearted-defense/FDBE07CBE08D4E17523930BF8C7BBC32, DOA:9-5-2018]

How is the argument supposed to go, if not by way of these multiple fallacies? Let us start with the principle of evidence and the analogy Mill draws between visibility and desirability. What is the analogy supposed to be if not one that commits Mill to interpreting "desirable" as "capable of being desired"? When it comes to visibility, no less than desirability, Mill explicitly denies that a "proof" in the "ordinary acceptation of the term" can be offered.25 As he notes, "To be incapable of proof by reasoning is common to all first principles; to the first premises of our knowledge, as well as to those of our conduct."26 Nonetheless, support -- that is, evidence, though not proof -- for the first premises of our knowledge is provided by "our senses, and our internal consciousness." Mill's suggestion is that, when it comes to the first principles of conduct, desire play the same epistemic role that the senses play, when it comes to the first principles of knowledge. To understand this role, it is important to distinguish the fact that someone is sensing something from what is sensed, which is a distinction mirrored in the contrast between the fact that someone is desiring something and what is desired. In the case of our senses, the evidence we have for our judgments concerning sensible qualities traces back to what is sensed, to the content of our sense-experience. Likewise, Mill is suggesting, in the case of value, the evidence we have for our judgments concerning value traces back to what is desired, to the content of our desires. Ultimately, the grounds we have for holding the principles we do must, he thinks, be traced back to our experience, to our senses and desires. Yet the evidence we have is not that we are sensing or desiring something but what it is that is sensed or desired.27 When we are having sensations of red, when what we are looking at appears red to us, we have evidence (albeit overrideable and defeasible evidence) that the thing is red. Moreover, if things never looked red to us, we could never get evidence that things were red, and would indeed never have developed the concept of redness. Similarly, when we are desiring things, when what we are considering appears good to us, we have evidence (albeit overrideable and defeasible evidence) that the thing is good. Moreover, if we never desired things, we could never get evidence that things were good, and would indeed never have developed the concept of value. 28 Recall that desire, for Mill, like taste, touch, sight, and smell, is a "passive sensibility." All of these, he holds, provide us with both the content that makes thought possible and the evidence we have for the conclusions that thought leads us to embrace. "Desiring a thing" and "thinking of it as desirable (unless for the sake of its consequences)" are treated by Mill as one an d the same, just as seeing a thing as red and thinking of it as red are one and the same.29 Accordingly, a person who desires x is a person who ipso facto sees x as desirable.30 Desiring something, for Mill, is a matter of seeing it under the guise of the good.31 This means that it is important, in the context of Mill's argument, that one not think of desires as mere preferences or as just any sort of motive. They constitute, according to Mill, a distinctive subclass of our motivational states, and are distinguished (at least in part) by t heir evaluative content.32 Thus, Mill is neither assuming nor arguing that something is good because we desire it; rather, he is depending on our desiring it as establishing that we see it as good. Mill's aim is to take what people already, and he thinks inevitably, see as desirable and argue that those views commit them to the value of the general happiness (whet her or not their desires follow the deliverances of t heir reason). Those who, like Mill, desire the general happiness already hold the view that the general happiness is desirable. They accept the claim that Mill is trying to defend. As Mill knows, however, there are many who do not have this desire -- many who desire only their own happiness, and some who even desire that others suffer. These are the people he sets out to persuade, along with others who are more generous and benevolent, but who nonetheless do not see happiness as desirable, and the only thin g desirable, as an end. Mill's argument is directed at convincing t hem all -- whether their desires follow or not -- that they have grounds for, and are in fact already com mitted to, regarding the happiness of others as valuable as an end. At the same time, while desirin g something is a matter of seeing it as good, one could, on Mill's view, believe that something is good without desiring it, just as one can believe something is red without seeing it as red. While desire is supposed to be the fundamental source of our concept of, and evidence for, desirability, once the concept is in place there are contexts in which we will have reason to think it applies even when t he corresponding sensible experience is lacking. In deed, in Chapter IV, Mill is co ncerned not with generatin g a desire but with justifying t he belief t hat happiness is desirable, and t he onl y thing desirable, as an end, and so concerned with defending t he standard for determining what should be desired.33 Mill recognizes that whatever argument he might hope to offer will need to appeal to evaluative claims people already accept (since he takes to heart Hume's caution concerning i nferring an 'ought' from an 'is').34 The claim Mill thinks he can appeal to -- that one's own happiness is a good (i.e. desirable) -- is something licensed as available by people desiring their own happiness. Yet he is not supposing here that the fact that they desire their own happiness, or anything else, is proof that it is desirable, just as he would not suppose that the fact that someone sees something as red is proof that it is. Rather, he is supposing that if people desire their own happiness, or see something as red, one can rely on t hem having available, as a premise for further argument, the claim that their own happiness is desirable or that the thing is red (at least absent contrary evidence).35 As he puts it in the third paragraph, "If the end which the utilitarian doctrine proposes to itself were not, in theory and in practice, acknowledged to be an end nothing could ever convince any person that it was so." Thus, in appealing to the analogy bet ween judgments of sensible qualities and judgments of value, Mill is not trading on an ambiguity, nor does his argument here involve identifying being desirable with being desired or assuming that "desirable" means "desired." He is instead relying consistently on an empiricist account of concepts and their application -- on a view according to which we have the concepts, evidence, and knowledge we do only thanks to our having experiences of a certain sort. In the absence of the relevant experiences, he holds (with other empiricists), we would not only lack the required evidence for our judgments, we would lack the capacity to make the judgments in the first place. In the presence of the relevant experiences, though, we have both the concepts and the required evidence -- "not only all the proof which the case admits of, but all which it is possible to require."36

#### **2. Only consequentialism explains why we start actions**

**Sinnott-Armstrong 92** [Walter Sinnott-Armstrong, professor of practical ethics. “An Argument for Consequentialism” Dartmouth College Philosophical Perspectives. 1992.]

A moral reason to do an act is consequential if and only if the reason depends only on the consequences of either doing the act or not doing the act. For example, a moral reason not to hit someone is that this will hurt her or him. A moral reason to turn your car to the left might be that, if you do not do so, you will run over and kill someone. A moral reason to feed a starving child is that the child will lose important mental or physical abilities if you do not feed it. All such reasons are consequential reasons. All other moral reasons are non-consequential. Thus, a moral reason to do an act is non-consequential if and only if the reason depends even partly on some property that the act has independently of its consequences. For example, an act can be a lie regardless of what happens as a result of the lie (since some lies are not believed), and some moral theories claim that that property of being a lie provides amoral reason not to tell a lie regardless of the consequences of this lie. Similarly, the fact that an act fulfills a promise is often seen as a moral reason to do the act, even though the act has that property of fulfilling a promise independently ofits consequences. All such moral reasons are non-consequential. In order to avoid so many negations, I will also call them 'deontological'. This distinction would not make sense if we did not restrict the notion of consequences. If I promise to mow the lawn, then one consequence of my mowing might seem to be that my promise is fulfilled. One way to avoid this problem is to specify that the consequences of an act must be distinct from the act itself. My act of fulfilling my promise and my act of mowing are not distinct, because they are done by the same bodily movements.10 Thus, my fulfilling my promise is not a consequence of my mowing. A consequence of an act need not be later in time than the act, since causation can be simultaneous, but the consequence must at least be different from the act. Even with this clarification, it is still hard to classify some moral reasons as consequential or deontological,11 but I will stick to examples that are clear. In accordance with this distinction between kinds of moral reasons, I can now distinguish different kinds of moral theories. I will say that a moral theory is consequentialist if and only if it implies that all basic moral reasons are consequential. A moral theory is then non-consequentialist or deontological if it includes any basic moral reasons which are not consequential. 5. Against Deontology So defined, the class of deontological moral theories is very large and diverse. This makes it hard to say anything in general about it. Nonetheless, I will argue that no deontological moral theory can explain why moral substitutability holds. My argument applies to all deontological theories because it depends only on what is common to them all, namely, the claim that some basic moral reasons are not consequential. Some deontological theories allow very many weighty moral reasons that are consequential, and these theories might be able to explain why moral substitutability holds for some of their moral reasons: the consequential ones. But even these theories cannot explain why moral substitutability holds for all moral reasons, including the non-consequential reasons that make the theory deontological. The failure of deontological moral theories to explain moral substitutability in the very cases that make them deontological is a reason to reject all deontological moral theories. I cannot discuss every deontological moral theory, so I will discuss only a few paradigm examples and show why they cannot explain moral substitutability. After this, I will argue that similar problems are bound to arise for all other deontological theories by their very nature. The simplest deontological theory is the pluralistic intuitionism of Prichard and Ross. Ross writes that, when someone promises to do something, 'This we consider obligatory in its own nature, just because it is a fulfillment of a promise, and not because of its consequences.'12 Such deontologists claim in effect that, if I promise to mow the grass, there is a moral reason for me to mow the grass, and this moral reason is constituted by the fact that mowing the grass fulfills my promise. This reason exists regardless of the consequences of mowing the grass, even though it might be overridden by certain bad consequences. However, if this is why I have a moral reason to mow the grass, then, even if I cannot mow the grass without starting my mower, and starting the mower would enable me to mow the grass, it still would not follow that I have any moral reason to start my mower, since I did not promise to start my mower, and starting my mower does not fulfill my promise. Thus, a moral theory cannot explain moral substitutability if it claims that properties like this provide moral reasons.

#### **3. Util is a lexical pre-requisite to any other framework: Threats to life preclude the ability for moral actors to effectively utilize and act upon other moral theories since they are in a constant state of crisis – that inhibits the ideal moral conditions which other theories presuppose**

#### **4. Actor spec:**

#### **A. Aggregation – every policy benefits some and harms others, which also means side constraints freeze action**

#### **B. No act-omission distinction – choosing to omit is an act itself – governments actively decide not to act so there’s no omission**

#### **5. Only consequentialism explains degrees of wrongness – breaking a promise to meet up for lunch isn’t as bad as breaking a promise to take a dying person to the hospital. Only the consequences of breaking the first explain why the second one is much worse**

#### **6. Extinction first under any framework:**

#### **A. It precludes the possibility of any kind of moral value – we can’t confer value onto anything if we’re not alive**

#### **B. Future generations means infinite magnitude – we have to look towards future lives too**