# 1AR

#### Asteroid mining won’t solve resource shortages or conflict. Too many technical hurdles and pro mining ev is a prisoner to mining companies PR machines.

**Riederer 14** (Rachel Riederer is co-Editor in Chief of Guernica. Her writing has appeared in The New Yorker, The Nation, Best American Essays. “Silicon Valley Says Space Mining Is Awesome and Will Change Life on Earth. That’s Only Half Right”. May 19, 2014.)

What’s misleading about **these projects** isn’t that they’re subject to budget problems and delays, but that they **come couched in overblown rhetoric about their potential to** radically **alter human life, to do away with the notion of scarcity and deliver us to a future of** plenty and **peace**. It’s a pattern that has become familiar in Silicon Valley: develop a plan for a business that will do something cool and make a lot of money, but describe it instead as something that will change the world. Return to that platinum asteroid for a moment. There’s one that Planetary Resources has been tracking: It passes near the Earth’s orbit every 23 months and is a half-kilometer by one kilometer in size. A spacecraft could travel to it in around eight months. Diamandis estimates its total worth at between $300 billion and $5 trillion. If it were to be mined at some point in the future, it would drive down the global price of platinum, which might make some items more affordable—luxury jewelry, of course, but also catalytic converters for cars and hard disks for laptops and DVRs—but it would primarily make the investors of Planetary Resources extremely rich. **Allusions to the Wild West abound in the literature of space-mining companies**. The Moon Express website talks about “brave pioneers” who explored new territories "with the backing of a monarch or a state.” For these entrepreneurs, space is not a distant emptiness; beyond the frontier, they envision a business-place. And with the exception of a Cold War–era treaty prohibiting national appropriation of the moon, there aren’t laws about ownership in space; its riches are there for the taking, like gold nuggets in a California stream. In a March debate on "Selling Space," at the American Museum of Natural History, Space Foundation CEO Elliot Pulham said that asteroids are clearly up for grabs: “There’s no law that says you can’t snag an asteroid. Knock yourself out.” It’s certainly true that space is full of valuables. Billions of years ago, during the formation of the solar system, gravity pulled the heavy materials on would-be planets toward their cores, forcing the comparatively lighter rocky material out to the surface. When those planets broke apart, they became asteroids. Some are made of rocky surface fragments, but some are made of the core materials—platinum, gold, silver, palladium—that are rare and precious on Earth. At a press roundtable after the "Selling Space" debate, Tyson explained why this process matters so much to those who would mine the sky: “Nature has pre-sifted the ingredients for you. You go grab yourself an asteroid made from the core of a planet that never survived, and you’ve got this stuff concentrated in the palm of your hand.” This is what Manifest Destiny must have felt and sounded like. Wealth beyond your wildest dreams, and it’s there for the taking. You just have to get there first. The “getting there first” will not be simple, or cheap. Most of the asteroids in the solar system are in the asteroid belt between Mars and Jupiter. But the orbit paths of some near-Earth asteroids, or NEAs, bring them relatively close to our planet—that is, within around 30 million miles. Planetary Resources has developed what is essentially an outer-space drone: a small telescope-equipped spacecraft, around the size of a desktop computer, that will survey near-Earth asteroids. Once an asteroid is identified and determined to be valuable, the **extraction** could begin, though that **introduces** a new set of **technical obstacles**. Because of the difficulty and expense of getting heavy machinery from Earth into space, some have suggested using 3D printing technology to use materials found in space to create the necessary equipment. Then, some modified version of a terrestrial mining method, like drilling or magnetic separation, could be used for the mining itself. But these extraction processes have been developed for the pressure and gravity of Earth, and they would need to be overhauled to function in the low-gravity, vacuum environment of space. If this part of the process sounds unclear, it’s because it is. To give an idea of the scale—in time and difficulty—of these kinds of operations, consider the government’s version of asteroid prospecting. In April, NASA greenlighted a mission in which a spacecraft called OSIRIS-REx will rendezvous with an asteroid called Bennu. OSIRIS-Rex is scheduled to launch in 2016, reach the asteroid in 2018, reconnoiter it for over a year, and then bring back samples for scientific study. The amount of asteroid that NASA plans to collect after all this time and trouble? Two ounces. **A major premise of private space mining companies is that they will be able to work far faster and more economically** than NASA, and will be willing to take on levels of risk beyond that of a government operation, **but** the **scale** and timeline of OSIRIS-REx **shows how complex these operations will be**, even **for** the swiftest companies. The most far-out proposal in **space mining** is to "redirect" an NEA toward Earth and into lunar orbit. There, the asteroid could spin safely around the moon, accessible to our planet. A 2012 Cal Tech study determined that this method would be not only feasible, but “essential” for long-term human space exploration. According to the study, it will soon be possible for an unmanned spacecraft to identify a target asteroid—one around seven meters in diameter and 500,000 kilograms in mass—approach it, “loiter” nearby to determine its spin, and ultimately enclose the asteroid in what is described as a “draw-string bag.” (Take a moment to imagine a man-made drawstring bag capturing a giant mass of precious metal hurtling through space. “This is awesome!” does feel like the only reasonable response.) Once the asteroid and spacecraft are connected, a solar-powered propulsion system could fly the asteroid back to our moon and deposit it in lunar orbit. Depending on **the** mass of the asteroid, this **retrieval flight would last between six and ten years.** This idea, like the other **space-mining projects**, will require tremendous patience, money, vision, and bluster. So it's no surprise that the **futurists of Silicon Valley are behind them**: The group of companies founded with the intention of mining space are backed largely by investors who made their names and fortunes in tech. Peter Diamandis is the founder of the X Prize Foundation and of Silicon Valley’s Singularity University, which he co-founded with futurist Ray Kurzweil; Eric Schmidt is one of Planetary Resources’ major investors; before starting Moon Express, Naveen Jain was a senior executive at Microsoft and then CEO of his own startup, InfoSpace; Elon Musk founded PayPal and now has a private space company, SpaceX, currently under contract with NASA to begin carrying astronauts to the International Space Station. The New Yorker's George Packer identifies the “conflicting pressures” of Silicon Valley as “work ethic, status consciousness, idealism, and greed.” All of these pressures are present in the space-mining race, too. The work required to pull it off is undeniable—as is the idealistic delusion that outer-space extraction would bring world peace. Whoever accomplishes this first will be hailed, from Mountain View to Capitol Hill, as a genius. They will also become unfathomably wealthy, and rightly so: Entering a new, high-risk, high-tech field of business should come with the possibility for enormous reward. These entrepreneurs have evinced as much in less-utopian, off-the-cuff remarks. Diamandis has joked that his company’s financing plan is to buy puts in the platinum market and then announce their plan to bring a platinum asteroid home. Jain imagines coming back from trips to the moon with payloads worth billions of dollars: “I don’t care what people say," he said in an interview with Wired's editor last year. "That’s a shit load of money.” It’s telling that the foundational text of the space mining industry—1997's Mining the Sky, by John Lewis, a professor of planetary science at the University of Arizona and the chief scientist of Deep Space Industries—begins not with a catalog of the wealth of space, but with a brief history of exploration and military domination on Earth. Here, there isn’t enough, but in space, rather than nothingness, we find “a lively, rich understanding of the unity and lawfulness of Creation, within which the diversity and complexity of local materials and events falls into place.” Thanks to the saving power of technology, the very ideas of “limited resources and finite living space” are “tired old myths,” he writes. **It’s exhilarating, this notion that tech advances could end scarcity as we know it, relegating wars over mineral wealth and energy sources to the list of woes defeated by science**, alongside plague and polio. But **it’s a dangerous exhilaration**. It seems far more likely that new sources of wealth will, in their abundance, be one more thing for us to scrabble over. The space-mining notion is immensely appealing: the sky is full of infinite riches and abundance leads to peace. But why wouldn’t riches from the heavens cause conflicts and problems? Their vulgar terrestrial cousins always have. The problem with comparing **space-mining** to the Wild West isn’t just that it **won’t revolutionize our economy** like Manifest Destiny did. It isn’t even that there’s something suspect in taking the sky—something that feels so shared, so very deeply part of the commons—and turning it into a set of privately held commodities. It’s that this rhetoric gives the industry a kind of up-by-the-bootstraps patina, calling to mind a situation in which anyone with a gold-pan could go and seek their fortune, if one were plucky and lucky enough to set out for virgin territory. This simply does not apply to space mining, an industry where—to an even greater degree than modern-day resource extraction businesses on Earth—the barriers to entry in terms of both technology and capital are so immense that it is only open to entrepreneurs who are already billionaires.

# 1AC

#### I affirm the resolution: The appropriation of outer space by private entities is unjust.

### Framework

#### The framework for this round is util, or maximizing expected well-being

#### Util treats everyone equally because it only measures consequences

1. **Lives come first under either of our frameworks because death is the largest impact. If we are all dead we can’t do any other framework.**

### Contention 1 is developing countries

#### Outer space houses tons of valuable resources, it’s about who can get there first

**Blair 15**, Brad Blair, Expert in commercial space law, Winter 2015, "Space Mineral Resources," National Space Society - Working to Create a Spacefaring Civilization, <https://space.nss.org/space-mineral-resources/> Livingston RB

**A recently released study** by the International Academy of Astronautics (IAA) **found that space mineral resources** (SMR) **can serve as an economic gamechang**er, **opening a vast new source of wealth to benefit humanity**. The study examined technical, economic, legal, and policy-related requirements to enable SMR, and offered specific recommendations to international space agencies and commercial enterprise for moving humanity forward into a new era of space settlement and commercial resource development. The study was assembled by two prominent space lawyers. Art Dula is a professor of law at the Houston Law School, trustee of the Heinlein Prize Trust, and founder of Excalibur Exploration Limited. Zhang Zhenjun is secretary general of the China Institute of Space Law, a resident director of the Chinese Society of Astronautics, and holds an MBA from George Washington University. The work solicited and included extensive input by entrepreneurial startup companies including Deep Space Industries, Shackleton Energy Company, Planetary Resources, Excalibur Exploration, Moon Express, and Tethers Unlimited. Study findings on SMR technology and engineering design are that **mining asteroids and lunar regolith is within reach of the current state of the technical art.** The extrapolation of Earth-based mining appears to be a one-for-one trade with alterations due to vacuum, low gravity, and temperature, with bench and lab-scale testing to date in private and government labs on Earth affirming this conclusion. Indeed, the primary roadblocks to SMR today are more intimately related to reducing market, legal, and financial risk. A focus on customers, demographics, and increasing market certainty is needed to create a solid foundation for the future of space enterprise. The study found that the cost to develop Moon or asteroid water sources could become significantly lower than the delivery price from Earth, especially as distance increases, making space water a potential basis for future currency. Indeed, establishing spaceports and selling water mined in space is a key to unlocking a robust and sustainable space economy, enabling human expansion into the Solar System.

#### The ability to appropriate space keeps developing nations out of these valuable resources- it’s already happened with satellites

**Giacomin 19**, Nicolas Giacomin, author on space, 12-4-2019, "The Bogotá Declaration and space law," Space Legal Issues, <https://www.spacelegalissues.com/the-bogota-declaration-and-space-law/> Livingston RB

The practice of developed states **is based** on free access and priority given to the first **satellites** placed in the geostationary orbit. The placing into orbit of satellites is in accordance with the 1967 Outer Space Treaty. These satellites have the right to pursue a trajectory without interference from satellites later placed in orbit. In addition, the international regulation of the radio spectrum has favored the development of satellite telecommunications systems. Increasing congestion of the orbit and frequencies may **limit the access and opportunities of developing countries in the future**. **It will become more and more difficult** to use frequencies from the geostationary orbit under satisfactory conditions (without creating or suffering radio interference, or without incurring additional costs). Common law regime for the use of frequencies traditionally protects the first users against such interference. In this situation, new entrants must design their space telecommunication systems taking into account both the trajectory and the frequencies used by the satellites in place. Unlike the regime of orbit and outer space in general, for more than half a century, there has already been an institutionalized mechanism for access to radio frequencies. This mechanism makes it possible to coordinate the use of frequencies and thereby, prevents harmful interference between radio stations under the jurisdiction of different states. In order to avoid anarchy in this area, ITU distributes radio waves between recognized radio services. Thus, the frequencies used by the various services at the international level are determined in advance before the establishment of telecommunications stations. Any state wishing to establish a station and allocate a frequency band, must comply with the service allocation deriving from international regulations. While inter-service distribution is pre-established, the distribution among states within a given service is traditionally done according to their order of arrival: the first to notify the use of a frequency band by a station under its jurisdiction acquires a right of priority at the international level. Frequency assignments by states must be registered with the ITU. Within the latter, the International Frequency Registration Board examines the compliance of these assignments with the regulations in force and the possibility of interference with other stations already in operation. In case of conflict between an existing user registered before the International Frequency Registration Board and a newcomer, preference is given to the first one; this is sometimes described as **“first come, first served”**. Some **developing countries have argued that** the utilization of geostationary **orbit by developed countries is contrary to the 1967 Outer Space Treaty** and, in particular, to the principle of non-appropriation. For a variety of reasons, **this challenge to current practice does not really addresses the problem** of orbital saturation. First, the 1967 Outer Space Treaty and the prohibition of appropriation do not limit the use of orbital space. In addition, this instrument appears unable to provide a solution to the problem of saturation of the orbit, because it is primarily due to exogenous constraints related to the use of radio frequencies. Access to the frequency spectrum depends on International Telecommunications Law and not on space law.

#### This locks in existing global inequality into space

**Reinstein 99**, Ezra J. Reinstein, Owning Outer Space, 20 Nw. J. Int'l L. & Bus. 59 (1999-2000) <https://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1500&context=njilb> Livingston RB

The rights of less-developed nations create a concern that is both political and moral in character. As a matter of political reality, the less developed nations wield considerable power, due in no small part to majority voting systems in the major international regulatory bodies. Some feel, and developing nations argue, that **it is morally imperative to take the interests of the non-space-capable nations into account when designing a system of space property law.** A regime based on **the "right of grab,"** the first-come, first-served theory of property acquisition**, should be feared**. **By the time space-incapable nations develop the** technological **prowess and capital** reserves **to fund** meaningful **development of** outer **space, the earlier** space-faring **nations,** left unchecked, might already **have locked up the** most accessible and valuable **resources. Present inequities of global wealth distribution** thus **would be carried forward into** the **space** age. 38

#### Global Inequality has severe impacts for all

**Doucouliagos 17** Chris Doucouliagos, Professor of Economics, Department of Economics, Deakin Business School and Alfred Deakin Institute for Citizenship and Globalisation, Deakin University 8-6-2017, "Don't listen to the rich: inequality is bad for everyone," Conversation, <https://theconversation.com/dont-listen-to-the-rich-inequality-is-bad-for-everyone-81952> Livingston RB

A world where a few people have most of the wealth [motivates others](https://www.economist.com/blogs/economist-explains/2015/06/economist-explains-11) who are poor to strive to earn more. And when they do, they’ll [invest](http://www.jstor.org/stable/2296292?origin=JSTOR-pdf&seq=1#fndtn-page_scan_tab_contents) in businesses and other areas of the economy. That’s the argument for inequality. But it’s wrong. [**Our study**](http://business.monash.edu/__data/assets/pdf_file/0017/455111/1816inequalitymadsenislamdoucouliagos-002.pdf)**of 21 OECD countries over more than a 100 years shows income inequality actually** **restricts** people from **earning** more, **educating** themselves **and** becoming **entrepreneurs**. That flows on to businesses who in turn invest less in things like plant and equipment**. Inequality makes it harder for economies to benefit from innovation.** However, if people have access to credit or the money to move up, it can offset this effect. We measured the impact of this by looking at the number of patents for new inventions and then also looking at the Gini coefficient and the income share of the top 10%. The Gini coefficient is a measure of the distribution of income or wealth within a nation. Don’t let yourself be misled. Understand issues with help from experts. How inequality reduces innovation From 1870 to 1977, inequality measured by the Gini coefficient fell by about 40%. During this time people actually got more innovative and productivity increased, incomes also increased. **But inequality has increased in recent decades and it’s** having the opposite effect Inequality is **preventing pe**ople [with less income and wealth](https://www.jstor.org/stable/2297811?seq=1#page_scan_tab_contents) **from reaching their potential in terms of education and invention**. There’s also less [entrepreneurship](http://www.journals.uchicago.edu/doi/abs/10.1086/261876). Inequality also means **the market for new goods shrinks.** [One study](https://link.springer.com/article/10.1023/A:1009889321237) shows that if incomes are more equal among people, people who are less well off, buy more. Having this larger market for new products, incentivises companies to create new things to sell. If wealth is concentrated among only a small group of people, [it actually increases](https://www.jstor.org/stable/2937810?seq=1#page_scan_tab_contents) demand for imported luxuries and handmade products. In contrast to this, distributed incomes means more mass produced goods are manufactured. What’s been driving inequality since the 1980s is changes to economies - countries trading more with each other and advances in technology. As this happens old products and industries fade while new ones take their place. These changes have delivered significant [net benefits](http://www.pc.gov.au/research/completed/rising-protectionism/rising-protectionism.pdf) to society. **Reducing trade and innovation will only make everyone poorer.**

### Contention 2 is the ozone

#### Ozone is improving in the status quo

**UN 19**, United Nations Report, 9-16-2019, "Ozone on track to heal completely in our lifetime, UN environment agency declares on World Day.," UN News, <https://news.un.org/en/story/2019/09/1046452> Livingston RB

The phaseout of controlled uses of ozone-depleting substances has not only helped replenish the protective layer for future generations but is also helping guard human health by filtering harmful rays from reaching Earth, said [UNEP](https://www.unep.org/) shared in a[statement](https://ozone.unep.org/ozone-day/32-years-and-healing). The recognition of this success comes on [World Ozone Day,](https://www.un.org/en/events/ozoneday/) marked 16 September. This year celebrates “32 Years and Healing”; a commemoration of the international commitment to protect the ozone later and the climate under the historic [Montreal Protocol](https://ozone.unep.org/sites/default/files/2019-08/MP_Handbook_2019_0.pdf), which has led to the phase-out of 99 per cent of ozone-depleting chemicals in refrigerators, air-conditioners and other consumer products. **Since 2000**, parts of **the ozone** layer **have recovered at a rate of 1-3 per cent** every ten years, the latest [Scientific Assessment of Ozone Depletion](https://www.esrl.noaa.gov/csd/assessments/ozone/2018/)estimates. At projected rates the “**Northern Hemisphere and mid-latitude ozone will heal completely by the 2030’s**”, UNEP said, with the Southern Hemisphere repaired by the 2050’s, and Polar Regions in the following decade. UN Secretary-General, António Guterres [said](https://www.unenvironment.org/news-and-stories/statement/secretary-generals-message-world-ozone-day-2019) “**we must be careful not to neglect the ozone layer**,” as we “rightly focus our energies on tackling climate change”, spotlighting the importance of preventing threats posed by emission of ozone-depleting gases**. Regenerating the ozone has helped curb the effects of climate change** - with approximately 135 billion tonnes of carbon dioxide emissions from 1990 to 2010 averted by a strong protective shield.

#### Even getting into space harms the environment by punching holes in the ozone

**Mortillaro 21**, Nicole Mortillaro · Cbc News · Posted, 4-22-2021, "Rocket launches could be affecting our ozone layer, say experts," CBC, <https://www.cbc.ca/news/science/rocket-launches-environment-1.5995252> Livingston RB

Rocket launches are a breathtaking culmination of human ingenuity as they propel us into the future, but there is a growing concern that not enough research has been done on their effect on the environment. While some may be worried about potential greenhouse gas emissions that's not the main issue. Instead, **it's ozone depletion and the potential effects in our upper atmosphere,** specifically the stratosphere, **along with concerns about toxic fuels.** **The problem has flown under the radar**, according to Martin Ross, an atmospheric scientist at The Aerospace Corporation, **because people still think of rocket launches as rare**.  But it's time to face the fact that we may be entering a boom era, he said. "One of the arguments that people have used in the past was to say that we don't really need to pay attention to rockets or to the space industry, or the space industry is small, and it's always going to be small," Ross said.  "But I think the developments that we're seeing the past few years show that … space is entering this very rapid growth phase like aviation saw in the '20s and '30s." The stratosphere is an important weather driver for Earth's systems, and that's where some particles from rocket launches are ending up. **The ozone layer, which helps protect us from the sun's** harmful ultraviolet **rays**, is also located in the stratosphere. In 1990, the [Montreal Protocol was signed into law](https://ozone.unep.org/treaties/montreal-protocol), banning harmful ozone-depleting substances, such as chlorofluorocarbons (CFCs), used in things like refrigerators and air conditioners, after it was revealed that the ozone layer was being stripped away by these chemicals. While the protocol touched on airlines, there was no mention of the aerospace industry. But now some industry experts are concerned that with no oversight, we could be in for a problem**. There are different types of rocket propellants**. Some, like liquid oxygen and liquid hydrogen, produce mainly water vapour and have little environmental impact. These were used in past shuttle launches and even in the Apollo-era Saturn V vehicles.  Then there are those that produce alumina particles in the stratosphere, such as those in solid rocket boosters, which were also used in past shuttle launches, and are still being used today by some launch companies. Finally, **there are those that deposit black soot in the stratosphere, such as kerosene used in SpaceX's Falcon** 9 and Russia's Soyuz rockets. **It's the alumina and black soot that is most concerning to experts.** "The atmosphere is complex," said Jessica Dallas, a PhD candidate at the Australian Centre for Space Engineering Research, in New South Wales. "We don't have a complete understanding of atmospheric circulation and how all of the mechanisms in the atmosphere actually work. And so that means that we also don't have a good idea of what happens when we're injecting these particles into the stratosphere."

#### Ozone is key to human survival

**European Commission ND**, “Protection of the ozone layer” European Commission Official Website, <https://ec.europa.eu/clima/eu-action/protection-ozone-layer_en> Livingston RB

**World governments agreed** in the late 1980s **to protect th**e Earth’s **ozone** layer by phasing out ozone-depleting substances emitted by human activities, **under the Montreal Protocol**. In Europe, the Protocol is implemented through EU-wide legislation that not only meets its objectives but also contains stricter, more ambitious measures. Global action taken under the Montreal Protocol has halted the depletion of the ozone layer and allowed it to start recovering, but much remains to be done to ensure a steady recovery. **The ozone layer** is a natural layer of gas in the upper atmosphere that **protects humans and other living things from harmful ultraviolet (UV) radiation from the sun**. Although ozone is present in small concentrations throughout the atmosphere, most (around 90%) exists in the stratosphere, a layer 10 to 50 kilometres above the Earth’s surface. **The ozone** layer filters out most of the sun's harmful UV radiation and **is therefore crucial to life on Earth**. Scientists discovered in the 1970s that the ozone layer was being depleted. Atmospheric concentrations of ozone vary naturally depending on temperature, weather, latitude and altitude, while substances ejected by natural events such as volcanic eruptions can also affect ozone levels. However, these natural phenomena could not explain the levels of depletion observed and scientific evidence revealed that certain man-made chemicals were the cause. These ozone-depleting substances were mostly introduced in the 1970s in a wide range of industrial and consumer applications, mainly refrigerators, air conditioners and fire extinguishers.

### Contention 3 is a safety net

#### In the status quo, billionaires are looking to space colonization to escape earth

#### Space colonization if only done by private entities will only be accessible to the extremely wealthy

**Maney 15**, Kevin Maney, Kevin Maney is a best-selling author, award-winning columnist, and musician still waiting for his big break. Maney co-authored, with Al Ramadan, Dave Peterson and Christopher Lochhead, the 2015 book [Play Bigger: How Pirates, Dreamers and Innovators Create and Dominate Markets](http://www.harperbusiness.com/book/9780062407610/Play-Bigger-by-Al-Ramadan-Dave-Peterson-Christopher-Lochhead-and-Kevin-Maney/), published by Harper Business.  Maney’s other books include [The Two-Second Advantage: How We Succeed by Anticipating the Future...Just Enough](http://www.amazon.com/The-Two-Second-Advantage-Anticipating-Future-Just/dp/0307887650), a 2011 New York Times bestseller. He also co-wrote the most widely distributed business book of 2011, [Making the World Work Better:The Ideas That Shaped a Century and a Company](http://www.amazon.com/Making-World-Work-Better-Century/dp/0132755106), which marked IBM’s centennial. His other books are [Trade-Off: Why Some Things Catch On, and Others Don't](http://www.amazon.com/Trade-Off-Some-Things-Catch-Others/dp/0385525958); [The Maverick and His Machine: Thomas Watson Sr. and the Making of IBM](http://www.amazon.com/The-Maverick-His-Machine-Thomas/dp/0471679259); and [Megamedia Shakeout](http://www.amazon.com/Megamedia-Shakeout-Exploding-Communications-Industry/dp/0471107190). Maney has been a contributor to Fortune, The Atlantic, Fast Company and ABC News, among other media outlets. He was a contributing editor at Conde Nast Portfolio during its brief run from 2007 to 2009. For 22 years, Maney was a columnist, editor and reporter at USA Today. He has been a book and writing consultant to numerous CEOs and companies such as Cisco, IBM, IdeaPaint and Qualcomm. He lives in New York. 12-14-2015, "'Star Wars' Class Wars: Is Mars the Escape Hatch for the 1 Percent?," Newsweek, <https://www.newsweek.com/2015/12/25/mars-colonies-rich-people-404681.html> Livingston RB

This is the unspoken flip side of Musk's [SpaceX](http://dcinno.streetwise.co/2015/12/07/spacex-2016-elon-musks-internet-satellites-nasa-missions/) and Bezos's [Blue Origin](https://www.businessinsider.com/about-blue-origins-be-4-engine-2015-12). The space travel companies say they are creating a way for the human species to endure by populating other planets. But **the bottom line is that only the wealthy will have the means to move to Mars**. Musk's target ticket price is $500,000 a person in 2015 dollars, and that's just to get there. Imagine the new outfits you'll have to buy to go with that space helmet. So **you can picture a scenario that's something like the 1970s**[**white flight**](http://www.citylab.com/work/2013/11/mapping-60-years-white-flight-brain-drain-and-american-migration/7449/)**from inner cities, when the wealthier classes moved to freshly built suburbs, leaving the declining neighborhoods to the lower classes.** In fact, **the fleeing upper classes sped up the decrepitude of that era's older cities by relocating their money and clout with them**. Today, we're seeing a similar situation in Syria, as the wealthiest and most educated people [escape](https://www.ibtimes.com/europe-refugee-crisis-facts-wealthy-educated-syrians-risking-lives-leave-war-2089018) to the West, which will make the country even harder to stabilize and rebuild.

#### This means that it allows for the extremely wealthy to have a safety net to turn to if things on earth go bad

**Moran 20**, Michael Moran, 08-02-2020, "Billionaires could leave Earth behind 'for space colony' as 'climate collapses'," Dailystar.co.uk, <https://www.dailystar.co.uk/news/weird-news/billionaires-could-leave-earth-behind-21445413> Livingston RB

But noted American media theorist Douglas Rushkoff has written that **the overall direction of technological development was about creating an escape route for the super-rich**. He pointed out that combat robots would serve very well to guard the bolt-holes of billionaires remaining on Earth **once climate change reached its end-game** and described Elon Musk’s **planned Mars** colony **as “less a continuation of the human diaspora than a lifeboat for the elite.”** They can certainly afford a lifeboat. The world’s richest people have seen their share of the world’s total money supply increase from 42.5% at the height of the 2008 financial crisis to just over 50.% by the end of 2017. That adds up to about or $140trillion (£106tn), according to a report from Credit Suisse.

#### And the ultra-wealthy are the ones exploiting earth in the squo

**Zimmerman 15**, Jess Zimmerman, 9-16-2015, "What if the mega-rich just want rocket ships to escape the Earth they destroy?," Guardian, <https://www.theguardian.com/commentisfree/2015/sep/16/mega-rich-rocket-ships-escape-earth> Livingston RB

Of course, **uber-wealthy** tech entrepreneurs **aren’t just buying rockets for their personal amusement.** They’re founding or investing in space travel – they want to get you off-planet, too. Well, not you-you, but someone like you with much, much, much more money. And that’s where the vogue for billionaire space travel magnates gets a little weird –and maybe even sinister. It’s already very true that **money expands your world**; the person with the funds to have a car is less restricted in her movements than the person without one, and the person with a huge plane and the money to fly it is less restricted still. The expansion of rich people’s travel horizons comes at a price for everyone, both rich and poor. With the exception of America’s weirdly-expensive Amtrak system, cost and luxury scale with fossil fuel consumption; travel that costs more and feels more indulgent is also travel that has a cataclysmic effect on the environment. The faster and further you can afford to travel, the greater your environmental footprint. And often, the people less able to travel are the ones left holding the toxic-chemical and pollution-filled bag. **Companies** like Blue Origin **are using** money and **resources to push outwards**, to expand the worlds of their rich customers all the way into space. **But those same customers** – and some of the owners – **are** making their terrestrial money in the classic capitalist terrestrial way: by **working around any obstacle to profit, including environmental regulations and conservation efforts**. Almost **all industry is environmentally disastrous**, after all; truly prioritizing earth-friendliness would destroy most companies. Some people with a great deal of money care more about the fate of the world than others, but they’re all willing to cut corners if it affects the bottom line. You can tell because they have a great deal of money; you can also tell because they’re willing to spend it on a ride in a spaceship. Which raises the question: are they just gearing up to wash their hands of the planet and leave the rest of us to clean up? **By pushing outward while ignoring the problems it causes back on the home turf**, are **they effectively** **creat**ing **a galactic upper class that rests on the backs of the earthbound**? Even if that’s not literally the plan, it may be the ultimate outcome.

#### This leads to worse warming of earth. Billionaires already do it and space means there are no consequences. Warming harms the least well off the most

**Paddinson 21** Laura Paddison, 21-10-2021, "How the rich are driving climate change," No Publication, https://www.bbc.com/future/article/20211025-climate-how-to-make-the-rich-pay-for-their-carbon-emissions

In 2018, Stefan Gössling and his team spent months scouring the social media profiles of some of the richest celebrities, from Paris Hilton to Oprah Winfrey. The tourism professor from Linnaeus University in Sweden was looking for evidence of how much they were flying.  The answer was a lot. Bill Gates, one of the world's most high-profile environmental advocates, took 59 flights in 2017, according to Gössling's [calculations](https://www.sciencedirect.com/science/article/abs/pii/S016073831930132X?via%3Dihub), covering a distance of around 343,500km (213,000 miles) – more than eight times around the world – generating more than 1,600 tonnes of greenhouse gases (that's equivalent to the [average yearly emissions of 105 Americans](https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=US)).  Gössling's aim was to try to uncover **the individual consumption levels of the mega rich**, whose lifestyles **are often shrouded in secrecy**. His research coincided with a growing environmental movement, spearheaded by Greta Thunberg, which put a spotlight on personal accountability. Flying, one of the most carbon-intensive forms of consumption, became a symbol of this new accountability.  "**The bigger your carbon footprint, the bigger your moral duty,**" Thunberg [wrote in the Guardian](https://www.theguardian.com/environment/2019/jan/25/our-house-is-on-fire-greta-thunberg16-urges-leaders-to-act-on-climate) in 2019.  The last few decades have shone a spotlight on global inequality. From the 2008 financial crisis, to the pandemic and the [increasingly severe impacts of climate change](https://www.bbc.com/future/article/20200618-climate-change-who-is-to-blame-and-why-does-it-matter) – disruptive events tend to hit the poorest first and hardest.But in debates about how to solve inequality, over-consumption is often overlooked. "Each unit you overshoot means someone has to give [something] up," says Lewis Akenji, managing director of Hot or Cool Institute, a Berlin-based think tank. As a result, the outsized carbon footprints of society's richest entrench inequality and threaten the world's ability to stave off catastrophic climate change. The statistics are startling. **The world's wealthiest 10% were responsible for around half of global emissions in 2015, according to a 2020**[**report**](https://www.sei.org/wp-content/uploads/2020/09/research-report-carbon-inequality-era.pdf) from Oxfam and the Stockholm Environment Institute. **The top 1% were responsible for** 15% of emissions, **nearly twice as much as the world's poorest 50%,** **who** were responsible for just 7% and **will feel the brunt of climate impacts despite bearing the least responsibility for causing them.**

#### Climate Change leads to extinction

**Specktor 19.** Brandon Specktor. June 04 2019. LiveScience. “Human Civilization Will Crumble by 2050 If We Don't Stop Climate Change Now, New Paper Claims.” https://www.livescience.com/65633-climate-change-dooms-humans-by-2050.html. – Livingston RB

It seems every week there's a scary new report about how man-made climate change is going to cause the [collapse of the world's ice sheets](https://www.livescience.com/65524-antarctica-ice-unstable.html), result in the extinction of up to [1 million animal species](https://www.livescience.com/65314-human-influence-species-extinction.html) and — if that wasn't bad enough — make our [beer very, very expensive](https://www.livescience.com/63832-climate-change-will-ruin-beer.html). This week, a new policy paper from an Australian think tank claims that those other reports are slightly off; the risks of climate change are actually much, much worse than anyone can imagine. [According to the paper](https://docs.wixstatic.com/ugd/148cb0_b2c0c79dc4344b279bcf2365336ff23b.pdf), **climate change poses a** "near- to mid-term **existential threat to human civilization**," **and there's a good chance society could collapse as soon as 2050 if serious mitigation actions aren't taken in the next decade**. **Published by the Breakthrough National Centre for Climate Restoration in Melbourne (an independent think tank focused on climate policy) and authored by a climate researcher and a former fossil fuel executive,** the paper's central thesis is that climate scientists are too restrained in their predictions of how climate change will affect the planet in the near future. [[Top 9 Ways the World Could End](https://www.livescience.com/36999-top-scientists-world-enders.html)] The current climate crisis, they say, is larger and more complex than any humans have ever dealt with before. General climate models — like the one that the [United Nations' Panel on Climate Change](https://www.ipcc.ch/sr15/) (IPCC) used in 2018 to predict that a global temperature increase of 3.6 degrees Fahrenheit (2 degrees Celsius) could put hundreds of millions of people at risk — fail to account for the sheer complexity of Earth's many interlinked geological processes; as such, they fail to adequately predict the scale of the potential consequences. The truth, the authors wrote, is probably far worse than any models can fathom. How the world ends What might an accurate worst-case picture of the planet's climate-addled future actually look like, then? The authors provide one particularly grim scenario that begins with world governments "politely ignoring" the advice of scientists and the will of the public to decarbonize the economy (finding alternative energy sources), resulting in a global temperature increase 5.4 F (3 C) by the year 2050. At this point, the world's **ice sheets vanish; brutal droughts kill** many of the **trees** in the [Amazon rainforest](https://www.livescience.com/57266-amazon-river.html) (removing one of the world's largest carbon offsets); and the **planet** plunges **into a feedback loop of ever-hotter, ever-deadlier conditions.** "Thirty-five percent of the global land area, and **55 percent of the** global **population**, are **subject to** more than 20 days a year of [**lethal heat conditions**](https://www.livescience.com/55129-how-heat-waves-kill-so-quickly.html)**, beyond** the threshold of **human survivability**," the authors hypothesized. Meanwhile, droughts, floods and wildfires regularly ravage the land. Nearly one-third of the world's land surface turns to desert. Entire **ecosystems collapse**, beginning with the planet's coral reefs, the rainforest and the Arctic ice sheets. The world's **tropics are hit** hardest by these new climate extremes, destroying the region's agriculture and turning more than **1 billion** people into **refugees**. This mass movement of refugees — coupled with [shrinking coastlines](https://www.livescience.com/51990-sea-level-rise-unknowns.html) and severe drops in food and water availability — begin to **stress the fabric of the world's largest nations,** including the United States. **Armed conflicts over resources**, perhaps culminating in nuclear war, are likely. The result, according to the new paper, is "**outright chaos**" and perhaps "**the end of human global civilization as we know it."** How can this catastrophic vision of the future be prevented? Only with the people of the world accepting climate change for the emergency it is and getting to work — immediately. According to the paper's authors, **the human race has about one decade left to mount a global movement to transition the world economy to a zero-carbon-emissions system**. (Achieving zero-carbon emissions requires either not emitting carbon or balancing carbon emissions with carbon removal.) The effort required to do so "would be akin in scale to the [World War II](https://www.livescience.com/65025-nazi-massacre-site-artifacts.html) emergency mobilization," the authors wrote. The new policy paper was endorsed with a foreword by Adm. Chris Barrie, a retired Australian defense chief and senior royal navy commander who has testified before the Australian Senate about the devastating possibilities climate change poses to national security and overall human well-being. "I told the [Senate] Inquiry that, after [nuclear war](https://www.livescience.com/65603-doomsday-plane-can-survive-nuclear-attack.html), human-induced global warming is the greatest threat to human life on the planet," Barrie wrote in the new paper. "Human life on Earth may be on the